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EXHIBIT NO. 3-0**

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.**

**FAA'S REVIEW AND CORRECTIVE ACTIONS
CONCERNING NATIONAL MSAW PROGRAM**

(10 pages)

MSAW Parameter Review Team

A joint team of experts from AOS and AT who will examine the thousands of safety critical data elements and ensure that each of them is set to its optimal value.

Chronology

- 10/3/97 AOS and AT group meet to discuss MSAW adaptation parameters.
- 10/14/97 AOS and AT meet to develop method and propose timetable to ensure integrity of MSAW adaptation parameters.
- 11/3/97 FAA invests AOS with exclusive authority for MSAW adaptation parameters. AOS sets several teams to work examining MSAW.

ARTS 11A Process

- Sites deliver their current operational program to the Team. Program is dumped for evaluation.
- Rough screen to find priority sites to do first.
- Team member spends approximately two days working through safety critical parameters, line by line, and optimizing each one.
- Program is patched, then re-dumped and sent back to step one. Cycle is repeated until program comes through without errors.

ARTS 11A Process (Con't)

- Site specific MSAW/Conflict Alert functionality test scenario is created to help site personnel to ensure that the program is operating as designed.
- Safety critical parameters are sent from AOS-600 to AOS-400 for final quality review. If changes are made, program is re-dumped and sent back to step one.
- Enhanced program is sent back to site to be brought online within 15 days.

Standards and Tools

- The Team spent several weeks establishing standards and guidelines for each safety critical parameter, which had never before existed for ARTS 11A.
- Three PC programs form the backbone of the parameter evaluation effort. Two of these program were written from scratch by AOS, and the other was modified to our specifications.
- The team believes that if these standards and tools had existed in the field, much of our current work would be unnecessary.

Scope of Work

- There are 130 ARTS 11A sites. Each of these sites covers more than one airport and most airports have more than one approach.
- As of 1/28/9⁸X, the Team has evaluated 38 sites including 178 airports and 427 approach capture boxes.

Recommendations

- Ensure that every future ATC automation system is delivered with independently validated standards and guidelines for site adaptation.
- Ensure that every future ATC automation system is delivered with graphical tools to help the adaptation specialist visualize each parameter and ensure that it is optimally adapted.

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IE	ID	Facility Name	Date Ops		Initial Lab	Initial Evaluation	Initial	Date		Date Ops	Date	Q/A	Final	Final	Date	Remarks	ID	Facility Name	
			Type	NOAA				Rec'd	Disc										Rec'd
83	FMH		12/3/97	10/31/97	12/3/97	12/9/97		12/12/97	1/7/98	1/7/98	1/7/98	1/7/98	1/15/98	1/21/98	01/22/98	Needs clean up bad	FMH		
2	ABE		11/9/97	11/9/97	12/3/97	12/9/97	xxx	1/13/98	1/14/98	1/15/98	1/16/98	1/15/98	1/16/98	1/21/98	01/22/98	large volume inhibit to SW	ABE		
13	AGS		11/11/97	11/11/97	11/11/97	11/17/97	xxx	1/12/98	1/13/98	1/14/98	1/13/98	1/14/98	1/16/98	1/26/98	01/27/98	Large volume inhibit areas, 19 bins off NOAA 12/97 data	AGS		
16	ICT		11/13/97	11/13/97	11/17/97	11/17/97	xxx	12/9/97	12/10/97	1/6/98	1/6/98	1/6/98	1/14/98	1/22/98	01/27/98	4 Bins less than NOAA, APM's 4 mi's wide	ICT		
27	HSV		12/2/97	12/2/97	12/2/97	12/3/97	xxx	1/13/98	1/15/98	1/15/98	1/15/98	1/15/98	1/16/98			45 Bins lower than NOAA (12/97) Large volume inhibits	HSV		
34	MLI		11/20/97	11/20/97	12/3/97	12/9/97	xxx	12/9/97	12/10/97	12/10/98	12/10/97	12/11/97		12/12/97	12/12/97	Huge GTM inhibit area, many Volume inhibit areas	MLI		
36	LIT		12/9/97	11/13/97	12/9/97	12/9/97	xxx	1/14/98	1/15/98	1/16/98	1/20/98	1/20/98				Two Large volume inhibit areas, NOAA 11/97 data used	LIT		
42	GSO		11/12/97	11/12/97	11/13/97	11/17/97	xxx	1/13/98	1/15/98	1/16/98	1/20/98	1/19/98				14 Bins less than NOAA	GSO		
44	GPT		11/11/97	12/2/97	11/11/97	12/9/97	xxx	1/14/98	1/15/98	1/19/98	1/20/98	1/20/98				27 Bins lower than NOAA	GPT		
45	SJT		11/3/97	12/2/97	11/11/97	12/9/97	xxx	1/13/98	1/13/98	1/13/98	1/14/98	1/13/98	1/28/98			20 mile wide APM, cutoff area inhibits most of the airport	SJT		
49	CAE		11/11/97	11/11/97	11/18/97	12/10/97	xxx	1/19/98	1/20/98	1/21/98	1/21/98	1/21/98	1/23/98	1/23/98	01/23/98	Dep. Inhibit area way too big, 26 Bins Lower than NOAA 12/97	CAE		
51	CHO		11/13/97	11/13/97	11/17/97	11/17/97	xxx	1/7/98	1/8/98	1/8/98	1/8/98	1/8/98				ca mismatch	CHO		
56	RME		11/3/97	11/3/97	11/7/97	11/14/97	xxx	1/14/98	1/15/98	1/15/98	1/20/98	1/16/98	1/22/98	1/22/98	01/27/98	7 Bins Less than NOAA, Overlapping APM's	RME		
57	AVL		11/10/97	11/10/97	11/11/97	11/14/97	xxx	12/8/97	12/8/97	12/9/97	12/9/97	12/11/97		12/12/97	12/12/97	Large GTM/Volume inhibit areas	AVL		
60	ELM		11/19/97	12/2/97	11/19/97	12/8/97	xxx	1/12/98	1/14/98	1/21/98	1/21/98	1/21/98	1/27/98	1/27/98		16 Bins less than NOAA	ELM		
61	TLH		1/8/98	1/8/98	1/8/98	1/8/98	xxx	1/8/98	1/13/98	1/13/98	1/13/98	1/13/98	1/15/98	1/15/98	01/20/98	DO NOT SHIP. Will be sent as new build by Ron Wimp.	TLH		
64	SAV		11/11/97	11/11/97	11/12/97	11/14/97	xxx	1/21/98	1/23/98	1/23/98	1/23/98	1/23/98				10+ bins lower than NOAA; GTM inhibit large	SAV		
65	RIC		11/13/97	11/13/97	11/17/97	11/18/97	xxx	12/4/97	12/6/97	12/6/97	12/6/97	12/11/97	1/7/98	1/8/98	12/12/97	CA Mismatch, System Parameter, Large GTM	RIC		
71	COU		11/13/97	11/13/97	11/17/97	11/17/97	xxx	1/21/98	1/22/98	1/22/98	1/22/98	1/22/98				No .STO file	COU		
72	FAR		11/20/97	11/20/97	12/3/97	12/9/97	xxx	1/12/98	1/12/98	1/12/98	1/12/98	1/12/98	1/15/98	1/21/98	01/22/98	29 Bins lower than NOAA	FAR		
73	BGM		11/13/97	11/13/97	11/17/97	11/18/97	xxx	1/7/98	1/9/98	1/9/98	1/9/98	1/9/98	1/13/98	1/15/98	01/20/98	ZMI's = 0 at 2 mi, Several Volume Inhibit Areas	BGM		
82	CKB		11/3/97	11/3/97	11/19/97	11/21/97	xxx	1/12/98	1/14/98	1/14/98	1/14/98	1/14/98	1/15/98	1/21/98	01/22/98	22 bins lower than NOAA, TWRAAA less than IFRAAA, New N	CKB		
84	MOB		11/12/97	11/12/97	11/13/97	11/14/97	xxx	1/19/98	1/19/98	1/20/98	1/21/98	1/20/98				Very Unique	MOB		
90	MGM		11/3/97	11/3/97	11/10/97	11/14/97	xxx	1/22/98	1/26/98							Large Inhibit Area, 24 Bins lower than NOAA 12/97 data	MGM		
92	MCN		1/8/98	1/8/98	1/8/98	1/8/98	xxx	1/8/98	1/12/98	1/14/98	1/19/98	1/14/98	1/15/98	1/16/98	01/20/98	ship prior to xmass break	MCN		
93	FLO		10/31/97	10/31/97	11/5/97	11/17/97	xxx	1/27/98	1/28/98	1/28/98	1/28/98	1/28/98				91 Bins less than NOAA, NOAA 12/97 data used	FLO		
95	YNG		11/20/97	11/20/97	12/3/97	12/9/97	xxx	1/21/98	1/20/98	1/21/98	1/21/98	1/22/98				36 bins lower than NOAA	YNG		
96	GSP		11/11/97	11/11/97	11/12/97	11/17/97	xxx	1/26/97	1/28/98	1/28/98	1/28/98					25 Bins less than NOAA, NOAA 12/97 data used	GSP		
100	MWH		11/3/97	11/3/97	11/7/97	11/21/97	xxx	1/29/98								5 small volume inhibit areas?????	MWH		
103	ALO		10/31/97	10/31/97	11/6/97	11/17/97	xxx	1/29/98								Bad .STO file, Large GTM Inhibit Area	ALO		
105	ERI		10/31/97	10/31/97	11/6/97	12/9/97	xxx	1/29/98								GTM Big and odd	ERI		
107	MFD		11/20/97	11/20/97	12/3/97	12/9/97	xxx									Bad .STO file, 56 bins lower than NOAA	MFD		
112	FYV		1/12/98	1/13/97	1/12/98	1/12/98	xxx									lg gtm inhibit, several bins lower than nasa	FYV		
113	SBN		1/28/98	11/14/97	1/28/98	1/28/98	xxx									Large PDR, several Volume Inhibits (found on old tape.)	SBN		
117	NMM		11/11/97	11/11/97	11/12/97	11/19/97	xxx									7 bins lower than NOAA	NMM		
119	MBS		11/3/97	11/3/97	11/10/97	12/9/97	xxx	1/12/98	1/14/98	1/19/98	1/21/98	1/21/98				Bad STO File, 14 Bins less than	MBS		
126	MYR		11/17/97	11/17/97	11/17/97	11/18/97	xxx									Large GTM inhibit areas, NOAA 12/97 data used	MYR		
127	FSI		11/19/97	11/20/97	11/20/97	11/20/97	xxx	11/20/97	11/20/97	12/8/97	12/8/97	12/11/97	1/15/98	1/16/98	01/20/98		FSI		
129	FWA		12/3/97	11/20/97	12/2/97	12/3/97	xxx									34 DTM Bins Lower than NOAA	FWA		
900	GUM		11/20/97	11/20/97	12/3/97	12/9/97	xxx	1/27/98	1/29/98							15NM GTM inhibit area, DTM bin 1800 low	GUM		
1	PPP		11/12/97	11/12/97	11/13/97	11/13/97										Check all ZMI's and primary departure area	PPP		
3	MSN		11/20/97	11/20/97	12/3/97	12/9/97											MSN		
4	RDG		11/3/97	11/3/97	1/6/98											Complete CA mismatch Ops/Lib	RDG		
5	MKG		11/3/97	11/3/97	11/17/97	11/17/97										Bad .STO file	MKG		
6	BPT		10/31/97	10/31/97	11/5/97	11/14/97										CHECK ALL ZMI'S AND SATELLITE AIRPORT AREAS	BPT		
7	BTR		11/19/97	10/31/97	11/19/97	11/17/97										Bad .STO file	BTR		
8	ROA		11/18/97	11/18/97	11/18/97	11/19/97											ROA		
9	AMA		10/31/97	10/31/97	11/6/97	11/17/97											AMA		
11	ASE		11/20/97	11/20/97	12/2/97	12/3/97										MSAW Inhibited via Waiver.	ASE		
12	ADW		1/6/98	1/6/98	1/6/98	1/6/98											ADW		
14	RNO		11/13/97	12/2/97	11/18/97	12/8/97											RNO		
15	EUG		11/20/97	11/20/97	12/3/97	12/9/97											EUG		
17	BFL		11/14/97	12/2/97	11/18/97	12/9/97											BFL		
18	LNK		11/10/97	11/10/97	11/11/97	11/17/97											LNK		
19	BOI		11/20/97	11/20/97	12/3/97	12/8/97											BOI		
20	SCK		11/19/97	11/13/97	11/19/97	11/20/97											Bad .STO file	SCK	
21	MHT		11/3/97	11/3/97	11/17/97	11/17/97		11/19/97	11/20/97	12/2/97	12/3/97	12/11/97	1/8/98	1/8/98	12/12/97		MHT		

