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NSTC GREAT LAKES, IL
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FINAL SITE RECOMMENDATIONS NS GREAT LAKES IL
4/1/2005
MALCOM PIRNIE

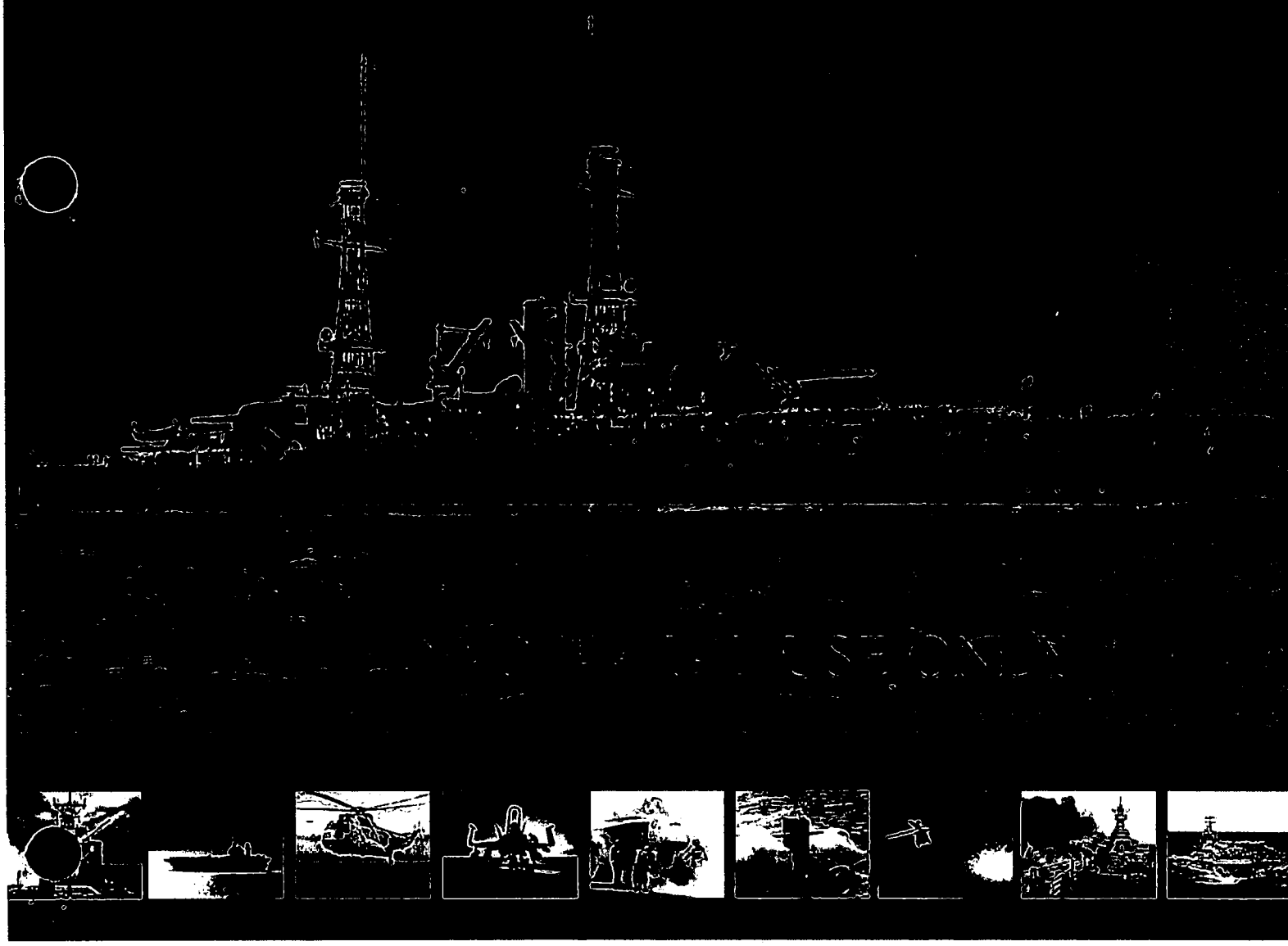
332

FINAL

Site Recommendations

Naval Station Great Lakes, Illinois
Naval Training Center Lakefront

April 2005



ENCLOSURE 1

Naval Station Great Lakes – Recommendations

The following recommendations are made for the Naval Training Center (NTC) Lakefront, located at Naval Station Great Lakes, Lake County, Illinois. The recommendations are based on data presented in the Final Water Area Munitions Study (WAMS) dated April 2005, prepared by Malcolm Pirnie, Inc. If additional data are discovered, the recommendations should be reviewed and amended to the report appropriately. Recommendations are presented for munitions and explosives of concern (MEC) and munitions constituents (MC) for the Site.

NTC Lakefront

Data Summary

The NTC Lakefront is approximately one acre of land with a range fan extending approximately 2190 square miles over Lake Michigan. The NTC Lakefront is located on the edge of Lake Michigan in the eastern portion of the installation. The firing points are located approximately 25 feet from the water's edge. According to installation drawings, the NTC Lakefront operated during World War II (1943 through 1945) as demand for trained Anti-Aircraft (AA) personnel increased over the war campaign. The NTC Lakefront was used for training AA personnel and testing new AA munitions. Training was conducted night and day to enhance the skills of AA program personnel who would target balloons and cable-drawn targets with 20mm, 40mm and 1.1-inch High Explosive AA munitions. Historical documentation and Naval Station Great Lakes personnel indicate that no other explosives or munitions were used at the site, and that the site was not used for any other purposes.

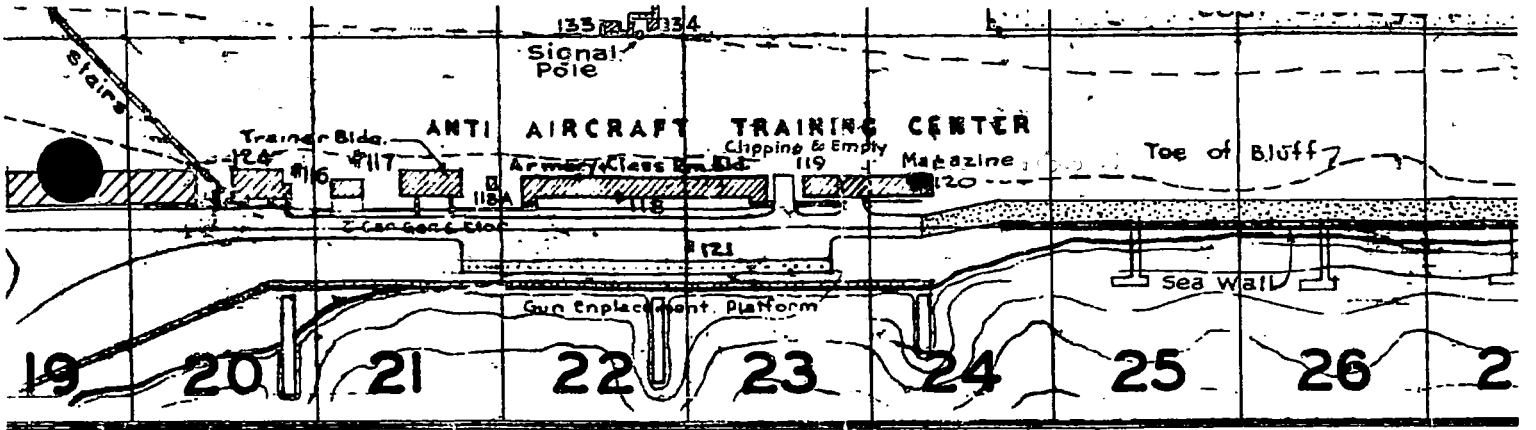
A RAC and Site Prioritization score was not developed for the NTC Lakefront due to evidence supporting that it is unlikely that buried or expended munitions are located on the land portion of the site and the fact that RAC and Site Prioritization scores are not completed for WAMS. The range fan is encompassed by Lake Michigan; therefore, the likelihood of expended munitions to exist on the land portion of the site is not feasible. A storage building designated for spent munition shells and misfires was located on the site and because this was a testing facility, the number of misfires were reported to the Readiness Section Commander in Chief for the U.S. Fleet. The fact that the Anti Aircraft Training Center, adjacent to the firing points, maintained a Clippings and Empties building along with an Armory, indicates that burial pits are unlikely to

exist at this site. Enclosure 2 illustrates these conclusions, providing a cross-section of a 1945 installation map with the location of the NTC Lakefront and a typical monthly report of progress at the training site. The area is currently used as a fuel oil tank farm for the adjacent power plant. Future use is not expected to change.

Recommendations

No Further Action (NFA) is recommended for the NTC Lakefront land portion with respect to MEC and MC, since historical use and evidence as discussed throughout the PA report indicate that no MEC is present at the land portion of the site and the area that is likely to have MC contamination is the targeted area of the range. There is no recommendation for the water portion of the WAMS at this time. The Anti Aircraft Training Center, adjacent to the firing points, maintained a Clippings and Empties building along with an Armory, which concludes burial pits are unlikely to exist and munitions on the land portion were likely accounted for and disposed of in proper manner.

	NTC Lakefront	
Options	**MEC**	**MC**
No Further Action	X	X
Site Inspection		
Remedial Investigation		
Emergency Response		



MAP OF
U. S NAVAL TRAINING CENTER
GREAT LAKES ILL.
AREA EAST OF SHERIDAN ROAD
SHOWING CONDITIONS ON
JAN. 1, 1945

SCALE OF FEET

200 100 0 200 400 600

P.W. DRAWING NO.
508-90G

SHEET 1 OF 3 PUBLIC WORKS OFFICER

BLDG. NO.	LOCATION	DEP'T OCCUP'G	USE
MAIN STATION (con't)			
76	Q-14		
90	J-34		
90A	J-35		
93	G-19		
94	I-19		
95	M-18		
99	J-17		
100	F-12		
101	I-12		
102	D-17		
103	J-18		
104	I-18		
104A	I-18		
A to D	M-15		
105	M-18		
106	K-18		
107	H-37		
107A	H-37		
108	M-13		
109	M-13		
109A	M-13		
110	I-12		
111	R-15	R.T.&S.S.D.	Recreation Bldg.
111A	S-16	S.S.D.	Garbage House
112	O-18	C.D.	Cold Storage
113	A-18	P.W.D.	Coal Storage
114	P-18	F.L.	Bos'n Ster. Bldg.
115	I-16		Reviewing Stand
116	B-21	A.A.S.	Garage & Sterage
117	B-21	A.A.S.	Machine Gun Tr. Bldg.
118	B-22	A.A.S.	Armory & Cl.Rm.Bldg.
118A	B-22	P.W.D.	Transformer Vault
119	B-23	A.A.S.	Clipping & Empties
120	B-24	A.A.S.	[illegible]
121	A-22	A.A.S.	Gun Empl. Platform
122	M-18	D.D.	Disbursing Off. Bldg.
123	M-12		Decontamination Bldg.
124	B-20	A.A.S.	Visual Trainer Bldg.
125	E-2	P.M.	Sentry Tower
126	A-17	P.M.	Sentry Tower
127	A-27	P.M.	Sentry Tower
128	A-31	P.M.	Sentry Tower
129	O-17		Garage & Bos'n Locker
CAMP BRONSON			
200	I-23	Var.	Administration Bldg.
201	I-19	P.M.	Brig

BLDG. NO.	LOCATION	DEP'T OCCUP'G	USE
CAMP BRONSON (con't)			
308	K-26	S.S.	Barracks
309	L-26	S.S.	Shop Bldg.
310	L-26	S.S.	Math. Drafting Bldg.
311	M-25	S.S.	Class Rm. Bldg.
312	M-27	S.S.	Class Rm. Bldg.
313	O-28	P.M.	Sentry House
401 to 408	K-29	S.S.	Barracks
409	M-30	C.D.	Subsistence Bldg.
409A	N-30	C.D.	Garbage House
409B	N-31	C.D.	Trash House
410	N-30	C.D.	Cooks' Qtrs.
411	M-29	S.S.	Barracks
412	M-29	Per.	Barracks, OGU
413	N-28	S.S.	Class Rm. Bldg.
414	N-31	S.S.	Storehouse
CAMP PAUL JONES			
500	I-32	S.S.	Dr. Hall & Adm. Bldg.
501 to 508	G-29	S.S.	Barracks
509	I-29	C.D.	Subsistence Bldg.
509A	J-30	C.D.	Garbage House
509B	J-30	C.D.	Trash House
510	I-28	S.S.	Barracks
511	I-31	Per.	Barracks

March 1, 1945

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ANTI AIRCRAFT TRAINING CENTER
GREAT LAKES, ILLINOIS

NC113-7/A9-4/P11-1
(012-45)/JCH:jpr

NC113-7

1 March 1945

C O N F I D E N T I A L

From: Commanding Officer.
To : Commander in Chief, U. S. Fleet, Readiness Section.

Via : Commandant, NINTH Naval District.

Subj: Report of Progress and Activities, February 1945.

1. TRAINING PROGRAM

(a) A summary of all types of training in the reporting period is presented:

GUN	OFFICERS	MEN
20MM	82	11251
40MM	83	11179
.50 CALIBER	19	0
.30 CALIBER	19	0
MARK 14 SIGHT	81	5622
MARK 51 DIRECTOR	19	139
SMALL ARMS	49	0
	352	28191
		352
Total instructed in all types		28543
Total number of different officers and men instructed during February 1945		11471
Total instructed in all types since commissioning		368390

(b) Only 3829 of 9458 recruits, instructed in 20mm gunnery, received dry tracking and firing on the Mark 14 Sight, as a number of sights have been shipped to the Navy Yard, Philadelphia, Penna., for repair. With the expansion of the 20mm gun line, it was found that the electrical power supply was overloaded, thus precluding the use of all sights on all guns at the same time. However, all LST personnel and Service School GM and FC students received the full Mark 14 Sight program.

0305-45-1457

RG 74, BuOrd
Constr. + Proc. 1945
Box 1256, NC113-7

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1 March 1945

C O N F I D E N T I A L

Subj: Report of Progress and Activities, February 1945.

(c) Additional training has been devised for LST's in that concentrated periods of firing and operational and maintenance training are given to crews as availability permits. The following is a summation of the number of [illegible] trained as crews:

SHIP	20MM	40MM	No. of Days Trained
LST-1107	52	30	2
LST-1108	50	35	5
LST-1109	46	37	3
LST-1125	51	45	2
LST-1126	57	45	4
Totals	256	192	16

2. GUNNERY EXERCISES

(a) Firing was conducted 51 times during the reporting period. Improved weather made possible greater effectiveness in firing periods. Each period includes the conduct of both 20mm and 40mm firing.

FIRING PERIODS	SCHEDULED	COMPLETED	CANCELLED
Morning	28	19	9
Afternoon	28	21	7
Twilight	20	11	9
	76	#-51	0-25

#			0	
Sleeve	42 periods	:	Inclement weather	24 periods
Drone	4 periods	:	Ice and snow preven-	
Balloons	3 periods	:	ted tow plane take-	
40MM Bursts	2 periods	:	off	1 period
Totals	51			25

(b) Dry-tracking was conducted 29 times during the reporting period for a total of 28 hours. During this exercise, SNV planes were used as points of aim:

DRY TRACKING PERIODS	SCHEDULED	COMPLETED	CANCELLED
Morning	24	14	10
Afternoon	24	15	9
Totals	48	29	19
Cancelled due to inclement weather			19

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1 March 1945

C O N F I D E N T I A L

Subj: Report of Progress and Activities, February 1945.

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3. VISITORS

Visitors at this activity during the month of February 1945 were:

Rear Admiral Henry F. Bruns, Superintending Civil Engineer, Area Six - in company with Captain K. B. Bragg, CEC, USN Ninth Naval District Public Works Officer - on 23 February 1945.

Lt. Cdr. J. C. Troxel, MC, USN, District Medical Chemical Warfare Officer, Ninth Naval District, on 23 February.

Lt. Cdr. T. Hart, A-V(S), USNR, Administrative Command, U. S. Naval Training Center, Great Lakes, Ill., on 28 February.

4. PERSONNEL CHANGES

Received	Transferred
FC1c - 1	GM2c - 5
FC2c - 1	GM3c - 8
GM2c - 2	MM2c - 1
GM3c - 3	AMM3c - 1
MM2c - 2	S1c - 3
S1c - 15	18
S2c - 1	
25	

5. ORDNANCE TESTS

At the present time the following material is being tested at this activity:

(a) Four (4) 40mm Experimental Flash Eliminators (SK-121982-1) complete with Front Gasket (SK-121982-2) and Rear Gasket (SK-121982-5) are being tested on 40mm Twin and 40mm Quad guns. A preliminary indication is that the Experimental Flash Eliminators conceal the gun flash considerably more than the old-type.

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1 March 1945

C O N F I D E N T I A L

Subj: Report of Progress and Activities - February 1945.

(b) Five hundred and fifteen Experimental Recoil Buffer Springs No. SP-4290 (299676-7) made of Chrome Silicon Wire, are being tested upon the request of the U. S. Naval Ordnance Plant, Centerline, Michigan. At the present time indications are that the experimental type of spring is not standing up as well as the regular-production springs.

(c) This activity has aboard ten (10) 20mm Cyclic Rate Controls Mark 2, Mod 1. A small amount of use has been made of this control because of the limited electrical power serving the firing line. Greater use will be made of this device as soon as materials are received with which to install a greater supply of power.

6. CONSTRUCTION

During the reporting period the original section of the clipping shed was remodeled to conform to the more recent addition, providing greater bench space and balancing the number of loading trays with the number of 20mm gun mounts on the firing line.

7. APPENDIX

I	TRAINING REPORT
II	TRAINING SUMMARY
III	AMMUNITION REPORT
IV	MATERIALS RECEIVED AND RETURNED
V	MOTION PICTURE FILMS RECEIVED AND RETURNED
VI	AMMUNITION QUALITY EVALUATION REPORT
VII	TDD MONTHLY REPORT

8. TRAINING REQUESTS ACCOMPLISHED

All requests for training have been honored and accomplished during the reporting period.

JOHN C. HICKMAN

Encl: HW
1. Appendices I to VII.

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R E S T R I C T E D

4. All split cases are splits occurring at the top of the cartridge case unless otherwise indicated. Splits at the base will be called base splits, splits in the center will be called body splits.

5. The 40mm misfires occurred when rounds of lot UB-1109-TEI-44 were fired to obtain 3 samples of misfires for the Bureau of Ordnance. As soon as 3 samples were obtained this station ceased firing this lot and returned unfired rounds to N.A.D., Crane, as unsuitable for firing.

6. The following symbols are being used in this report.

P-h -- High order premature

MF -- Misfire

HF -- Hangfire

SC -- Split case

PP -- Pierced primer

BP -- Blown primer - no jam

BPj -- Blown primer causing a jam

OC -- Oversize case - failed to chamber

SR-a -- Short recoil - case returned to chamber

SR-b -- Short recoil - case caught between face piece and breech casing

SR-c -- Short recoil - gun failed to recock after last round

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R E S T R I C T E D

7. Detailed analysis of malfunctions.

(a) 20mm HE

Lot	Rds.Fired	Miscellaneous	MF	SR a	SR b	SR c	SC	PP	BP	BP1
WC-199-S	9,160		1	1	18	5				
V - 2G	4,680				4					
- 3G	46,620	1 bbl.P(or det. of prop.)	10		28	2				
- 3L	44,820		2		32	2				
- 3M	46,920		2	12	28		10			
- 3N	45,720	1 bbl. P.	1	5	20	1	2			
- 3O	48,880		1	2	23		3			
- 3P	46,260	1 SC was at base	2	5	37	2	4			
- 4A	40,500		1	1	14		1			
- 4B	48,060	1 HF (10 sec.)	1	4	33	5	1			
TPC-943-E	49,500	BP's with old face piece		1	24		3		6	
-943-F	40,320	12 BP's with old face piece		2	52	4	2		13	1
-943-G	18,000				7	2				
Mixed(apparently reworked by St. J)	8,280	Loose fuzes & projectiles, inset primers-44,280 rds. returned to Crane as unsafe for firing.	7							
Total HE	481,508		28							

(b) 20mm HEI

NFCh-17-C	29,340				4					
-82-O	54,900		4	2	16	1	4			
Total HEI	84,240		4							

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R E S T R I C T E D

7. Detailed analysis of malfunctions. (Con't.)

(d) 20mm HET

Lot	Rds. Fired	Miscellaneous	MF	SR a	SR b	SR c	SC	PF	EF	EP 1
2B-693-NFH-44	41,220		2		31		10			
-734-	31,280	9 "Type 1" HE	2	6	80	2	37			
-735-	41,220	8 "Type 1" HE	4	13	45	13	10			
NFH-1829	29,880			9	46	1	2		22	
-1835-	41,220	1 HE (sec.)		4	78	4	3		9	1
NF-1399-	360	None					1			
-1403-	540				6					
NFC-77-A	18,360		1		5	2				
-77-Q	28,800									
-78-D	50,040									
-78-E	18,000									
-79-H	11,340		1	2	3					
-79-I	50,040		3	2	14					
-79-J	11,880		1		4					
-80-E	23,220	Split cases were in body	1	3	16		4			
NFCh-24-C	50,040		3	2	54	6	1	2		
-25-C	50,040	1 P-h (Bbl.)	5	1	66	4	2			
-25-F	50,040	1 Cook off (2½ Min.)	4	6	55	2	2			
-27-K	13,320				12					
-28-G	46,800		1	4	32	1				
Total HET	607,640		28							
Total (20mm)	1,173,388	4 Bbl. P's.	60							

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R E S T R I C T E D

7. Detailed analysis of malfunctions. (Con't.)

(d) 40mm HETSD

Lot	Rds.Fired	Miscellaneous	MF Fired 2nd. attempt	MF Never Fired	P-h	OO
UB-1057-TEI-44	8,096					1
-1070-	8,096	None				
-1078-	3,712	None				
-1088-	3,308	None				
-1096-	1,600	None				
-1100-	11,810					3
-1104-	16,672				1	
-1109-	696	Fired to obtain misfired rds. for BuOrd.		3		
-1110-	1,600	None				
-1112-	5,808	1 SC (1½ split near base)				3
-1114-	1,600	None				
-1117-	1,600	None				
-1118-	10,464					2
-1121-	14,736	None				
-1123-	608	None				
-1126-	1,760	None				
-1127-	1,600	None				
-1128-	1,600	None				
-1133-	1,984	None				
Total (40mm)	93,350		None	3	1	9

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MONTHLY OPERATIONAL AND STATUS REPORT
TDD TARGET AIRPLANES
(OPERATIONAL)

C O N F I D E N T I A L

Flight No.	Date	Nature of Flight	Hours Flown	Firing Activity	No. and Type Runs	Disposition of Target
I	2-13-45	Firing practice	.10 hr.	AATC Great Lakes, Ill.	*2 Runs	Chute popped when hit was scored on fuselage. Chute lost.
II	2-13-45	"	1 hr.	"	*21 Runs	Popped chute at secure. Chute beyond repair.
III	2-27-45	"	.50 hr.	"	*7 Runs	Lost to gunfire.
IV	2-28-45	"	.20 hr.	"	*4 Runs	Antenna shot off. Chute beyond repair
V	2-28-45	"	.10 hr.	"	*1 Run	Chute popped when tail was hit.
VI	2-28-45	"	1 hr.	"	*15 Runs	No damage.
Total 6			3.30			1 Expended 3 damaged but repairable.

*All slightly diving and crossing runs.

1. No. of targets on hand. 36
2. No. of targets ready. 33
3. No. of targets expended last month. 1
4. Tabulation of all spare parts peculiar to the TDD target, catapult, and transmitting equipment expended during past month.

Coils	2	Engines	2
Parachutes	4	Gas Tanks	1
Wings	5	Props	1
Fuselages	1	Servos	2
Receivers	2		

APPENDIX VII-1

APPENDIX VII-1