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HISTORY OF THE ARMY SECURITY AGENCY AND SUBORDINATE UNITS

Fiscal Year 1953

VOLUME II - Technical Operations

Declassified and Approved for Release by NSA on 10-12-2016 pursuant to E.O. 13526, MDR Case # 62311



Prepared by the Assistant Chief of Staff, G2

1957

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I. FOREWORD

This, Volume II of two volumes setting out the history of the Army Security Agency (ASA or the Agency) in fy 1953, has to do expressly with the Agency's conduct, from 1 July 1952 to 30 June 1953, of communications intelligence (COMINT) for the Army and the National Security Agency (NSA). In this, as in fy 1952, emphasis had been given the Far East--ASA Pacific; for while the Agency was building strength generally, conflict in Korea, now in its third year, continued to draw the emphasis of Agency planners. The volume, in its discussion of mission performance of ASA mobile units and NSA field stations¹ manned by ASA personnel, is intended as a practical addition to a continuing series of annual reports the guiding purpose of which is to point the way in future COMINT planning and instruction.

Data for this report has been gathered from records, reports, and correspondence resulting from requirements on commanders of ASA units in every part of the world. Controversial information has been resolved through discussion with qualified military and civilian counsel. Special authority and methods of compilation are contained in AR 220-345, Subj: "Field Organizations, Unit Histories," 18 October 1954; DA Pamphlet 20-200, "Guide to the Preparation of American Military History," August 1951; "Specifications for Annual Historical Reports," Hq ASA, 21 May 1956; SR 320-50-1, Subj: "Military Terms, Abbreviations, and Symbols," 23 November 1953 to include Change 1, 28 October 1954, and Change 3, 8 January 1956; and other memoranda applicable to the Agency's historical program.

1. FS 8615 AAU is one not discussed in this volume; it remains exempt from a formal accounting of its activities.

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It is intended that dissemination of information contained herein be handled in strict accordance with requirements set forth in the DA Regulation "Security and Dissemination of COMINT (U)," dated 14 February 1956.

Cross references at the end of unit summaries in this volume indicate the first page of supplementary, administrative information concerning the unit in Volume I.

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II. BACKGROUND

In a rebuilding program now two years in the process and, by original plan, two years short of deadline, the close of fy 1952 saw ASA progressing in nearly every respect. A few deficiencies remained--in Germany and Japan, for example, fixed intercept positions had actually decreased in number--but overall, and particularly in the Far East where Korean fighting still went unabated, the Agency was growing stronger.

A summary of the Agency's position--first by units and positions, then personnel, then by equipment--on 30 June 1952 follows:¹

Units and Positions

TD Units: 30 June objective:	34
Activated by 30 June:	34
Required by the end of fy 1954:	44
Field Stations: 30 June objective:	13
Activated by 30 June:	13
Required by the end of fy 1954:	17

Note: Plans were for four additional stations in the United Kingdom, Italy, Germany and Turkey.

Fixed Intercept Positions: 30 June objective:

Installed--that is, ready to operate save only for mission and personnel--by 30 June:

Operating by 30 June:

Required by the end of fy 1954:

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1. Ann Hist, ASA & Subordinate Units, Vol II, fy 1952, pp10-12;
Qtrly Rept, ASA Programs, 4th Qtr, fy 1952, pp6-9.

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Note: The number of fixed positions originally called for by the end of fy 1952 was . The reduced goal resulted from delay in the construction of FS 8611 at Baumholder, Germany.

Mobile intercept positions: 30 June objective:

Installed by 30 June:

Operating by 30 June:

Required by the end of fy 1954:

DF Units: 30 June objective:

Installed by 30 June:

Operating by 30 June:

Required by the end of fy 1954:

Personnel

Here, while large numbers of personnel had been added, many had not yet been trained; hence varying shortages of intercept operators, translators, and maintenance men remained. Greatest progress was in Korea, where DA civilians, many of them already technically proficient, had been recruited from Formosa.

Equipment

Greatest emphasis was on research and development and, with Korea in mind, on low level and direction finding facilities. By the fiscal year's end, all low level teams in Korea had been supplied with SCR-300s and BC-683s or 603s.

In operations, the principal achievement had been the introduction of low level intercept in the forward areas of Korea. Ten low level teams made up of personnel of the 303d, 304th, and 301st CRBs were operating there by the close of the fiscal year. Another important develop-

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ment in operations in Korea, was on-line translation by field units. Instrumental in this was a new IBM spot-checking process that permitted personnel with even limited linguistic training to get the import of a message at a glance.

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III. OPERATIONAL HIGHLIGHTS (GLOBAL)

On 1 July 1952 the Agency entered a period that in many respects was to be little different from that just past. There was still fighting in Korea, within a few miles of the 38th parallel, and it continued to be indecisive. Cease-fire negotiations, begun a year earlier, dragged on the year long.

Moreover, the trouble in Korea threatened anew to spill over nearby-- in Indo-China, for example, and Formosa, where the Chinese Nationalists no longer found the US Seventh Fleet standing between them and a long-considered move against the Chinese mainland. The trouble, in fact, continued to feed anxiety the world over; as far away as Europe, the free West would be pressing hard to put through a European Defense Community or its equivalent.

Against the unfolding of these events--and because of them--the Agency went on in fy 1953 to duplicate much of the pattern of a year earlier. There was continued expansion--more tactical units, more personnel, more equipment. Emphasis continued on Korea, though expansion was worldwide. Progress again was fast--in some cases, faster even than programmed. But in one respect, at least, the pattern was uninterrupted by the fiscal year's end, the Agency could look back and find that it had become stronger and more the master of its mission than ever before in its history.

This was its position:¹

1. ASA Qtrly Program Review, 4th Qtr, fy 1953, pp3-13, 31, 32.

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~~TOP SECRET~~Units and Positions

T/O&E units: 30 June 1953 objective:	36
Activated by 30 June:	36
Required by the end of fy 1954:	40
Field Stations: 30 June 1953 objective:	13
Activated by 30 June:	13
Required by the end of fy 1954:	16

Note: Eliminated from the fy 1954 field station requirement of fy 1952--17 stations in all--was the installation proposed for Germany. As of 30 June 1953, base-rights negotiations for the three remaining stations had gone this far:

United Kingdom: The British Government had agreed to the establishment of FS 8613 AAU on its territory; all that remained for ASA, which was conducting on-site surveys under the supervision of USCINCEUR, was to make a final site determination.

Italy: A joint Army-AF site survey, approved by the Italian Government, was in progress.

Turkey: The final statement of base and military operating rights had been approved by ACoFS, G2, DA, and forwarded to the State Department for final negotiation with the Turkish Government.

Fixed intercept positions: 30 June 1953 objective:	
Installed by 30 June:	
Operating by 30 June:	
Mobile intercept positions: 30 June 1953 objective:	
Installed by 30 June:	
Operating by 30 June:	
Required by the end of fy 1954:	

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The Agency more than doubled its strength: where [] mobile positions had been installed by 30 June 1952, [] were in and ready for operations by 30 June 1953; where [] positions were operating on 30 June 1952, [] were operating on 30 June 1953. While in installed positions the Agency was [] short of the [] figure, this requirement (unchanged for fy 1954) was for operating positions, in which the Agency was still [] short.

DF units:	30 June 1953 objective:	36
	Installed by 30 June:	31
	Operating by 30 June:	26
	Required by the end of fy 1954:	36

Here, too, progress was good. In installed units the Agency increased its strength over the year from 15 to 31; in operating units, from 15 to 26.

Personnel

Though the Agency continued to add personnel in fy 1953-- falling short of its programmed ceiling by less than 300 and surpassing by more than a thousand the 11,951 "programmed assigned" figure--it still was faced with shortages of technical personnel. The most critical were in MOS's 717, 766, and 740--Morse interceptors and high, intermediate, and low-speed radio operators.

Equipment

Fy 1952's emphasis on low level and direction finding facilities was carried over, and, particularly in the late months of fy 1953,

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more and more time was spent on machine aids--in modification and installation of IBM machines.

Operations

DF: With 13 DF units established at fixed stations, providing data on strategic targets, and 25 deployed with mobile companies, covering tactical problems, the Agency by the close of the report period had achieved optimum output. The job now was improvement of quality.

[] In general, [] results in the Far East continued good, while in Europe they deteriorated a little in both quality and quantity.

COMINT processing: In the course of the year a number of COMINT-producing units were delegated responsibility for control and processing of traffic intercepted by their subordinate units. Operational control on assignment changes and analysis conclusions continued with NSA.

One of the large projects undertaken in connection with COMINT processing in fy 1953 was a joint NSA-ASA staff study in which prime attention was given to (1) unnecessary duplication of effort, (2) wordy reporting, and (3) lack of report cohesion. The study went far to correct these deficiencies.

As to cryptanalysis (C/A) and traffic analysis (T/A) in Europe during the report period the first saw limited progress while the latter developed rapidly. ASAE's C/A, like its voice effort short on technical supervision, was under joint ASAE-NSA study at the fiscal year's end.

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Low level voice: In LLV, because of replacement of old equipment by new, and despite insufficient trained personnel and difficulty in intercepting ground force military traffic, the Agency was moving ahead as planned. By June, a total of [] low level positions was in operation.

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Special Projects: Of these, the most important was the development [] in both Europe and the Far East. In ASAPAC, progress was held up slightly by lack of equipment.

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IV. INDIVIDUAL UNIT OPERATIONS (AREA)

A. Continental United States

1. Field Station 8601 AAU, Warrenton, Virginia

Despite a general reorganization in January 1953, which replaced the Office of the Chief of Operations by a Field Operations Branch, FS 8601's operational mission continued unchanged. As before, NSA assigned the intercept mission and received all intercepted traffic.¹

All matters concerning assigned mission remained in the hands of Operations Service Section, which comprised four units: Analysis, Morse, Non-Morse, and Communications.²

Focal point of operations, Analysis unit, was accountable for development, assignment, and control of the mission's components. These included general search, national nets, scanning, and traffic processing.³ General search assignment remained top coverage priority throughout the fiscal year.⁴

National net assignments called for continued observation of the

[redacted] Besides the addition of an undetermined number of new schedules, of which forty were recovered, the net's rota was assumed to contain approximately 1,500 frequencies.⁵

Early in October 1952 a [redacted]

[redacted] --was assigned full coverage.

1. Comd Rept, FS 8601 AAU, fy 1953, p38.

2. Ibid. p39.

3. Ibid. pp42, 44, 47, 48.

4. Ibid. p42.

5. Ibid. pp45, 46.

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High-powered, slow-speed transmissions of the "broadcast" type facilitated reception and copy. The net was dropped on 19 December.

Four months later, [redacted] military links were taken off continuous assignment, as was a [redacted]

The latter continued to be monitored, however, for student operator training.¹

On 3 December a Venezuelan guerrilla link between Caracas and Costa Rica was assigned as last priority of full coverage, a status it held the rest of the year. By June 1953 the link had yielded a total of 96 msgs, under receiving conditions that ranged from good to very poor.

On 28 December a Cuban guerrilla link between Havana and Mexico City-- [redacted] --was heard at FS 8601 for the first time. Four months later it was given second priority of full coverage. Adverse atmospheric conditions, plus apparently poorly trained transmitting operators, combined to hold total intercept to 191 msgs.²

Seventeen links were assigned for scanning during fy 1953. They follow:³



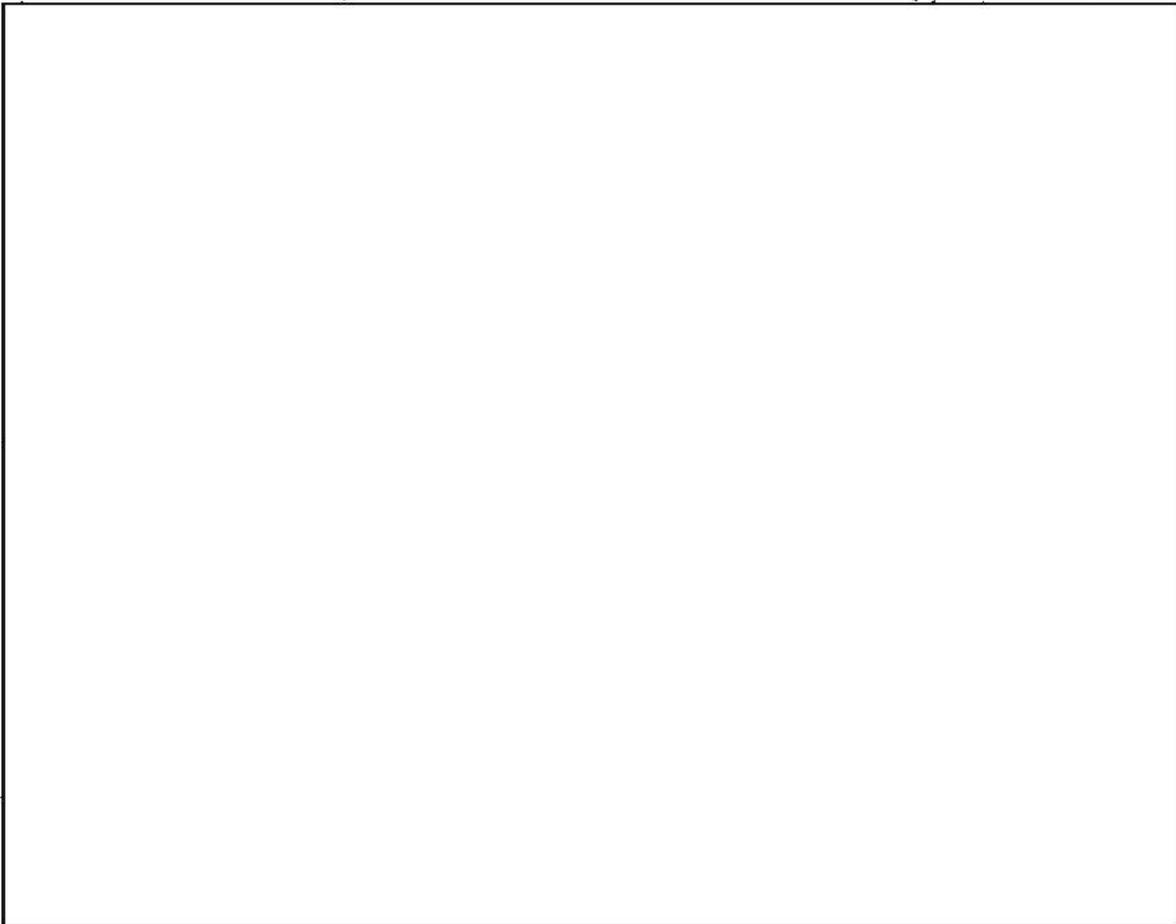
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1. Comd Rept, FS 8601 AAU, fy 1953, p46.
2. Ibid. p47.
3. Ibid. p48.

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In mid March 1953, Morse unit moved into a new, larger operations building. For manual Morse, it meant an increase of three operator's positions--from [redacted]

Coincident with the move, but unimpeded by it, was the assignment to Morse automatic section (M/A) of a special [redacted] [redacted] project. For ten days, traffic between [redacted] [redacted] was given top priority, the assignment was then dropped. Copy was forwarded immediately to NSA.³

1. Comd Rept, FS 8601 AAU, fy 1953, p48.
2. Ibid. p49.
3. Ibid. p51.

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On 9 May 1953, M/A was assigned to copy stations in []
[] that were working specified [] In addition to this'
and M/A's continuing [], the section remained alert for any
unlisted stations using Morse automatic.¹ For possible future assign-
ments all discernible [], along with their operating charac-
teristics, were logged in a card file.²

Non-Morse unit's move to the new operations building, in April, was
not carried off so easily. Installation of CXOF terminal equipment, for
example, interrupted for several days the monitoring of [],
[] transmissions.

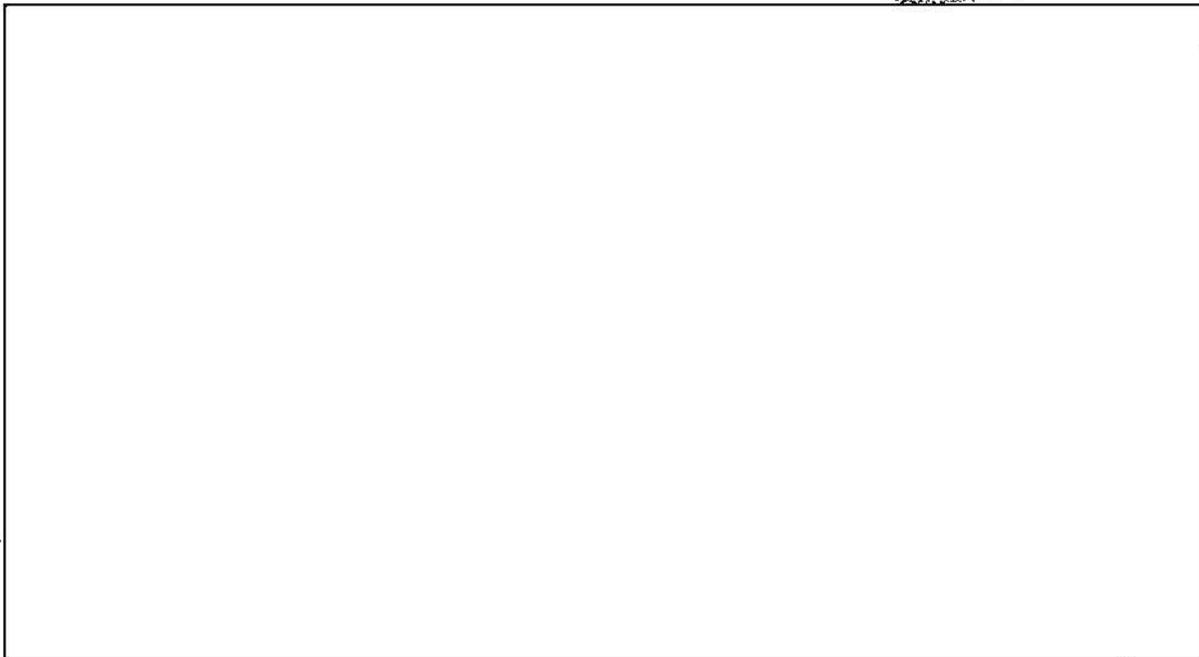
Two special search missions assigned non-Morse during fy 1953, yielded
negative results. The first, in August 1952, involved []
[] the second, assigned in March 1953, searched []
[]

Early in December an unknown type of transmission appeared on one side
of a Russian double-frequency shift emission. Later it was identified as
"flexible multiplex," using either three, four, or six channels. Though
it was nearly a month before any traffic could be broken out of the fac-
simile copy, it was not until February that the system, whose traffic was
largely commercial, became significantly active. Thereafter, it was heard
nearly every week.³

Non-Morse continuing assignment for fy 1953 saw little change. It
included:⁴

1. Comd Rept, FS 8601 AAU, fy 1953, p51.
2. Ibid. p52.
3. Ibid. pp52-53.
4. Ibid. pp53-54.

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Non-Morse operated with the following equipment during fy 1953:¹

1. [redacted] single-channel positions with associate equipment
2. [redacted] 2-channel positions with associate equipment (ASAN6A)
3. [redacted] 2-channel position (DEV-24)
4. [redacted] 3-channel position (Stone) with associate equipment
5. [redacted] multi-channel (2-6-9) positions (Rock) with associate equipment (One auxiliary distributor drum for 3B, 4B, 4 Ch, 8 Ch) (Russian)
6. [redacted] CXOF position (multiplex)
7. [redacted] ASAN5A (Golfballs) for DFS transmissions
8. [redacted] channel-separators (homemade) of DFS transmission
9. [redacted] RD-2/GXR Hellschreibers
10. [redacted] facsimile recorder (AX-9)
11. [redacted] Fairchild precision disk recorder

1. Comd Rept, FS 8601 AAU, fy 1953, pp54-55.

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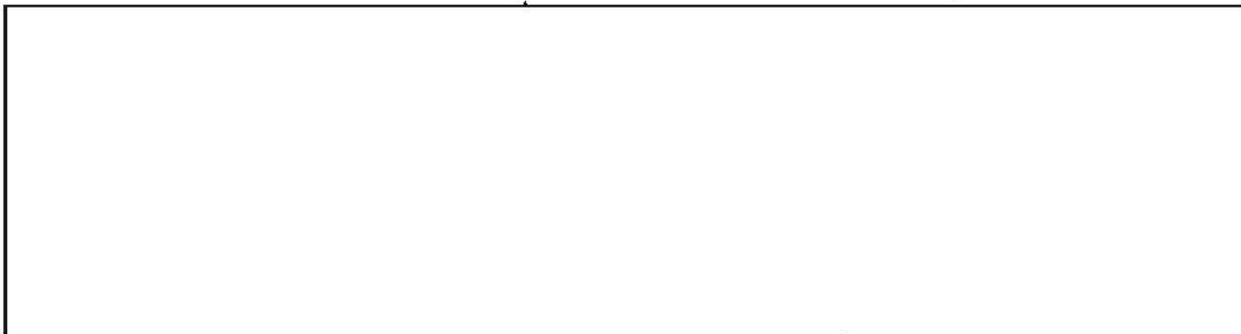
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P.L. 86-3612. Ampex magnetic tape recording positions13. sound spectograph (Sonograph).REF: VOL. 1 P. 58

2. Field Station 8602 AAU, Petaluma, California

As in fy 1952, Operations Division, FS 8602, performed under the operational control of DIRNSA.¹ The division, in turn, controlled five sections- Manual Morse, Automatic Morse, Radio Printer, Traffic Analysis, and Maintenance and Supply- along with the Communications Center, and a special survey team. Their missions, interrupted from time to time, remained substantially the same during the report period.²

The mission of Manual Morse, was concerned with Russian target transmitters situated in the Far Eastern military district of Russia. Assigned circuits included military, military air, civil air, air defense, police, and weather nets, from which the section intercepted traffic ranging from a low of 392 msgs per week to a high of 1,296.³

Automatic Morse mission dealt with the intercept of certain circuits, principal of which were the following:⁴



1. Comd Rept, FS 8602 AAU, fy 1953, p21.
2. Ibid. pp22-39.
3. Ibid. p22.
4. Ibid. p23.

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[Redacted]

This assignment was modified somewhat in December 1952 with the deletion of the [Redacted] and the addition of a [Redacted]. Five months later three more [Redacted] were added. [Redacted]

From 20 November to 17 December 1952, circuits [Redacted] [Redacted] were taken on as special assignments. And in June 1953, links from [Redacted] and from [Redacted] were added as top priority. From these latter, all traffic concerning the [Redacted] was forwarded by teletype under "Operational Immediate" precedence.¹

Radio Printer Section continued to intercept and copy frequency shift keyed, double-frequency shift, on-and-off keyed multi-channel and single-channel R/P signals, radio facsimile, Hellschreiber, voice, and high-speed Morse.²

As of 30 June 1953, the section's Russian commercial mission included the following links:³

[Redacted]

1. Comd Rept, FS 8602 AAW, fy 1953, p24.
2. Ibid. p24.

[Redacted]

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A continuing Russian service printer assignment covered two categories-- circuits parallel to assigned manual links and general search. Majority of intercept was taken from military circuits controlled [redacted] [redacted], and military air circuits controlled [redacted]

Radio Printer personnel also processed all commercial multiplex and simplex traffic intercepted. Their output of messages intercepted and scanned during the year was 1,264,126 of which 470,226 were forwarded to NSA.

Traffic Analysis Section continued to analyze and interpret the product of the intercept sections--not only for NSA but for the sections themselves, for more efficient mission coverage.²

Most extensively covered of all mission assignments was Russian general air. Of a total of 10,942 messages intercepted during the year, the majority came from ten circuits controlled by [redacted] and by substations at [redacted].³

The Russian [redacted] assignment, by contrast, consisted of little more than general search for nearly half a year. Then, in November 1952, two circuits-- [redacted] --were assigned. With ionospheric conditions working against reception, however, the circuits were dropped seven months later, and Russian [redacted] was restored to general search. Intercepted messages came to 493.⁴

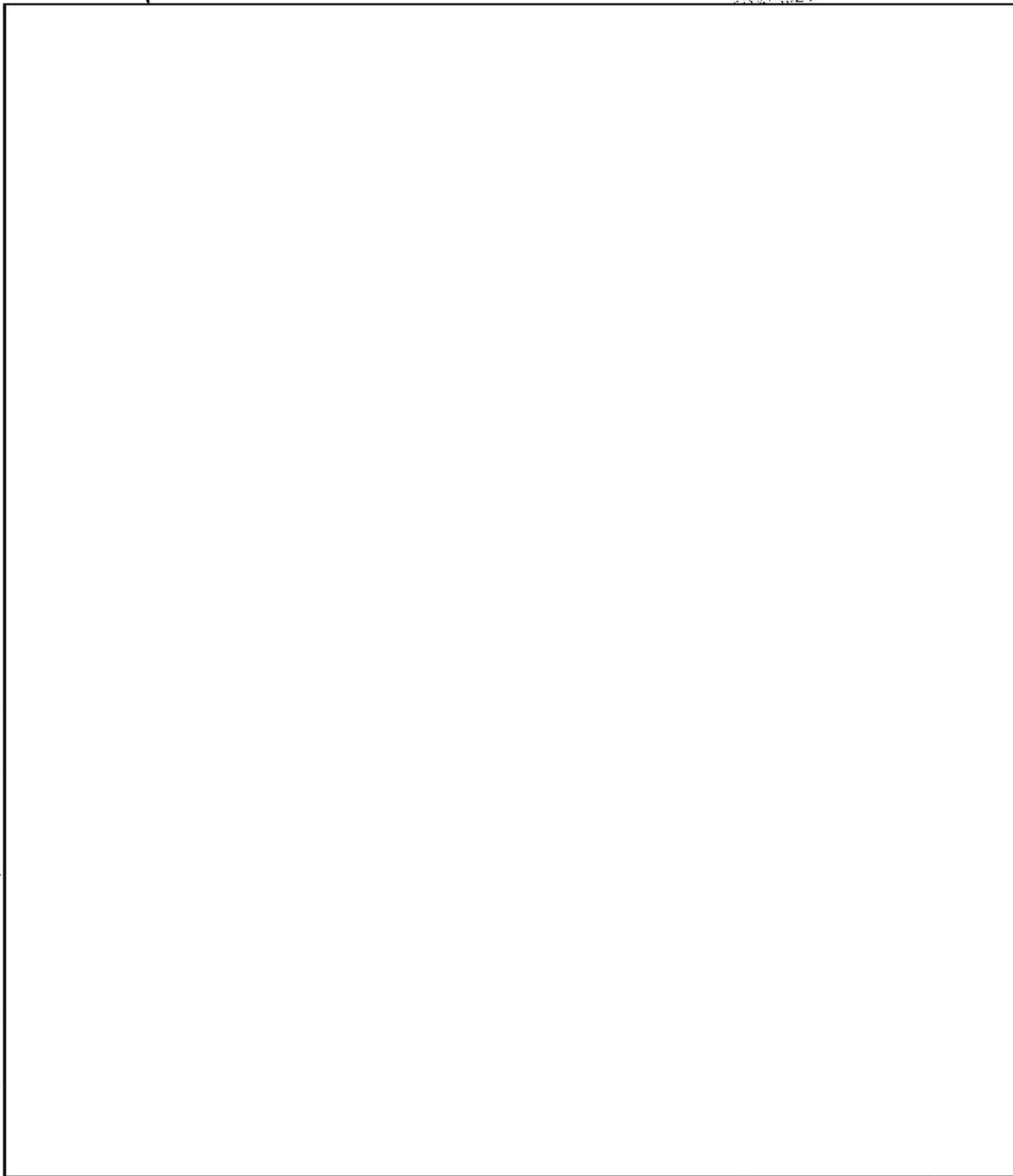
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1. Comd Rept, FS 8602 AAU, fy 1953, p25.
2. Ibid. p26.
3. Ibid. p27.
4. Ibid. p28.

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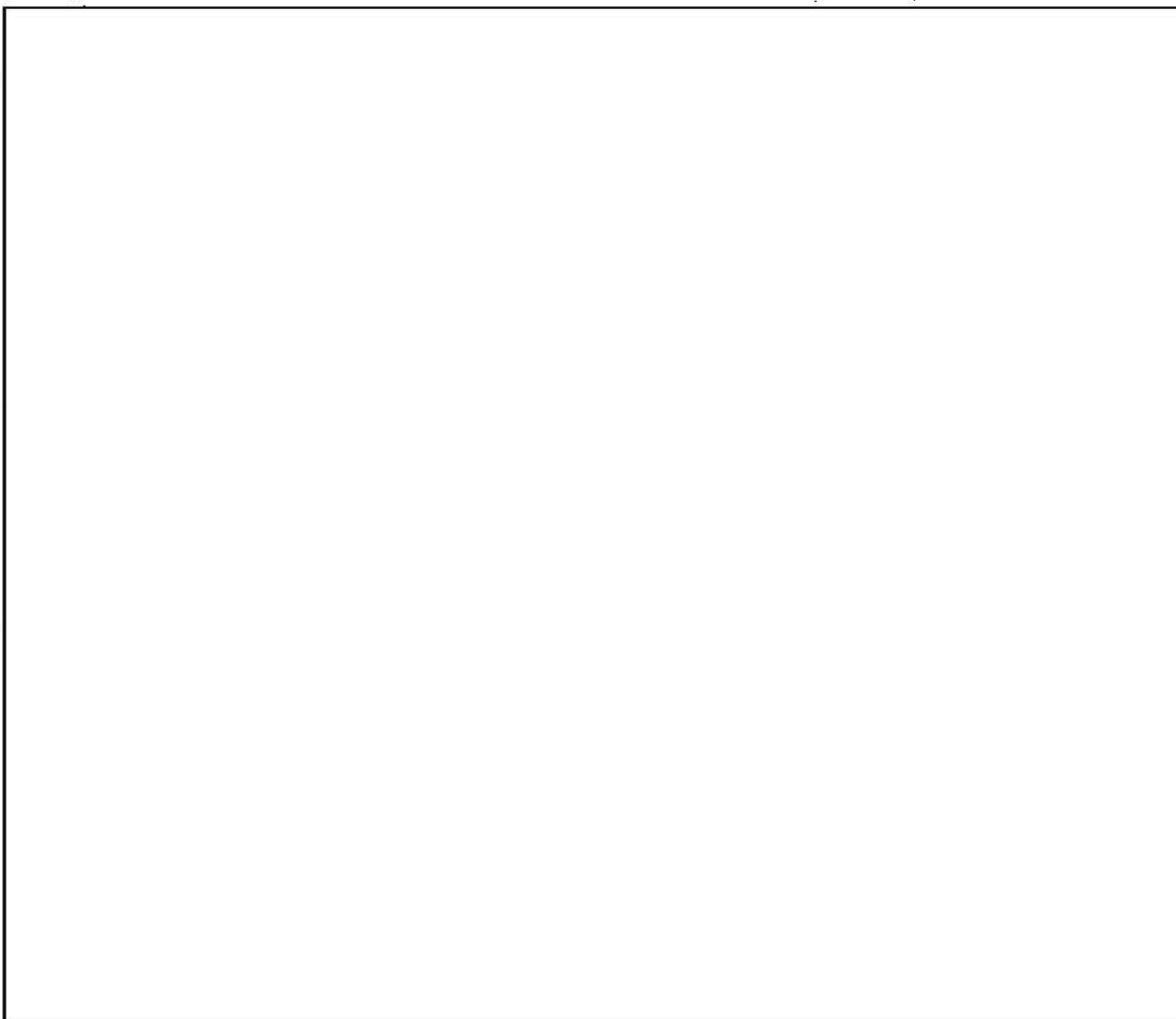
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1. Comd Rept, FS 8602 AAU, fy 1953, p28.
2. Ibid. p29.
3. Ibid. p29.
4. Ibid. p30.

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From Russian civil air, on general search throughout the year, a total of 244 messages was intercepted.

Russian weather assignment, limited in its coverage to the Khabarovsk area, accounted for a total of 11,512 messages.⁵

1. Comd Rept, FS 8602 AAU, fy 1953, p31.
2. Ibid. p33.
3. Ibid. p32.
4. Ibid. p32.
5. Ibid. p33.

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In addition to its continuing assignments, a special section of select T/A personnel--undertook in May a special project of analyzing textual addresses passed by Russian Far Eastern military circuits. But, though the project was still on assignment at the close of the report period, the passing weeks found the Russian circuits reverting to simpler systems, and much of the project's urgency was lost.¹

REF: VOL. 2 P. 1

1. Comd Rept, FS 8602 AAU, fy 1953, p34.

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B. Territories and Possessions

1. Hq ASA Alaska, 8614 AAU, Fairbanks

The job of ASA Alaska in fy 1953 was the biggest in its history. Having added Translation and Cryptanalysis (C/A) Sections in the final month of fy 1952, and a DF unit in August of fy 1953, the station had, on paper at least, considerably increased its operational capacity. Now the job was not only Traffic Analysis (T/A) (the only section through May, 1952); it was the development of three inexperienced sections as well.²

Translation, whose mission was to translate [redacted]

[redacted] plain text messages proved a valuable addition.

As adjunct to C/A and T/A sections, Translation was of value in its (1) translation of manual and automatic Morse; (2) scanning of radioprinter traffic received from FS 8607; (3) compilation of a word-pattern book of high-appearance-frequency [redacted] words; and (4) maintenance of personality files of names appearing in [redacted]

Nearly as productive as Translation was C/A, whose mission was to identify, solve, and read messages in systems employed by low-echelon military targets in the [redacted]. Its contributions included complete

[redacted]

1. COMD Rept, FS 0002 AAU, fy 1953, p34.
2. Ann Rept, Hq ASA Alaska, 8614 AAU, fy 1953, ppl6-20.
3. Ibid. ppl8, 19.
4. Ibid. ppl7, 18.

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The DF Section, (established 1 August 1952), took on full, three-site support, hence full-scale operations, early in October with the re-establishment of sites at Cape Prince of Wales and Point Hope. These were formerly located at Nome and Kotzebue, Alaska. With their help, and that of the only site in the area operational at the fiscal year's start--at Gambell, St Lawrence Island--DF achieved favorable cuts in its mission of plotting and evaluating accessible bearings.¹

The other operational section at ASA Alaska in fy 1953 was Traffic Analysis. Its mission remained essentially as in fy 1952: to study external characteristics of signal communications and related data. Here the major effort was the production of [redacted] for which Hq, US Army Alaska had submitted a request 27 March 1952. In connection with this request, it became evident in February 1953 that its basic requirement, for full information of low-echelon military nets in a broad area of [redacted] was beyond the capabilities of ASA Alaska. The solution, recommended and approved on 26 March 1953, was a revised EEI requirement that narrowed and delineated more clearly the area to be covered: [redacted]

Intercept missions in fy 1953 were assigned to sites at Fort Richardson; Nome Field; Nome; and Gambell, St Lawrence Island. Results of T/A, C/A, voice intercept, and DF were consolidated by T/A and forwarded by the Chief, ASA Alaska, to the CG, USARAL; the Chief, ASA; and for comments

1. Ann Rept, Hq ASA Alaska, 8614 AAU, pp19, 20.
2. Ibid. pl6.

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and technical guidance, to DIRNSA.¹

REF: VOL I P. 67

2. 333d Communications Reconnaissance Company, Fort Richardson
With intercept positions at Nome and Gambell, Alaska, and
DF positions at Point Hope, Tin City, and Gambell, the 333d in fy 1953
continued without change an operational mission assigned 17 June 1952.
Its provisions:²

1. Provide Hq ASA Alaska with COMINT as directed.
2. Transmit to the Chief, ASA Alaska, as directed, operational information as follows:
 - a. Intercept traffic, intercept operator notes, recordings or translations of radio telephone transmissions, and related intercept data.
 - b. T/A reports.
 - c. Reports on DF, transmitter identification, and related data.
3. Operate such intercept and search positions, and recording and transcribing equipment as required to fulfill operational assignments.
4. Conduct training programs as directed by existing directives and by the Chief, ASA Alaska.

REF: VOL I P. 67

3. Field Station 8607 AAU, Fairbanks, Alaska

Mission of FS 8607, little changed from fy 1952, consisted of three categories: Russian civil air, and police, and automatic intercept of Russian internal commercial; and special intercept of Russian single- and double-frequency shift and

1. Ann Rept, Hq ASA Alaska, 8614 AAU, pp16, 17, fy 1953.
2. Ann Rept, 333d CRC, fy 1953, pl.

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single-channel radioteletype. At the fiscal year's close, the primary assignment was:

	air:	42 manhours a day
	military:	55 manhours a day
	police:	12 manhours a day

	Service links:	16 manhours a day
	Russian-commercial automatic:	42 manhours a day

In addition, the station was assigned a reserve of related circuits, to be turned to in the event that part of the primary mission became inactive or otherwise inaudible.¹

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4. Field Station 8605 AAU, Helemano, Hawaii

In accordance with an unchanged mission, FS 8605 in fy 1953 continued to intercept and forward radio transmissions as directed by DIRNSA. Operations were divided among three sections--Morse, Non-Morse, and Ty/A.²

Morse Section, though by primary mission both a manual and automatic intercept agent, handled only Russian circuits in fy 1953 and these used manually-keyed signals exclusively. The section's assignment as of 1 July 1952 included twenty-nine Far East military cases, four [redacted] military cases, four [redacted] military air cases, one military maritime case, and four [redacted] civil air cases. So it remained until 26 June 1953, when it was changed to twenty-two Far East military cases, two [redacted] military cases, four civil air cases, and four air defense cases. Alternate assignment at the fiscal year's close

1. Ann Rept, FS 8607 AAU, fy 1953, ppl, 2.
2. Ann Rept, FS 3605 AAU, fy 1953, ppl3, 14.

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was a single military case; additional assignment comprised four civil air cases; three air defense cases, and two search assignments--one air, one military.¹

Averaging 104 man-hours per day at the beginning of the period, 192 at the end, Morse averaged 3,140 intercepted messages a month in amassing a total 37,683 for the year. In addition to its intercept, the unit noted and passed on to Non-Morse a substantial number of non-Morse references, and conducted research in quest of a schedule of [] circuits.

Only equipment change during the period was the replacement of four Super-Pro BC-799 receivers by two SP-600 and two R-274/FRR receivers.²

Mission of Non-Morse continued to focus on Russian service printer and Russian commercial. The first of these dealt with Army, Navy, and AF transmissions, and almost exclusively with two-channel signals. The second was more diverse; traffic was taken from two-, three-, four-, six-, and nine-channel multiplex senders, as well as [] singles. (In the main, commercial targets used double-frequency shift-keying in which one or both channels were [] transmissions.) Some Russian facsimile was intercepted but both quality and quantity were low.³

Because of a shortage of T/A personnel, non-Morse operators performed their own traffic analysis--service printer operators until mid fiscal year, commercial operators all year long.

There was not a special section for it, but with a few non-Morse personnel the station also conducted limited voice intercept--during 1-10 July 1952 and 2 May-30 June 1953. In the first instance the Russian

1. Ann Rept, FS 8605 AAU, fy 1953, pp14, 15.
2. Ibid. pp15, 16.
3. Ibid. pp16, 17.

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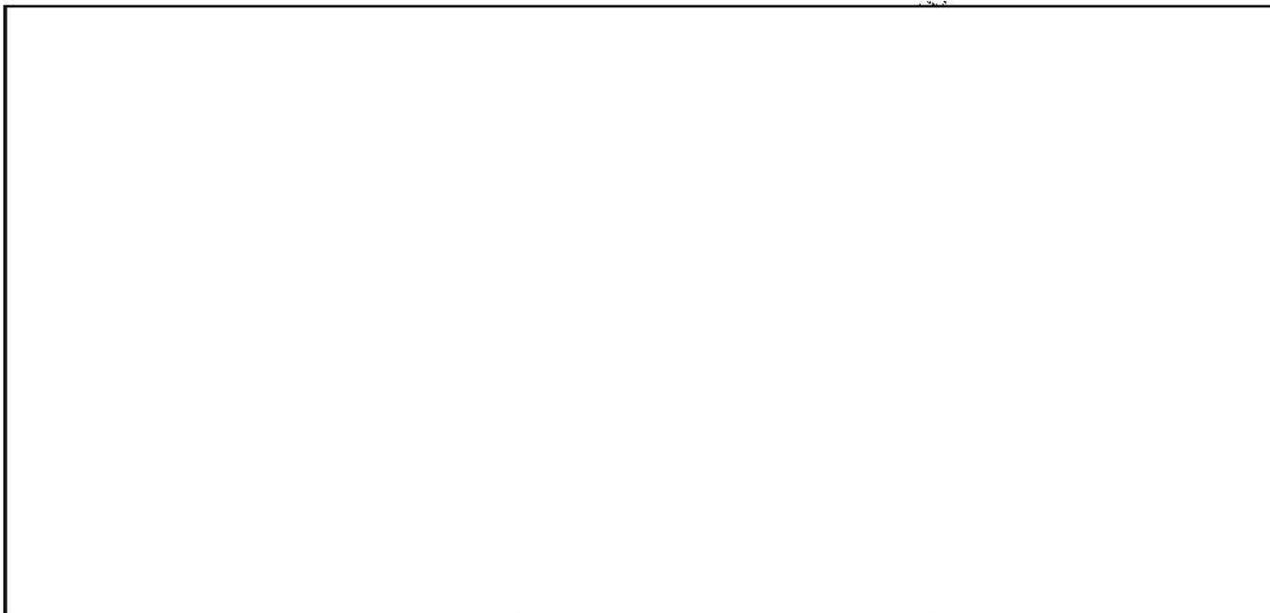
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civil air fleet was searched; in the second, [redacted] Results on the whole were negative.

Important equipment additions during the period included a number of Boehm 6E tone keyers and CV-62/U frequency shift converters, and one ASAN-13BD distributor drum.¹

T/A Section, shorthanded much of the year, carried on as best it could its job [redacted]

[redacted] When personnel permitted, as it began to late in the period, the section had an ambitious list of projects to turn to:



REF: VOL. 2 P. 75

1. Ann Rept, FS 8605 AAU, fy 1953, pp17, 18.
2. Ibid. p20.

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C. Pacific

1. Japan

a. Hq ASA Pacific, 8621 AAU, Tokyo

Like its counterpart in ASA Europe, the Operations Division at Hq ASA Pacific remained responsible throughout fy 1953 for supervising and coordinating all theater Army units engaged in the production of COMINT. Broadly, the assignments of these units were these:¹

Chinese Communist Problem

This assignment called first for the intercept of five sources, discussed individually below, and second, for the development of unidentified traffic in East China, Manchuria, and Korea.

Administrative Air

In May 1953, NSA, acting to eliminate duplication of effort, relieved ASA Pacific of all administrative air processing requirements. Recoveries to that time had been chiefly of procedure signals.

Third Field Army

Upon discontinuance of administrative air processing, personnel formerly so assigned went over to Third Field Army processing. The effect was to give impetus to an effort which, because of deficiencies in both personnel and equipment, had long been below potential.

With the added personnel, and, prospects of added equipment, ASA Pacific began to give thought to expanding the operation. Late in May, the Okinawa intercept station initiated a five-day test series on the reporting of Oriental technical summary information. Whether they would be taken on permanently was still uncertain at the fiscal year's end, for results had not yet been fully evaluated.

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1. Comd Rept, Hq ASA Pacific, fy 1953, pp63, 64.

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In October 1952 Hq ASA Pacific effected major identification on thirty-seven PVA cases. On 15 March, logging responsibility was assigned 326th CRC. In April, the headquarters recovered the network's relay indicator system and thus made possible the establishment of positive numerical designations and the identification of all major controls and outstations.

During the year, the PVA system evolved from a disorganized accumulation of radio nets into a clearly defined network, one, however, that by the end of the fiscal year had been 90% recovered in procedures and identifications.

At the outset of the report period, nineteen positions of the 326th CRC in Korea were intercepting twenty-nine PVA nets. At its close, thirty positions were working thirty-seven cases and searching five. In May 1953 an added five positions to the 329th CRC in Korea were engaged in search.

A material aid in maintaining PVA continuities, as well as separating the complex into forward and rear echelons, was the PVA call sign generation system, recovered early in the period by NSA.

Peking Mainline Military

On 27 March 1953, by direction of NSA, one position at FS 8610 was assigned PMM search and development. Another position, which proved inadequate for development, was similarly assigned Okinawa in January 1953. Even together, however, these positions were not enough to preserve net continuities, and the project was dropped. NSA planned to reinstate it

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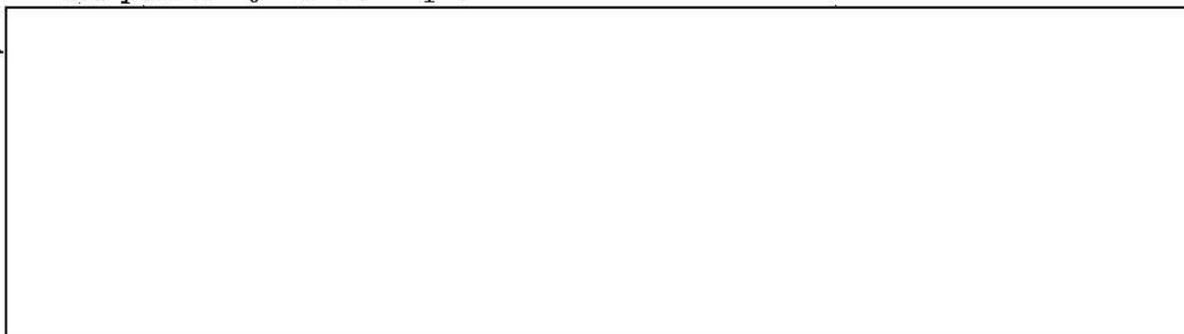
as the fiscal year drew to a close, with the assignment of a single Peking net to Okinawa.¹

Voice and Voice Morse

Coverage here was the work of a single station, the 329th CRC. Its mission objectives in the main were three: to maintain continuity, to make identifications, and to lend support to cryptographic and integration activity. As of 1 July 1952, twenty-two cases were assigned to a total of twenty-six positions. Twelve months later there were thirty-one cases and thirty positions. Virtually all targets assigned passed readable traffic the entire year.²

In cryptanalyzing the Chinese Communist problem, ASA Pacific dealt closely both with known systems--identifying them--and with new systems--isolating and making entry into them. In all sixty-eight systems were processed during the year.³

In addition to the C/A processing there was general cryptographic research. These following were the major cryptosystems studied during the period by research personnel:



1. Comd Rept, Hq ASA Pacific, fy 1953, pp64, 65.
2. Ibid. pp65, 66.
3. Ibid. pp66, 67.
4. Ibid. p68.

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Once uncovered, the system was rapidly developed. Ten weeks after its initial appearance [redacted] The first full translation [redacted] was rendered on 29 August 1952, and by September sufficient progress had been made in this direction to turn over all [redacted] responsibility to the 501st CRG.



I. Comd Rept, Hq ASA Pacific, fy 1953, pp68, 69.

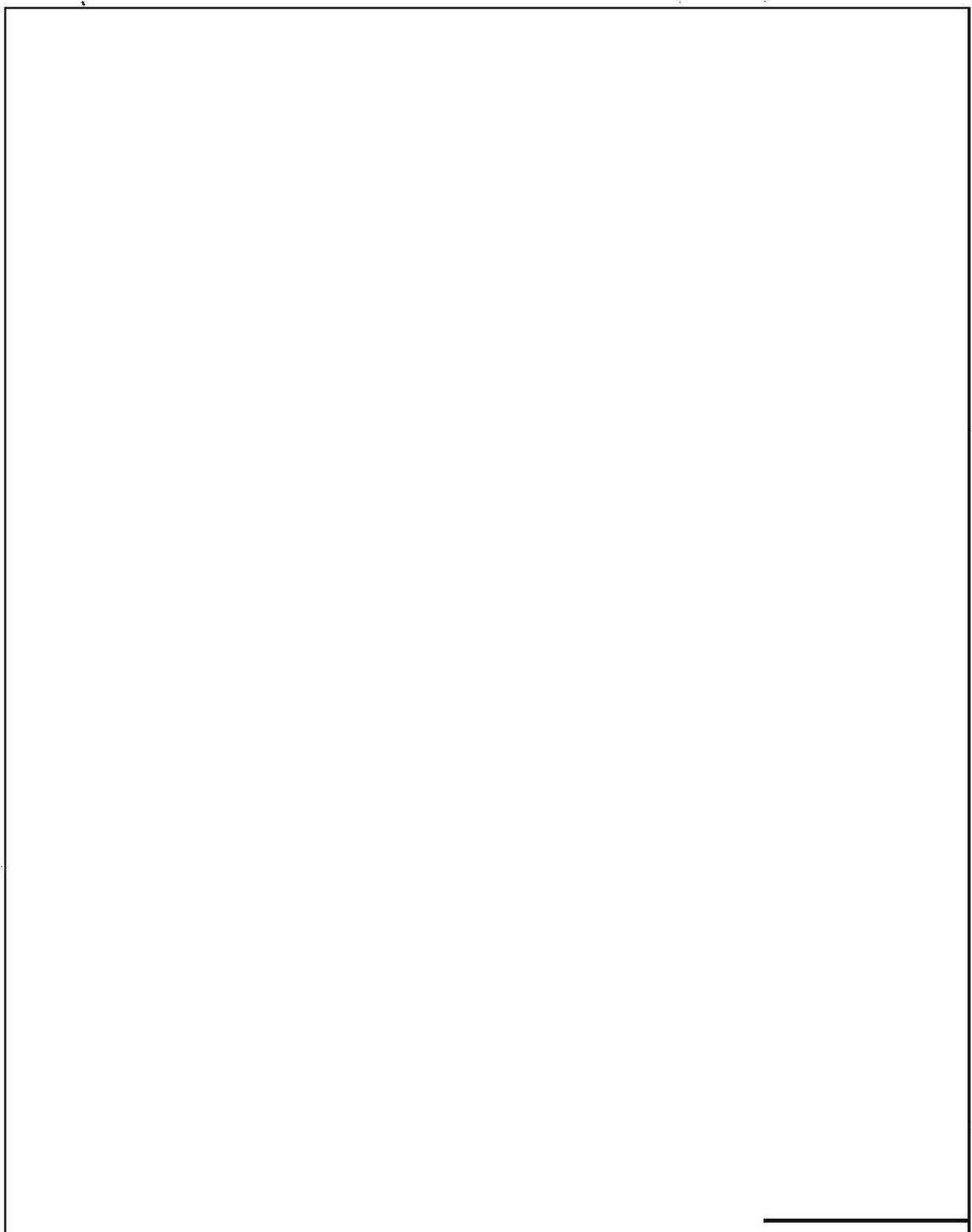
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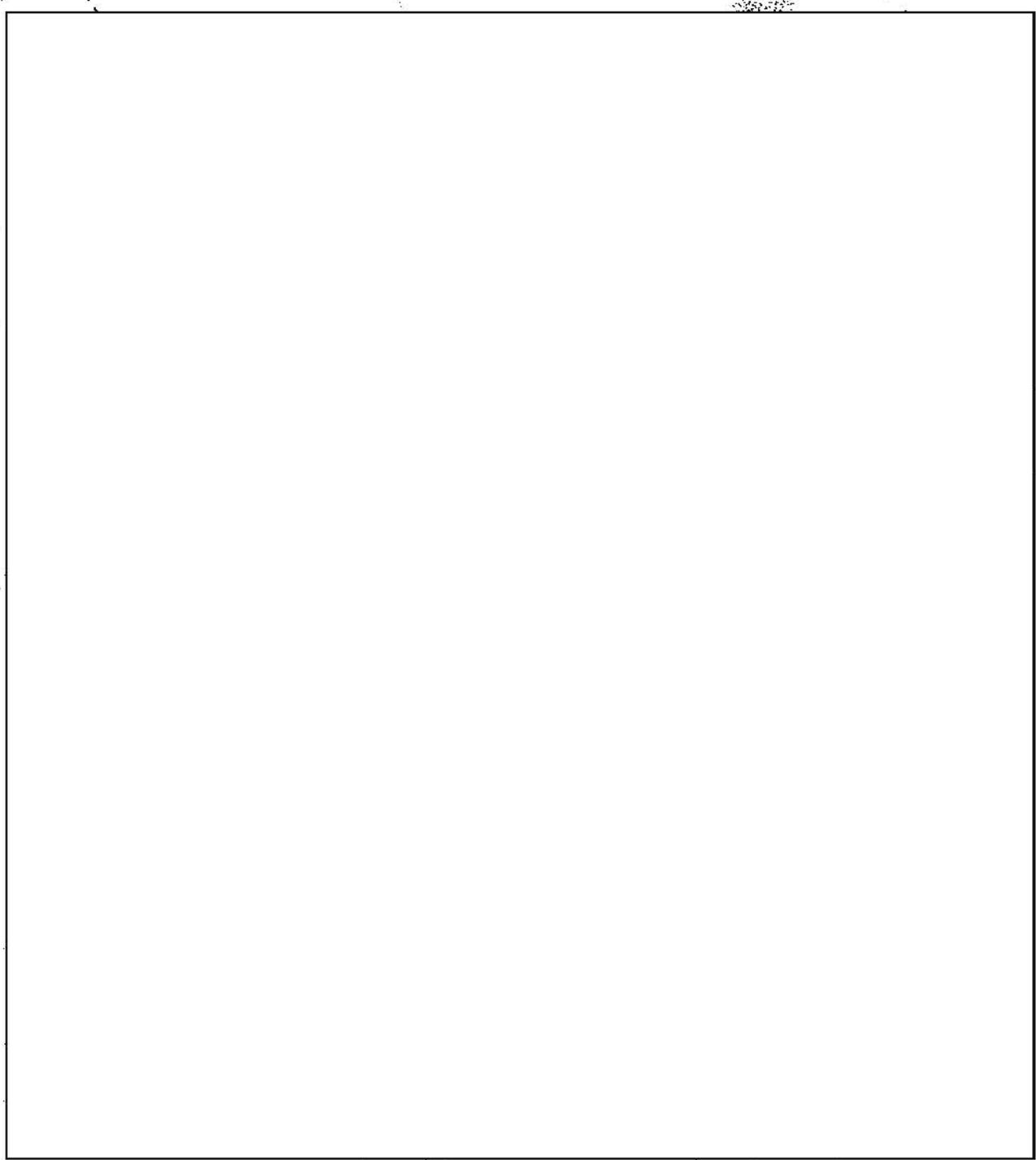


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1. Comd Rept, Hq ASA Pacific, fy 1953, pp71, 72.

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~~TOP SECRET~~~~EIDER~~Korean Communist Problem

Primary mission in this area called for research on all North Korean (NK) military cryptosystems in support of field processing units in Korea. The secondary mission, which was transferred on 13 November 1952 to the 6920th Security Group, Johnson AFB, directed the exploitation of Korean Communist air systems.

In NK traffic processing and research, and T/A, Hq ASA Pacific took a direct hand. In the first instance the headquarters called in all NK traffic intercepted in Korea, including that gathered by ROK Group M and the ROK AF station attached to Det I, 15th Rad Sq Mbl. In T/A, the headquarters assisted the 501st CRG and the 330th CRC, both of which carried out primary T/A.

In November 1952, search and development of NK commercial nets was begun. Shortly thereafter, following first intercept of NK commercial plain text, the headquarters began processing all traffic and translating selected messages.

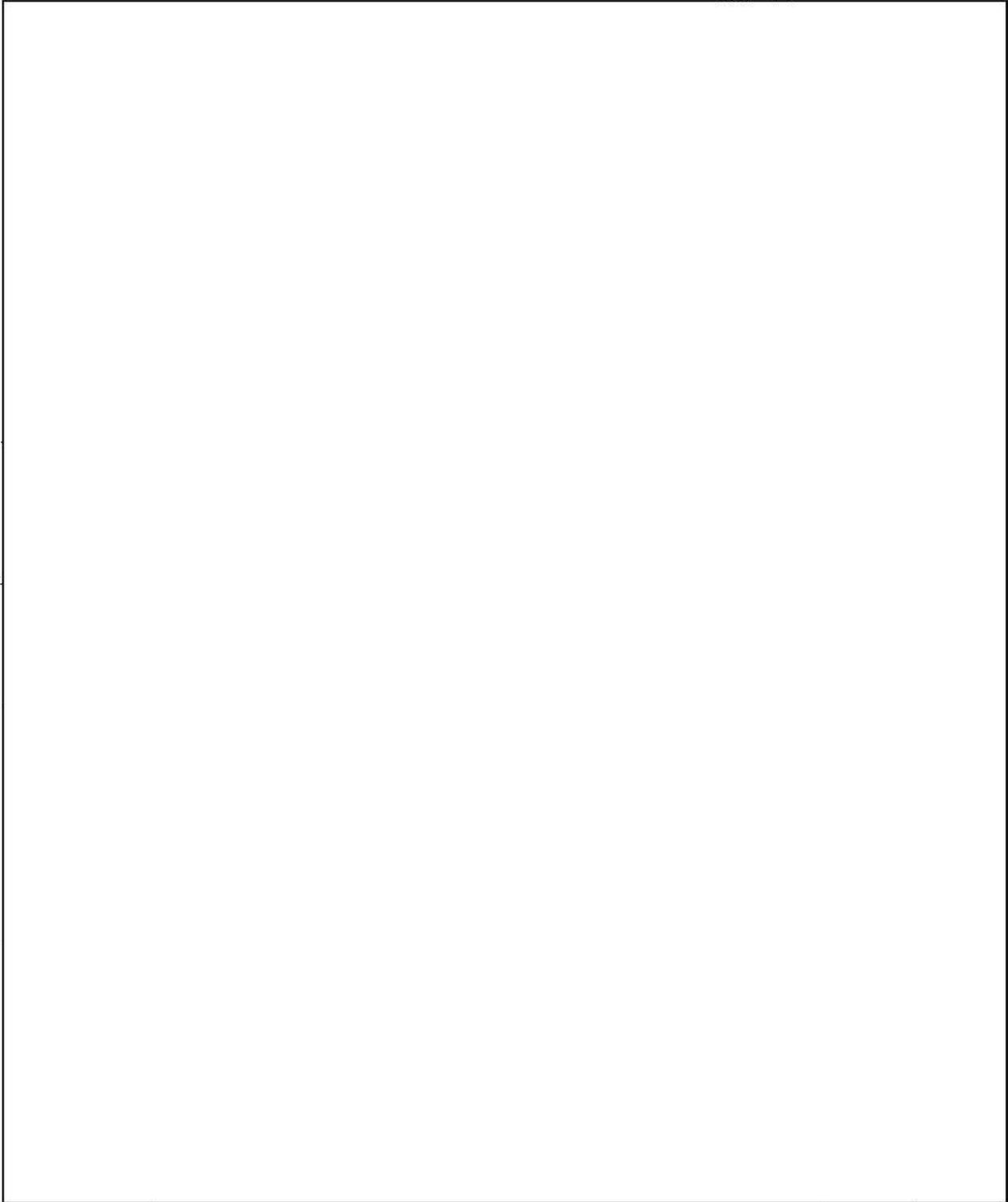
1. Comd Rept, Hq ASA Pacific, fy 1953, pp71, 72.

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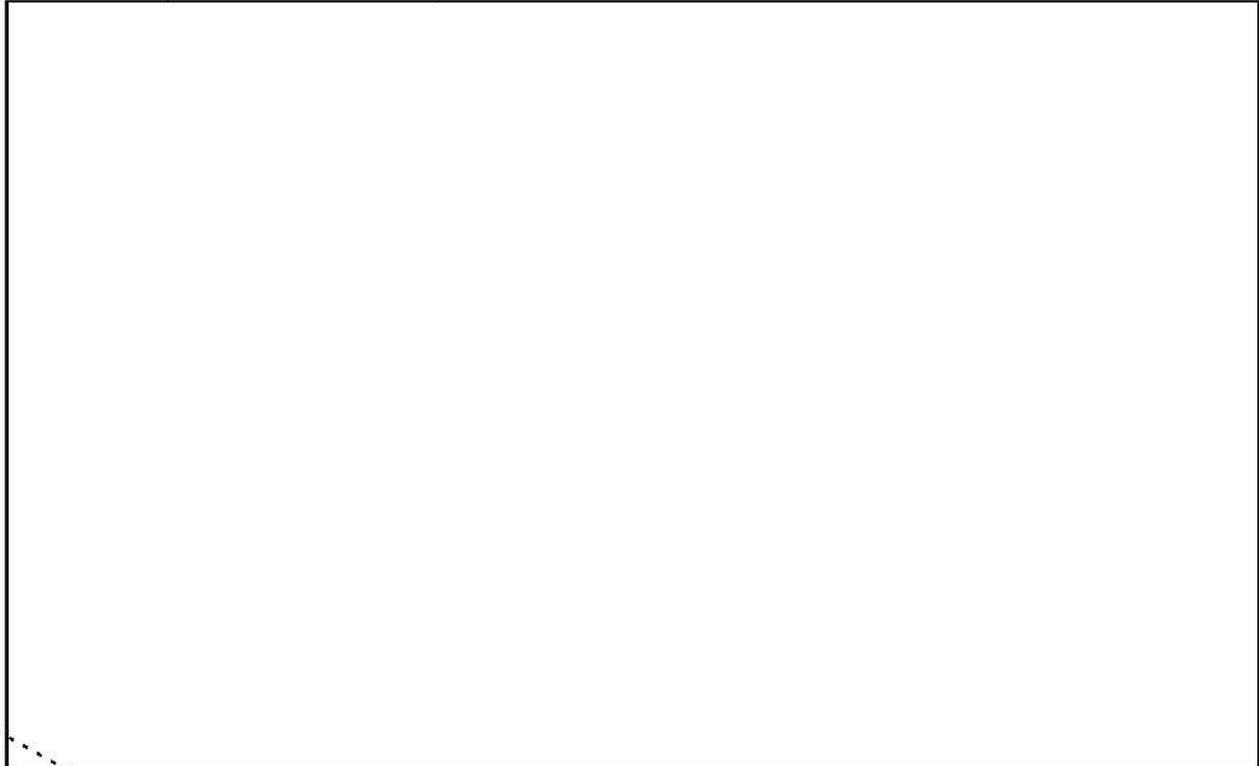
1. Comd Rept, Hq ASA Pacific, fy 1953, pp72, 73.

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- 1. Comd Rept, Hq ASA Pacific, fy 1953, pp74, 75.
- 2. Ibid. p76.

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1. Comd Rept, Hq ASA Pacific, fy 1953, pp76-78.

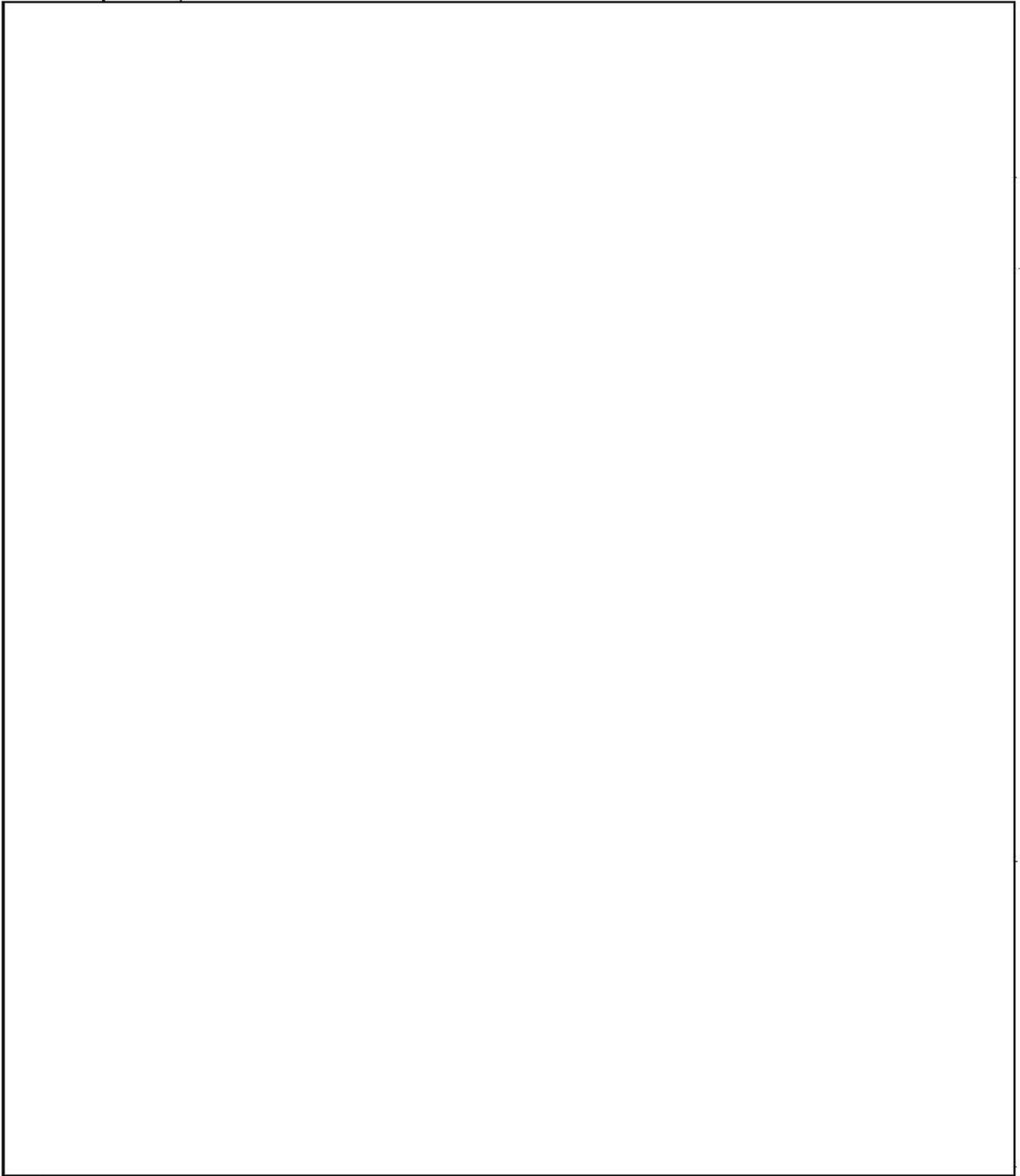
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1. Comd Rept, Hq ASA Pacific, fy 1953, pp79, 80.
2. Ibid. p81.

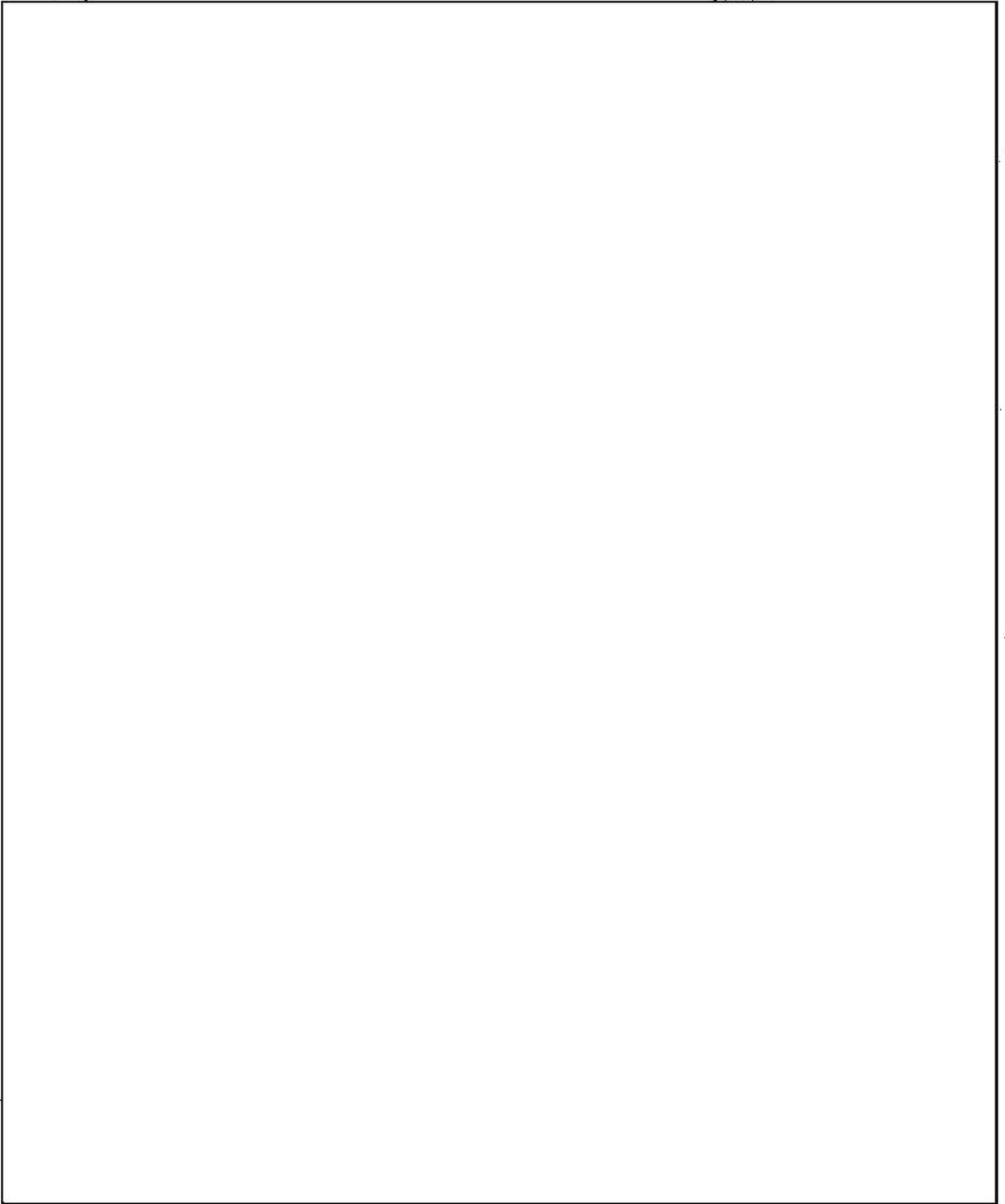
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1. Comd Rept, Hq ASA Pacific, fy 1953, pp80, 81.

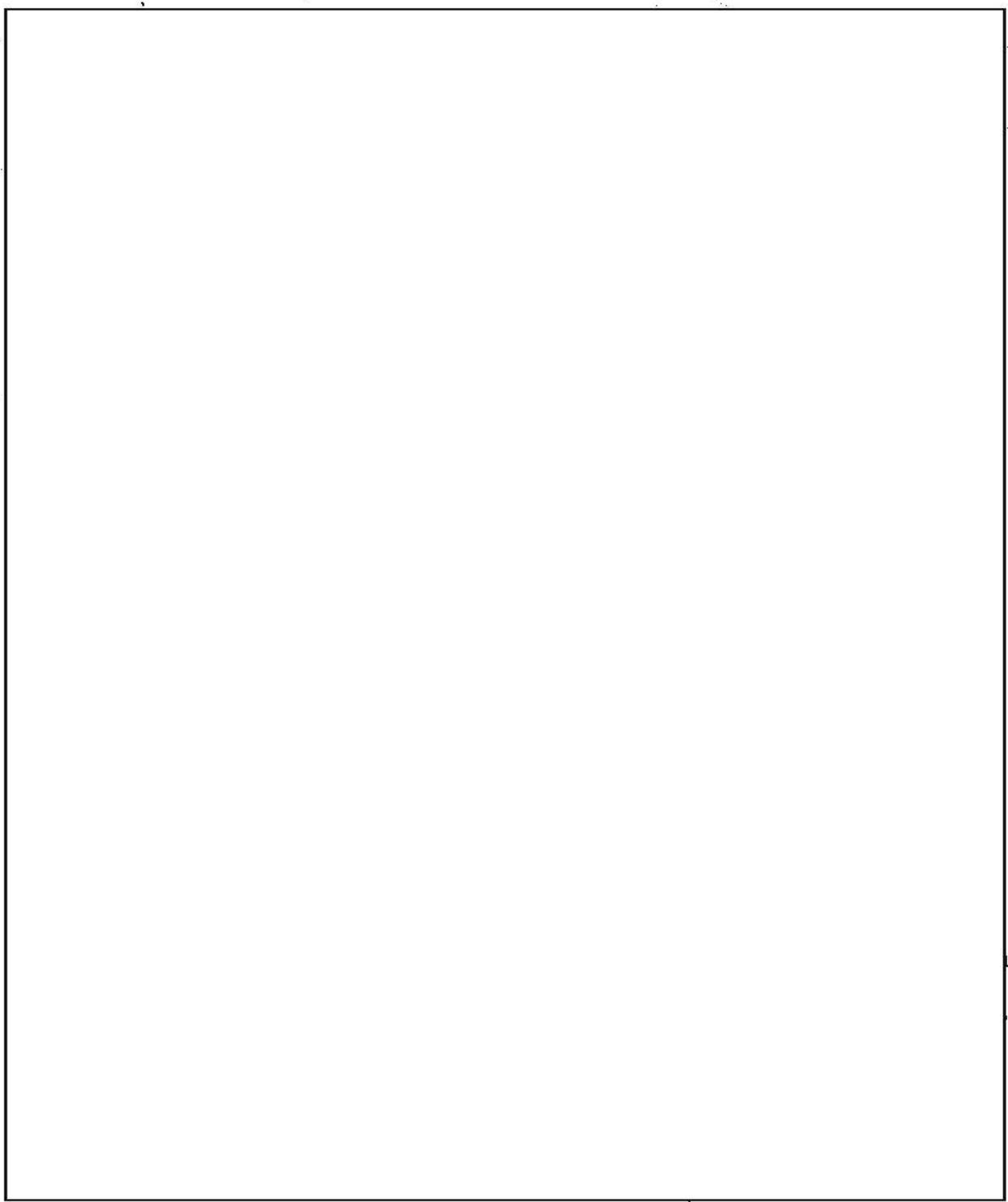
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1. Comd Rept, Hq ASA Pacific, fy 1953, pp81, 82.

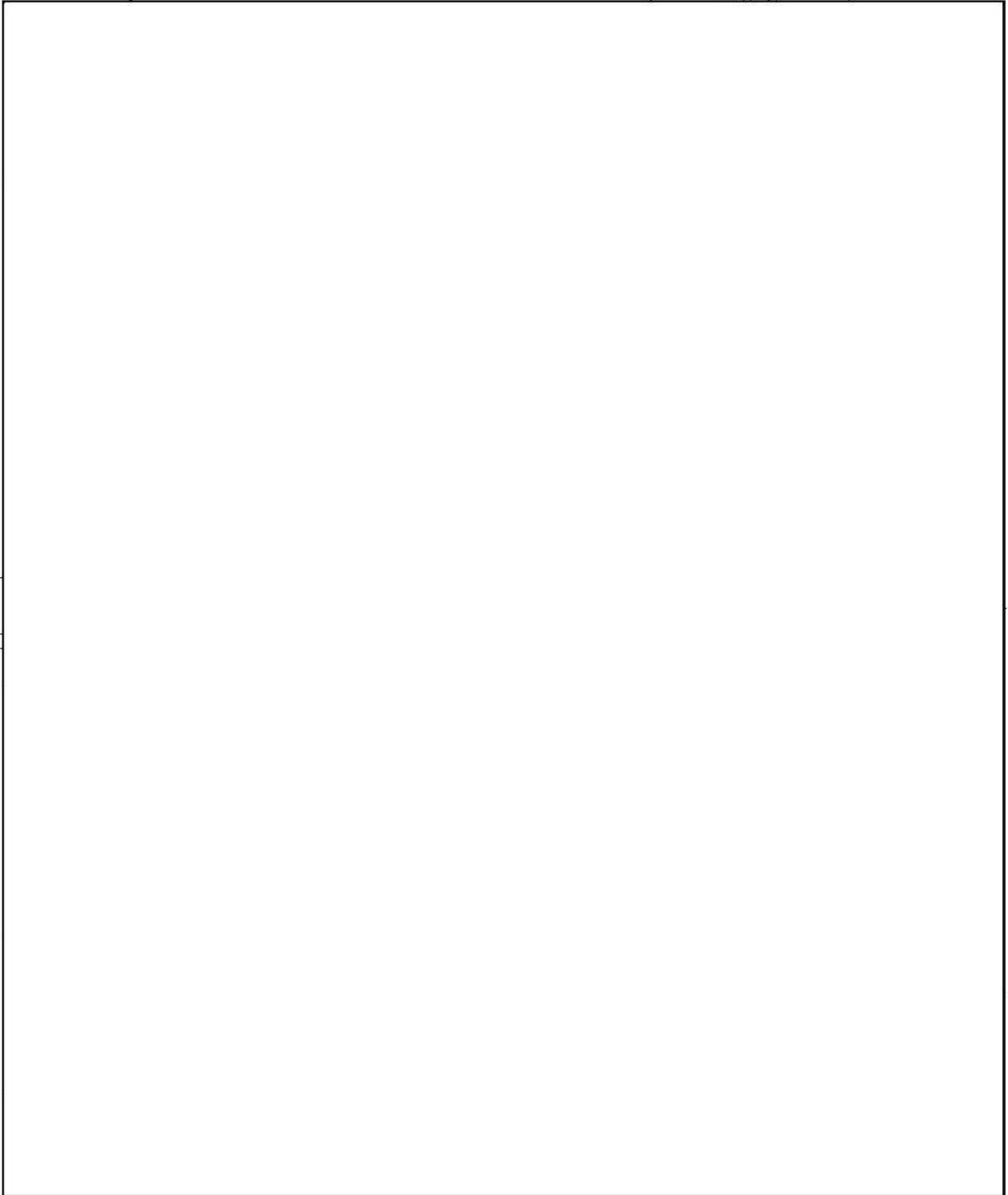
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1. Comd Rept, Hq ASA Pacific, fy 1953, pp⁸², 83.
2. Ibid. p83.

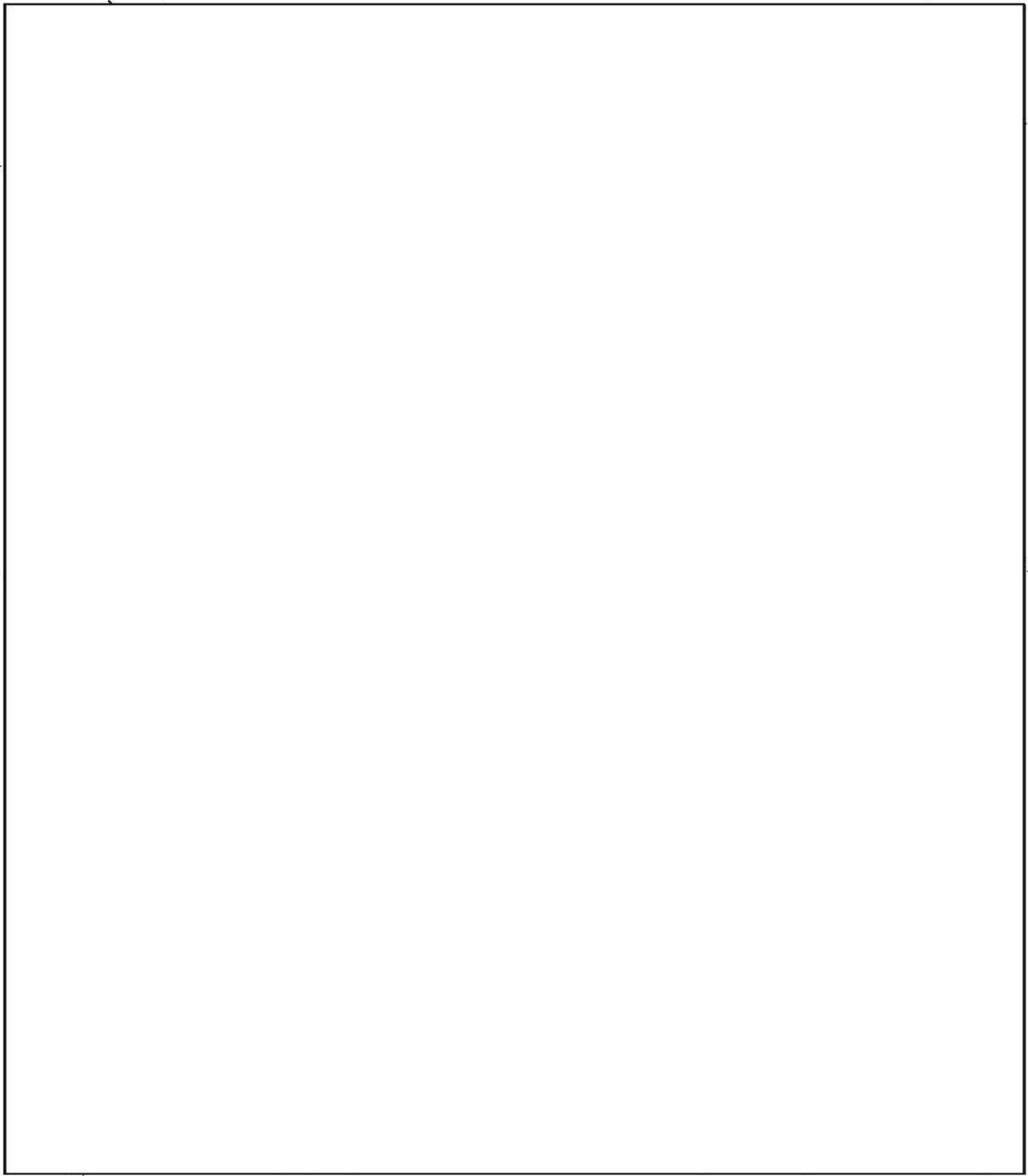
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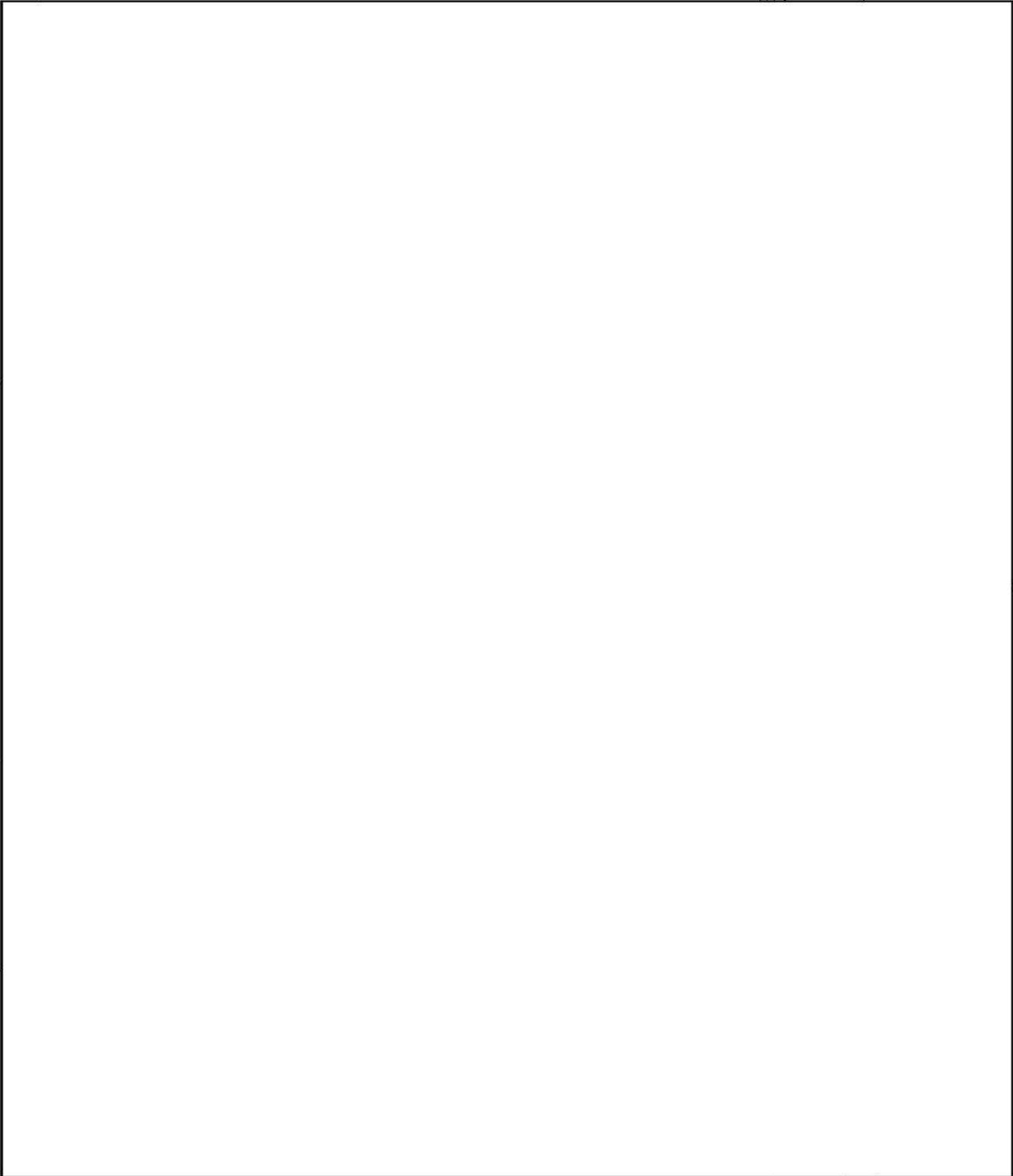
1. Comd Rept, Hq ASA Pacific, fy 1953, p84.
2. Ibid. p84.

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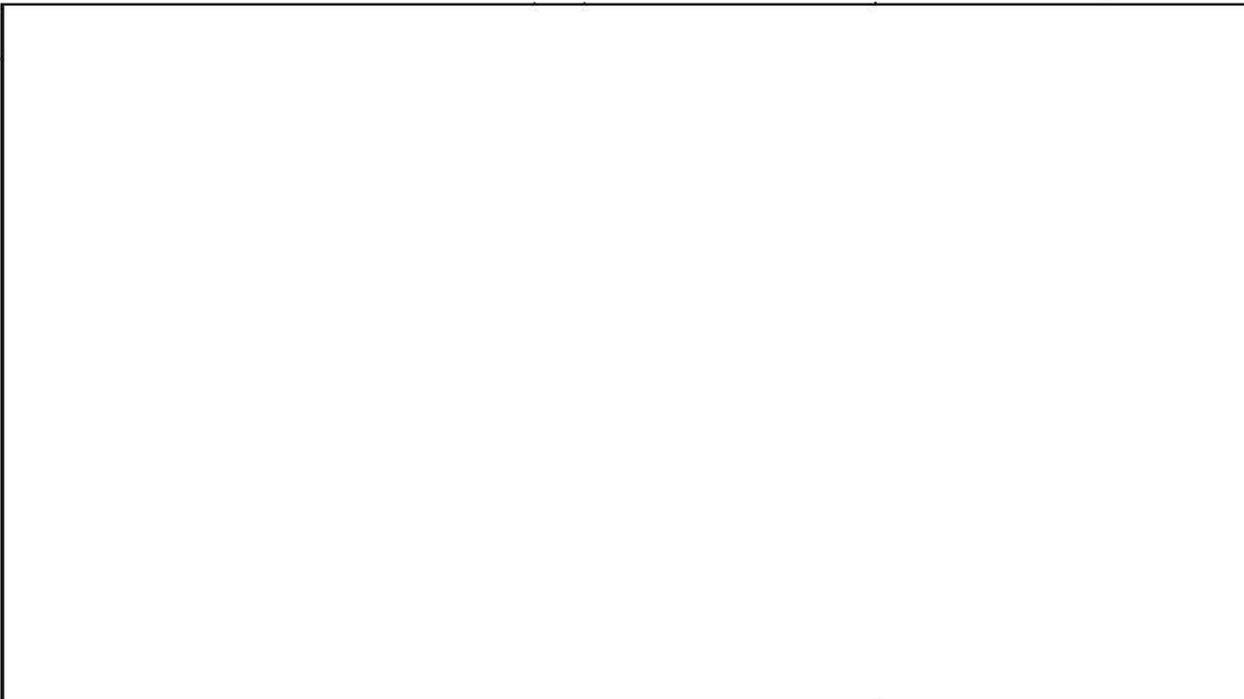


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1. Comd Rept, Hq ASA Pacific, fy 1953, pp⁸⁴, 85.
2. Ibid. pp⁸⁵, 86.
3. Ibid. p⁸⁷.

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P.L. 86-36Viet Minh Section

It was also on 27 October, following six months of on-the-job training at Hq ASA, that a twelve-man (1-O, 5 C/A, 3 T/A, 3 translators) Viet Minh unit was assigned to Hq ASA Pacific. Its progress in general was slow--because (1) it lacked machine aids and (2) it spent too much time on decryption, to the detriment of research; but its contribution in its eight months of operations was solid: 22,620 msgs processed; nine transportation keys recovered.²

Direction-Finding

At the outset of fy 1953, ASA Pacific Strategic DF units numbered five--at Chitose, Kyoto, and Kumamoto, Japan; Okinawa; and Clark Field, PI. All belonged to a flash-control net controlled at Kyoto.

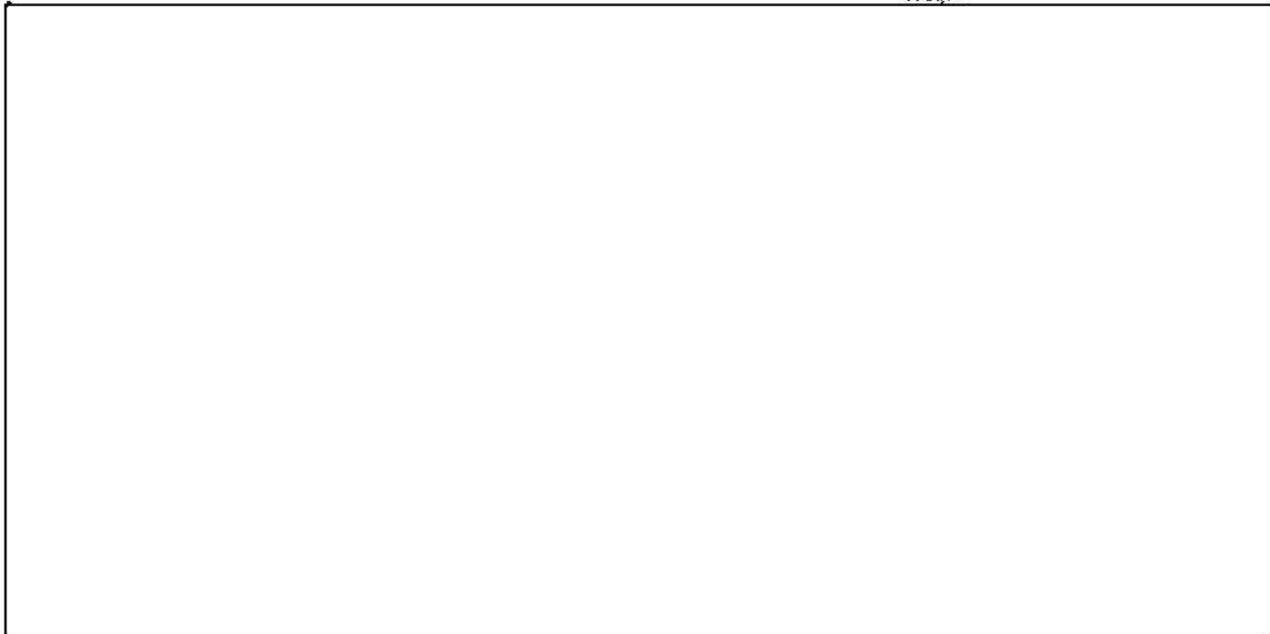
1. Comd Rept, Hq ASA Pacific, fy 1953, pp87-88.
2. Ibid. pp88, 89.

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Daily bearings were sent via a radio report net to Kyoto Control, where they were consolidated and forwarded, through ACAN channels, to Hq ASA Pacific and Hq ASA Washington.¹

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The fiscal year opened with ASA Pacific DF capable of about 24,000 bearings and 400 fixes a month. A year later, after (1) the implementation in September of new flash-plotting methods, (2) the addition, in November, of a DF unit near Seoul, and (3) year-long development of tip-off procedures, these totals had risen, in order, to 30,000 and 1,500.²

The biggest single problem in achieving this improvement was to cut down report-circuit and relay-flash-net overloading brought on by development of tip-off procedures. The answer, proved out in March at Okinawa, was multiple-flash. Such was its success in reducing the overloads that, as the fiscal year closed, Hq ASA Pacific was considering installing it at

1. Comd Rept, Hq ASA Pacific, fy 1953, p52.
2. Ibid. pp52, 53.

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Tokyo and Chitose, with the thought in mind of transferring flash-control duties from Kyoto, which would remain as alternate control, to Tokyo.¹

As for DF cryptographic systems, ASA Pacific relied through most of fy 1953 on AFSAG 1245 (tracking code) and a slightly modified AFSAG 1244 (mission assignment code), both of which used ASAM-4. As a result of the implementation of multiple-flash, AFSAG 1245, designed for tip-off operation, did not provide the required synchronization in multiple-flash and was supplanted by a new tracking system featuring grill and special alphabet lists. Early results showed the replacement faster, easier to use, and more accurate.²

REF: VOL. I P. 54.

b. 327th Communications Reconnaissance Company, Kyoto

Having arrived in Kyoto, Japan (from Okinawa) 2 September 1952, and after building from a strength at that time of 1-0 and 1 EM to 6-0 and 143 EM, the 327th resumed operations 6 February 1953. Its sections included Manual Morse, T/A, and Radio Maintenance. Pending further move to the Camp Momoyama area around 1 July 1953, they worked out of Operations building, FS 8610.³

Determining factor in Manual Morse's performance during the year was its lack of experienced personnel. Although at the very outset, in February, a nucleus of sixteen combat-tested operators had been routed to the section via rotation out of Korea, few followed; in the main, operator personnel came directly from the ASA School at Fort Devens. As

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1. Comd Rept, Hq ASA Pacific, fy 1953, pp53, 54.
 2. Ibid. pp55, 56.
 3. Ann Rept, 327th CRC, fy 1953, ppl, 3.

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to the extent to which the problem was lessened, month by month, by intensive on-the-job training, the following is quoted: 1.

<u>Month</u>	<u>Qualified Operators</u>	<u>Trainees</u>	<u>Total</u>
Feb	[REDACTED]		
Mar			
Apr			
May			
Jun			
<u>Month</u>			
Feb	[REDACTED]		
Mar			
Apr			
May			
Jun			

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Antennas in use February to June--seven Sloping V's and one Double-Doublets--were for high-frequency reception only. Installation of low-frequency, long-wire antennas was planned.²

In the matter of experienced personnel, T/A Section was in much the same predicament as Manual Morse. Both lacked experience generally and experience with Russian procedure in particular. But where Manual Morse's problem eased steadily through the year, that of T/A had relief only temporarily--in late February, when [] qualified analysts were taken on;

1. Ann Rept, 327th CRC, fy 1953, pp4, 5.

2. Ibid. p4.

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by the end of fy 1953 an ever-increasing workload had reestablished the need for at least additional analysts.¹

Except for the preparation of running, day-by-day case histories (POROCO folders) for operator reference, that workload is reflected below.²

Intercepted Group Count

<u>Month</u>	<u>Russian</u>	<u>Student</u>	<u>Korean</u>	<u>Totals</u>
Feb	82,380			82,380
Mar	91,489	46,971		138,460
Apr	74,074	68,905		142,979
May	252,177	11,307	21,686	285,170
Jun	36,828		370,337	407,165

Though the company had no DF mission in fy 1953, it did have four qualified DF operators. For the time being, they worked with DF Section of FS 8610.³

Radio Maintenance Section reported the following receivers on hand as of 30 June 1953:⁴ thirty-six BC-799's; twenty BC-342's; twelve BC-344's; eight BC-312's; nine SP-600's; and five R-274/FRR's.

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c. Field Station 8610 AAU, Kyoto

In terms of general definition, FS 8610's operational mission in fy 1953 remained unchanged. By assignment of the Chief, ASA, the station continued to intercept and process electrically transmitted

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1. Ann Rept, 327th CRC, fy 1953, pp6, 7.
 2. Ibid. p7.
 3. Ibid. p5.
 4. Ibid. p7.

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communications and conduct such DF and search as were directed. In practice, however, the mission was changed--or expanded; in February 1953, conduct of [] was added to a list of assignments that continued to require the sections Manual Morse, Radio Printer, R/T, T/A, and DF (all of which in August left Camp Momoyama for Fushimi "A").¹

Manual Morse, varying in strength during the year between [] [] positions, continued its work in Russian military (chief target area: Maritime Military District) and general search, and in April took on in addition Chinese search. Of these assignments, general search yielded good results. Intercept of the Russian assignments, though it continued to draw the section's prime attention, was sporadic at best, while Chinese search was stifled from the beginning by an antenna array oriented for Russian military. For the latter, however, a solution was in the making: late-year plans called for an additional rhombic antenna, oriented on the necessary 300-degree azimuth, by early fy 1954.²

Radio Printer Section, with [] positions at the outset of the period as against [] at the end, found its assignments less difficult. Not only did it build substantial intercept volume in its continuing mission, which took in both simplex and multiplex, it kept pace with the very active Russian naval targets on its special mission. Equipment at the fiscal year's end included six ASAN-17B typing reperforators, three ASAN-13BC terminals, two ASAN-13BA terminals, one ASAN-6 terminal, two DEN-24-2's, and seven ASAN-15C page printers. In addition, there were

1. Ann Rept, FS 8610 AAU, fy 1953, p10.
2. Ibid. pp10,11,13.

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two ASAN-17C reperforators, two AFSAV D-38 dual ink recorders, three Ampex S-3160 dual track recorders, and four IC/VRT-5 and two Ampex 400 audio recorders.¹

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The station's new section [redacted] became operational 9 February 1953. Its men, inexperienced but for the [redacted] operator-analysts around whom the section was built, consisted primarily of MOS's 1717. Its equipment was mainly DEW 17-1's. Principal achievement in its first half year: development of a library of nearly 2,500 shots, the majority of which dealt with Russian military.²

R/T Section in fy 1953 consisted of a single position. Its only assignment, Russian voice, proved unproductive and was dropped on 13 August 1952.³

T/A Section opened the period with two subsections, Manual Morse and Non-Morse. In June, it added a third, [redacted] team. Except for the added scanning and the job, acquired in August, of packaging and forwarding pertinent intercept, the section's responsibilities remained those of fy 1952.⁴

The station's DF operation continued in the hands of a section with control in the operations building and DF sites near Kyoto and Camp Wood, Kumamoto, Kyushu. Reception during the year was generally good--better at Kyoto than at Camp Wood. From a comparatively low point in July 1952, flash missions, search bearings, and control-mission returns increased

1. Ann Rept, FS 8610 AAU, fy 1953, pp12, 13.
2. Ibid. p13.
3. Ibid. p12.
4. Ibid. p16.

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steadily until January, when monthly totals leveled off on a plane that varied little thenceforward. Most productive frequencies in a year in which only the Viet Minh missions from FS 8609 in the Philippines were inaccessible were 5,210; 7,325; and 13,500 kcs.¹

REF: VOL. 2 P. 26

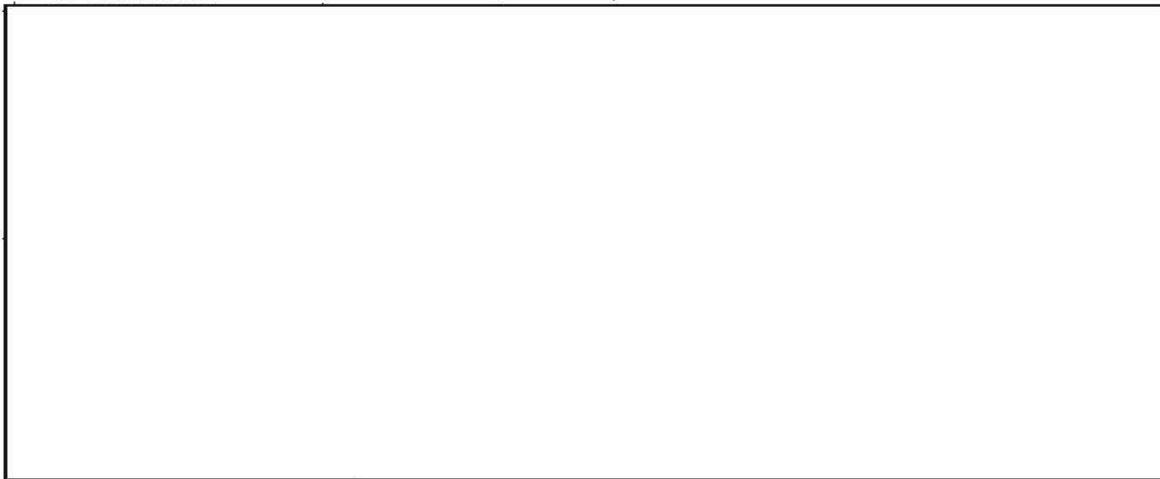
d. Field Station 8612 AAU, Chitose

Essentially that of fy 1952, the mission of FS 8612 was changed significantly only in that radioprinter targets were added in the fall of fy 1953. The lineup of sections conducting the mission was changed to the same extent: added to holdovers Morse, Voice, T/A, and RDF was Radio Printer.²

The history of Morse Section in fy 1953 was characterized by growth, not only in facilities (positions nearly doubled during the period--from

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but in mission. By 30 June 1953 the mission had expanded to include:⁴



1. Ann Rept, FS 8610 AAU, fy 1953, p14.
2. Ann Rept, FS 8612 AAU, fy 1953, pp9-19.
3. Ibid. pp9, 10.
4. Ibid. Tab 7.

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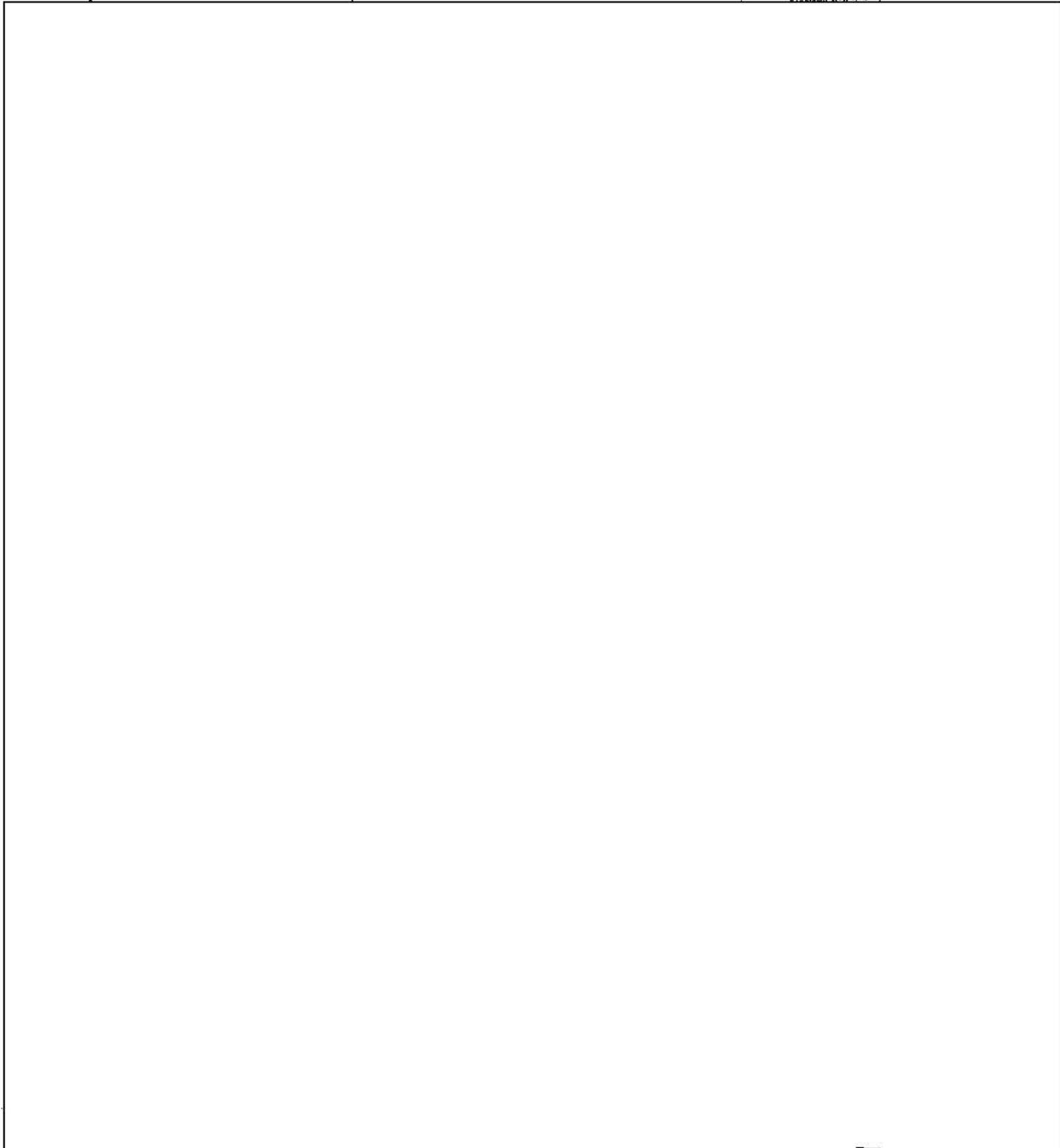
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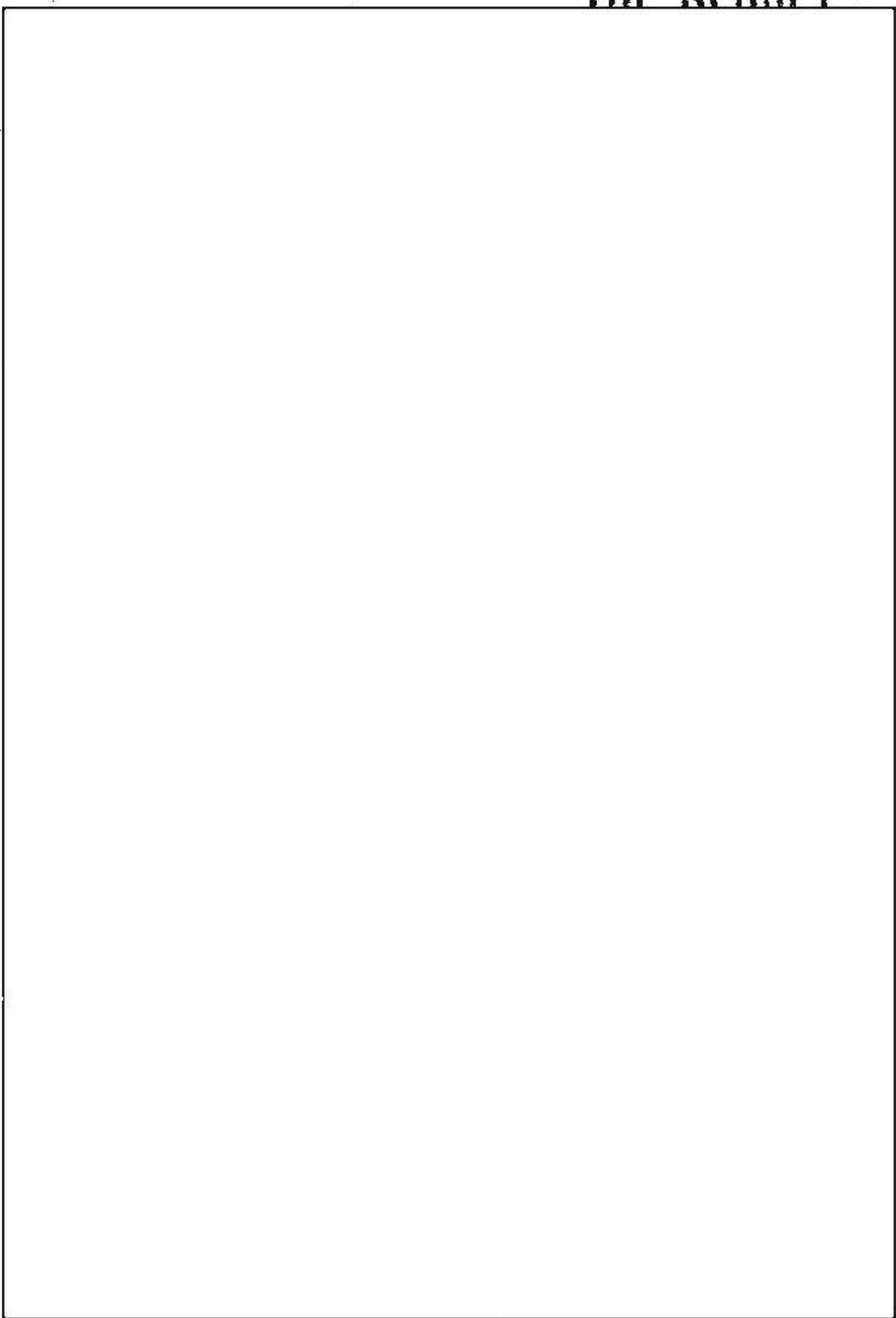


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Voice Section, by contrast, went the year long without major change in personnel, equipment, or assignment. What adjustments there were, were ones of procedure--e.g., updated processing techniques whereby consumers got more accurate reports faster; and emphasis--the replacement of

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military at "top place on

desired coverage."¹

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In May, Voice Section conducted a test of VHF signal reception, in which it used the radio set SCR 616 to cover the frequency range 145-600 mcs. Results, because of obtrusive topography between target and intercept site, were negative.

A month later the section began reconnaissance north of Hokkaido near Shakunai in successful search of suitable surroundings for a proposed detached unit.²

Voice assignments as of 30 June 1953:³

[Redacted]

Prior order Poroco

Search DOG

Search ABLE

Search BAKER

Search CHARLIE

1. Ann Rept, FS 8612 AAU, fy 1953, pp14, 15.
2. Ibid. p15.
3. Ibid. Tab 9.

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Priority Poroco

Search EASY

(Utilize 6 MHPD. Time designated by station for maximum productivity.)

Radio Printer Section, new to 8612 in fy 1953, began its non-Morse operation in September. Equipment included two 400-AMPEX magnetic tape recorders, two Hammerlund SP-600 receivers, one CV-62 frequency shift converter, one BC 1016 undulator tape ink recorder, one model 14 typing reperforator, and one miniature two-channel demultiplexer (DEN 24).

Midway in October the DEN 24 was instrumental in the demultiplexing of a 2B (two-channel Baudot) teleprinter signal and the demodulation of five-unit, start-stop single-channel signals. Assisting were the CV-62, SP-600, and model 14 reperforator. Through this operation--which began as a one-position effort but later, because of its success, became the



1. Ann Rept, FS 8612 AAU, fy 1953, pp11, 12.

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In December, RP installed two positions for the intercept of [redacted] [redacted] radioprinter. Their equipment included two Hammerlund receivers, Boenne 5-C apparatus, and a model 14 reperforator.

Also in December, after a two-month period of adjustment, RP categorized its mission into three groups: naval links of the [redacted] and the liaison link between fleets; search of military, air, air defense, naval, naval air, and unidentified activity; parallel Morse links.¹

In February, in recognition of deficiencies in low-frequency coverage and classification, Radio Printer arranged for installation of an RBA-3 radio receiver. Scattered results underlining the need for more RBA-3's were catalogued and used to advantage in late-year search.²

RP assignments as of 30 June 1953:³

Group 1

[redacted]

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Group 2

[redacted] Printer cases parallel to assigned Morse.

Group 3

[redacted]

Single- and two-channel search below 3 mcs. (Emphasis exploitation both ends active links recovered.)

T/A Section in fy 1953 continued to correlate the reports of the intercept sections and ASAPAC DF net in keeping current a composite picture of [redacted] Morse and radioprinter activity. In addition it began in Sep-

1. Ann Rept, FS 8612 AAU, fy 1953, pl2.
2. Ibid. pl3.
3. Ibid. Tab 8.

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tember to provide support for a theater AF ferret mission.¹

DF mission continued unchanged.²

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2. Korea

a. 501st Communications Reconnaissance Group

From the focal point of COMINT Section, the 501st's Operations officer continued in fy 1953 to assign, integrate, and direct COMINT missions from group level on down.³ As in fy 1952, the missions embraced low-level voice intercept, T/A and C/A, DF, OB, and integration.

Still a relatively new concept--but already a markedly successful one--was low-level intercept. In less than two years it had established itself among field commanders as highly desirable. And yet, being in the formative stage, it was not without its problems.⁴

In the first place, there was no authorized TOE. A special list of equipment was authorized in July, and in the hands of the 501st by November, but this proved far from adequate. For the better part of the year the low-level teams were limited in their equipment to the BC-603, -683, SCR-300, and AN/GRC-9, of which the BC-683 and SCR-300 yielded very satisfactory results.

To aggravate matters, a 24-hour-a-day intercept schedule gave rise to frequent and sometimes irreparable breakdowns among the team's PE-210's, which were endlessly at work recharging the 18-hour wet-cell batteries used

1. Ann Rept, FS 8612 AAU, fy 1953, p18.

2. Ibid. p11.

3. Comd Rept, 501st CRG, fy 1953, p30.

4. Ibid. p50.

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by the BC's -603 and -603. To this, however, a solution was at least in the offing; in experiments with dry-cell AN/PRC-8, -9, and -10 sets.¹

As for personnel, the 501st's battalions (which were in operational control of low-level) were confined in their choice of sources to two: CRC's whose subsequent operations suffered accordingly, and Fort Devens. The latter was unsuited, for its personnel were unfamiliar with the workings of low-level, and by the time on-the-job training had fashioned them into competent performers they were ready to rotate out of Korea. As the fiscal year closed, an answer to the personnel problem was yet to be found.²

Source of still another difficulty was the discontented DAC, the majority of whose grievances came under the heading of "petty . . . self-contrived." Notwithstanding, his complaints were looked into and, where practicable, corrected; and by the end of the fiscal year only a few of the 95 DAC's employed in low-level refused new contracts.³

During the first quarter of fy 1953, low-level operations were unusually slack, owing, presumably, to heavy rains. Though intercept was light, however, it did reveal three of the enemy's current sore points: the rains, UN artillery fire, and air strikes.⁴

During the same three months, the 501st sent the last of its low-level teams into operation, raising their number along the MIR to nineteen. By late August, the teams were serving the I, IX, and X US Corps areas.⁵

1. Comd Rept, 501st CRG, fy 1953, p52.
2. Ibid. p53.
3. Ibid. p53.
4. Ibid. p54.
5. Ibid. p50.

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In September, his transmissions output still low,¹ the enemy turned to developing his COMSEC. First he devised new and various numerical codes. And then he began using cover words more abundantly than ever. This required new methods of analysis to derive tactical intelligence.²

Through these early months there were few changes in low-level assignments. The first of consequence came in December, when the 301st CRC's low-level team #5 inherited from the 40th US Division the "ground return landline intercept" mission. For several months the mission objective--to monitor North Korean telephone conversation--was pursued from a single site, near Hill 1052 in the X Corps sector. But in light of the landline's great value to UN forces in anticipating enemy action, a second site was added in April, this atop Heartbreak Ridge.³

Perhaps best indicative of low-level's versatility through the year was its application during the days surrounding the WHITEHORSE attack. Not only was it largely responsible for an accurate and early prediction of the time and place of attack--which it surmised 72 hours in advance--but it served to keep UN field commanders abreast of all major tactical developments in the heavy fighting that followed.⁴

Midway of fy 1953, what had been known for nearly two years as "North Korean Section" became three separate, if not independent, sections: North Korean T/A, C/A, and OB. In the process, T/A Section assumed control of the mission assignment of the 330th CRC and a share of responsibility

1. Enemy traffic never did resume its earlier pace until April 1953, when warmer weather brought intense enemy action all along the front.
2. Comd Rept, 501st CRG, fy 1953, p54.
3. Ibid. p55.
4. Ibid. p55.

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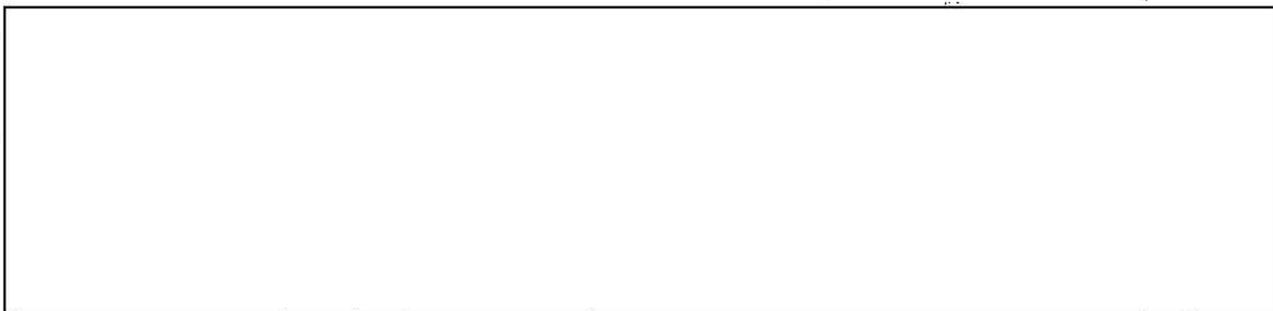
for processing traffic intercepted by the 330th, ROK "M," and the 15th Rad Sq Mbl.¹

In the autumn of 1952, CCF T/A Section observed that the CCF voice Morse complex was becoming more secure. The evidence--increased use of CW, the disappearance of enemy links--indicated that the enemy was turning from radio to landlines and couriers. The evidence showed too, however, that prior to and during attack, when other means of communication presumably were overloaded, the enemy was forced to revert to radio.²

In February 1953 the 501st received from NSA full information on the CCF's CW call sign system, which for seven months had defied NSA efforts to break it. With this information the group was able to confirm a long-standing supposition that the CW complex was serving the Chinese Peoples' Volunteer Army in Korea.

Several weeks later, NSA was prominent again in the affairs of CCF T/A--in the nature of a test team whose mission was to eliminate duplication of effort throughout headquarters.

North Korean C/A Section, expanded somewhat to cope with increased traffic, continued to process and research a large part of the traffic



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1. Comd Rept, 501st CRG, fy 1953, p32.
2. Ibid. p35.
3. Ibid. p36.

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¹
values.

The section's biggest difficulty lay in There, readability dropped from 30% through July-September to less than 15% at the fiscal year's end.²

Fulfillment of Chinese Communist C/A Section's continuing mission--to process, exploit, and translate CCF military radio transmissions--was eased considerably in July 1952, when teletype facilities between the 501st and 329th CRC were augmented and otherwise improved. The result was that if the situation demanded, intercepted traffic could be refined to published translation within a hour.³

As the fiscal year began, Direction Finding comprised twelve stations --eight DF, three tip-off, and one flash. Distributed among the 326th, 329th, and 330th CRC's the stations were located at Penyong-do, Sucham-ni, Kwangson-ni, Moean, Chip'o-ri, Hapk'o-ri, Oegon-ni, Chunchon, and Kansong.⁴

Subsequent relocations, brought about by a year-long effort to improve DF plots, found Kwangson-ni replaced by Tukto, Hapk'o-ri by Kumwah Valley, and Chunchon by Manda-re (in the "Punch Bowl"). In addition, the Oegon-ni station moved to Kansong, and an altogether new station was established at Kwang-sang-ni. And just before the fiscal year was up, the Moean station moved to Kwangson-ni.

As of 1 September, DF media consisted of a flash circuit, a manual

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- 1. Comd Rept, 501st CRG, fy 1953, p39.
 - 2. Ibid. p39.
 - 3. Ibid. pp40, 41. The situation demanded several times during the year, most notably on 7 Oct (WHITEHORSE) and 23 Mar (PORKCHOP).
 - 4. Ibid. p44.
 - 5. Ibid. pp45, 46.

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CW circuit for tip-offs, and a manual CW circuit employing star-type operations. Through the early weeks of the report period, flash missions averaged eighty-five a day, fixes twelve.¹

Still there was room for improvement. For one thing, countless delays in the retransmission of tip-offs as flashes were cutting deeply into flash-mission potential. For another--too much reliance was being placed on a master DF chart. The answer in the first instance came in February 1953, when the 501st adapted the Navy's Pacific DF flash-net procedure--"multiple-flash"--for use in Korea; before long, 165 flash missions were being discharged daily. The answer to improved DF plotting--plotting each mission by individual reproduction of the tracking chart, using the master chart only in checking and getting approximate fixes--followed in March. Its result: an 80% increase in the average fixes per day.²

Late in autumn 1952, North Korean and CCF Order of Battle Sections were reorganized and fused with the group's Integration Section. Through this change, it became possible to funnel all intelligence derived from COMINT sources and from liaison with CIC, MIS, and AFSS, into a single, focal center; and thus, in terms of greater continuity and inclusiveness, to enhance in great measure the end integration product itself.³

Among the more valuable pieces of intelligence gathered during the year were two turned up by POW interrogation. One was proof that both CCF and North Korean forces were using LLI against UN lines. The other was that ROK CIC agencies were attempting to use a defected guerrilla radio operator

1. Comd Rept, 501st CRG, fy 1953, p44.
2. Ibid. p45.
3. Ibid. pp58, 59.

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in sending encoded messages to the 526th Guerrilla Unit Hq in P'Yong-Yang in an effort to gain information and uncover enemy agents operating in South Korea. This information was forwarded through SSO channels to ACoFS, G2, Eighth Army, with an urgent request that this activity of ROK agencies be stopped at once. Continued monitoring of the net concerned proved it was stopped in time to prevent compromise.¹

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b. 301st Communications Reconnaissance Battalion

Continuing in its support of the X US Corps and subordinate units on the eastern front, the 301st CRB continued as well its production and dissemination of low-level intelligence. Its sources, as in fy 1952, were North Korean radio and telephone and CCF radio.²

In the service of these ends, a search for suitable additional radio sites was begun early in fy 1953. Of three sites tested, two proved out and were added--one in July, the other in October--as permanent facilities. Virtue of the first, on Hill 1181 in the DT201387 area, was in its access to both North Korean and CCF radio,³ whereas the second, on Hill 751, DT365488, (1) enabled the battalion to provide complete coverage of the enemy front opposing the X Corps and (2) assured full support for each UN Division in the X Corps sector. It also brought to three the total of low-level teams operated by the battalion.⁴

Two problems stood out in this radio phase of the 301st's operations. Foremost was year-long interference with North Korean communications by

1. Comd Rept, 501st CRG, fy 1953, pp47, 48.
2. Ann Rept, 301st CRB, fy 1953, p8.
3. Ibid. p8.
4. Ibid. p10.

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ROK Army stations, which greatly inhibited enemy operator chatter. Of lesser consequence (because it was corrected by mid year) was the lack of qualified personnel.¹

In December 1952 the 301st gained access to a second and potentially more prolific source of low-level intelligence when it became third heir in as many months to the "ground return landline intercept" mission. (The battalion's predecessors: the 25th and 40th US Infantry Divisions).

In developing landline potential, the battalion's first job, and biggest, was to find a companion site to Hill 1052 (Sand Bag Castle), from which the mission had been performed since its inception. In April 1955, after five months of search, it found such a site--Hill 855 (Heartbreak Ridge).²

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c. 303d Communications Reconnaissance Battalion

The battalion's operational activities in fy 1953 continued direct low-level support of the I US Corps. Hq & Hq Det was attached to I Corps Command Post, and liaison detachments, save those aiding British and ROKA elements, were attached to US divisions on line within the Corps sector.³

Before merging with Det #2 in May 1953, Det #1 had supported, in order, the 1st Marine Div, the Kimpo Prov Regt, and a Korean Marine Corps Regimental combat team. Det #2 also had supported the 1st Marines, which was followed by the 25th Division. The combined detachments set up with

1. Ann Rept, 301st CRB, fy 1953, p9.
2. Ibid. pp10, 11.
3. Ann Rept, 303d CRB, fy 1953, p5.

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the 25th Division.¹

Det #3 served alternately the British 1st Commonwealth Division and the 2d US Division.² Det #4 served the 1st ROKA Division its temporary relief during July-September--the 3d US Division the entire year.³ Recipients of Det #5 support were more numerous: first, the 45th US Division, then the 2d US Division; and finally, from 29 December on, the 7th US Division.⁴

The value of low-level intelligence was shown during PORKCHOP. On 23 March, for example, when a CCF battalion threatened to overrun the entire area, Det #5 furnished intelligence of enemy intentions regarding reinforcements, assaults, artillery fire, and defense of newly-acquired positions. In the hands of the 31st Regimental S2 and the 7th Division G2, this information played an important part in the four-day battle.⁵

At one time or another during the year, two problems were shared by nearly every detachment. First was vehicle maintenance; only the heavier (3/4-ton, M-type) trucks were equal to the roads. Not so serious was CCF artillery and mortar, which occasionally severed phone lines between detachments and their sites. As a rule, the lines were quickly restored.⁶

Radios in use over the year included: AN/GRC 9, R-108/GRC, R-110/GRC, SCR 508-V26, SCR 608-V26, SCR 300, and AN/PRC 8, 9, and 10.⁷

REF: VOL. I P. 107.

1. Ann Rept, 303d CRB, fy 1953, pp9, 10.
2. Ibid. p8.
3. Ibid. p6.
4. Ibid. p7.
5. Ibid. p17.
6. Ibid. p18.
7. Ibid. p18.

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d. 304th Communications Reconnaissance Battalion

Still in direct support of the IX US Corps and in secondary support of the II ROK Corps, the 304th continued in fy 1953 to intercept, evaluate, and disseminate Chinese low-level voice transmissions. Assisting battalion operations therein were four liaison detachments and six intercept teams.¹

The value of their efforts over the year is reflected in the following extract from an intelligence report regarding WHITEHORSE:²

Indications of CCF Attack, Prior to 6 October: The following indications of CCF intentions were noted, in low-level intercept, and published in daily intelligence summaries prior to the attack on Hill 394.8 . . .

- a. Increase in call sign count, approximately ten days prior to the attack.
- b. Increase in new call signs, approximately four days prior to the attack.
- c. Indications in traffic of new operators (inferring new units) who were unfamiliar with terrain, stations which they were to contact, etc.
- d. Increase in volume and frequency of communications checks.
- e. Large amounts of practice traffic, including artillery seemingly registering on targets, approximately four days prior to the attack.
- f. An actual anxiety indicated by CCF operators and transmissions suggestive of pending action, i.e., "Be in contact constantly; there may be action today." (Reply) "Damn, I don't think there is anything will happen today." Such transmissions were copied only 24 hours prior to the attack. . . .

The battalion's best coverage during the year came opposite the II ROK Corps and in the X US Corps' left sector. Overall, volume of intercept was up substantially from fy 1952. The proper conclusion was that fighting elements of the CCF had made sizeable additions to their store of tactical

1. Ann Rept, 304th CRB, fy 1953, p6.
2. Ibid. Tab 15, pp2, 3.
3. Ibid. p6.

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radio equipment.¹

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e. 326th Communications Reconnaissance Company

In continuing its primary mission of fy 1952--the intercept and recording of identified Chinese Communist military Morse stations at group and division levels--the 326th employed five sections: Intercept, T/A, DF, Radio Repair and Wire.²

Through most of fy 1953, Intercept Section worked thirty positions (an increase of eleven from fy 1952), of which twenty-five handled regularly assigned cases, and the remainder, general search. All were active 24 hours a day.³

The section's greatest difficulties during the year lay in its on-the-job method of training operators. In the first place, it took too long--ten to sixteen weeks. In the second, it was scarcely "on-the-job" training at all; the trainees did little but sit beside experienced operators, go through the motions, and hope thereby to attain proficiency themselves. The whole idea proved so unsound that at length (in May 1953) it was discarded in favor of a student operator school in which the students learned by practical application. Here, in less than four weeks, were graduated fourteen of the school's first class of seventeen.⁴

Equipment in use at the fiscal year's end included the BC's -794 and -799 (Super Pro's), and R-274/FRR (Hallicrafter), in addition to three

1. Ann Rept, 304th CRB, fy 1953, p7.

2. Ann Rept, 326th CRC, fy 1953, ppl7-26. What would have been a sixth section--C/A--had been transferred at the close of fy 1952 to the 501st CRG.

3. Ibid. pl7.

4. Ibid. pl9.

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Sloping V antennas and a beverage antenna.¹

EO 3.3(h) (2)
P.L. 86-36

T/A Section, whose principal concern was the maintenance of continuity on high-level nets, consisted of three subsections: Control, Analysis, and "Three Tricks" (the logging subsection). Their composite effort, unlike in fy 1952, dealt only with T/A pertinent to case continuity and net control. Net development, station identifications, colocations, specific volume studies, and out-station continuities were performed by Group (501st) T/A.²

The company's DF activities centered about three DF sites--(A, B, & C) and, until it left the company for the 501st in June 1953, Group DF Control. In November, Charlie site was dropped from the Korean net and picked up by ASA Pacific, and the 501st Group Control took over operational control of sites Able and Baker. Responsibility for the sites' administrative and logistical support remained with the company.

At the close of the report period, Able site was located at Paeng Yong-Do, Baker at Tosa-Ri, and Charlie at Tukto. Their equipment included SCR 399's and MC 551-type modifications of the AN/CRD-2 with Super-Pro receivers.³

Radio Repair and Wire Sections were charged solely with installation and maintenance of equipment.⁴

REF: VOL. I P. 110

1. Ann Rept, 326th CRC, fy 1953, p18.
2. Ibid. pp20-23.
3. Ibid. pp24, 25.
4. Ibid. pp26, 27.

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f. 329th Communications Reconnaissance Company

In mission and operational makeup alike, the 329th, at Songjong, bore close resemblance to the nearby 326th CRC. Both were engaged in the intercept of Chinese Communist military Morse and both carried on DF. As for organization, the 329th lacked only its neighbor's T/A section. (The 329th's sections: Intercept, DF, Radio Maintenance, Power, and Wire.)¹

Through most of fy 1953, the Intercept Section was occupied in a search for new sites. Going into fy 1954, two sites other than the section's home base (Songjong) were in operation--one (advance) at Yonchon, the other (test) at Kumchon-ni.²

DF activities required three outlying sites--USM 652 -A, -B, and -C. In the early weeks of the fiscal year, Able site was located at Yonchon, Baker at Chipo-ri, and Charlie at Kumwha. But of them, as of 30 June 1953, only the Chipo-ri location remained; in a move to improve the sites' positions, Yonchon (Able) and Kumwha (Charlie) had long since been succeeded by Uijongbu and Haksa-ri.³

Nor was relocation the only step toward improved DF. In January, after lengthy experimentation, the DF Section adopted a patch-panel audio tip-off system designed to monitor target stations and thus allow more efficient missions. A few weeks later, the Korean DF SOP in effect since 1 July 1952 was revised to accommodate a new multiple-flash system.⁴ In

1. Ann Rept, 329th CRC, fy 1953, ppl, 10, 18, 19 & Foreword.

2. Ibid. ppl-6 & Foreword.

3. Ibid. pl0 & Foreword.

4. Ibid. ppl1, 13.

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June, as one result of a Far East DF meeting at ASA Pacific, the section put into operation a new tracking code.¹

With all this, however, at least two problems remained--bearing wildness and lack of up-to-date equipment. In the former especially, there was little the section could do; the elements--atmospheric conditions and the rugged Korean terrain--were against it. As for equipment, deteriorated from age and constant repair, DF had to make repeated repairs.²

In a year in which the AF three times used the company's DF facilities for special missions,³ the DF Section discharged through its three sites a total of nearly 130,000 missions and 75,000 searches.⁴

As suggested above, the 329th's repair and installation sections--Radio Maintenance, Power, and Wire--had some problems keeping in operation the company's worn and dated equipment.⁵

REF: VOL. I P. 112

g. 330th Communications Reconnaissance Company

Fiscal year 1953 found the 330th still in the X US Corps area (at DF 2408), still employing the following sections: Radio Intercept, DF, T/A, C/A, Translation, and Signal Maintenance.⁶

Intercept's mission, handed down by the 501st CRG and constant throughout the year, involved the monitor of all North Korean CW stations within

1. Ann Rept, 329th CRC, fy 1953, p14.
2. Ibid. pp15, 16.
3. Ibid. p15.
4. Ibid. Tab 9.
5. Ibid. pp8, 18, 19.
6. Ann Rept, 330th CRC, fy 1953, p1, 11-23.

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the range 1600-6000 kcs. Implementing it, as of 12 July 1952, were nineteen double intercept positions--fourteen in the company area and five with Detachment Dog (which had been established at Kansong late in fy 1952 in a move to regain continuity of low-frequency circuits).¹ By May, however, due to a shortage of personnel, the number nineteen had been reduced to eight, all in the company area. Detachment Dog was left with eleven single positions.²

In the second quarter of the fiscal year, a detachment of 1-0 and 9 EM, enough to operate two positions 24 hours a day, set out for areas near Chunchon and Kapyong in search of suitable alternate sites to which the company could withdraw should the tactical situation warrant. Sites proved out in both areas, not only because they met the chief requisite--proximity to teletypewriter landline facilities--but because they offered access to both low- and high-frequency NK stations. This information was relayed at once to the 501st but no further action was taken during the report period.

Another alternate site was discovered quite by chance a few weeks later. On 11 April 1953, at the request of NSA, 1-0 and 8 EM were detailed to the First Marine Division (CT 032924) for the purpose of tracking down a Korean radio net . In this they failed (the project was discontinued in the first week of May), but in their search and development between 1600 and 6000 kcs was salvaged the knowledge that CT 032924 gave top coverage for all missions then assigned the company and Kansong sites.³

1. Ann Rept, 330th CRC, fy 1953, pl4.
2. Ibid. pl7.
3. Ibid. ppl5, 16.

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In February 1953, the Intercept Section had need once more of a "special project" detail, this time to improve operator training. The result was a totally revised course, reduced in duration by two weeks and in format to two essential steps: instruction in school, then application on the job.¹

DF activities in fy 1953 centered around three sites--"Seven" (USM 35-A), "Eight" (USM 35-B), and "Nine" (USM 35-C). Their respective locations as the year ended were DT 2336, DT 5648, and DT 4947. DF Control was at the 326th CRC. Tip-off operators worked out of the company and Kansong sites.

As for procedure, targets were flashed to outstations by DF code AFSA Guide 1-2-3-4, using a family of ten numerical one-time pads. Results were returned to Control via the same code with a two-family numerical one-time pad. (Literal one-time pads were used only for administrative purposes.)

DF's primary assignment during the year was its North Korean mission, in which was utilized a modification of the Signal Corps' Radio 291 (SCR-291) known as the Army-Navy Transportable Radio Device 4 (AN/TRD-4) prototype. Because of only 36-foot spacing on the antenna array and a receiver (BC-1004) the equipment was inadequate for the low (1.5 mcs) NK frequencies. The problem was under advisement at ASA Pacific as the fiscal year closed.²

The T/A Section, after a short trial-basis consolidation with the 501st CRG in fy 1952, returned early in fy 1953 to its former site in the

1. Ann Rept, 330th CRC, fy 1953, pp17, 18.
2. Ibid. pp18, 19.

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X US Corps area. Left behind were two traffic analysts to assist in the processing of intercept turned in by ROK Det M and Rad Sq Mbl.¹ Theirs eventually became permanent assignments at the 501st.

The months, July and August 1952, presented 330th T/A its first problems of the period. Sparsity of NK traffic, wider use of cryptographic systems throughout NK Corps nets, tightened NK security--all these worked as one to becloud identification of NK traffic and units and render call sign derivation and prediction almost useless. In countering, T/A Section initiated studies which in time proved that net continuity was attainable through [redacted]

Early in November, two traffic analysts were assigned to the company's east coast site in a successful effort to improve liaison between T/A and intercept units.³

As the fiscal year closed, T/A's foremost operational problem was to maintain continuity on assigned cases without sufficient call sign predictions. To compensate, studies were undertaken on various message internals and externals in an attempt to develop and sustain more efficient case coverage.

There was no such compensation for another of the section's problems--

1. Ann Rept, 330th CRC, fy 1953, ppl9, 20.

3. Ibid. p20.

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lack of personnel.¹

The C/A Section, in confining the bulk of its analytic efforts to



The Translation Section, whose chief source of translations in fy 1953 was traffic from NK Peoples' Army and Navy nets, continued in direct tactical support of the X US Corps and Eighth US Army. Its product, however, which consisted of 5,309 translations [redacted]

[redacted] went also to Hq ASA Pacific, NSA, and Hq Fifth AF,

Secul.³

[REF: VOL. I P. 114]

3. Okinawa

a. Field Station 8603 AAU, Futema

Another to assume an operations mission in fy 1953,⁴ FS 8603 in July began intercept of Chinese Communist military, air, and naval Morse, and Russian two-channel radioprinter. The only change in this assignment, in mid-October, was the deletion of Russian non-Morse. Conducting the station's operations were four sections: Morse, Non-Morse, T/A, and DF.

Morse Section, with twenty-one double positions and two singles, and amid personnel, assignment, and ionospheric unsteadiness, accounted in its

1. Ann Rept, 330th CRC, fy 1953, pp21, 22.

2. Ibid. pp22, 23.

3. Ibid. p24.

4. Ann Rept, FS 8603 AAU, fy 1953, pp3-6, Tab 1. Technically, the mission--formerly that of the 327th CRC--had been taken over in the last weeks of fy 1952, when the 327th moved from Okinawa to Japan.

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first full fiscal year for monthly message totals ranging from 3,200 in September to 5,700 in May.

Non-Morse, before suspending operations on 15 October and sending its personnel to ASA Pacific for reassignment, maintained continuous one-position search for eleven two-channel radioprinter circuits. The section's facilities included one ASAN-13-BA, modified to demultiplex only two-channel radio teletype, and six M-14 reperforators.

The work of both, Morse and Non-Morse, became in turn the work of T/A, which, like most of ASA Pacific's longer-established T/A units, carried on in three subsections--Control, Analysis, and Reports.

DF Section in fy 1953 based operations at Futema Air Strip, three miles outside the unit area. Chief equipment was a modified AN/CRD-2. DF missions came from two sources: Kyoto Control, via military radio, and local headquarters by military wire. Kyoto used a one-time-pad system, local headquarters a simple substitution system which was changed weekly. Added to the communications facilities in January 1953 was a SIGNIN circuit linking operations with the site at Futema.

In July of the fiscal year, a station DF site was consolidated with the station, the modified AN/CRD-2 being moved. Concurrently, all DF power cables, along with the section's telephone lines, were laid underground.

In September, in anticipation of the removal of all transmitters from the unit area to the Tengan Signal area nine miles distant, the section developed a remote-transmitter-control unit. The remote unit proving out, the transmitters were moved, as scheduled, on 27 October 1952. In

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the new location, maintenance was provided by the Signal Corps.¹

In March 1953, in a step to build DF mission effectiveness, the section introduced multiple-flash. How well it achieved its purpose is demonstrated in these monthly tip-off averages: before multiple-flash: 481; after: 1,312. Bearing production during the year averaged 3,999 a month. These were forwarded via radio report to ASA Pacific DF Control.

In general, the section's production increased as the year went along-- particularly in the last six months. The reason, already presented, was multiple-flash; another nearly as influential, was the absence during January-June of typhoons, which in the first half of the fiscal year-- in August and November--had caused several outages for short periods.²

4. Philippines

[REF. VOL. I P. 127]

a. Field Station 8609 AAU, Clark Air Force Base

But for a few theater missions assigned by ASA Pacific and an occasional request from local air rescue squadrons for bearings on lost aircraft, FS 8609's job once more was laid out for it by NSA. As before, missions were teletyped directly to T/A Section, and there were broken down and assigned to the various operating positions.

In the main, these assignments were those of fy 1952. A few were transferred during the year, and a few were added; but of the carryovers retained throughout fy 1953, only one saw major change. This, the Viet Minh mission, was broadly expanded late in autumn, following counsel with a representative of NSA. As to the station's overall mission, its five

1. Ann Rept, FS 8603 AAU, fy 1953, pp4, 5.

2. Ibid. pp5, 6.

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general categories continued in effect. They were Manual Morse, Automatic Morse, Non-Morse (multiplex, simplex, radiotelephone, and facsimile), RFP, and DF.¹

Mission of Manual Morse was altered several times during the year, but in these assignments it remained constant: Viet Minh traffic of all types; General Search (600 kcs to 10 mcs until April, when 15-to-600-kc coverage was added); [redacted] military. Most of the changes came in the second quarter of the report period, when Russian air and military, [redacted], and Chinese Communist air assignments, along with the better part of CC commercial, were transferred. (The rest of the latter was expected to follow in fy 1954.)

Inasmuch as the station was the only facility capable of the coverage desired for Viet Minh traffic, approximately two thirds of manual Morse's efforts were given over to it. Six positions--three for General Search, three for coverage of the Russian, [redacted] and Chinese assignments--handled the remainder of the mission.²

Through most of the year, Automatic Morse was interested primarily in commercial links in and around Communist China. At the fiscal year's end, however, emphasis switched to intercept of [redacted] traffic bearing on the current armistice negotiations.³

Non-Morse activities, more varied, included coverage of [redacted] service printer links, Russian service printers in the Far Eastern area, Russian air cases in the European area, and facsimile. All but the first of

1. Ann Rept, FS 8609 AAU, fy 1953, pp10-12.
2. Ibid. p12.
3. Ibid. p14.

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these assignments were expanded during the report period.¹

The station's growing concern for Viet Minh traffic displayed itself again in the final months of the fiscal year, as the Radio Fingerprinting Section dropped all Russian and Chinese targets to concentrate exclusively on recording Viet Minh transmitters.² In all during the year, the section filmed and forwarded to NSA a total of

The total represented an increase of more than 10% over fy 1952.

For the DF Section too, fy 1953 saw improvements. Through a number of modifications in equipment and procedure, the section was able to increase its capacity for both flash missions and local bearings and, at the same time, eliminate security breaches. Earliest of the changes, in September, was the installation of a Sloping-V antenna to replace an inadequate doublet used to bring in signals from net control and other stations in ASA Pacific's DF net. Directional characteristics of the new Sloping-V, whose lead-in was plastic-coated coaxial cable, were greatest at a point half way between Tokyo and Kyoto.⁴

Other moves to improve both quality and quantity of flash missions included: (1) revision of net logging procedures; (2) substitution of the ASA Pacific pad for the literal one-time pad, and (3) refinements in "Z"

1. Ann Rept, FS 8609 AAU, fy 1953, p18.
2. Ibid. p15.
3. Ibid. p14.
4. Ibid. p15.

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signals and the diagraphic and pentagraphic codes.

To eliminate security breaches in direct communication with the Operations area, DF Section, in January, installed an M-294 converter (SIGNIN).¹

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D. Europe

1. Germany

a. Hq ASA Europe, 8620 AAU, Frankfurt

Throughout fy 1953, Operations Division, ASA Europe, remained responsible to the Chief, ASA Europe, for supervision and coordinating all theater Army units engaged in the production of COMINT. Recipients of COMINT support included EUCOM, USAREUR, SACEUR, USFA, 7th Army, and TRUST.²

In a year in which EEL of theater recipients continued unchanged, ASA Europe Morse intercept strength was increased more than twice over--

[redacted] This in turn necessitated a modification in reporting format--to the [redacted] style of DIRNSA.³

On 1 August 1952 the 502d CRG was allocated analysts and files of ASA Europe concerning [redacted] With the allocation the group became responsible to ASA Europe for performing [redacted]

[redacted] Nine months later, on 7 March 1953, the 502d was authorized to release its COMINT to theater recipients.

On 1 November 1952, Operations Division of ASA Austria became operational. Its responsibilities included tactical analysis and reporting on

1. Ann Rept, FS 8609 AAU, fy 1953, pp15, 16.
2. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, p52.
3. Ibid. pp52, 53.

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[Redacted]

Personnel formerly at

work on these assignments at ASA Europe were transferred to ASA Austria. On 10 February 1953, ASA Austria was authorized to release its COMINT to theater recipients. As in the case of the 502d, the intelligence was released through the Special Security Officer.¹

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By the close of the report period both the 502d CRG and ASA Austria were in full operational control of intercept of subordinate units, subject to the requirements of DIRNSA; and ASA Europe. Additionally, the 502d was delegated close support responsibility by DIRNSA.

Fy 1953 was for ASA Europe a year of development--not only in intercept facilities, as outlined above, but in traffic processing, in C/A and T/A. Below, in illustration, follows a resume of the command's six-team operation:

Team 1²

[Redacted]

Considerable effort was given over to improving the team's military voice proficiency. Of several steps in this direction, the opening of an operator training school and the compiling of a low-level voice intercept guide were foremost.

1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp53, 54 & Tab 28.
2. Ibid. pp54, 55.

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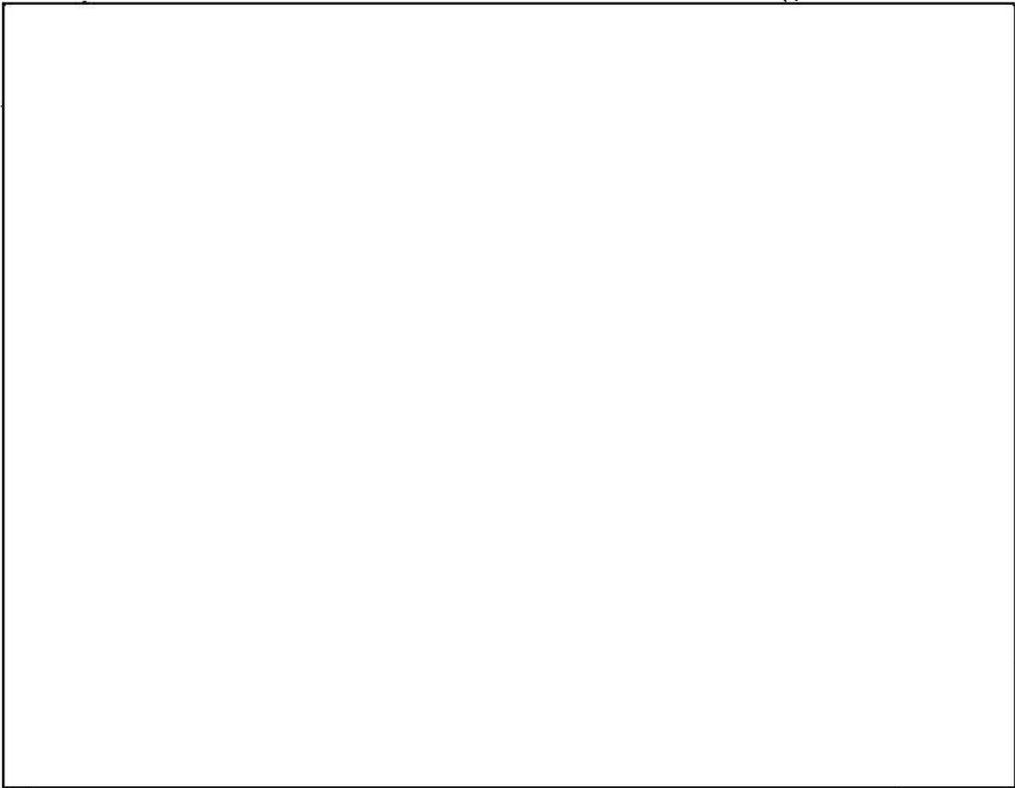
In December 1952, the team initiated weekly T/A notes as the means by which analysts could exchange information informally with their counterparts at other headquarters.



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Team II.

Team II, having increased its strength from [redacted] and [redacted] EM to 6-0 and 52 EM, went on in fy 1953 to expand its work load accordingly. Prime attention was given the [redacted] problem.



1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp56-58.

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P.L. 86-36Team III¹

Team III increased its strength substantially in fy 1953. In the Machine Aids Section, strength rose from -0 and EM at the beginning of the year to -0 and EM at the end. To further qualify itself to handle its share of ASA Europe's expanded fy 1953 operation, the team brought in new equipment and began 24-hour-a-day operations.

Team IV²

Team IV, a DF unit, also grew in the new fiscal year.

1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, p58.
2. Ibid. pp59, 60.

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Reflecting that growth, in terms of both personnel and facilities, was the increase in fully manned DF stations during the period--from seven at its beginning to twenty-two at its close. Targets were principally [redacted]

These stations worked the ASA Europe DF net, which was divided into four nets as follows:

- (1) 502d CRG: eight stations (four stations in the 302d CRB; four in the 307th). Primary target: [redacted]
- (2) 328th CRC: four stations. Primary targets: [redacted]
- (3) 334th CRC: four stations. Primary target: [redacted]
- (4) FS 8606: three stations; FS 8608: three stations. (These were combined into a fixed net controlled at FS 8606. Targets were primarily [redacted])

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In December 1952, ASA Europe through Team IV established a system of landline intercommunication among controls of all nets. Later, a new plotting board and a new gnomonic tracking chart (GT 435-0) were distributed to all stations.

In May 1953, ASA Austria and the 502d CRG assumed responsibility for plotting, evaluating, and reporting to COMINT recipients all traffic pertaining to targets on the two units' missions.

Team V¹

Team V in fy 1953 performed the following missions and functions:

- (1) Maintained liaison with ASA Europe analytical teams and theater recipients. (EEI was translated into COMINT by Teams I, II, and IV.)
- (2) Visited periodically with outstations to assist in local problems.
- (3) Received and dispatched to subordinate units NSA and [redacted] intercept texts.
- (4) Maintained records of all Morse, voice, and R/P intercept assignments reflecting case number, basic station trinomes, and associated OB as available.

1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp60, 61.

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- (5) Exercised staff supervision over daily coverage and weekly operations reports to ensure timeliness, proper format, and adequate texts.

Electrical transmission of texts to subordinate units was discontinued in February 1953. Thereafter, all texts was dispatched by courier.

In April 1953, ASA Europe and subordinate intercept stations received authority to employ [redacted]

Team VI¹

Team VI, a landline unit, was reactivated in October 1952 with 1-O and 3 EM. Its initial job was to forward to NSA all teletype tapes received at ASA Europe and to duplicate [redacted]

As personnel were added, duties were added--almost monthly:

- (1) Processing, scanning, and translating nearly a third of all tapes received at ASA Europe; forwarding results to NSA.

(2) [redacted]

- (3) Scanning all tapes received at ASA Europe; removing and pasting up all [redacted] and [redacted] messages; forwarding foreign [redacted] by electrical means to Hq ASA and NSA, by courier to [redacted] (Feb)

- (4) Establishing and maintaining a daily journal on [redacted] (Feb)

- (5) Establishing and maintaining a [redacted] tion bulletin on special traffic. (Mar)

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1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp62, 63.

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b. 502d Communications Reconnaissance Group

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On 1 August 1952, a month after it had arrived at Heilbronn, the 502d, through its COMINT Branch, began organized intercept operations. Its mission was to analyze and report on radio communications [redacted] Preliminary traffic analysis reports and raw traffic were forwarded to group headquarters from its intercept companies and from the [redacted] [redacted] unit also was responsible for COMINT reports on [redacted] and a share of radio-telegraph coverage.)

Bulk of analysis was on radio-telegraph, with less on radioprinter and almost none on voice. Bulk of the group's effort was on T/A, with little on C/A.

As far as the 502d was concerned, success of its first-year performance was best measured by its steadily increasing responsibilities.

On 25 February 1953 the group took on full responsibility [redacted]

[redacted] It was directed at the same time to forward all COMINT obtained to Hq ASA Europe.¹

Three months later, after Hq ASA Europe had arranged to clear all [redacted] COMINT with the group prior to release--except in cases of a "critical nature"--the 502d assumed responsibility for releasing [redacted] COMINT direct to consumers (all major US Army, Navy, and AF commanders in Europe, including SHAPE, USAREUR, and Seventh Army). For this, by the end of the

1. Ann Rept, 502d CRG, fy 1953, pp35, 36.

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period, a direct teletypewriter line to USAREUR at Heidelberg had been installed and a like line direct to Seventh Army Special Security Office was under construction.¹

Operational control of its mission was delegated to the group on 16 June, on which occasion DIRNSA recapitulated the group's duties:²

"To process and exploit intercepted communications of enemy forces directly opposing or of potentially direct tactical concern to the Commanding General, Seventh Army, to provide intercept on selected targets in support of the overall mission of DIRNSA, and to provide technical support within capabilities to subordinate communications reconnaissance battalions, companies and detachments."

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More specifically, DIRNSA, who retained technical control over the mission, directed the group to (1) apply intercept and DF to radio communication of including Morse, radioprinter, and radiotelephone; (2) make all assignments of coverage of targets in all subordinate units or in other units as designated by DIRNSA; (3) perform T/A and maintain texts and other technical data as required for local intercept control purposes; (4) transcribe all voice intercept, forward all raw traffic, and perform other tasks ancillary to the intercept operations as directed; and (5) perform T/A, C/A, and translation of all immediately exploitable communications to provide timely COMINT support to Commanding General, Seventh Army.³

Operations as originally conducted were the work of two sections, Control and Analysis. Later a reporting unit was added.⁴

1. Ann Rept, 502d CRG, fy 1953, p36.
2. Ibid. p37.
3. Ibid. p37.
4. Ibid. p38.

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Essentially, duties of Control Section in fy 1953 were these: to relay changes of mission and texta from Hq ASA Europe to subordinate units; to prepare weekly operations reports for forwarding to Hq ASA Europe; and to check daily coverage reports against the group assignment for accuracy. Mission assignments involved radiotelegraph, radiotelephone, [] Printer, and DF, cases in which were assigned as full coverage, priority POROCO, or sample POROCO.¹

Analysis Section functioned much like any such section at group level, analyzing all traffic sent in by its companies and battalions and conducting limited technical research. During the first half of the report period, analysis coequated 90 to 95 per cent of all [] target nets identified to order of battle.

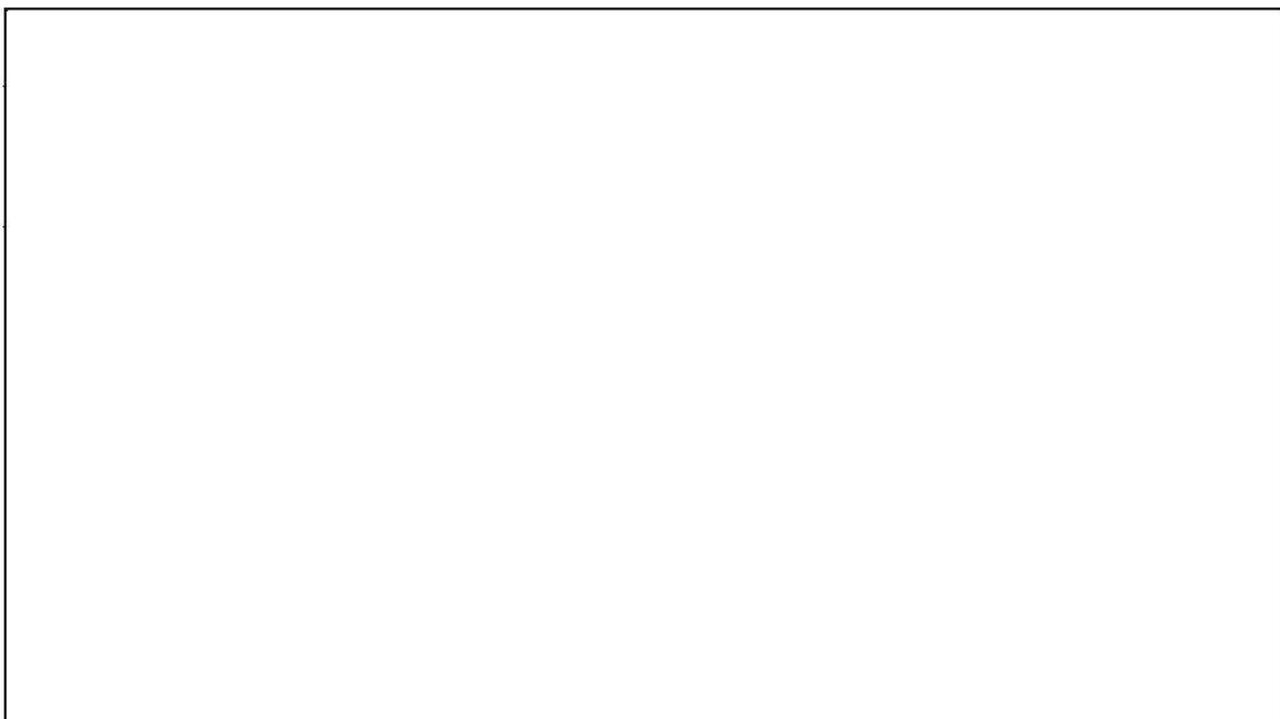
In December, because of a period of light [] activity prefaced on 1 November by a complete change of keys, the section spent most of its efforts analyzing [] communications structure and researching its own--the 502d's--mission.

In January, after the customary quarterly book change, Analysis noted the [] changing to an unknown set of keys. The change slowed the process of net identification considerably.

In February, [] networks were found to be using three different [] Solved--as a few of them were--they led the Analysis Section to the locations of a number of [] units. In the same month the section noted unusual activity on [] target nets--indicating, as

1. Ann Rept, 502d CRG, fy 1953, pp46, 47.

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T/A activity slumped some in May but picked up again in June, when

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mid-month [] brought greatly increased [] traffic.

The excitement brought a number of [] compromises too, betraying a tactical alert. On news of this, 502d intercept and DF missions were quickly realigned to give emphasis to [] units likely to move in to stop the trouble. [] Analysis Section published an account of its character, for which, as well as for its earlier day-by-day reporting, the unit received commendations from General McClure, G2, USAREUR, and DIRNSA.²

Intercept progress in general in this first year, however, was slow, not for lack of traffic--but because of periodic shortages in men and equipment. Lack of the first was reflected in Morse position totals

1. Ann Rept, 502d CRG, fy 1953, pp42-45.
2. Ibid. pp38, 45.

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through the period: late in July there were [redacted] late in February, seven months later, there were [redacted]. While the total rose to [redacted] in April, it was not until late May that it approached the high mark of July. At the end of May, [redacted] positions were fully manned.¹

Equipment, while generally sufficient through the first nine months of the fiscal year, became insufficient in April. Early that month, [redacted] [redacted] the 502d estimated, for radioprinter coverage alone, would require an increase in automatic equipment of nearly 300%. The figure served also as an approximation of the need in event of combat.²

In DF, the 502d's first mission was a general assignment of undifferentiated [redacted]. In time, on 28 November, the group began to categorize these cases--into four blocks, by priority. The first block was reserved for suffix calls and other targets indicative of split headquarters. The second block accommodated special missions required by the plotting and analysis units. The third and fourth blocks took in command

1. Ann Rept, 502d CRG, fy 1953, p48.
2. Ibid. p49.
3. Ibid. p50.

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nets and low-echelon targets respectively. Still later, blocks three and four were downgraded to four and five, and into the block three category went selected tactical nets.¹

As the fiscal year began, DF Control was at Giessen. On 11 August it moved to Hersfeld. Its sites until September numbered three--at Kassel, Hammelburg, and Memmingen. In September, Control moved to Hof, and there a fourth site was established. As the year went on, Control moved from one area to another, occasionally locating with one or another of its sites.²

In addition to its regular assignments, the 502d through the course of the report period conducted or supervised a series of special projects. Though these are discussed elsewhere in this volume, mainly in the reports of the 331st and 332d CRC's, they are recounted briefly below:³

1. Signal and Fist Characteristic charts: Tested by the group's intercept companies, the charts, whose prime function was to bring closer liaison between analysis and intercept units, were thought to be more work than they were worth. In the first place, the companies felt that most of the charts' entries would more properly be noted in the traffic log. In the second place, according to the companies, there already was sufficiently close liaison between intercept and analysis.
2. Special Research Van: Known alternately as the "terrormobile," the van was a roving, three-position unit introduced to cover missions not within the intercept capabilities of equipment in use by the group. It was capable of both Morse and voice intercept, and DF, being equipped with AN/CRD-2, R-274, RD-74, S-37, and RC-173. Its specific job was to patrol roads parallel

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1. Ann Rept, 502d CRG, fy 1953, pp47, 48. Fuller information on sites--intercept as well as DF--can be found in the reports of the group's companies and battalions.
2. Ibid. pp51-53.
3. Ibid. pp58-63.

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3. Voice: In a move to increase voice intercept in accordance with a desire expressed by higher headquarters in the spring of 1953, the group put into action in April not only patrols but, for the first time, balloons, which were hoped to raise antennas high enough to trap signals possibly being missed. Later, in June, the group sent up aircraft positions. Together these measures, though not without their disadvantages (examples: sudden winds disengaging balloons from their antenna couplings; sun rays blistering and cracking them; lack of power in airborne positions), did much to increase the quantity of voice intercept to a satisfactory level.
 4. Tape Recorder: The project involved here was a test, during 10 June-1 July, of two Waters-Conley tape recorders (BC-1016) modified for teletypewriter use in lieu of unavailable Boehme 5-C's and 6-E's. Proving unacceptable as substitutes for Boehme equipment but satisfactory for the recording of simplex signals, the recorders were recommended as "supplementary to present equipment."¹

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c. 331st Communications Reconnaissance Company

The 331st, at Giessen, carried on its fy 1953 operational activities in two phases- first, through 28 February 1953, as Co B, 307th CRB, and second, as the 331st CRC.

Under provisional reorganization, the company continued to act as an intelligence-collecting agency for the battalion processing center. In line with this and the unit mission, assigned in the early stages by ASA Europe and later by Hq 502d CRG, Operations Section of Co B functioned as three independent sections--Intercept, RDF, and Radio Repair.

1. Ann Rept, 502d CRG, fy 1953, pp58-63.

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All were under the direct supervision of Operations Control.¹

The Intercept Section comprised two additional sections--Manual Morse and Radio Printer--whose assignments were to intercept Russian military signals originating in the Soviet zone of Germany. Coverage was of five types: full, priority position rotating (priority POROCO), sampling position rotating (sampling POROCO), additional, and alternate.²

In a year in which Manual Morse moved with the company, first to Hersfeld, Germany, and later to Echterdingen, for maneuvers, and in which it took part in Exercise BLOWTORCH, the section employed the following types of equipment: BC-342, Hammerlund Super-Pro, and Halli-crafters R-274 receivers; PE-95 power units; CU-119 multicouplers; and long-wire and double-doublet antennas.³

Training for Manual Morse operators stressed radio and antenna theory, along with [redacted], call sign generation, and chatter characteristics.⁴

Radio Printer Section, too, went to Hersfeld, but not as part of the main company convoy (which moved in August). The section's signals at Giessen had long been of poor quality. The first day of the new fiscal year a better location, about four miles southeast of Hersfeld, was established. Aided by a voice team from Co A, the [redacted] Printer team exploited its new 1.5-to-2.5 mc range to the extent of producing between

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1. Ann Rept, 331st CRC, fy 1953, pl1.
2. Ibid. pp13, 14.
3. Ibid. pp14-19.
4. Ibid. pl6.

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45 and 55 tapes daily in a four-day test. (By comparison, only 295 tapes had been produced in the entire preceding month of June.)¹

Through the rest of this first phase of the company's fy 1953 operations, particularly between 10 July and 10 August, radio printer activity fell off steadily. Of several reasons, the biggest was a change of schedule systems, which on 10 July rendered predicted schedules void. The section stepped up its operator training, in which two Waters-Conley tape recorders BC-1016 played the largest part.²

DF Section of Co B employed two outstations during the period--one at Kassel, Germany, the other at Hammelburg and, after 15 December, Schweinfurt. Together they comprised the company's contribution to a four-station (later, eight-station) DF net, whose basic line of 375 miles paralleled the Soviet zone of Germany from Kassel to Memmingen.

In tracking targets, the section used the ASA Europe Tracking Code. In its security system it used the Mission Assignment Code. Each outstation used the SCR-291 RDF set, the SCR-399, and the AN/GRC-26.³

Late in 1952, radio control of the DF net, until now the joint province of Co B and the 332d CRC, went to the 502d CRG. Amid the adjustments that followed, encoding and tracking remained unchanged.⁴

Phase 2 of the company's operations began 1 March 1953. In this stage the company--now the 331st CRC--increased its number of fully-manned intercept positions from and began preparations

1. Ann Rept, 331st CRC, fy 1953, p20.
2. Ibid. pp21, 22.
3. Ibid. pp22, 23.
4. Ibid. pp22, 23.

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to move a detachment to the British zone of western Germany early in fy 1954.

Under the new TOE 32-500, Intercept Section again was broken down into two groups, this time Manual Morse and Voice Intercept. What had been Radio Printer Section now became part of Manual Morse.¹

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Mission of Manual Morse was to intercept [] military CW and printer signals emanating from the []. Like the mission, and despite certain changes wrought by the new TOE, the section's operations in the latter months of fy 1953 continued virtually unchanged.

As for the new Voice Intercept Section, most of its short life in the report period was spent getting the feel of of its assignment--coverage of [] military-ground and ground-to-air transmissions.²

DF Section, through 1 March-30 June, operated four stations in the 502d's net. They were at Kassel, Schweinfurt, Butzbach, and Fulda.

(Fulda was taken out of operation on 15 June in anticipation of a move.)

The section's biggest problem during these months involved radio communications between control station and outstations. Partly because of the enlargement of the two-company DF net, partly because of adverse weather conditions, sustained contact was almost impossible. Some help came on 20 May in the revision of the net's frequency system, but ultimate solution awaited the materialization of plans for a duplex type of operation in which one frequency was to be used by control for target-tracking and administrative matters, the other by the outstations for

1. Ann Rept, 331st CRC, fy 1953, pp25-27.

2. Ibid. pp25-29.

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reporting bearings. In this way it was hoped the net could be kept operative at all times.¹

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d. 332d Communications Reconnaissance Company

As in fy 1952, operations of the 332d CRC (home station: Heilbronn, Germany) centered around six sections: Intercept, T/A, C/A, [] Printer, Radio Telephone, and DF. Number one objective continued to be the development of networks []

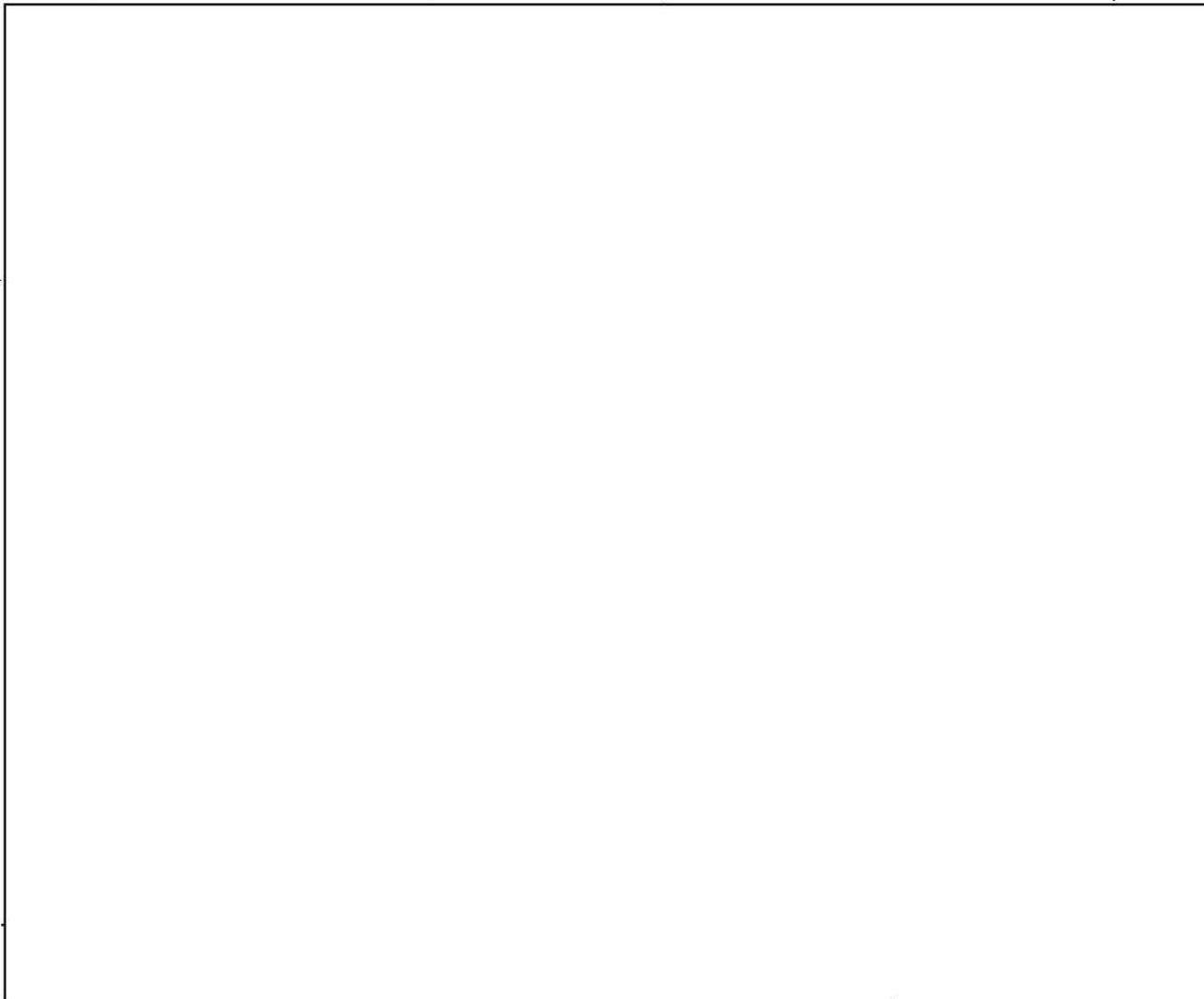
Coverage of [] for fy 1953 was provided by a single CW position, operating around the clock. The following were its findings:³

- (1) Call signs remained fixed and constant. Both control and outstations used the call sign [] although the latter ordinarily added the suffixes two through fourteen. Standard [] "Q" and "Z" signals were used frequently.
- (2) Breaches of security were not so rare as in fy 1952 (when net security had been good enough to prompt the assumption that [] supervisors were at work). The inference was that [] supervision, had been relaxed.
- (3) During September-December 1952, control [] used automatic tape in calling outstations. In several instances, 25- to 40-word-per-minute tapes were used in passing traffic. From these practices it was assumed the net was being readied for conversion to fully automatic operation.
- (4) The network used a number of different schedules during the year. In the early stages it daily (except Sundays and important [] civil and religious holidays) worked a 0800-1600Z schedule. Later it went to 1600-2300Z. When last observed, in mid-June, it was active between 1000 and 2200 hours.

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1. Ann Rept, 331st CRC, fy 1953, pp29-31.
2. Ann Rept, 332d CRC, fy 1953, pp23, 46.
3. Ibid. pp23-25.

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ordinates. After moving to Hof for the summer, however, and noting on arrival that the target's signal suddenly had grown weak (which was laid to the probability that Hof was in the target's skip zone), the positions gave up [redacted] to the 331st at Giessen and diverted their prime attention to [redacted]. Observation of both revealed that [redacted] training exercises--mostly at division, rather than army, level--were especially active during August-October.

1. Ann Rept, 332d CRC, fy 1953, p25.

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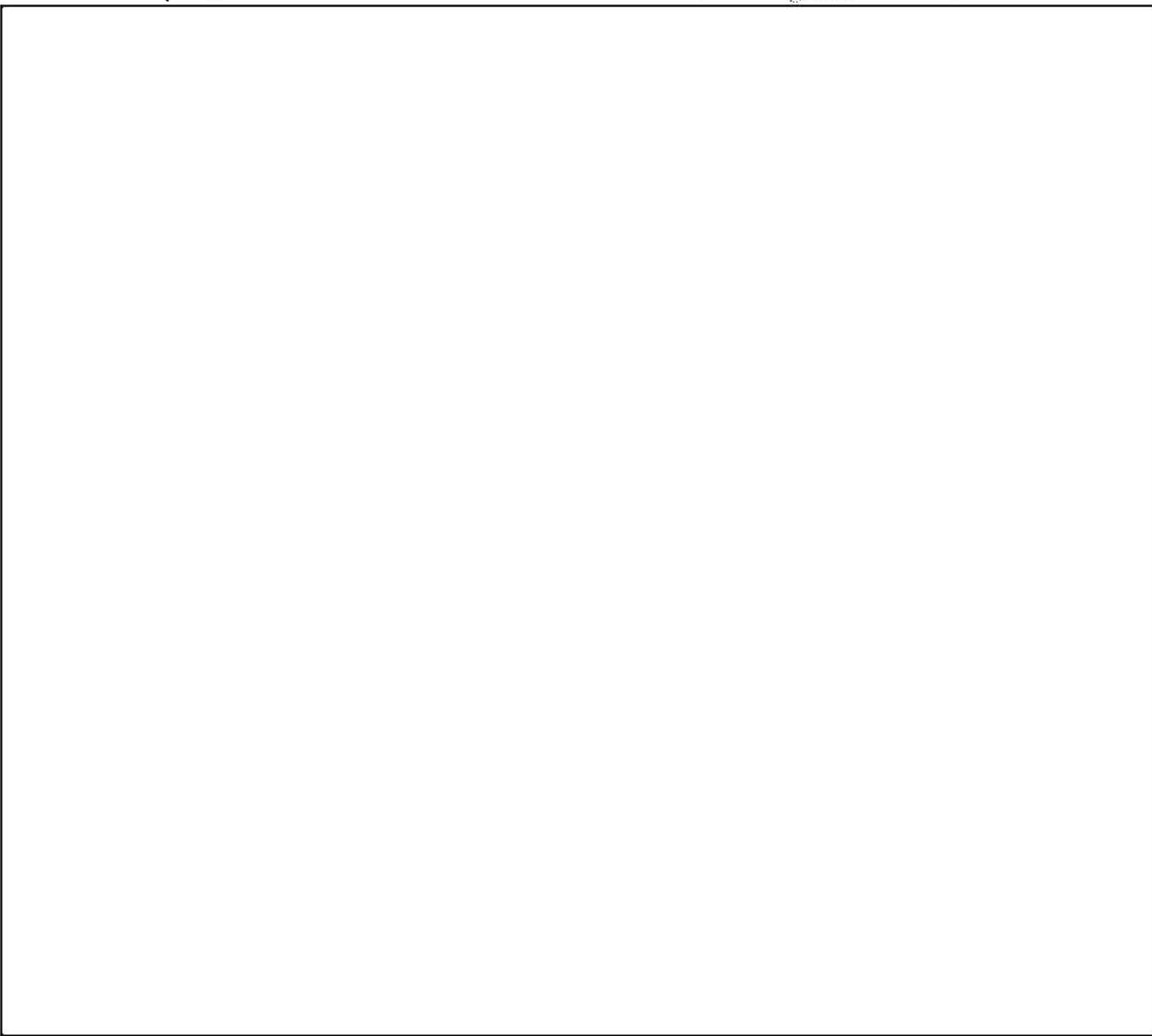
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On 1 October 1952 the 332d took on two additional full-coverage
cases-- [redacted]

After passage of codeword on the former, the command net, parallel, lat-
eral, and [redacted] printer nets were intercepted with notable success.¹



1. Ann Rept, 332d CRC, fy 1953, p26.
2. Ibid. p27.

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efforts at solving the sequence were still in process.¹

From 1 July to 10 August, the Radio Telephone Section, split up between Heilbronn and Hof, was engaged chiefly in the intercept of unknown maneuver traffic. (Though the section still logged and turned over to T/A all intercepted [] military air cover names, military air was no longer on assignment.) At both sites, R/T intercepted a number of unknown [] nets, but at neither was it able to pick up tank or other maneuver traffic.

In mid-August the section, now consolidated at Hof, began patrol work, and for this a maximum of three men was allotted. But here again, although the patrols skirted the east zone borders of Germany, Austria, and Czechoslovakia, the amount of useful intercept was small; and again, no tank or other maneuver traffic was intercepted.²

On 21 November the section returned to Heilbronn, and there it stayed, mission unchanged, for the next three months. Intercept during this period was relatively light.

On 2 March 1953, R/T Section made its last move of the year. It was sent, as part of a patrol, to Coburg, where it monitored several CW parallels and military nets. Coburg proved to be the best site yet for voice intercept.

A month later, in April, R/T went to work on one of its most pressing problems--how to segregate air nets from military nets in the absence of recognizable activity. Using newly-developed information brought to Coburg

1. Ann Rept, 332d CRC, fy 1953, p33.

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by two R/T analysts, the section net recognition was greatly facilitated. The time thus saved was applied to advantage in the development of R/T search.¹

It was also in April that the R/T Section began using balloons to support its single-strand antennas. Rising upwards of 150 feet, the balloon-borne antennas provided greatly improved reception and brought in several nets never before heard. The only apparent drawback was in the balloons themselves; they lasted only twelve hours at a time.²

On the 8th, 9th, 15th, and 16th of June, following the arrival of the rest of the company in Coburg, R/T went a step further in the testing of airborne intercept. This time the medium was an airplane. The results were negligible because the equipment (XMTR R/T 176/PRC-8, -9, and -10) was weak, but the concept was held sound.

In the midst of these air intercept tests an eight-operator patrol, equipped with two Super-Pro's, two 36 FM sets, and two RD 74/U recorders, was sent to Steinbach, Germany. In its brief stay there, the patrol reported hearing tank traffic and a number of nets not previously intercepted.³

In DF, the 332d was represented at the beginning of the fiscal year by two stations--Memmingen and Ansbach--which constituted the company's part in a joint effort shared by the 331st CRC and controlled by the 502d CRG. Of the two locations, only the former served its purpose, in Septem-

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1. Ann Rept, 332d CRC, fy 1953, pp39-41.
 2. Ibid. p41.
 3. Ibid. p42.

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ber, the Ansbach site was recalled to Hof, and the search for a suitable site was on. In October the station moved to Bindlach. Four months later it returned to home station Heilbronn. Finally, on 17 March, it settled as an established station at Coburg, there to remain the rest of the fiscal year.

Even as this problem was being attacked, however, another emerged to parallel it--early in 1953, as the section moved ahead with plans to expand. Having organized a third detachment, Detachment C, in late January, the section was six months in finding for it an adequate site outside Kiliansdorf. Rejected in the search were Schwabisch Hall, Vilseck, and Hof.

The next, and in fy 1953 the last, step in expansion came more easily. On 9 April, a new station was established at Rotz. The site was satisfactory and was retained.

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e. 334th Communications Reconnaissance Company

Among the later additions to ASA's operations force in fy 1953, the 334th took up its mission on 13 January 1953--less than a month after its arrival from the United States at Kaefertal, Germany. The mission, which covered [redacted]

Police, [redacted] Mainline, and [redacted] "unidentified," was at first conducted by [redacted] positions. Later that figure rose to [redacted] By the end of the year it was [redacted] of which [redacted] were voice, [redacted] DF search, and [redacted] search and development.

1. Ann Rept, 332d CRC, fy 1953, pp44, 45.
2. Ann Rept, 334th CRC, fy 1953, p6.

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One difficulty in conducting the mission was man-made interference. It was present in January and--to a lesser extent because of the installation of three double-doublet antennas--it was present in June.¹

As for matters of orientation affecting the company in general, the T/A Section in its first two months seemed to reflect as well as any. To begin with, there was equipment to be picked up at the local railheads; then unloading, assembling, installing, testing. For several weeks this procedure occupied almost full time. Too, there was an exchange of T/A personnel with Field Stations 8606-8608--inexperienced personnel of the 334th for experienced personnel of the stations. The men involved, either lending knowledge or acquiring it, were away from their assigned units for about a month. At the end of that time the 334th's analysts, for their part, returned well schooled in the various missions and functions of ASA Europe and ready to implement their own.²

Back at the job, T/A personnel were divided into three groups. One took on all assigned search nets of the [redacted]. A second was assigned [redacted] mainline and unidentified nets. The third handled all assigned [redacted] cases, such as [redacted] and [redacted]. To insure against too narrowly developed experience, personnel were moved periodically from one group to another. The work of the three groups is outlined below:

1. Ann Rept, 334th CRC, fy 1953, p7.
2. Ibid. p8.

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This was the [redacted] unit. Its first mission was assigned 13 January 1953. Coverage, by reason of insufficient personnel (most of the analysts were at this time on TDY), was poor, and nearly all of the [redacted] Manual [redacted] nets picked up remained unidentified.¹ Working the January assignment were two [redacted] positions, one priority Position of Rotating Coverage (POROCO), one sample POROCO. Priority POROCO consisted of four nets, none of them heard; sample POROCO consisted of five nets, and none of these was heard. In all on this assignment, only eight nets were heard and copied. These were [redacted] Morse [redacted] Com-
bined Voice and Morse [redacted]

In February, the mission was changed. Added were priority POROCO "F," comprising the nets of the [redacted] air warning system [redacted]; and sample POROCO, covering headquarters subordinate air warning radio nets [redacted] [redacted] and Search "B" (Book 17/11/08/27). Dropped, because it had not been heard, was all previous sample POROCO.

Changed too, was the quality of coverage, improved by the return of the men on TDY. The only nets still not heard were [redacted]

The second and last series of major changes came in March, and this, too, was attended by improved coverage. The changes were these: full coverage was assigned headquarters subordinate [redacted]

Several reasons accounted for better coverage in March. First, closer liaison with other of ASA Europe's T/A units brought 334th T/A increased knowledge not only of its own assigned nets but of the workings of nets in general. Second, ASA Europe several times sent the company experienced analysts to assist in local problems. Third and fourth, the company, in addition to having set up additional double-doublet antennas, had all the while been accumulating valuable experience of its own.

For these same reasons, largely, coverage continued to improve month by month until, by June, several weeks after T/A had begun

1. Ann Rept, 334th CRC, fy 1953, pp9-12.

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logging and analyzing Air Tracking traffic [redacted], only one assigned net, [redacted] remained unheard.

Team Two¹

Team Two, working [redacted] mainline and unidentified nets, accomplished little more in January than Team One--and for the same reason: lack of experience.

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In February, following the return of personnel on TDY with Field Stations 8606 and 8608, coverage picked up slightly. The team now began making identifications.

In March coverage was stepped up again, and again for substantially the same reasons that applied to Team One's progress: closer liaison with ASA Europe T/A (specifically its [redacted] team); experienced assistance in local problems--in this case sent by Frankfurt; addition of double-doublers, and the team's own greater experience.

In April, with improved coverage bringing in ever-heavier traffic, Team Two decided to subdivide itself into two teams of two men each, each team to confine its efforts to a given list of nets. One result in April was 122 unidentified nets copied.

Tactical activity dropped a little in May, but this was thought traceable to the fact that the nets on assignment were in the summer-maneuver movement area and hence on radio silence; however, since 334th DF was not in full operation at the time, the speculation could not be confirmed.

As fy 1953 moved to a close, traffic in general approached a new high. Result of a number of factors, the upswing was due in largest part to the setting up, on 22 June, of a two-man field operation intended to keep fuller account of [redacted] Forces tactical nets. With this, and with prospects of added personnel, Team Two on 30 June had reason to expect still broader coverage in fy 1954.

Team Three²

Team Three, in charge of [redacted] traffic and staffed by [redacted] O and [redacted] EM, had as its specific mission, as of 13 January, cover-

[redacted]

1. Ann Rept, 334th CRC, fy 1953, ppl2-16.
2. Ibid. ppl6, 17.

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placed [] Air Defense; finally, [] Military replaced [] Air Warning. In its first-year mission Team Three's progress closely paralleled that of Team One and Two: slow at first but increasingly sure.

Outside of traffic analysis, the 334th conducted several special projects. Identified by the designations of the detachments carrying them out, they were USM 679-E, USM 679-E-Hersfeld, and USM 679-F. USM 679-E, involving four enlisted men and two pieces of equipment--a 348 BC with a band spread of six mcs, and an AF transmitter--called for airborne monitoring of [] and voice stations. The project, conducted during the first three weeks in June, was unsuccessful for a number of reasons but principally because of lack of equipment and lack of sustained effort.¹

Second of these special projects, USM 679-E-Hersfeld, entailed []

Personnel assigned included [] O and [] EM; major equipment consisted of SP 600 receivers, RD 74/U tape recorders, and long-wire, Sloping-V, and double-doublet antennas. The project was conducted during the last two weeks of the fiscal year.

Of all targets on USM 679-E-Hersfeld assignment, only [] Military yielded good results. [] nets were virtually inactive; [] Military, out of the way geographically, was not heard at all; and [] Military nets, the few that voice search was able to pick up, were at best difficult to identify.²

Special Project USM-679-F, a one-man mission requiring one Super-Pro receiver and a recorder, turned out little better than the others. The principal difficulties, affecting both its [] voice assignments, were lack of experience, lack of adequate coverage.³

In DF through January-June 1953 the company spent most of its efforts establishing four sites. They were at Wackernheim, in the Mainz Military District; Karlsruhe; Sinzig, 20 miles south of Bonn; and Freiburg.

REF: VOL. I P. 752

1. Ann Rept, 334th CRC, Fy 1953, pp27-30.
2. Ibid. pp32, 33.
3. Ibid. pp30-32.
4. Ibid. pp19-27.

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f. Field Station 8606 AAU, Herzogenaurach

Fiscal year 1953 mission obligations of FS 8606 continued those of fy 1952: (1) to act as a collecting agency for the intelligence-producing activities of ASA Europe and (2) to perform such special missions as were directed by the Chief, ASA Europe. Fulfillment of these duties was the work principally of six sections: Manual Morse, Automatic Morse, Non-Morse, RDF, RFP, and Radio Telephone. A seventh section, Traffic Control, supervised.¹

With the new fiscal year, emphasis of Manual Morse's mission was re-directed from [redacted] intercept. (Responsibility for COMINT within the [redacted]-hence for the [redacted] cases--had passed to the 502d CRG.) As of 1 July 1952, Manual Morse was operating three positions--one for [redacted] traffic, one for [redacted] one for [redacted]. Twelve months later there were [redacted] positions: one--

[redacted]

Automatic Morse Section, its mission "to intercept and transcribe International Commercial . . . transmissions," was the field station's [redacted] Section, and as such, with a capacity for intercepting simultaneously either 33 short-wave targets or 25 short- and 8 long-wave targets, it performed the bulk of the station's special missions (which are outlined at the end of this summary).³

1. Ann Rept, FS 8606 AAU, fy 1953, pp8, 9.
2. Ibid. pp15, 16.
3. Ibid. pp46, 47.

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[] however, was not the concern of Automatic Morse alone; to a lesser degree it was the concern also of Non-Morse, which in all comprised six subsections: [] Taper Simplex [] internal single-channel circuits), MUX [] internal multi-channel commercial circuits), Service (two-channel and single-channel military, air, and naval transmissions), PIX (photo facsimile transmissions), and Signal Analysis (construction and identification by analysis of all unidentified signals).¹

[] Except for the addition of a [] Non-Morse's [] mission remained virtually unchanged. The new link, using [] was placed on priority assignment after initial intercept on 24 October 1952.

In other [] assignments, links connecting [] [] were intercepted daily throughout the year, while a [] [] chain was not heard at all. Constant unsuccessful search of the latter suggested that its traffic was being passed instead on the [] Automatic Morse links.

Through April-June 1953, due to a loss of equipment, only priority [] circuits were monitored.²

Taper Simplex: Of chief interest to Taper Simplex were its [] commercial assignments, which were performed on a strict priority basis. Relatively little time was afforded general search.

The section's biggest difficulty during the report period was the change by a number of [] links from on-off keyed or frequency-

1. Ann Rept, FS 8606 AAU, fy 1953, p49.
2. Ibid. pp50, 51.

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shift keyed signals to double frequency-shift signals. Lacking sufficient ASAN-5 demultiplexing equipment to copy the signals, the section substituted a Dual Receiver Diversity-Boehme 5-C combination; and this, because it required constant attention, impaired the efficiency of the entire Taper Simplex operation.

On 8 October 1952, the [] links were noted using a 1TRB [] type transmission on one side of a double frequency-shift signal. The information was forwarded to ASA Washington.¹

MUX: Coverage of [] circuits varied considerably during the year due to a number of signal changes. In October 1952, for example, links between [] were found to have switched to a double frequency-shift pattern consisting of a [] and MUX signal. A month later, [] were noted changing to a flexible multiplex (6TP) signal with a regular 6B serving as standby. Amid these and related observations, primary analysis showed there was no direct contact between [] traffic from one to the other was routed either through [] or, over an alternate relay link, through []

Although no 3W signals were heard during the period, there was noted a decided increase in the use of 3B.²

SERVICE: Service transmissions were broken down into two groups: Main-line [] and Low Level (Corps- and Army-controlled). All held priority over identified [] signals.

1. Ann Rept, FS 8606 AAU, fy 1953, p51.
2. Ibid. pp51, 52.

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Despite an overall decrease during the fiscal year in both quantity and types of service transmissions per day, air LTPB and naval LTPB transmissions increased appreciably. Mainline air and military transmissions held fairly constant.

In July, Service subsection found [redacted] to be using a LTPB [redacted] signal and thereupon raised it to top priority. Satisfactory coverage of the target was maintained through continuous search.¹

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PIX: In a year in which PIX monitoring was limited by shortages of recording discs and 60-cycle regulated power, links between [redacted] [redacted] received most notice.

SIGNAL ANALYSIS: Signal analysis came in for heavy stress in fy 1953. As illustrated in the abundance of information forwarded to ASA Washington regarding a flexible multiplex (6TP) signal employed by the [redacted] link. Through primary analysis it was determined that the signal consisted of three-channel and six-channel operation--each characterized by 400 operations per minute and a cycle length of 150 milliseconds. Band lengths were approximated to be seven milliseconds for the three-channel type and 3.5 for the six.²

In addition to the mission assignments of its subsections, Non-Morse took on a number of special projects. During 8-18 October, for one, all available methods of recording were brought to bear in an attempt at positive development of the [redacted] signal. Using two receivers,

1. Ann Rept, FS 8606 AAU, fy 1953, p53.
2. Ibid. pp53, 54.

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the section was able to record, on the Ampex 400 and the BC-1016, the audio-keyed output of both the Boehme 5-C and the 6E Tone Keyer. DC output of the Boehme 5-C was copied on the ASN 17-B, while RD-74 was used to copy receiver direct output.

In mid-November another project aimed to measure the frequency shifts of service-type transmissions.¹ Its findings: two-channel transmissions--400 cycles; LTPA and LTPB--600 to 1,500.²

In other special efforts during the year the section:

(1) began full coverage of LTPA and LTPB after discovering that both were carrying tests and operator chatter in the clear;

(2) began on 20 November to forward daily to ASA Washington a minimum of two hours' recordings of its target;

(3) maintained for more than a month (21 December-30 January) a co-reporting system between FS 8606 and GCHQ designed to provide both stations top coverage of 6TP;

(4) instituted on 1 June 1953 an search mission to sample new, previously inactive, or unidentified PIX or non-Morse signals.³

The job of the DF Section in fy 1953 was to coordinate the efforts of all units serving an expanded ASA Europe Fixed Station RDF net. Locations of these units were Herzo Base, Bremen, Berlin, Scheyern, Passau, and Straubing. Total fixes for the fiscal year came to 5,582. (Actually, this was

1. Measurement was determined by calibrating the beat-frequency oscillator on the receiver (in this case the BC 794-B)-- zero-beating the mark side of the signal with the main tuning dial, then moving the beat-frequency oscillator clockwise until the space side had been zero-beated. The frequency shift was the difference in calibration between the zero-beat of the mark side and the zero-beat of the space side.
2. Ann Rept, FS 8606 AAU, fy 1953, pp54, 55.
3. Ibid. p55.

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the work of only three months--April, May, and June; though the net's out-units had been taking bearings as of 1 July, it was not until 29 March that RDF Control was authorized to plot fixes.)¹



In the second project which took up the greater part of January, the section upgraded its [] cases to priority "A" to aid the local T/A Section in predicting [] call signs.²

Principal emphasis of FS 8606's Radio Telephone Section in fy 1953 was on the intercept and development of [] voice nets. To

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1. Ann Rept, FS 8606 AAU, fy 1953, pp30-38.
2. Ibid. pp41, 42.

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speed development, ASA Europe agreed with the section to assign voice intercept by country and type only, thus allowing R/T to search its entire band 24 hours a day and in turn to retain intercept and continuity on appropriate [redacted] unknown nets.

In September 1952, R/T Section conducted a controlled continuity-intercept test to determine whether the field station's Detachment F at Berlin could intercept traffic not heard at the station site. In the test, given frequencies--carefully selected to cover the gamut of the intercept band--were intercepted simultaneously at given times. Results showed (1) that there was no satellite traffic and (2) that very little traffic inaudible at Herzo Base was audible at Berlin.

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On 25 November, the same day that [redacted] Air Voice was dropped from assignment, R/T added [redacted] voice search.¹

As noted above, FS 8606 was not confined in its intercept facilities to Herzo Base alone. In Berlin it had Detachment F, whose mission, in addition to the tracing of unidentified transmitters by RDF, included intercept of manual Morse, non-Morse, and voice.

In manual Morse, the detachment's first big assignment came on 12 July 1952. A general search mission calling for two full-time positions, the assignment was intended to take in a range of 2.5 mcs--5 to 3. Owing to equipment and operator shortages, however, optimum operations were delayed until 6 September.²

The second assignment in manual Morse followed in December. On the

1. Ann Rept, FS 8606 AAU, fy 1953, p57.
2. Ibid. p64.

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16th of that month the initial assignment was dropped in favor of round-the-clock coverage of seven [] cases--designated POROCO "A"--and eight [] cases--POROCO "B." Also a part of the new assignment was an alternate block of [] search, POROCO "A" and "B" respectively. Except that [] search were replaced on 1 January by six [] cases and [] search, the assignment remained essentially unchanged until 25 March 1953, when all manual Morse was dropped from the detachment's mission.

On 19 June, four manual Morse operators were dispatched from Herzo Base to cover sixteen [] nets that were thought to be in touch with rioting []

In non-Morse, Detachment F's first and last concern of the year was intercept of [] single- and two-channel transmissions below 3 mcs. Since the basic assignment was being handled adequately at Herzo Base, the detachment's end of it was discontinued in mid-September.²

The R/T, or voice intercept, assignment at the fiscal year's outset tapped [] voice transmissions between 3 and 5 mcs. Coverage was provided by one position, operating 24 hours a day. Several weeks later, still in July, the assignment underwent the first of a protracted series of changes. Intercept now was to be taken between 24 and 30 mcs, and below 2 mcs. The other changes, chronologically:

- 7 August - Inclusion, on given days, of []
- 22 September - Expansion of the 24-to-30 mc coverage area to 20-40 mcs.

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1. Ann Rept, FS 8606 AAU, fy 1953, p65.
2. Ibid. p67.

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- 24 September - Reversion to the lower mc area 2.5 to 5 for prime coverage. (The 20-to-40 mc range was retained only for general search.)
- 30 October - Addition of the 120-to-220 mc area (following receipt of the highly sensitive S-37 Hallicrafters Receiver). Also, deletion of the area below 5 mcs.
- 1-30 November - Addition of [] coverage of 2.5 mcs to 5 mcs, between 0700 and 1600 hours GMT. Return from 20-40 mc area to 24-30 mcs.
- 16 December - Replacement of all but 120-to-220 mc assignments by [] search.¹

In RDF, Detachment F operated a unique outstation in the ASA Europe Fixed Station net. The reason for the station's value consisted in its Berlin location; because it permitted bearings--mostly southerly--that merged at right angles with the bearings taken by the other stations. This resulted in more accurate check of bearings.²

One area in which FS 8606 was interested during fy 1953 was [] Radio Printer. Below, in order of their occurrence, are several items "of major interest" reported.³

- 1) During the early part of July 1952, this station intercepted a signal which could not be run off in plain text on any of the equipment available. The signal could not be identified because the text of the traffic was garbled. This net was identified as [] by higher headquarters and placed on assignment in "Priority 1" on 20 July 1952. The common term for this traffic was [] and it was copied later by recording both the input signal and the output signal on magnetic tape by the "Ampex 400" and the RD-74, on reperforator tape by a typing reperforator, and on undulator tape with the BC-1016. Initially this signal was copied on both LTPA and LTPB tape;

1. Ann Rept, FS 8606 AAU, fy 1953, pp65, 66.
2. Ibid. p67.
3. Ibid. pp17-19.

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however, this system was discarded and the signal is now copied only on LTPA with the accompanying recordings on undulator tape.

- 2) On 16 June 1952, authorization was received from ASA Europe to issue an Ampex 400 Magnetic Tape Recorder to Detachment "J", Field Station 8606 AAU, for the purpose of comparing intercepted non-Morse printer signals between the Berlin site and this station. The project began 27 June 1952. On 9 July 1952, another Ampex 400 was installed in the Non-Morse Analysis Section of the Traffic Control Section, and one specially trained operator was assigned to handle the traffic. Detachment "J" . . . sent tapes to this station, and they were run off on the Ampex and compared with the intercept from this station. The project was completed on 28 August 1952, and it was determined that non-Morse intercept at Berlin was impractical since this station copied all the signals intercepted by Berlin, and most of the time receiving conditions were better at Field Station 8606 AAU.
- 3) On 6 September 1952, inclosure 14 to ASA Europe Classified Memo 1-52 was received. This inclosure initiated a new [] Printer report called the [] and it was effected immediately. . . One of the reports that this "DARE" immediately replaced was the [] Printer Service DCR. . . On 10 September 1952, this station received instructions from ASA Europe to discontinue the daily RU Printer Service "TAR," as the "DARE" report also replaced the "TAR" report. The final report which was discontinued because of the "DARE" was the Daily non-Morse "Logex." The "Logex" was discontinued 15 September 1952.
- 4) On 20 November 1952, this station reported to higher headquarters that an unidentified [] Radio Printer signal had been intercepted. Included in the report were all of the conclusions drawn from the initial signal analysis at this station concerning the type of signal heard. The signal was identified as a [] Flexible Multiplex 6-channel, and this identification was subsequently confirmed by DIRNSA. Since this station had no oscillator capable of driving the equipment fast enough to print the signal, the entire effort was placed on recordings (made on the CXDB navy recorder). This station accomplished several simultaneous Radio Fingerprinting shots and recordings. These were sent to DIRNSA, as requested, in an effort to obtain a sonograph of the signal. Information

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was received that the British were also copying this unidentified signal, but at times and frequencies that were different from this station. A flash system was initiated which enabled this station to notify the British at Knockholt, England, or they to notify us immediately upon intercepting the signal. The code word for this flash system was "TETANUS." Flashes to or from either station were often completed within 10 to 15 minutes, with a normal time lag of one half hour. When enough simultaneous intercept had been obtained, it was informally agreed to drop the system.

There was the following report on special missions assigned FS 8606 by higher headquarters:¹

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- 1) On 13 September 1952, a special intercept mission was placed on certain clandestine nets supposedly in the Halle-Leipzig area. This mission was for the benefit of intelligence units other than the Army Security Agency. Although negative results were obtained, the mission was retained until 16 November 1952.
- 2) On 19 November 1952, a "Ferret" mission, for the Air Force, was assigned. The purpose of this type of mission, which had been previously assigned this station periodically, was to recover grid additives. On 19 November 1952, this station copied 266 bonafide spotter messages during the two-and-one-half-hour period in which the mission was up.
- 3) On 7 March 1953, instructions were received from Washington to place a special scanning effort on all plain text, voice, and [] traffic which concerned the [] or important items within the traffic resulting from his death. This traffic was packaged separately and forwarded to Washington marked [] traffic." The mission terminated 23 March 1953.
- 4) On 20 March 1953, tapes of [] Printer intercept from USM-8E were forwarded to this station for analysis. The results of local analysis indicated that there was nothing unusual in the traffic, and this station recommended that USM-8E discontinue the mission.
- 5) From 25 May 1953 to 10 June 1953, all plain-text traffic on [] links to and from the [] concerning the European

1. Ann Rept, FS 8606 AAU, fy 1953, pp20, 21.

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Asiatic trip of the Secretary of State, John Foster Dulles, was forwarded by electrical means to Washington.

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- 6) At various times during the year, this station received missions from various US Army units to check reported jamming or interference on their assigned frequencies. These missions are accomplished under letter, ASA Europe, Subject: "Policy for Reporting Interference and Jamming," 9 April 1953.

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g. Field Station 8608 AAU, *Stuyvesant* Baumholder

Carrying the brunt of FS 8608's little-changed operational mission in fy 1953 were three sections--Morse, Non-Morse, and Voice. Backing up, as in fy 1952, were T/A and RDF.

Of the individual missions, that of Morse Section underwent the greatest change. Gradually over the year its scope shifted from predominantly [] coverage to predominantly [] Focus at the fiscal year's end was on three sources: the [] military and naval nets, and []

In the non-Morse area the only appreciable change came in Radio Printer. Through the fiscal year's first quarter, RP--with one simplex position, one duplex--covered parallel links of the Morse assignment. In the second quarter, however, parallel coverage was all but abandoned; while the simplex position was given over in part to a number of [] 00106 parallels, RP's two-channel operation, amid Morse's deletion of [] assignments for [] was diverted wholly to [] search.¹

Voice mission, as the year began, comprised a single assignment-- [] military search, in which were utilized two BC-1004 receivers,

1. Ann Rept, FS 8608 AAU, fy 1953, pp31, 32.

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one Recorder-Reproducer RD-74U, and four operators--three 2538's and a 1799. The mission remained such until 22 April, when the section added 24-hour-a-day, four-operator watch over [redacted] Shortly thereafter, Polish search was suspended for lack of intercept.¹

The job of interpreting and amalgamating the work of the three intercept sections was that of the T/A Section, which reported as "an epitome of the missions and . . . accomplishments" the following:²

- 1) On 1 July 1952, [redacted] target stations abandoned a policy of key-selection by pre-determined pattern. Thenceforth, horizontal keys were recovered through daily analysis.
- 2) On 1 August, all [redacted] mainline nets underwent a major trinome change. New trinomes were determined arbitrarily by the key of a net [redacted] whose trinomes remained unchanged. The new trinomes were recovered in October.
- 3) Late in October, [redacted] military nets were added to assignment. Though texts on these cases was meager and for the most part inaccurate, the nets were not without their yield; by the end of November they had given up sufficient traffic to permit, among other things, complete reconstruction of their master block of keys. Two months later, as the nets initiated an extensive call sign change, the station began development of additional [redacted] nets. Results included the recovery of eleven practice blocks and the squaring of call sign page 16 of [redacted]

1. Ann Rept, FS 8608 AAU, fy 1953, p33.

2. Ibid. pp34-37.

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4) In February, [] mainline nets underwent another major change, this time in call sign books and, presumably, keys and trinomes.

5) In the same month, local analysis cleared the way for an improved method of determining [] differential and maintaining continuity of [] Air Defense coverage.

6) Also in February, the installation of DEN-24-2 equipment facilitated copy of both channels of each end of a duplex transmission and thus eased greatly the identification of various two-channel links.

7) In a process that required most of the fiscal year's latter half, T/A Section prepared two lengthy reference documents. One, compiled from ITA Casebook data, listed in numerical sequence all known radio-printer frequencies, both simplex and multiplex. The other gave complete known data on Morse procedure, parallels, schedules, and frequencies.

8) The main effort of the station during October-June focused on [] groups. Except for a brief period in June 1953, [] was the only high-priority [] net on assignment.

9) The last quarter of fy 1953 brought especial attention to [] police, military, and naval nets, as well as [] air nets.

10) In the area of [] military and naval intercept, year-long analysis sought net-reconstruction, squaring of call sign pages, recovery of schedules, and location of stations. As the fiscal year closed, the following specific projects were in the planning stages:

a) Equating diagram call signs to trigraph call signs on pages 14 and 16 of []

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- b) Proving that [redacted] was located with
Control of [redacted]
- c) Determining the method of call sign selection on the
semi-fixed nets.
- d) Studying trinome addresses on the [redacted] series:
- e) Determining the connection, if any, between the [redacted]

11) In late-year attempts to accumulate call sign books of [redacted]
[redacted] air nets, upwards of 800 call signs were intercepted and logged for
reference.

Backing up T/A and the station's three intercept sections was an RDF
Section composed of four elements: Alternate Control, Scheyern, Germany;
Detachment A, Vieth; Detachment B, Straubing; and Detachment C, Kassel.¹
Alternate Control acted as intermediary between the intercept units and
the fixed RDF net and in addition maintained one transmitting position that
served as standby communication system in the event landline communication
became impossible.

Detachment A was home base for 8608 RDF and functioned as a member
station of the ASAE RDF fixed net.

Detachment B, at Passau through February 1953, moved to Straubing on
13 March 1953 and there resumed its status as outstation. (Reason for
the move was an Army building program at Passau, which made accurate bearing-

1. Ann Rept, FS 8608 AAU, fy 1953, p37.

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taking impossible.)

Detachment C was the net's newest. It was activated at Kassel on 15 April and began operations ten days later.

Communication equipment at each RDF site included one SIGNIN for RDF reporting loops and one teletype (TT-5) for tracking.¹

For nearly eleven months of fy 1953, the station exercised control over still another detachment. In late August 1952, Detachment E, earlier with the 328th CRC, was reassigned to the Scheyern Kaserne station for intercept work. Its new location was Wels, Austria. Its mission: intercept, to which it devoted six single Morse positions and a trick chief's double position.²

Through the first two months of the report period, Detachment E's intercept aimed chiefly at establishing continuity. High message totals in themselves were of little concern. In September, the detachment intercept emphasis was placed on cases . Of these, only the latter was covered satisfactorily.

The following month, attention was given the recovery of schedules, frequencies, and call sign rotas/systems of the series and unknown (Book nets). With the former, success came quickly; with the latter, not until late December. Meantime, assignment of basic station trinomes to the nets of both series was completed.³

1. Ann Rept, FS 8608 AAU, fy 1953, pp38, 39.

2. Ibid. p42.

3. Ibid. p43.

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On New Year's Day 1953, all [] Army nets initiated a sweeping call sign change in which the first and basic step was the thorough re-design of the call sign generation system. Virtually impenetrable for better than two months, the system by March began giving way to efforts at recovery; the first sign: Detachment E's partially reconstructed book- []

for the casing of []

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Through the same winter months, cases [] (Border guard), unaffected by the 1 January call sign change, were intercepted regularly. And on 19 February a new case- []-was heard for the first time. Close observation of [] led in March not only to construction of a net diagram but more, to speculation that the net was working in conjunction with certain [] nets.

In April the detachment, being affiliated geographically with ASA Austria, participated in that headquarters' spring field maneuvers. In them, men assigned to voice intercept were furnished a plane by Linz Military Post and flew the demarcation line along the Danube.¹

h. Field Station 8611 AAU, Baumholder

REF: VOL: I P: 765

Another of the Agency's intercept additions in fy 1953, FS 8611 officially began operations 29 November 1952. Two weeks later, operations were put on a 24-hour-a-day basis. Operations sections included Manual Morse, Non-Morse, and Control and T/A (a joint operation which included subsections for both manual Morse and non-Morse T/A).²

In Manual Morse, operator strength on 29 November was thirty-eight.

1. Ann Rept, FS 8606 AAU, fy 1953, pp43, 44.
2. Ann Rept, FS 8611 AAU, fy 1953, pp7-14.

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Of these, eighteen were qualified, the balance students. Strength rose gradually through the year, and by May 1953 it stood at eighty-five, fifty-one qualified. The period closed on figures of fifty-eight qualified operators and nine students--a total eighteen below the May high.

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Initial assignment of Manual Morse Section comprised two sample POROCO's: POROCO "A," including [redacted] Mainline nets, and POROCO "B," including [redacted] search. The assignment was increased periodically as qualified operator strength increased.¹

Non-Morse Section, nine days later in getting started than Manual Morse, opened operations with twelve operators, seven of them considered qualified. By the fiscal year's end the total had risen to sixth-six. Of these, sixty-two were qualified. The gap between total strength and qualified operator strength had been reduced mainly by intensive on-the-job training.

The section's initial mission--as in the case of Manual Morse, enlarged as operator strength increased--consisted of nine commercial links plus a service assignment of Morse parallel cases and one of search. Intercept quantity increased gradually through the report period until a high point in May, achieved amid unusually heavy commercial activity. Intercept quality improved all year long.²

FS 8611's field of antennas, on German property adjacent to the station, was composed as follows as the fiscal year closed:³

1. Ann Rept, FS 8611 AAU, fy 1953, pp7-9.
2. Ibid. pp9, 10.
3. Ibid. pl2.

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<u>Number</u>	<u>Type</u>	<u>Azimuth</u>
4	D Doublet	45° to 120°
5	C Rhombic	100° to 140°
7	Z Rhombic	35° to 125°
8	B Rhombic	25° to 95°
8	Y Rhombic	20° to 90°

Manual Morse T/A, one of Control and T/A Section's two subsections, performed through the fiscal year with a strength fairly consistently at seventeen. Of this number, eight, generally, were assigned to teams dealing with specific portions of the mission as follows:¹

Team 1:

Team 2:

Team 3:

Team 4:

The remaining nine or so men worked as supervisor, texta clerk, platoon control men, and package wrappers.

Most difficult manual Morse assignments during the period were the nets in --in each case, too far from the station's Morse positions. The easiest--the one on which most progress was made--was

The other of Control and T/A's subsections, Non-Morse T/A, began the fiscal year with two men and ended it with ten. Here, all assignments showed satisfactory progress except intercept of LTPB, for which the section

1. Ann Rept, FS 8611 AAU, fy 1953, pl4.
2. Ibid. ppl4, 15.

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lacked low-frequency antennas for eleven months. In June the trouble was corrected with installation of a number of "Z"-type antennas.¹

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2. Austria

REF: VOL E.P. 167

a. Hq ASA Austria, 8618 AAU, Salzburg

With the inception of its Operations Division on 21 October 1952, Hq ASA Austria added one more name to ASA's growing operations roster. Intercept assignments to be taken on as quickly as possible included [redacted]

[redacted] For these, cadre already were well advanced in training at Hq ASA Europe. A fourth assignment, the [redacted] was added in June 1953.

The first cadre group, constituting the nucleus of the [redacted] team, arrived from ASA Europe early in November 1952 and began [redacted] coverage on the 6th. Less than two weeks later the second group arrived and assumed coverage of [redacted]

Immediately on the arrival of the two teams, the Operations Division was broken down into three separate branches. A control group, charged with distributing assignments and text data to subordinate unnts, was designated "A" Branch. The [redacted] teams became "B" and "C" Branches respectively. An added breakdown--into T/A, C/A, and Translation Sections--was then applied to both "B" and "C."²

1. Ann Rept, FS 8611 AAU, fy 1953, pp15, 16.

2. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, pp15, 16. At this time, 8618 assumed operational control of the 328th CRC, at Bad Aibling, Germany.

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The station's initial operational effort was supported mainly by traffic from three sources: USM-8E, Wels, Austria; USM-680, Bad Aibling, Germany; and 87L (German sources). USM-8E and 87L covered the [] targets, the Bad Aibling unit, [] Additional support on the []

[] assignment was begun on 6 December by [] at Graz, Austria.

To assist 8618 in its [] T/A effort, NSA provided two advisors in late November 1952.¹

Morse intercept positions supporting 8618 operations were as follows:²

	<u>Nov 1952</u>	<u>Dec 1952</u>	<u>Jun 1953</u>
USM-8E	7	7	7
USM-680	12	12	23
UKM-252	0	14	14

(Number of 87L positions through the fiscal year was unknown.)

The headquarters also had access to a number of R/T positions. Through most of the year they numbered three--two at USM-860, on [] search; one at USM-8E, on []. By the fiscal year's end, however, after a series of site tests of Wels, Camp McCauley, Linz, Steyr, Camp Roeder, and, finally, Vienna Military Post, USM-680 alone had built that number to four. The additional R/T positions were located on the Vienna Military Post, which, under the designation USM-680F, began operations 1 June 1953.³

Average monthly manual Morse traffic group count for fy 1953 was as follows:⁴

1. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, p17.
2. Ibid. p18.
3. Ibid. pp18, 19.
4. Ibid. p19.

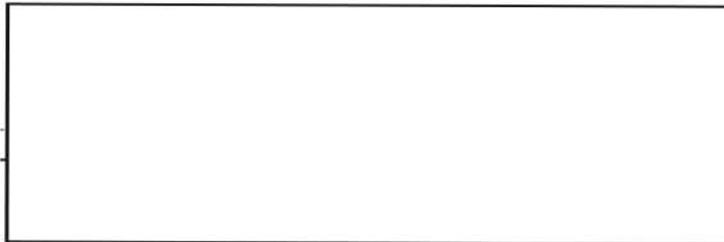
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	<u>Bonafide</u>	<u>Practice</u>	<u>Chatter</u>
	36,248	148,315	180,000
	35,322	148,000	61,854
	375	1,150	52,350
	0	15,000	2,370
	0	5,310	15,450

Through the report period, weekly contact was maintained with the CG, USFA, to the end that information pertinent to USFA could be integrated into the ASA Austria assignment. The areas considered to be of prime importance to USFA in determining imminence of hostilities and in selecting special targets in the event of hostilities were these:¹



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Priority information desired of these areas was found in radio and ground communications between  units. All information was categorized by OB, location, organization, and movement.

On 27 May 1953, Hq ASA Austria assumed technical control of USM-8E and supervisory control over the unit's intercept activity. Yet in practice, 8-E's position was little changed; C/A and T/A had always been in the hands of 8618, and as for the intercept assignment itself, all previous changes had required ASA Europe confirmation.²

1. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, p23.
2. Ibid. pp23-25.

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All through the year, periodic liaison was in effect between headquarters and subordinate units. An important facet of this liaison was a personnel exchange program, initiated early in 1953, which was designed to acquaint outstation personnel with the problems of the Operations Division.

Liaison also was carried on among Hq ASA Austria, Hq ASA Europe, and the 6910th AF Security Group. Here, the feature of greatest value was a technical information exchange program, out of which came, among other things, a directive from the Chief, ASA Europe, that all valid air warning [redacted] be forwarded to the 6910th for analysis. In compliance, all appropriate grids of CGF, SGF, and HU cases were forwarded by teletype beginning in June 1953. Beyond this, the Chief, ASA Austria, was requested to forward to the 6910th the following:¹

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<u>Material</u>	<u>Method of Transmission</u>
[redacted] traffic (CW, RT)	Teletype
[redacted] voice traffic	Teletype
Special releases	Courier
COMINF bulletins	Teletype
C/A and T/A weekly notes	Courier
All pre-flight data	Teletype

In return, Hq ASA Austria sought from the 6910th:²

<u>Material</u>	<u>Method of Transmission</u>
General Summary (GENSUM)	Teletype
Tactical Summary (TACSUM)	Teletype
Type "D" call sign changes	Teletype
Dragon keys	Teletype
Type "D" call sign book (IBM run, published by 6910th)	Courier
Spot intelligence items	Teletype

1. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, pp25, 26.
2. Ibid. p26.

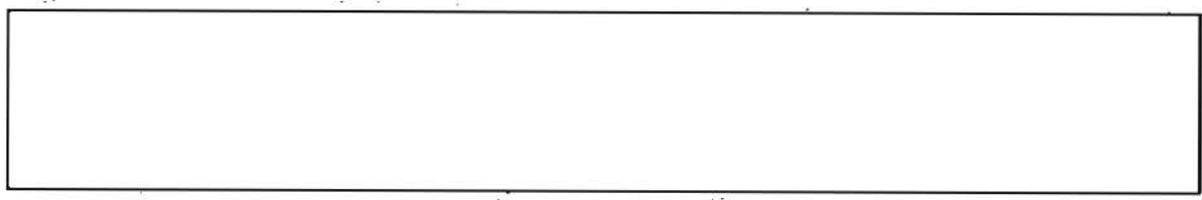
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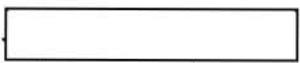
<u>Material</u>	<u>Method of Transmission</u>
Intelligence Summary (INTSUM)	Courier
Weekly technical notes	Courier
Air OB	Courier
Weekly summary	Courier

To facilitate this exchange, plans were made late in the fiscal year to install a direct teletype circuit between ASA Austria and the 6910th. To improve the quality of data exchanged, Hq ASA Austria requested in June of the USAFE, flight schedules of all commercial and military planes flying in the Linz-Vienna air corridor and in proximity to the US-Russian zone border. The schedules, it was hoped, would enable the analysts to



"A" Branch

The headquarters control unit, "A" Branch was established 17 November 1952 with a strength of 1-0 and 3 EM. Its original job was to process, for proper routing, all texts, interim reports, cables, operations reports, mission assignment changes, special releases, COMINT bulletins, weekly notes, technical support letters, translations, and operational instructions released by Operations Division.

On 5 and 15 May 1953, the branch took on some additional responsibilities, in DF. First of these was the DF reporting of  and entailed the preparation of plotting tickets, the plotting of five-day bearing averages, and plot analysis and evaluation. The second was the

1. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, p27.

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preparation of accuracy studies for the 328th CRC mobile DF net. In this the job was to construct logs for each known target bearing assigned, for distribution to the net's outstations.¹

"B" Branch

This branch, with six men, was established 6 November 1952. Unlike "A" Branch, it had but one assignment through the fiscal year: the processing of [] traffic. That the work was as diverse as that of "A" Branch, however, was illustrated in the system--termed "multiple-exchange"--best suited to carry it out: Raw traffic came in from USM-8E, [] and 87L. Once logged, it went to T/A, then to C/A--and often back to T/A again. From whichever of the sections had it last, the traffic was routed to Translation, scanned for important messages, and finally filed.



T/A Section, in addition to its analysis of [] military, air, police, and border guard traffic, had the job of maintaining [] OB. COMINT sources for this were the headquarters itself, NSA, and GCHQ.

Translation, its biggest job the preparation of 8618's publications,

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1. Ann Rept, Hq ASA Austria, 8618 AAU, fy 1953, pp27, 28.
2. Ibid. pp29, 30.

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b. 328th Communications Reconnaissance Company

On 1 September 1952, just three weeks out of New York, the 328th CRC, at Bad Aibling, joined the Agency's operations force with the launching of its first intercept effort. Through the first couple of weeks the effort was conducted with [] positions and borrowed equipment, but as the month wore on, the unit began to take prescribed shape. On 16 September the company's own TQE equipment began to arrive, and a few days later it acquired Detachment E and its facilities by transfer from 8608 AAU. By the end of September the 328th had been strengthened to [] Morse positions, [] of which were fully manned, and [] voice position.¹

In March 1953, the company's voice position was moved to Wels, Austria, and became Detachment E. A second voice position was added in June, in Vienna, and this was attended by the newly operational Detachment F. By the report period's end, neither position had had much to report.²

Intercept of the company's mission, which involved almost exclusively the targets of concern to US Forces, Austria--namely, [] [] showed generally steady progress throughout the period:³

<u>Month</u>	<u>Nr of Groups</u>	<u>Month</u>	<u>Nr of Groups</u>
September	38,754	February	55,708
October	43,636	March	100,071
November	44,650	April	136,692
December	61,581	May	111,927
January	44,395	June	171,253

1. Ann Rept, 328th CRC, fy 1953, pl1.
2. Ibid. pl2.
3. Ibid. pl3.

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In DF, the 328th was the first of the intelligence companies in Europe to put into operation the maximum detachments allowed by TOE--four. Detachment A, the first to be activated, began operations 10 October 1952 immediately outside the post at Bad Aibling. Detachment B followed a month later at Passau, still later to move to Straubing. Detachment C opened operations at Landshut 5 November, and Detachment D at Wels 18 March 1953. The entire operation was a part of the ASA Europe DF flash tip-off net.¹

REF: VOL I P 173

E. Africa

1. Eritrea

a. Field Station 8604 AAU, Asmara

Operational mission of FS 8604 (Asmara, Eritrea) remained in fy 1953 substantially that of fy 1952: to intercept, process, and log radio traffic assigned by the Chief, ASA, and DIRNSA, and to forward to those offices pertinent results. Six units shared directly in this assignment: Manual Morse, Automatic Morse, Russian Voice, Radio Printer, T/A, and RDF.²

In the manual Morse assignment, highest priority was assigned radio links and nets controlled in central Europe and active in southern Europe, European Russia, Asia Minor, North and East Africa, and China. Except during the rainy summer months, intercept of these targets was considered fair.

1. Ann Rept, 328th CRC, fy 1953, pp13, 14.
2. Ann Rept, FS 8604 AAU, fy 1953, pp41-49.

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Lesser manual Morse assignments involved links and nets in European [redacted] areas. Reception was fair except in the China area, where low-power transmitters combined with intervening mountains to inhibit transmission.¹

Automatic Morse Unit in fy 1953 was confined in its assignments almost exclusively to [redacted] targets--in Europe, the Middle East, North Africa, [redacted] and China. Though there were more than ninety links continuously on assignment during the period--some of them using more than one transmitter--and despite inadequate facilities at the station,² reception on the whole was satisfactory.³

[redacted] Voice Unit--a single position that varied in strength over the year between one and three--had a single assignment throughout: general search. Its objectives were [redacted] nets and links in the [redacted] [redacted] areas.⁴

Radio Printer mission, in addition to search for new and inactive [redacted] printer links, PIX links, and 3TPA transmissions, called for coverage of:⁵

- 1) [redacted]
- 2) [redacted]
- 3) [redacted] service radioprinter links. (In September the [redacted] service printer DCR was discontinued in favor of a daily analysis

1. Ann Rept, FS 8604 AAU, fy 1953, p45.
 2. For example, it was not until May 1953, when the section was able to increase its single-frequency shift positions from two to four, that it was able to cover fully its FSK assignment.
 3. Ibid. pp44, 45.
 4. Ibid. p46.
 5. Ibid. pp46, 47.

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report (DARE). The service printer assignment was divided thus: links assigned in priority order, links known to parallel assigned Morse cases but not assigned by priority, and search.)

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- 4) military radioprinter. (Emphasis here was on the Saigon-link, coverage of which was deemed excellent.)

In addition to this, Radio Printer had several special missions:¹

- 1)
- 2) Security monitoring mission--conducted during 23 July-23 August; 30 October-29 November; 14 December-12 January.
- 3) flexible multiplex (6TP). (In April the unit was assigned the link. The signal, a part of a double-frequency shift transmission, was recorded on the Ampex 400 magnetic tape recorder directly from ASAN 5 output.)

Early in October 1952, direct-circuit security monitoring of traffic to and from the Message Center, Military Mission, Ankara, Turkey (UFALP)--by way of the Major Relay Station, US Army, Asmara (UFA)--was put in effect on a 30-day basis.² At first, traffic was copied on two TP-61 printers, but when a 24-hour-a-day operation began to outlast the -61's they were replaced by Model 15's. Notable improvement followed.³

FS 8604's T/A Unit, limited through most of the year to operator aid and traffic processing, took on in June a third full-time activity: the scanning of commercial automatic traffic. For this, a special subsection was formed and on 16 June was elevated by NSA from a training to a functioning status.⁴

REF: VOL. 7 P. 176

1. Ann Rept, FS 8604 AAU, fy 1953, p47.
2. In compliance with radiograms ARL-26591 and ARL-26698, and in coordination with the CO, 9434 TSU, who made available the necessary ACAN patchboard circuits.
3. Ibid. p48.
4. Ibid. p49.

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F. Special Projects

1. COMINT

a. Collateral Intelligence

In its collateral intelligence activities in fy 1953, Hq ASA Europe continued to draw upon fy 1952's sources: G2, USAREUR; Hq Seventh Army; CIA; G2, DA; USAF; A-2, USAFE; Hq 6910 Scty Gp; Hq 616th CIC; [redacted]. The intelligence gathered from these sources--including data on [redacted] troop movements, changes in OB, new units, changes of home station, field exercises, CPX's, maneuvers, and changes in communications personnel--was of greatest value in establishing COMINT OB and communications patterns, and in identifying COMINT activity.¹

Owing to the comparative proximity of [redacted] zone of Germany--as against [redacted]--the bulk of collateral reports concerned [redacted] and for that reason, mainly, [redacted] was Hq ASA Europe's prime target.

In August 1952, headquarters began a series of studies of [redacted] that had as their principal subjects the [redacted] (August 1952), [redacted] (December 1953), [redacted] Army (May 1953), and [redacted] (June 1953). What headquarters learned from them and corollary studies made it want to go still further; for example, it was found that a study of [redacted] artillery units and their relationship to other [redacted] elements in [redacted] would be useful. So it was that late in the fiscal year,

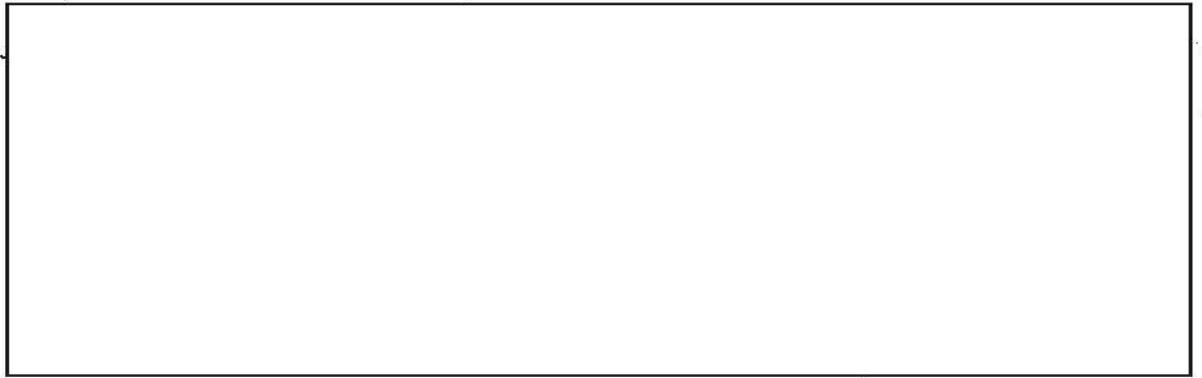
1. Ann Rept, Hq ASA Europe, 8620 MAU, fy 1953, pp14, 15.

plans were made not only to step up production of [] studies but, if practicable, to bring in additional collateral intelligence sources.¹

2. TICOM

Among the principal activities and investigations conducted in TICOM in fy 1953 were these:²

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- 5) Preliminary investigation of radio monitoring activities of the Deutches Bundepest.
- 6) Collection, from a number of inventors, of descriptions of various cryptographic and allied devices sent to Hq ASA for evaluation.
- 7) Interrogations and interviews with various defectors and escapees regarding communications practices in Soviet and satellite areas. (Lack of trained personnel brought a sharp reduction in this activity after mid-fiscal year.)

3. Sapporo Mission

Requirements of this mission continued unchanged: to intercept and evaluate traffic emanating from illegal Japanese radio stations. ASA's part here was taken by four FS 8612 radio operators on detached service with the 6th District of the 441st CIC Det at Sapporo, Hokkaido, Japan.³

1. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp16-18.
 2. Ann Rept, Hq ASA Europe, 8620 AAU, fy 1953, pp19, 20.
 3. Ann Rept, FS 8612 AAU, fy 1953, p19.