

TOBACCO DIVISION QUALITY ASSURANCE WEEKLY STATUS

W.E. FEBRUARY 4, 1990

LEAF PROCESSING

Internal

1. Strip qualities produced on 1989 burley for week ending January 26 show objectionable stems and pass 8 mesh material in the final strips at Brook Cove 96% within specifications. Objectionable stems at Davie were 97% within specs. All other parameters at both plants were 99% or better within specs.
2. Brook Cove completed processing of its portion of the 1989 burley tobaccos with a short special run on January 29th of R&D tobaccos. These tobaccos had been run on the 29th was to return these tobaccos to strip and by-product form. A similar run at Davie will be made in a few weeks.
3. Foreign matter found in stem analysis core samples for week ending January 29th:

<u>Type Foreign Matter</u>	<u>Number of Pieces</u>	
	<u>Brook Cove</u>	<u>Davie</u>
String/lint	72	45
Paper	19	22
Grass/Straw	28	4
Feathers	6	1
Foam Rubber	-	-
Plastic	7	-
Styrofoam	-	-
Wood	1	-
Total	<u>133</u>	<u>72</u>
Lbs. of core sample strips	174	65
% Foreign Matter by Wt.	0.003	0.005

External

1. Henry Warren and Jerry Heath report from Brazil that processing of RJR-USA tobaccos at RJR-Brazil and Adams began on January 30. No problems were encountered with specifications.
2. Wayne White and Danny Hudson were on site at RJR-McDonald (Canada) for the processing of flue-cured grade 44 during January 29-31. All specifications were met. Nicotine averaged 2.3% for the period.
3. Jerry Henderson finished inspection of Zimbabwe tobaccos on January 26 and is currently in Thailand inspecting RJR-US purchased K10X burley.

Applied Technology

1. The correlation study between the on-line IE-512 nicotine analyzer and the in-lab InfraAnalyzer continues at Davie. One 512 on B-unit appears to be yielding excellent results. The other 512 on A-unit still has its problems. There is currently no acceptable moisture calibrations available for the 512.

**QUALITY ASSURANCE
STEMMERY REPORT - BURLEY TOBACCO**

THE PERCENTAGE OF REDRIED STRIP QUALITY
TESTS WITHIN PROCESSING SPECIFICATIONS

FOR WEEK ENDING 1-26-90

DAVIE COUNTY

BROOK COVE

ON 3/4" 100

ON 3/4" 100

PASS 3/8" 99.2

PASS 3/8" 100

PASS 8-MESH 98.9

PASS 8-MESH 96.1

TOTAL STEM 100

TOTAL STEM 100

OBJ. STEM 97.3

OBJ. STEM 95.8

MOISTURE 97.7

MOISTURE 98.5

DISTRIBUTION:

MR. R. E. CLEMENTS
DR. G. R. DIMARCO
MR. R. M. HENDERSON
MR. D. K. ISBISTER
MR. F. M. LOCKAMY
MR. T. J. PORTER
MR. A. J. SCHINDLER
MR. S. L. SMITH
MR. H. H. WARREN
MR. J. B. WILSON

QUALITY ASSURANCE TEST DATA FOR DAVIE COUNTY PLANT
 STRIP QUALITY STATISTICS
 OVERALL
 WEEKLY SUMMARY REPORT
 22JAN90 TO 26JAN90 FOR CROP YEAR 1989

----- STATISTICS FOR BURLEY, TANGLED LEAVES -----

STAT	INPUT LBS/HR /UNIT	IN- FEED MOIST	THRESH MOIST	***** COOLER *****			REDRIED STRIPS *****			***** PASS *****			ZTOTAL STEMS	ZOBJ STEMS	FINAL MOIST	ZSUG. ZNIC.
				MOIST	ON 3/4 SIEVE	ON 3/8 SIEVE	ON 8M SIEVE	PASS 8M SIEVE	PASS 3/8 SIEVE	PASS 3/8 STEMS						
%	10057	22	22.7	10.1	60.3	29.1	10.2	0.5	10.6	1.5	0.3	13.2	0	3.9		
STD		1.4	0.6	1.3	2.9	1.9	1.1	0.1	1.2	0.5	0.2	0.5	0	0.4		
#TESTS	12	16	4	6	376	376	376	376	376	225	225	266	0	266		
													----- FINAL MOIST -----			
PGL TYPE					LOWER			UPPER	UPPER	UPPER	UPPER	UPPER	LOWER	UPPER		
%GLS					50			0.7	14.2	3.5	0.7	12	14.5			
% OUTSIDE					0			1.1	0.8	0	2.7	2.3	0			
# OUTSIDE					0			4	3	0	6	6	0			

QUALITY ASSURANCE TEST DATA FOR BROOK COVE PLANT
 STRIP QUALITY STATISTICS
 OVERALL
 WEEKLY SUMMARY REPORT
 22JAN90 TO 26JAN90 FOR CROP YEAR 1989

----- STATISTICS FOR BURLEY, TANGLED LEAVES -----

STAT	INPUT LBS/HR /UNIT	IN- FEED MOIST	THRESH MOIST	***** REDRIED STRIPS *****			*****					ZTOTAL STEMS	ZOBJ STEMS	FINAL MOIST	ZSUG. ZNIC.	
				COOLER MOIST	ON 3/4 SIEVE	ON 3/8 SIEVE	ON 8M SIEVE	PASS 8M SIEVE	PASS 3/8 SIEVE	ZTOTAL STEMS	ZOBJ STEMS					FINAL MOIST
%	22646	20.4	22.2	12.4	59	30.4	10.2	0.5	10.7	1.9	0.4	13.2	0	3.3		
STD		1.5	1.5	1.9	3.3	1.9	1.6	0.1	1.6	0.6	0.2	0.5	0	0.8		
#TESTS	20	30	230	138	750	750	750	750	750	499	499	714	0	714		
				LOWER			UPPER		UPPER		UPPER		UPPER		FINAL MOIST	
PGL TYPE																
FGLS								0.7		3.5	0.7	12		14.5		
% OUTSIDE					0			3.9	0	0	4.2	1.5		0		
# OUTSIDE					0			29	0	0	21	11		0		

51315 8000

QUALITY ASSURANCE TEST DATA

WEEKLY SUMMARY REPORT

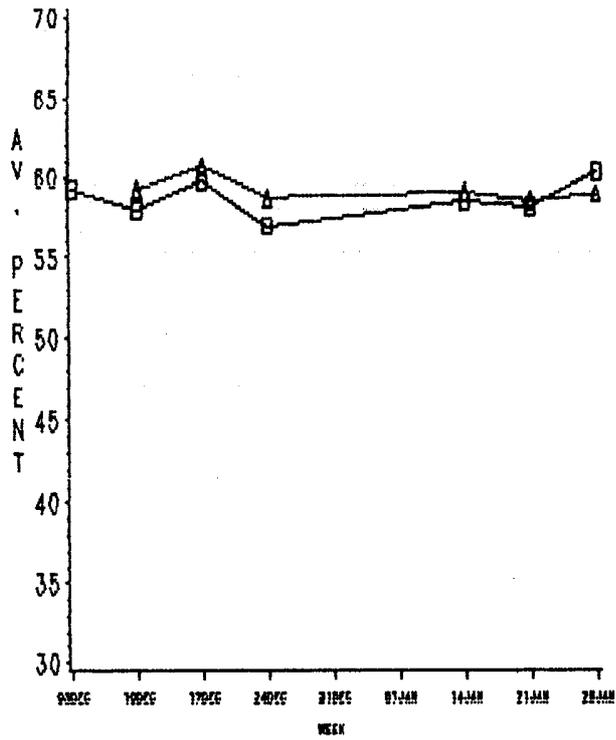
1989 BURLEY - TANGLED LEAVES
22 JAN 90 TO 26 JAN 90

ON 3/4 SIEVE
% OF TESTS UNDER PGL

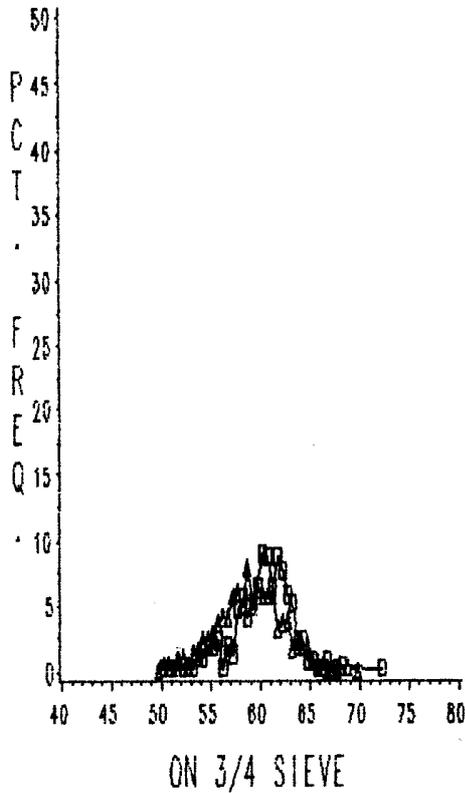
	THIS WEEK	LAST WEEK
DAVIE	0.0	0.5
BROOK COVE	0.0	0.0

LEGEND:
DAVIE: SQUARE----SOLID LINE
BROOK COVE: TRIANGLE--HYPHEN LINE

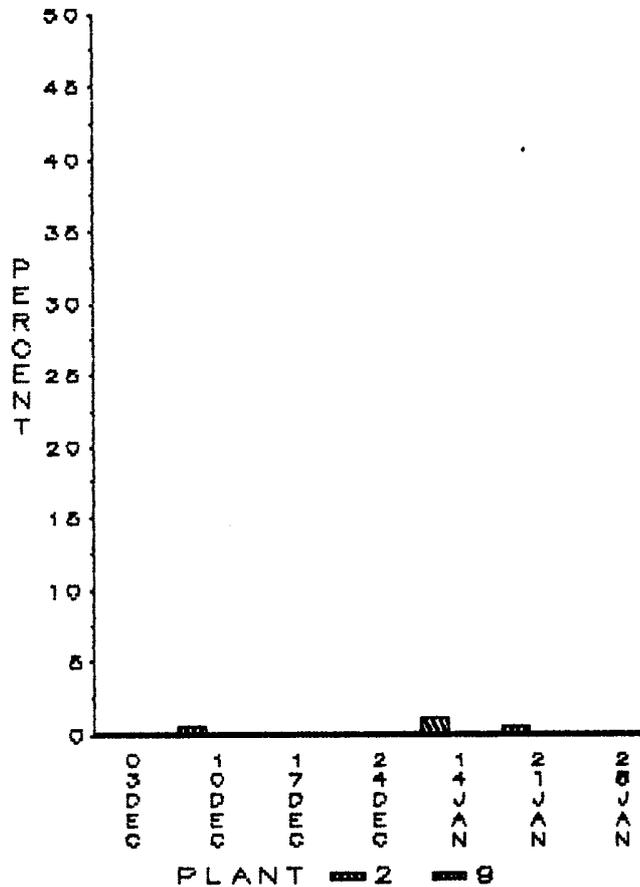
PCT ON 3/4 SIEVE WEEKLY AVER.
TANGLED LEAVES



PERCENT FREQUENCY OF OCCURANCE
TANGLED LEAVES



% TESTS OF ON 3/4 SIEVE OUTSIDE PGL
TANGLED LEAVES



QUALITY ASSURANCE TEST DATA

WEEKLY SUMMARY REPORT

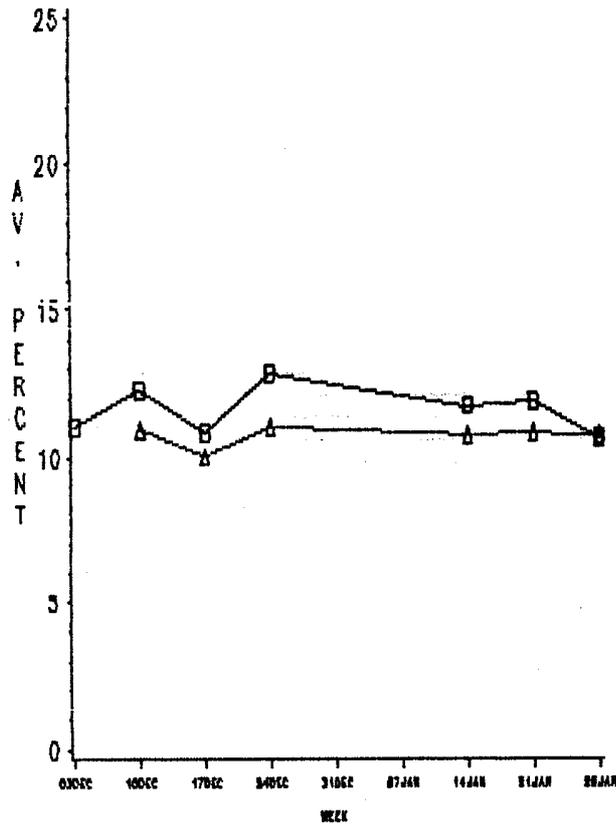
1989 BURLEY - TANGLED LEAVES
22JAN90 TO 26JAN90

PASS 3/8 SIEVE % OF TESTS OVER PGL

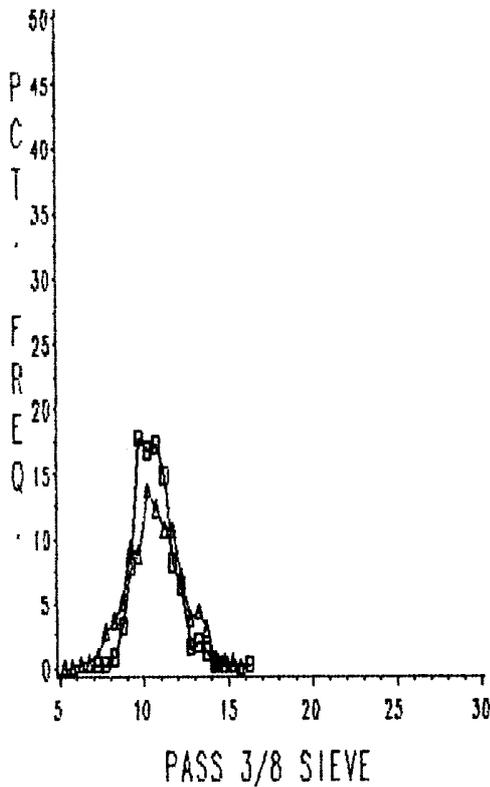
	THIS WEEK	LAST WEEK
DAVIE	0.8	1.8
BROOK COVE	0.0	0.0

LEGEND:
DAVIE: SQUARE----SOLID LINE
BROOK COVE: TRIANGLE--HYPHEN LINE

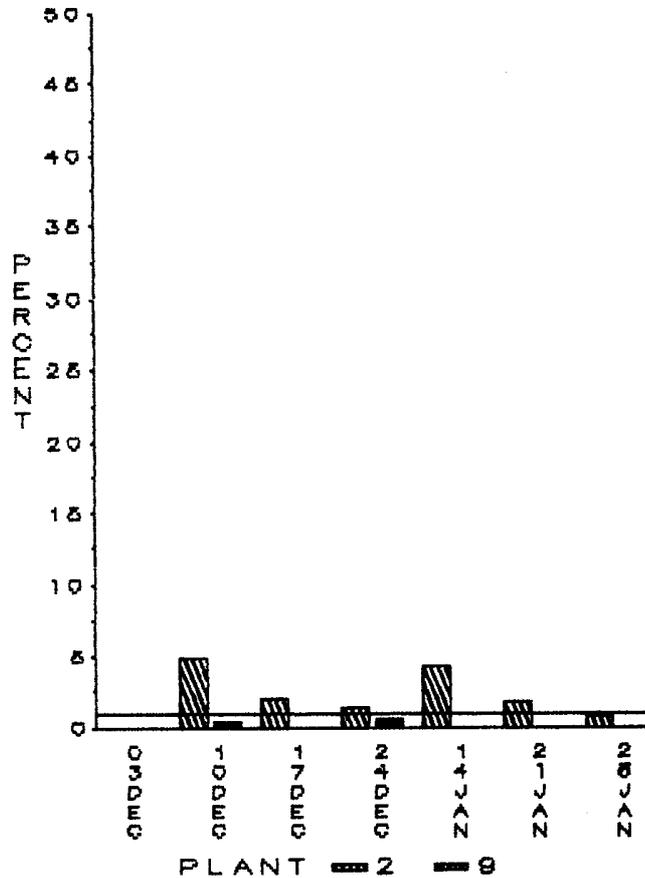
PCT PASS 3/8 SIEVE WEEKLY AVER. TANGLED LEAVES



PERCENT FREQUENCY OF OCCURANCE TANGLED LEAVES



% TESTS OF PASS 3/8 SIEVE OUTSIDE PGL TANGLED LEAVES



51315 8002

QUALITY ASSURANCE TEST DATA

WEEKLY SUMMARY REPORT

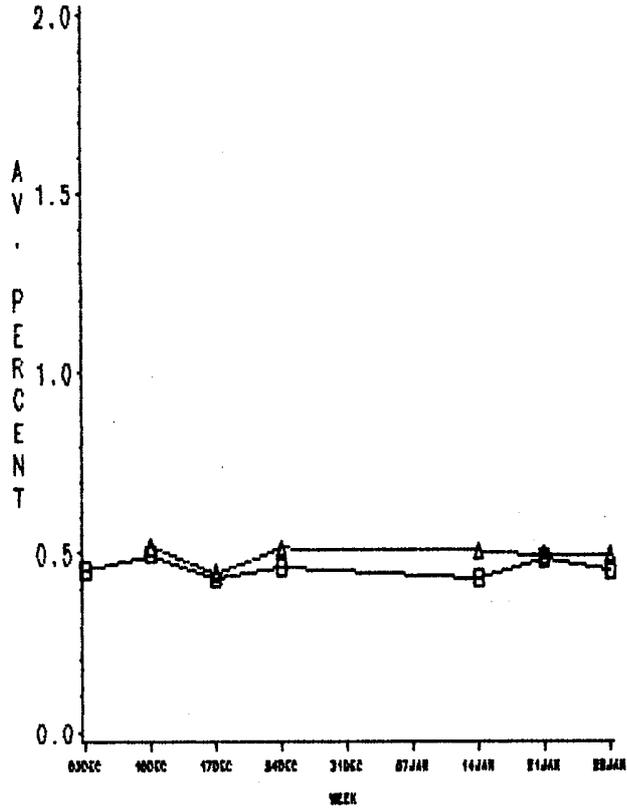
1989 BURLEY - TANGLED LEAVES
22JAN90 TO 26JAN90

PASS 8M SIEVE
% OF TESTS OVER PGL

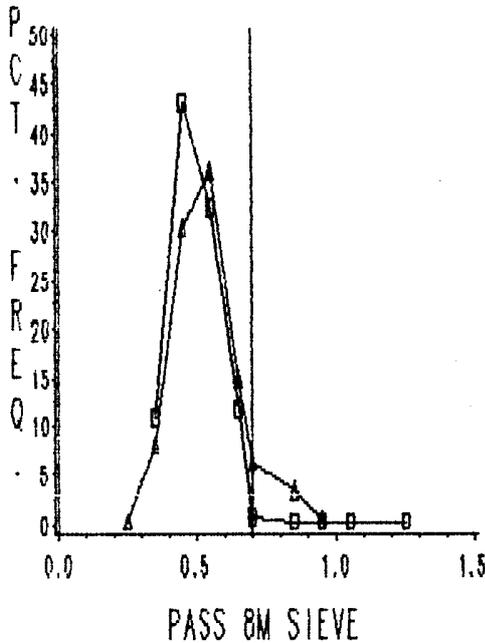
	THIS WEEK	LAST WEEK
DAVIE	1.1	2.1
BROOK COVE	3.9	2.5

LEGEND:
DAVIE: SQUARE----SOLID LINE
BROOK COVE: TRIANGLE--HYPHEN LINE

PCT PASS 8M SIEVE WEEKLY AVER. TANGLED LEAVES

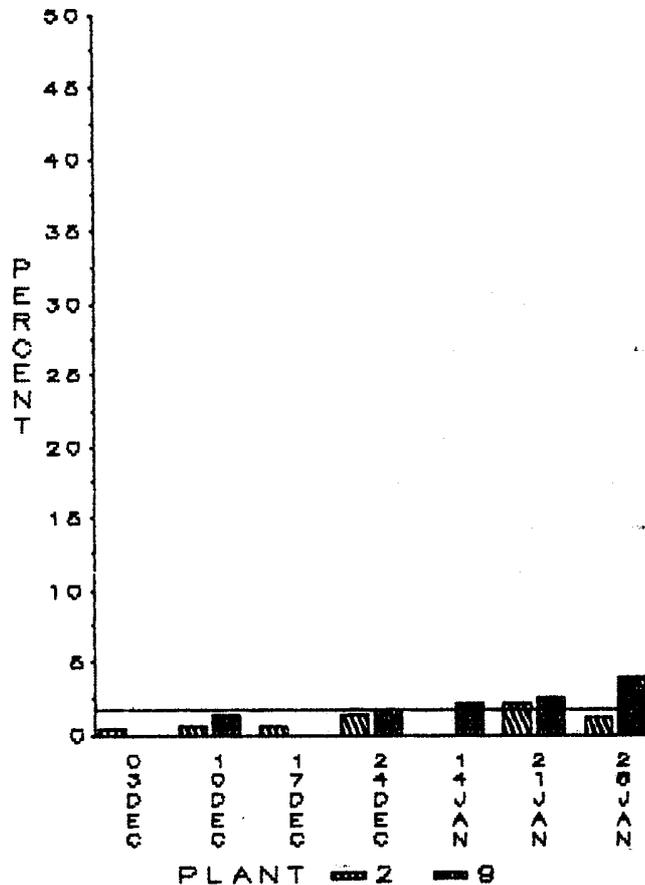


PERCENT FREQUENCY OF OCCURANCE TANGLED LEAVES



UPPER PGL = 0.7
* VERTICAL LINE REPRESENTS PGLS

% TESTS OF PASS 8M SIEVE OUTSIDE PGL TANGLED LEAVES



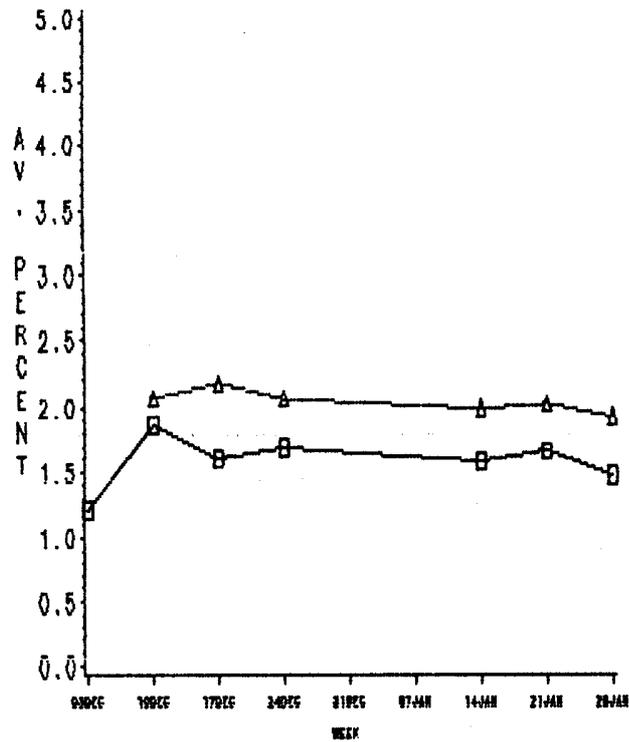
QUALITY ASSURANCE TEST DATA

WEEKLY SUMMARY REPORT

1989 BURLEY - TANGLED LEAVES
22JAN90 TO 26JAN90

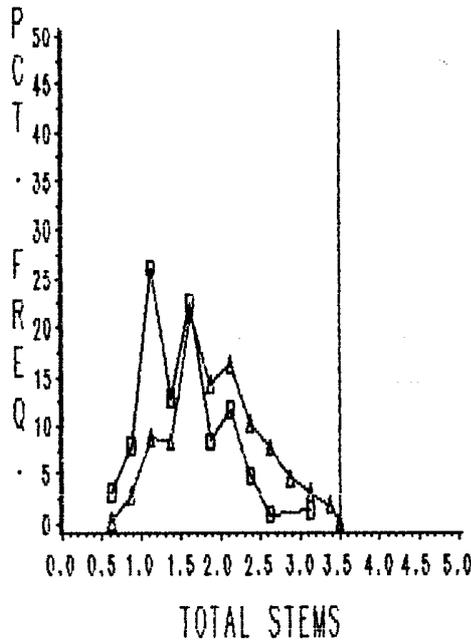
TOTAL STEMS		
% OF TESTS OVER PGL		
	THIS WEEK	LAST WEEK
DAVIE	0.0	0.0
BROOK COVE	0.0	0.0

PCT TOTAL STEMS WEEKLY AVER. TANGLED LEAVES



LEGEND:
DAVIE: SQUARE---SOLID LINE
BROOK COVE: TRIANGLE--HYPHEN LINE

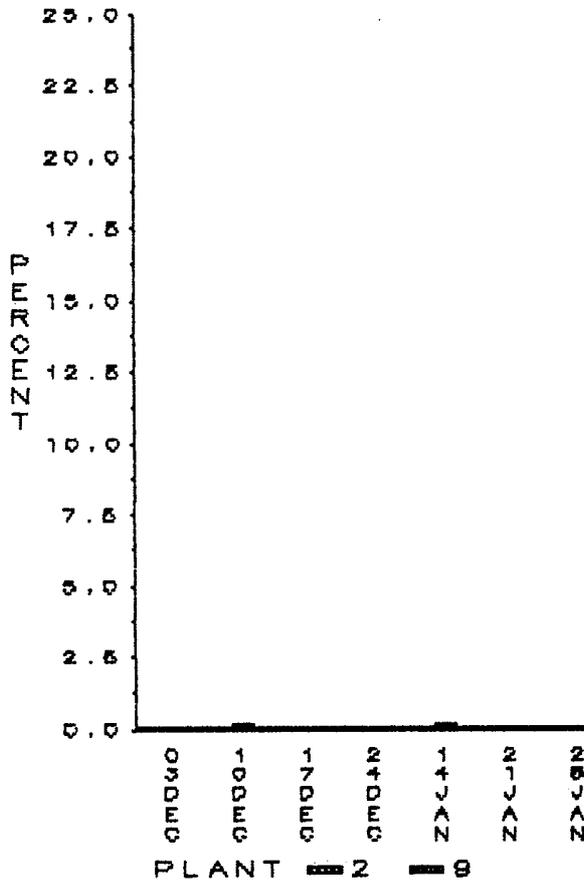
PERCENT FREQUENCY OF OCCURANCE TANGLED LEAVES



UPPER PGL = 3.5

* VERTICAL LINE REPRESENTS PGLS

% TESTS OF TOTAL STEMS OVER PGL TANGLED LEAVES



51315 8004

QUALITY ASSURANCE TEST DATA

PCT OBJECTIONABLE STEMS WEEKLY AVER. TANGLED LEAVES

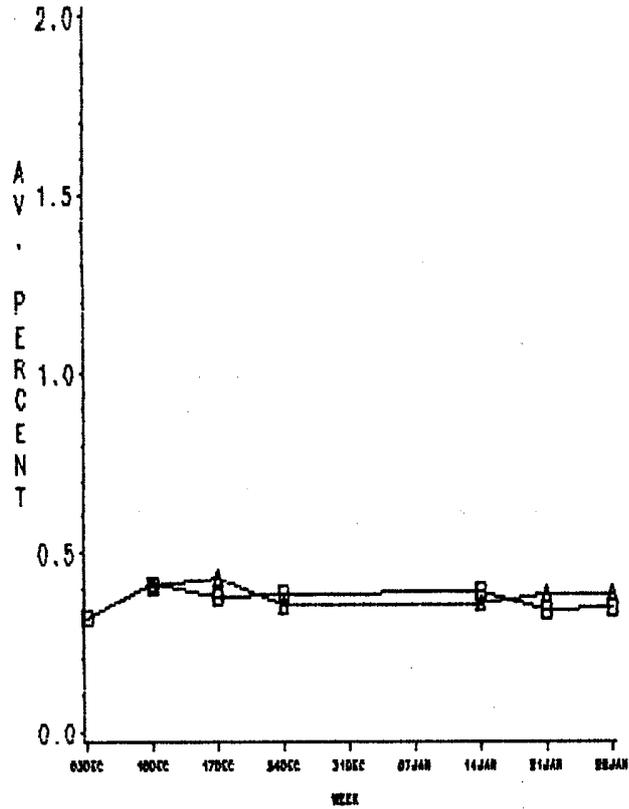
WEEKLY SUMMARY REPORT

1989 BURLEY - TANGLED LEAVES
22JAN90 TO 26JAN90

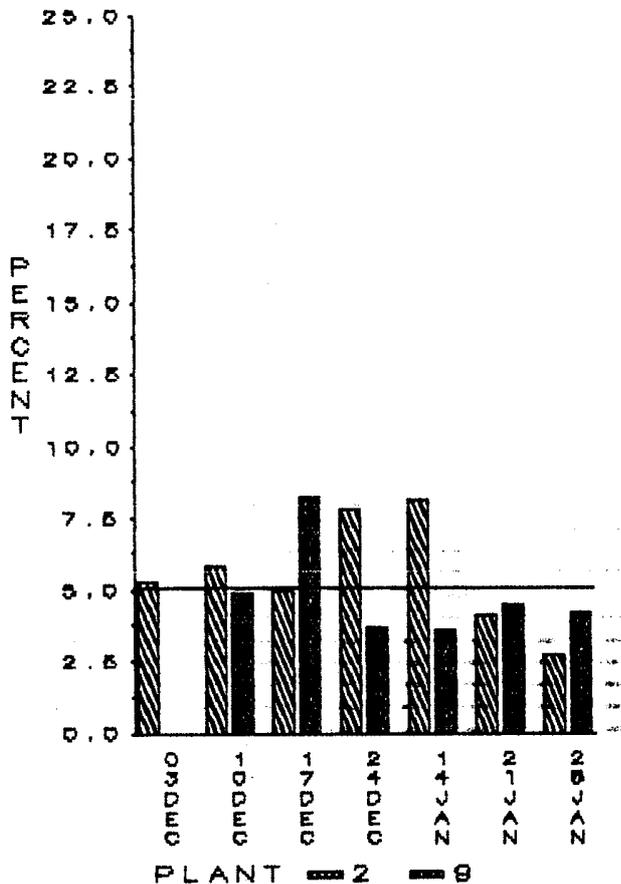
OBJECTIONABLE STEMS % OF TESTS OVER PGL

	THIS WEEK	LAST WEEK
DAVIE	2.7	4.1
BROOK COVE	4.2	4.5

LEGEND:
DAVIE: SQUARE---SOLID LINE
BROOK COVE: TRIANGLE--HYPHEN LINE



% TESTS OF % OBJECTIONABLE STEMS OVER PGL TANGLED LEAVES



QUALITY ASSURANCE TEST DATA

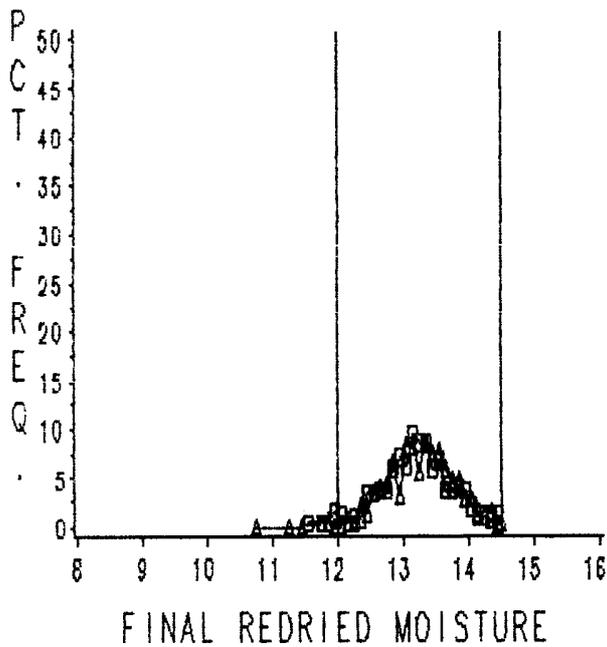
WEEKLY SUMMARY REPORT

1989 BURLEY - TANGLED LEAVES

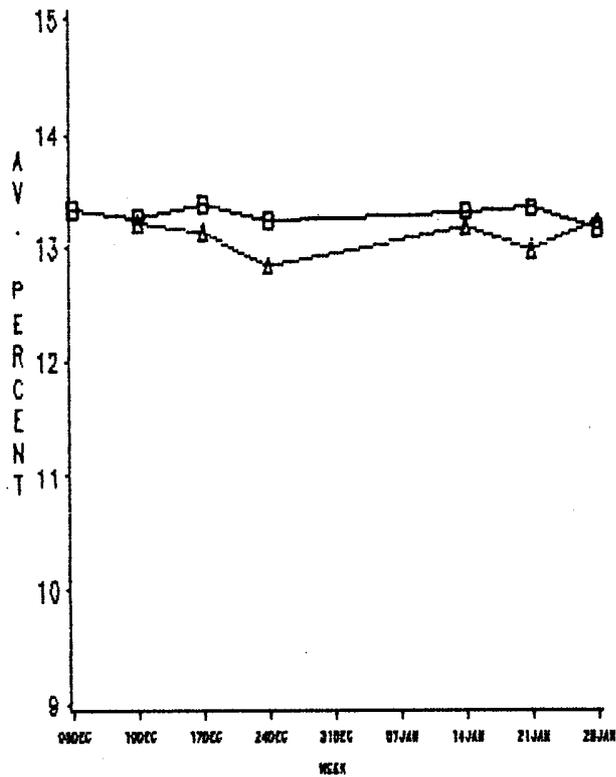
22JAN90 TO 26JAN90

LEGEND:
 DAVIE: SQUARE----SOLID LINE
 BROOK COVE: TRIANGLE--HYPHEN LINE

PERCENT FREQUENCY OF OCCURANCE
TANGLED LEAVES



PCT FINAL REDRIED MOISTURE WEEKLY AVER.
TANGLED LEAVES



LOWER PGL = 12.0

UPPER PGL = 14.5

* VERTICAL LINE REPRESENTS PGLS

51315 8006

QUALITY ASSURANCE TEST DATA

WEEKLY SUMMARY REPORT

1989 BURLEY - TANGLED LEAVES

22JAN90 TO 26JAN90

REDRIED MOISTURE, TANGLED LEAVES

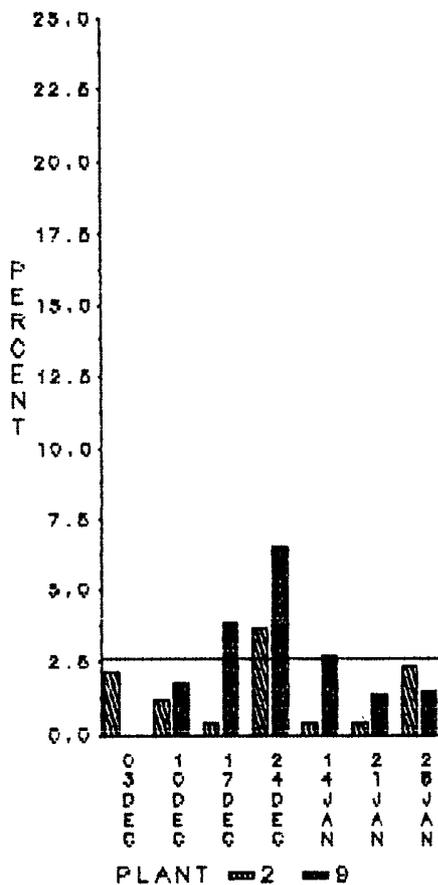
PERCENTAGE OUT OF PGL RANGE

	UNDER	OVER	TOTAL
DAVIE	2.3	0.0	2.3
BROOK COVE	1.5	0.0	1.5

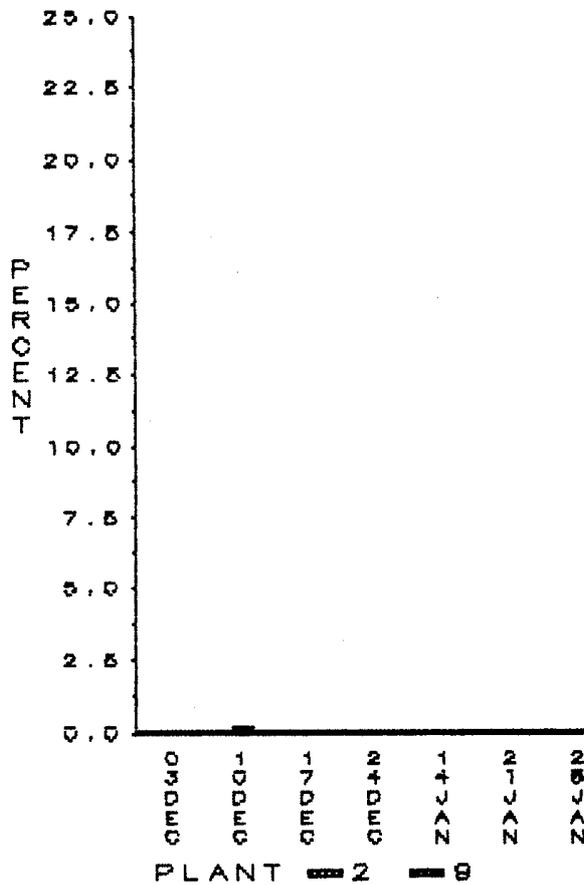
LEGEND:

DAVIE: SQUARE----SOLID LINE
 BROOK COVE: TRIANGLE--HYPHEN LINE

∑ TESTS OF FINAL REDRIED MOISTURE UNDER LOWER PGL
 TANGLED LEAVES



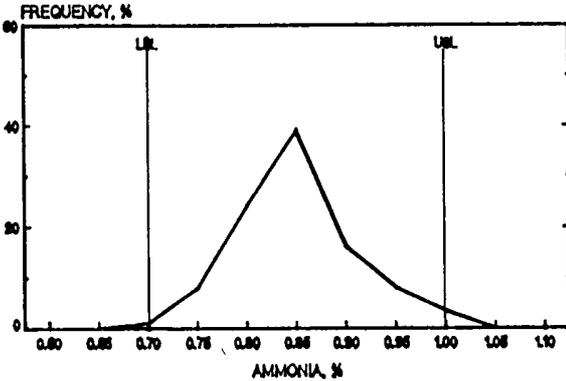
∑ TESTS OF FINAL REDRIED MOISTURE OVER UPPER PGL
 TANGLED LEAVES



1. The frequency distribution of data collected at 605 for the ammoniation process is shown below:

G-7-2 RESIDUAL AMMONIA
WE 01-28-90

G-7-2



G-7-2
Residual Ammonia

Control over the residual ammonia of G-7-2 was very good during the week ending 01-28-90.

Percentage of Tests Out of Limits:				
		Above	Below	Total
w.e.	01-28	0.00	0.00	0.00
w.e.	01-14	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00

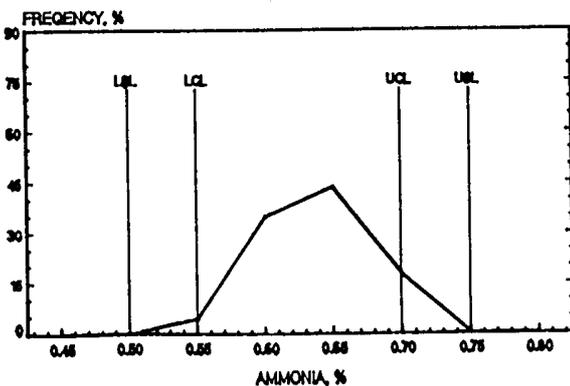
G-7-4
Residual Ammonia

Control over the residual ammonia in G-7-4 continued to be good with no tests out of limits. There were an inadequate number of tests to produce a meaningful frequency distribution.

Percentage of Tests Out of Limits:				
		Above	Below	Total
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00

C-30A RESIDUAL AMMONIA
WE 01-28-90

C-30A



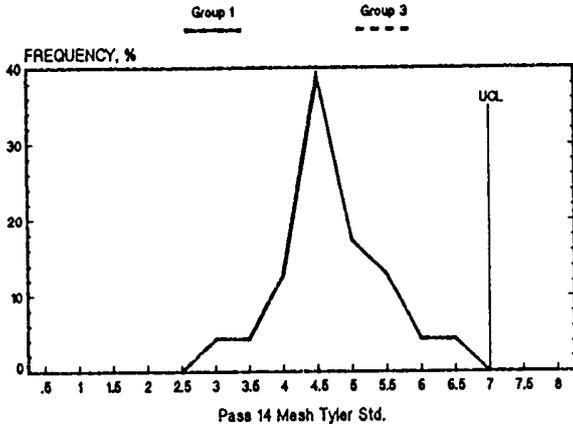
C30-A
Residual Ammonia

Control over the residual ammonia in C-30A improved from the previous week even though there was no change in the percentage of tests out of ship limits.

Percentage of Tests Out of Limits:				
		Above	Below	Total
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00

2. Frequency distributions of data collected at PRO on coarse stems and fines in WT Shorts and fines in Finished Shorts are shown below.

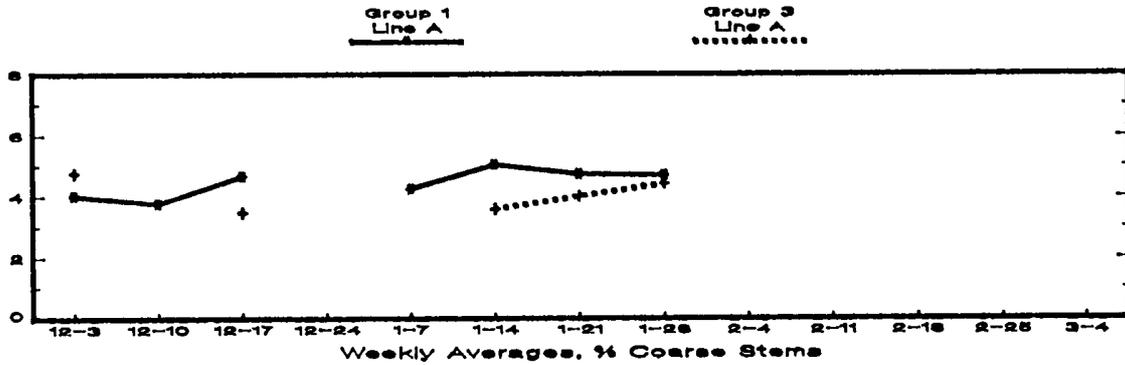
STEMS IN WT SHORTS
WE 01-28-90



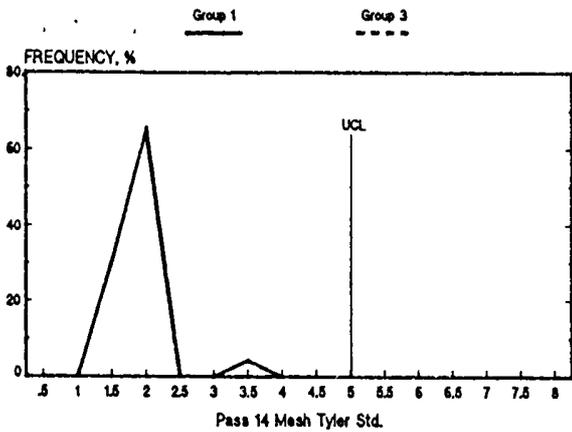
WT SHORTS
Stems

There was little change in the control over the stems in WT Shorts from the previous week.

STEMS IN WT SHORTS



FINES IN WT SHORTS
WE 01-28-90

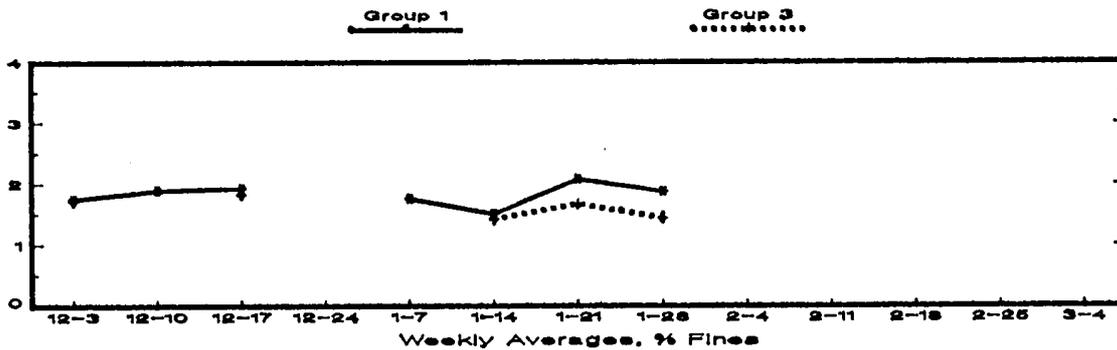


WT SHORTS

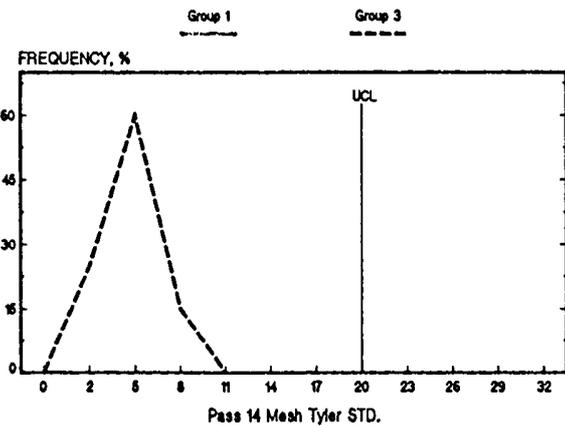
Fines

Control over the fines in WT Shorts improved slightly from the previous week.

FINES IN WT SHORTS



FINES IN FINISHED SHORTS
WE 01-28-90

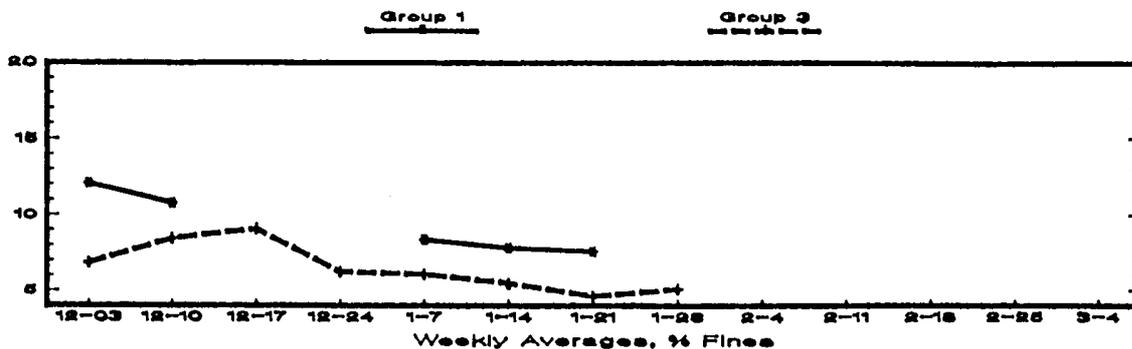


FINISHED SHORTS

Fines

Control over the fines in Finished Shorts continues to be good.

FINES IN FINISHED SHORTS

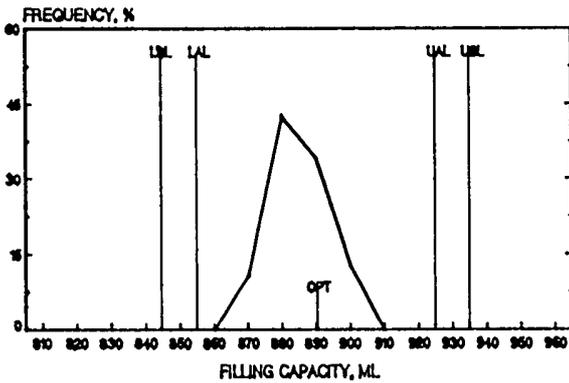


3. Frequency distributions of average bulker filling capacity and moisture for the G-13 process are shown below:

G13-23

Number of Bulklers of G13-23 Produced:
63-1 - 47

BULKER FILLING CAPACITY
WE 01-28-90
G13-23
63-1

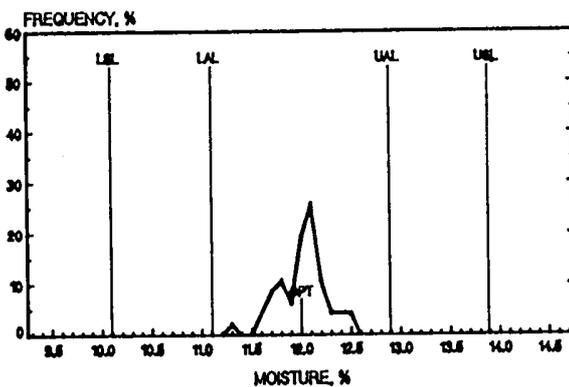


Filling Capacity

The distribution of average bulker filling capacity of G13-23 at 63-1 continues to be good.

		Above	Below	Total
63-1				
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00

BULKER MOISTURE
WE 01-28-90
G13-23
63-1



Moisture

The distribution of average bulker moistures of G13-23 declined slightly from the previous week.

		Above	Below	Total
63-1				
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00

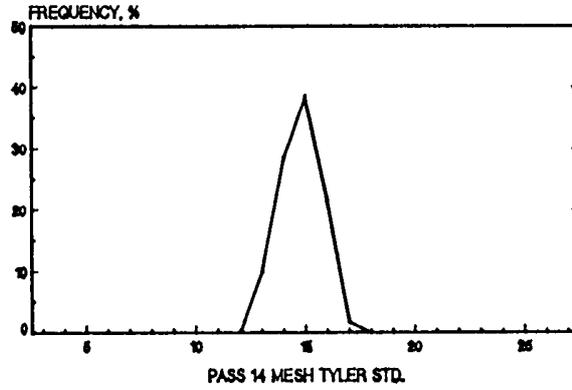
4. Below are graphs of data collected on fines in the G-13 process. Data shown are for individual test points. There was little change in the levels of fines in G13-23 from the previous week.

PASS 14 MESH

WE 01-28-90

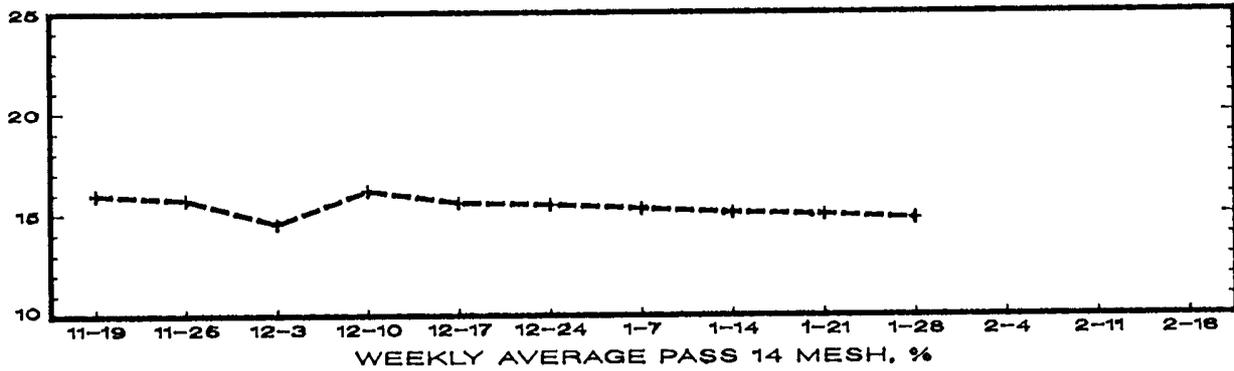
63-23

63-1



G13-23 FINES

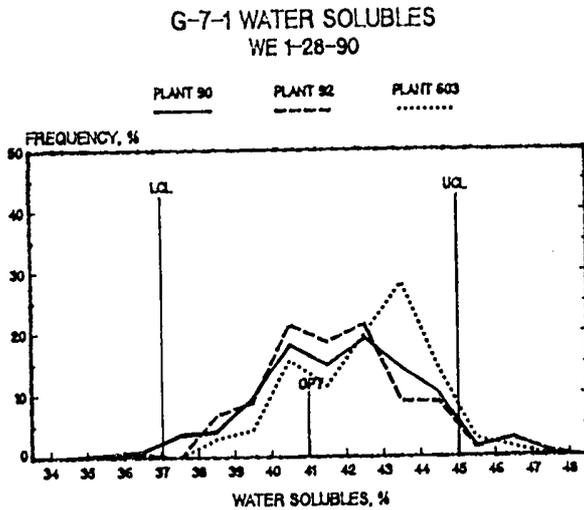
63-1



5. Frequency distributions of data collected on water solubles, base weights, and moisture for the G-7 process follow.

G-7-1 Water Solubles

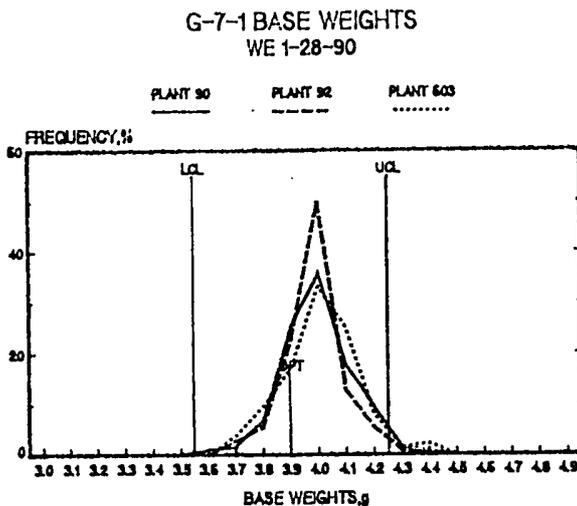
Control over G-7-1 water solubles improved only slightly at 90 from the previous week. Control at 92 improved slightly, while control at 603 declined.



Percentage of Tests Out of Limits:				
		Above	Below	Total
90				
w.e.	01-28	5.05	1.52	6.57
w.e.	01-21	7.36	1.84	9.20
y-t-d		5.42	2.35	7.76
92				
w.e.	01-28	2.70	0.00	2.70
w.e.	01-21	2.48	1.24	3.73
y-t-d		3.27	1.47	4.74
603				
w.e.	01-28	4.44	0.74	5.19
w.e.	01-21	0.00	0.00	0.00
y-t-d		2.90	0.58	3.48

G-7-1 Base Weights

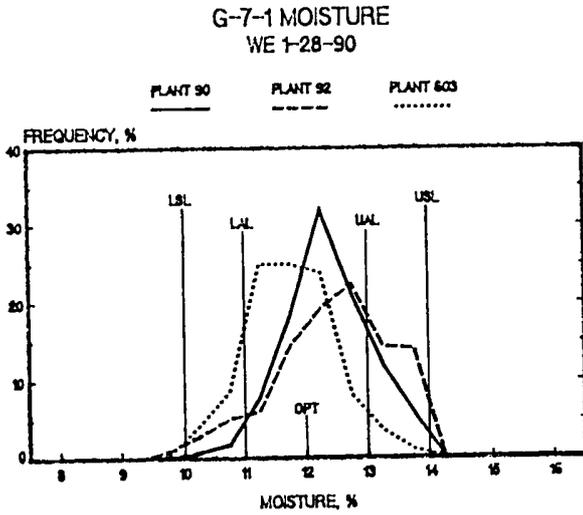
Control over the base weight of G-7-1 improved slightly at 90 and 92 from the previous week. Control at 603 declined slightly.



Percentage of Tests Out of Limits:				
		Above	Below	Total
90				
w.e.	01-28	2.02	0.00	2.02
w.e.	01-21	3.14	0.00	3.14
y-t-d		2.56	0.18	2.75
92				
w.e.	01-28	0.93	0.00	0.93
w.e.	01-21	0.64	0.64	1.27
y-t-d		1.33	0.83	2.17
603				
w.e.	01-28	3.68	0.00	3.68
w.e.	01-21	2.17	0.00	2.17
y-t-d		2.03	0.29	2.33

G-7-1 Moisture

Control over the finished moisture of G-7-1 continued to be excellent at 90. Finished moisture control at both 92 and 603 declined from previous weeks even though there was no significant change in the percentage of tests out of limits.

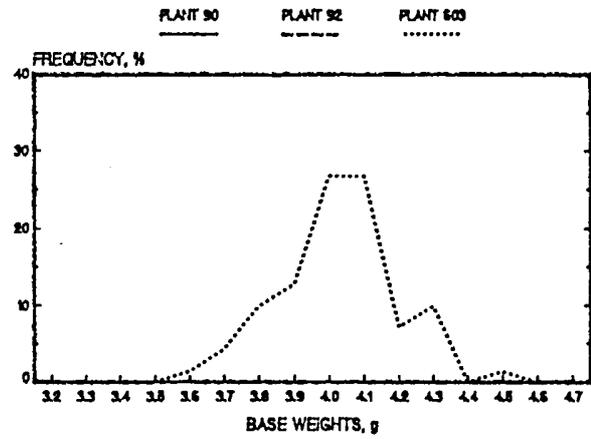
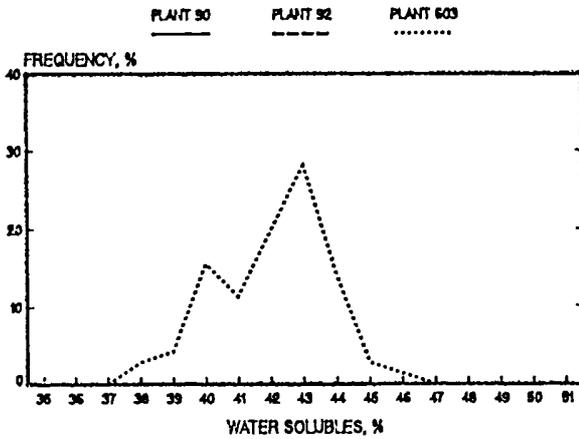


Percentage of Tests Out of Limits:				
		Above	Below	Total
90				
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.00	0.00
92				
w.e.	01-28	0.00	0.00	0.00
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.00	0.06	0.06
603				
w.e.	01-28	0.27	0.00	0.27
w.e.	01-21	0.00	0.00	0.00
y-t-d		0.11	0.00	0.11

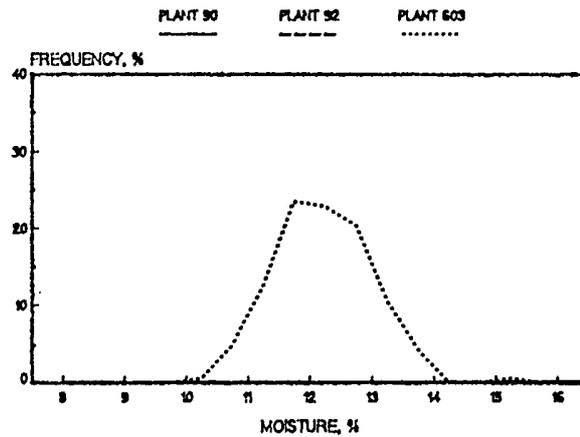
6. Below are frequency distributions of data collected on water solubles, base weights, and moisture for G-7BC produced at 603 for the week ending 01-28-90. G-7BC is manufactured for export and has no specifications.

G-7BC WATER SOLUBLES
WE 1-28-90

G-7BC BASE WEIGHTS
WE 1-28-90

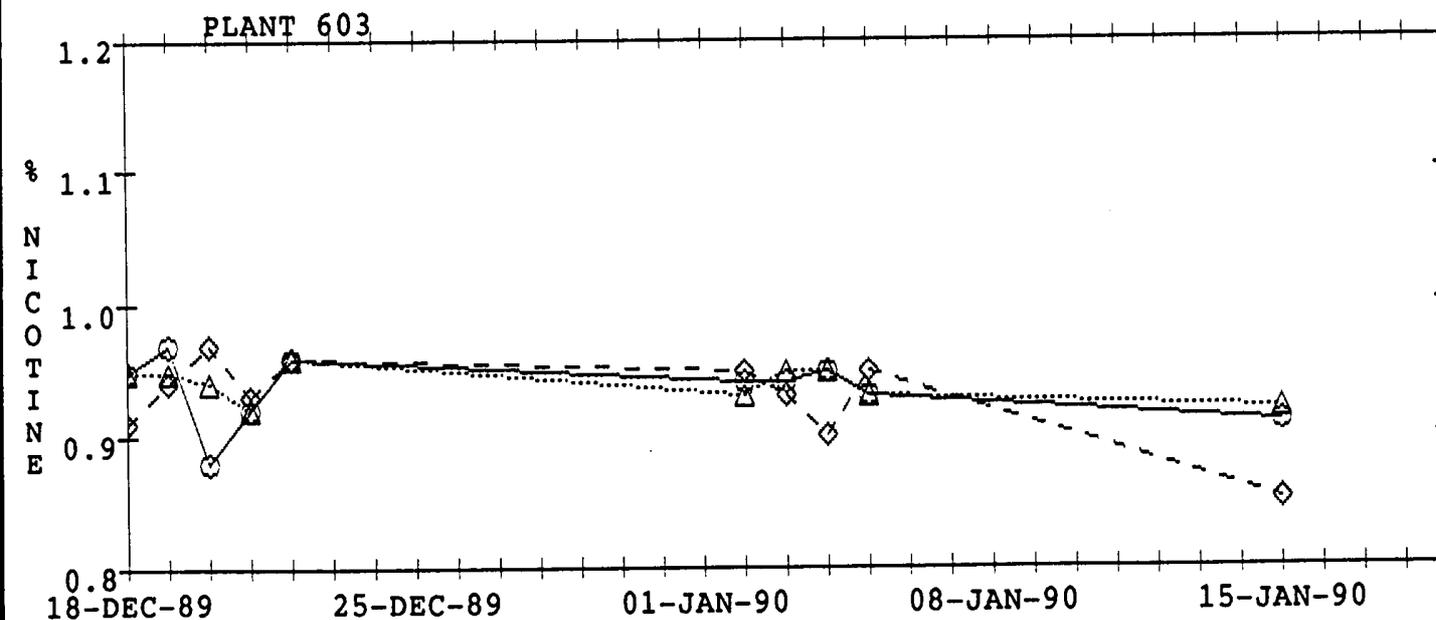
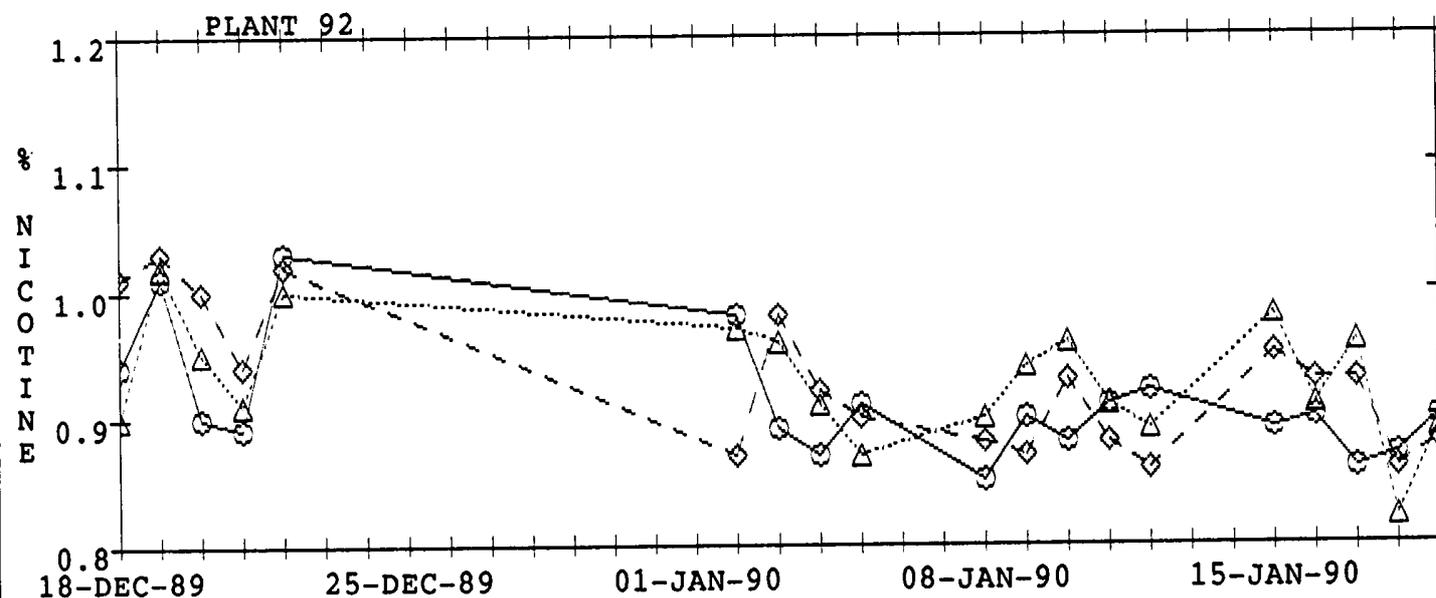
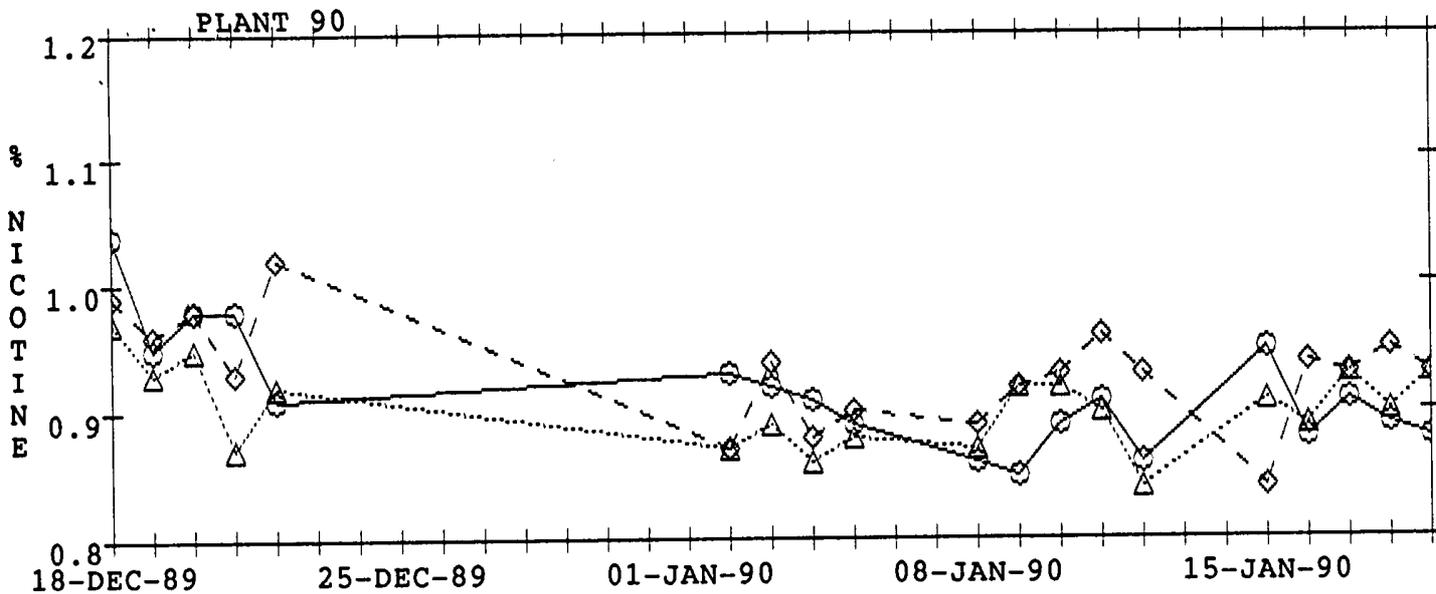


G-7BC MOISTURE
WE 1-28-90



7. On the following pages are graphs of nicotine and sugar data for Tobacco Processing products. Data for G-7 products are averages of individual tests performed in the plant by NIR. Data for G-13 are shift composite samples analyzed by Autoanalyser by QA Laboratory Services.

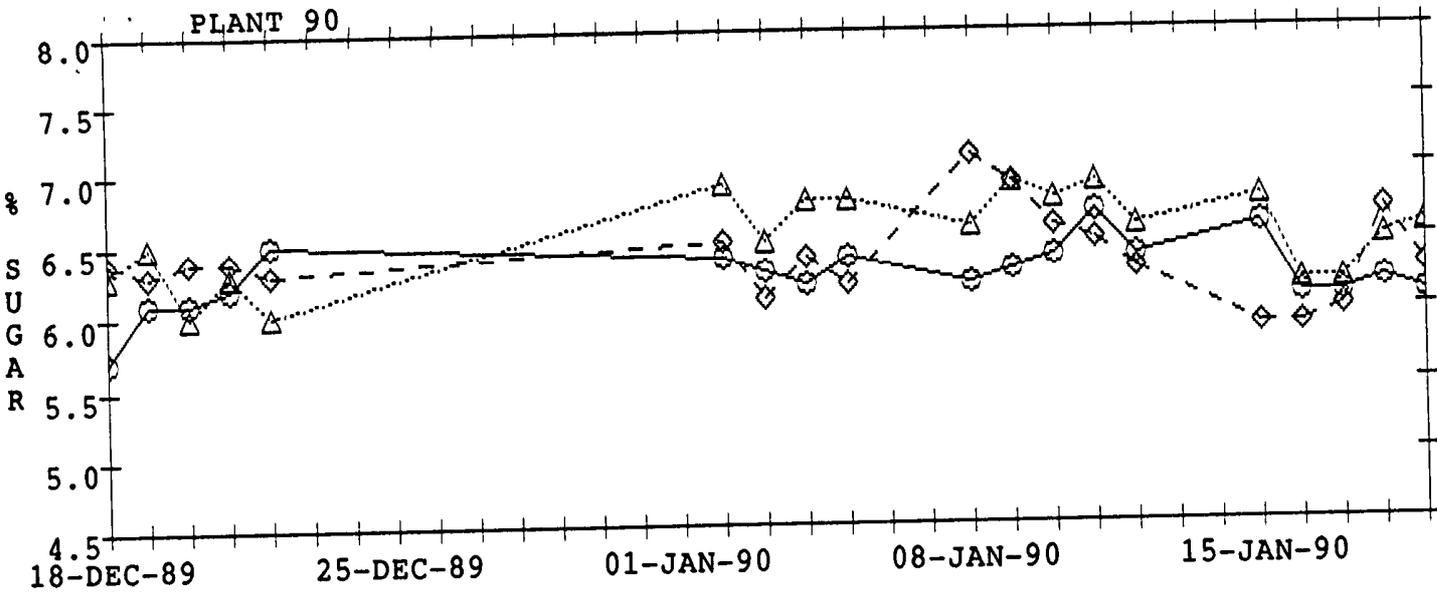
G-7-1 NICOTINE



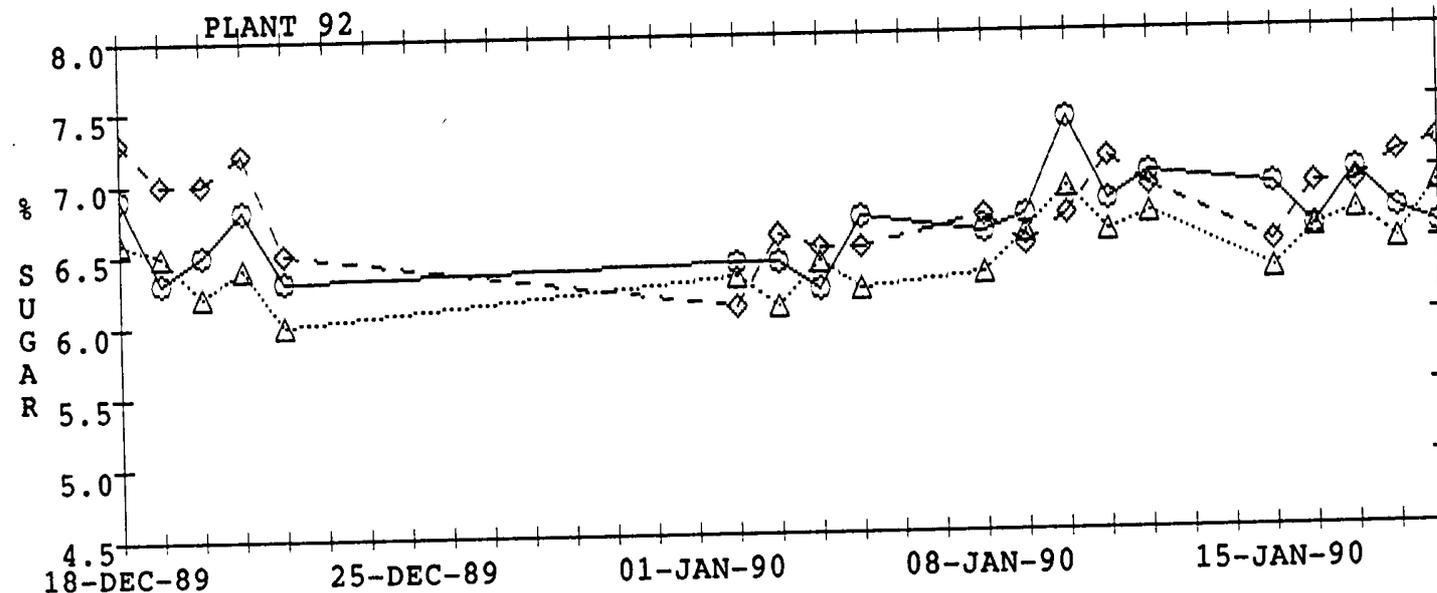
—○— 7 SHIFT
-◇- 8 SHIFT
.....△..... 9 SHIFT

G-7-1 SUGARS

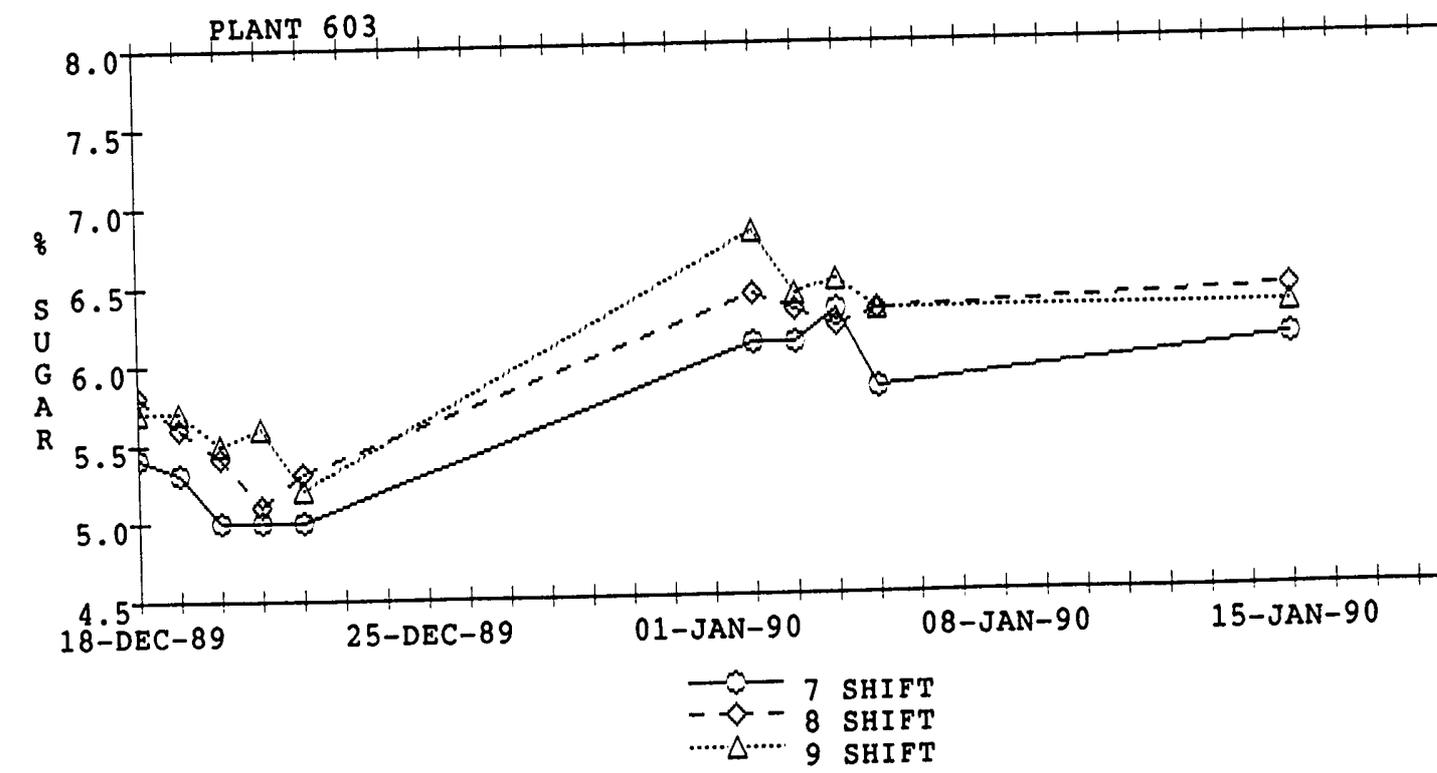
PLANT 90



PLANT 92



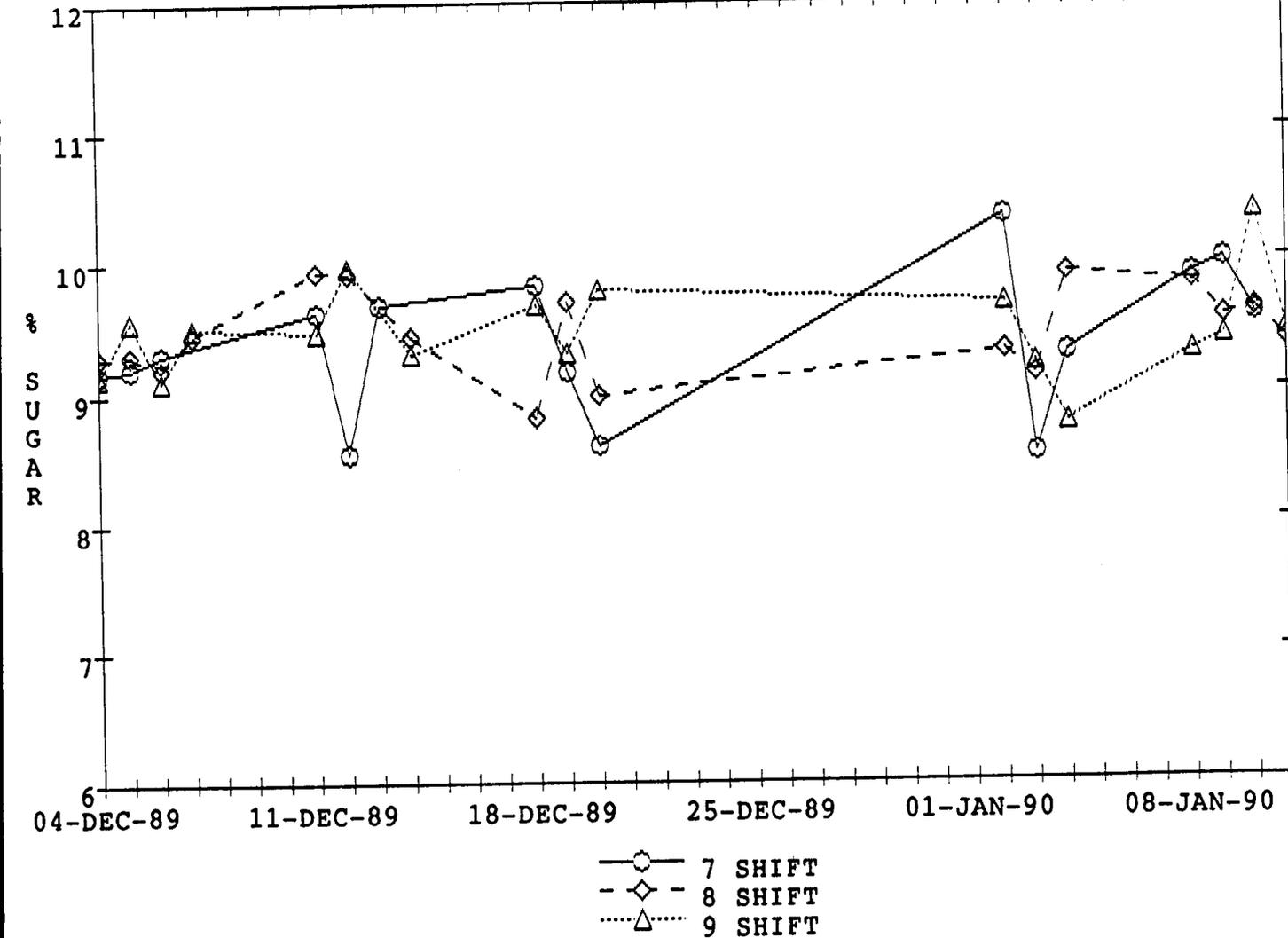
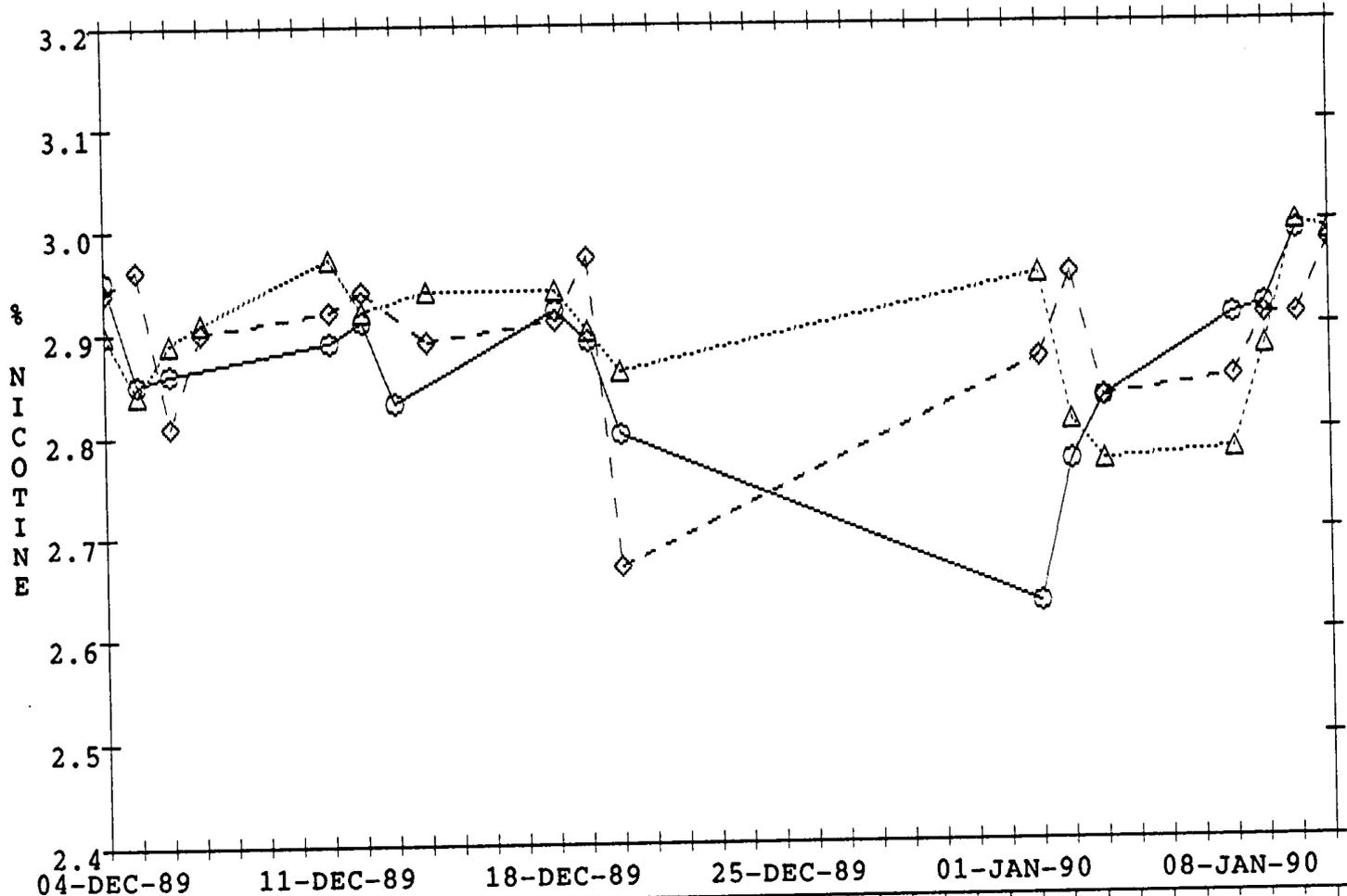
PLANT 603



—○— 7 SHIFT
-◇- 8 SHIFT
...△... 9 SHIFT

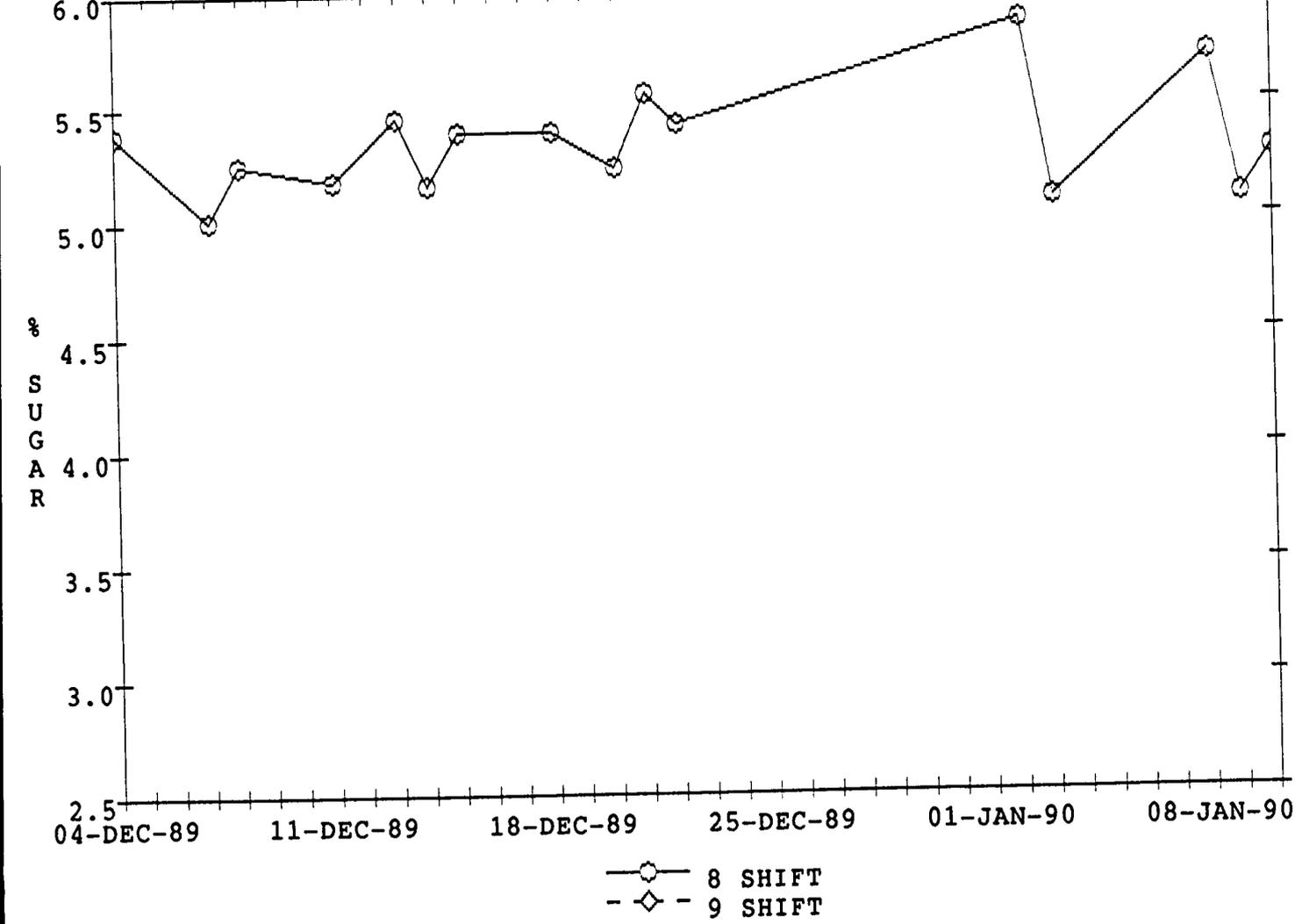
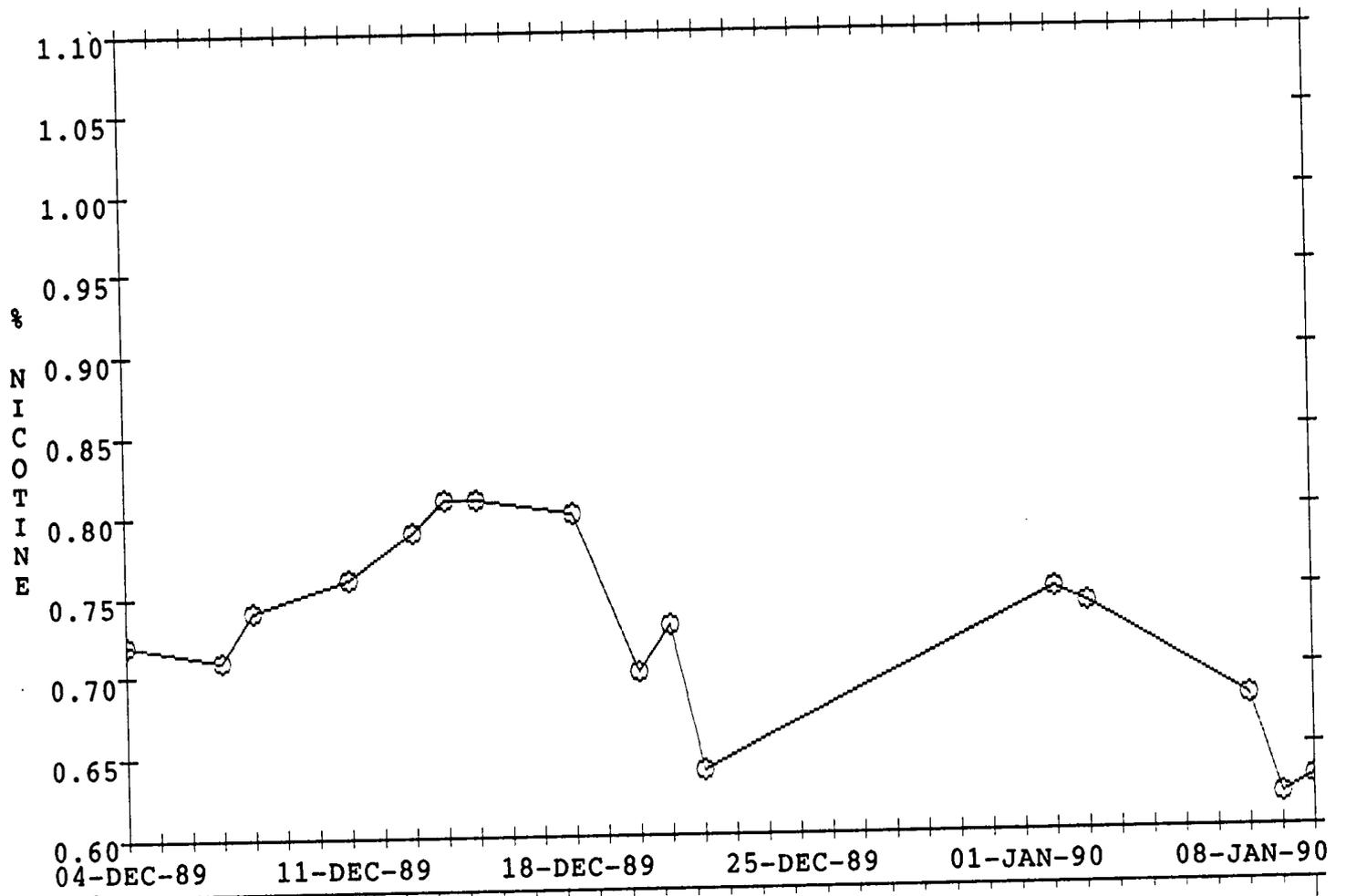
51315 8017

G13-23 NICOTINE & SUGAR
PLANT 63-1



—○— 7 SHIFT
-◇- 8 SHIFT
...△... 9 SHIFT

G-7-2 NICOTINE & SUGAR
PLANT 605

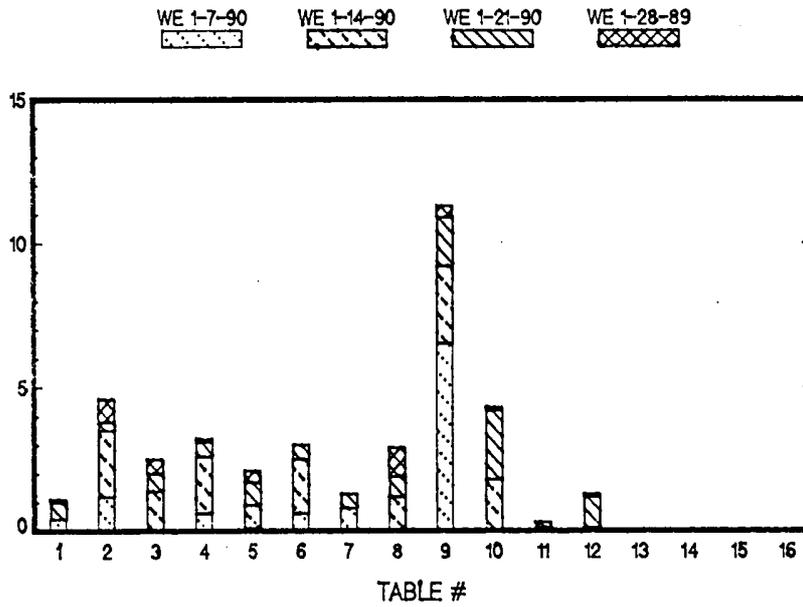


51315 8019

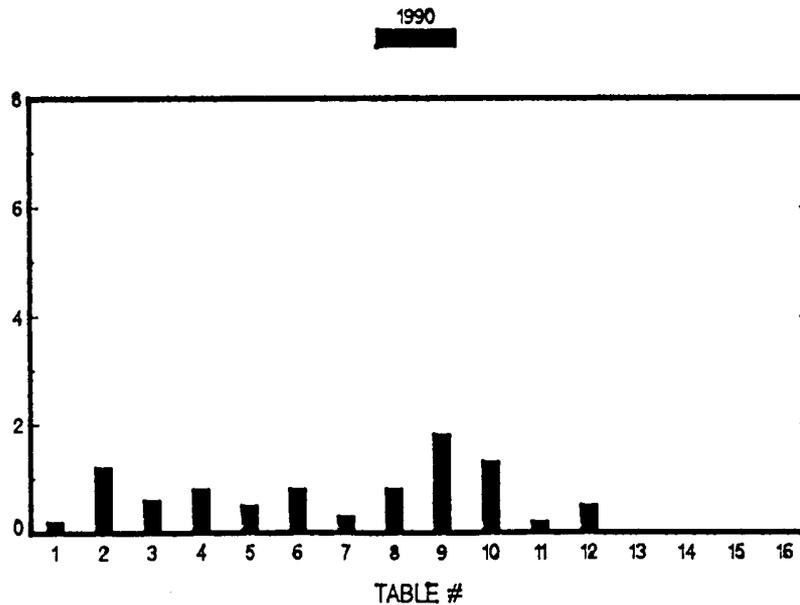
8. Below are the results from quality checks made at the, **BIGIF** Operation at 608-1 for the week ending 01-28-90.

Total Checks	35,985
Total Non-conforming	112
Non-conforming Rate	0.3%

BIGIF
NON-CONFORMING RATES



BIGIF
YEAR TO DATE NON-CONFORMING RATES



9. Tobacco Processing products conformed to specifications at the 95% level for the week ending 01-28-90, with the exception G-7-1 water solubles at 90 Processing with only 93% conformance.
10. The following is a summary of data collected on paper and foil found in samples of Group 1 Finished Shorts processed at P.R.O. during the week ending 01-28-90.

	<u>No. of Pieces</u>	<u>Weight (grams)</u>
Paper	3490	2.71
Foil	63	0.12
Miscellaneous	<u>311</u>	<u>1.53</u>
Total	3864	4.36
 Lbs. of Sample	 43.06	
 Foreign matter/lb	 90 pieces	 0.101 grams

11. Tonya Young, Tommy Hickman, and Pat Vest from QA met with Percy Phillips, Ed Bernasek, Amos Westmoreland, and Doug Young from R&D on January 23 to discuss analysis of G-7DAP. R&D stated at this meeting that phosphorus is the critical measurement that is needed on this product. No additional analyses are to be required outside those already measured on regular G-7 production. R&D has recommended that a X-Ray Fluorescence method be used for the phosphorus analysis. QA has an Oxford Lab-X 1000 XRF unit that is not presently being used. The instrument must be calibrated, however, with product samples with known levels of phosphorus over the range to be tested. R&D must make these samples which have been promised for delivery by the first week in February.
12. Tonya Young, Lee Williams of Processing Engineering, and Ted Sparks from 90 Processing were in Waltham, Mass. on January 25 and 26 to inspect the Automated Basis Weight Tester under construction at Foster-Miller, Inc. The instrument was in final stages of construction and is due to be shipped the first week of February for installation at 90 Processing.

FLAVOR & ADHESIVE

1. Samples tested during this week:

	<u>Samples Received</u>	<u>Analyses Done</u>
FLAVORING	73	132
ADHESIVES	48	93

Flavoring materials included three shipments of glycerine and propylene glycol, two of invert sugar and corn syrup, and one load of licorice and plasticizer.

A small amount of a tobacco flavor concentrate (TC-2) from inventory was rejected (did not match GC standard).

2. The following adhesive items required viscosity adjustment to bring them into specification:

<u>Item</u>	<u>Mfg. Date</u>
N-11 (carton end adh.)	1/23/90
MT8009 (tipping adh.)	1/29/90
1238A (label & case)	1/29/90

A total of 14 finished adhesive batches and two poly-vinyl alcohol solutions were produced this week.

3. Miscellaneous materials included nine revised burley casings, two non-standard licorice samples and a new flavor raw material. QA evaluated the quality of two McAndrews & Forbes spray dried licorice samples submitted by Purchasing for consideration in lower cost applications.
4. Initial analysis for composition of a Lonza blend of Hystar and glycerine, submitted from R&D, was done. QA will compare the data with the supplier before recommending specifications.