

DRAFT

Philip Morris USA Trade Secret

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Richmond, Virginia

DRAFT

To: Distribution

Date: November 28, 1997

From: C. L. Ellis

Subject: R&D Quarterly Report - July-September, 1997

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SM - Pls review
& return comments
to H. Stewart
by Wed 12/5
2 weeks
Hogel

I. PRODUCT DEVELOPMENT

A. Domestic

POL tests of Marlboro (Phase I and II) were approved for shipment. Prototype development continues for Phase III and IV. Phase I has been implemented (moving tar specifications from 16 to 15 mg). Phase I for all other full flavor premium and discount brands (16 mg) has been implemented.

Prototypes of Marlboro Menthol Full Flavor 100s FTB and Virginia Slims 100 Regular/Menthol FTB with paper grade changes have been requested for evaluation as part of the Tar Reduction Program. National launch of these products is scheduled for May, 1998.

Production of sell in samples for Basic 100 FTB began September 29. A factory trial for Brand X Menthol (full flavor and Lights) FTB was completed in July. Product achieved analytical and subjective expectations.

B. International

1. Asia Region

Blends, flavor systems and abstracts have been reformulated for Trade Mark Brands jointly owned by Philip Morris and Godfrey Philips, Inc. Flavors, with one exception, will be sourced from the Flavor Center. The one exception will be sourced from Malaysia.

2. Japan

The tipping length for Marlboro Lights Regular and Menthol and Marlboro Menthol has been changed from 30 to 32 mm in length. The tipping length change is to prepare for the Marlboro tar reduction program and to maintain tipping length consistency across the Marlboro brands.

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The 2 mg Lark Ultra Lights (white tipping) product is in production startup. This is in preparation for a February, 1998 national launch.

Development activities have been initiated to evaluate the possibility of converting Merit Lights, Lark Super Lights and Next from their current filter design to a less expensive dual CA version.

Production was initiated for the Parliament Lights Menthol product for an October national launch.

3. Latin America and Brazil

Product specifications from 11 of 15 countries have been revised to meet region wide targets of 14 mg (Marlboro full flavor) and 10 mg (Marlboro Lights). The tar delivery of USA Marlboro made for export in this region was reduced to 15 mg. Marlboro in several countries has been converted from LS to KS format.

4. EEMA

Regional management has expressed a desire to systematically reduce the current 15 mg delivery of full flavor products. An overall plan is being developed.

II. PRODUCT TECHNOLOGY

A. Project Tomorrow

Results from the extended mill trial indicate paper machine down time due to the MOD process is lower than expected. Cigarettes are being made for performance evaluation to determine the required process parameters necessary to meet product parameters.

Eleven various banded paper prototypes (8 for USA and 3 for PME) were produced during the PdM (France) trial. Cigarettes using these papers are being produced in order to evaluate the paper performance.

B. GAMMA

While evaluating six concepts for fabrication, two new concepts evolved that would significantly simplify manufacturing. Both concepts remove heat from the cigarette coal without having a carbon heat source to maintain combustion. The optimum concept will be selected by December, 1997.

C. Advanced Low Tar

Training of panelists for the new Research Sensory Panel should begin in November. The panelists will be trained using the list of 16 attributes developed as a

result of profiling nine cigarettes from around the world. Optimization of No Vent and Lo Vent prototypes continues. The laboratory apparatus designed to control puff duration during smoking is complete. Calibration curves for the apparatus are nearing completion. The first experiment using the apparatus will take place in the fourth quarter. Experimental gas diffusion filters have been tested on three Industry Monitor 15 models. A significant reduction in both CO and TPM was observed. New filters, with lower pressure drop, are being constructed to determine if the CO reduction can be maintained without reducing the TPM delivery.

III. PROCESSING TECHNOLOGY

A. ET Technical and Product Support

R&D process engineers are providing technical support to Manufacturing on operational procedures and to MTS on design considerations for the Cabarrus ET tower. GSE Systems was awarded the contract for developing the NET-SCI process model. This model will be used for troubleshooting, specification, development, technology transfer and as a training simulator. The on-site support of PM Malaysia NET-SCI facility is complete. Preliminary results from the CCV optimization test are expected in the fourth quarter.

B. Recon Technical and Product Support

The design procurement and site work for the Cast Leaf Facility in Brazil is on schedule. Training for Brazilian process engineers is complete. BLE production at CATANA (Venezuela) is fully qualified through the efforts of Process Development. The decision was made to proceed with the modifications of the BL plant to make the plant NBL and Cast Leaf capable; however, the use of NBL has not yet been approved.

C. Primary/Stem Technical and Product Support

Plans for the Sagemuller dryer evaluated in Brazil have been finalized.

IV. EMERGING TECHNOLOGIES

A. Digital Printing

A single nozzle droplet generator has been developed. This nozzle generator will help model ink jet technology. The Scitex 1" wide printer system has been delivered. The paper transport system used with the printer will be completed in October.

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