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INTER-OFFICE CORRESPONDENCE

To : Mr. S. PARRISH Date : 30th November, 1990

From : H.W. GAISCH

Subject : MONTHLY REPORT

H I G H L I G H T S N O V E M B E R 1 9 9 0

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Abbreviations :

HER = H. REIF	IAM = I. MARCOVITCH
HGA = H.W. GAISCH	MJA = J.C. MANDIRATTA
ANB = A. BADSTUBER	PIC = P. CESCHINI
PEM = P. MARTIN	MPO = M. POLAK

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(1)-EXTRAMURAL PROJECTS, PRIMARILY IAQ EXPERIMENTAL WORK - PRESENT STATUS :

- TNO CORRELATION OF RSP MEASUREMENT METHODS - OBJECTIVE : TO ESTABLISH A CORRELATION BETWEEN THE RESULTS OF THE FILTER PAD AND LIGHT SCATTERING METHODS. STATUS : The final report will be discussed in a meeting at TNO/Delft at the end of November.

- TNO - AIR FLOW PATTERNS IN AIRCRAFT CABINS - OBJECTIVE : TO IMPROVE THE AIR QUALITY IN PASSENGER CABINS OF NARROW-BODY AIRCRAFT. STATUS : Suggestions given in the test flight report for improving airflow in air cabins will be discussed in a meeting at the end of this month at TNO. These findings will serve as the basis for experiments in the mock-up air cabin.

- IMPERIAL COLLEGE, LONDON - IAQ IN UK OFFICES - OBJECTIVE : TO SUPPLEMENT THE BASIC RESULTS OF THE "PERRY STUDY" WITH SOME MORE DETAILED AND REFINED INVESTIGATIONS (e.g. THE TIMEWISE CHANGE IN IAQ). STATUS : A new two-year contract has been signed with Imperial College. It foresees (a) experiments, including variable air volume ventilation (VAV), controlled by temperature or carbon dioxide probes, (b) extension of measured parameters to include volatile organic compounds and ozone, and (c) comparison of the differences between indoor and outdoor air quality in selected climates.

- FRESenius - METHODS FOR IAQ MEASUREMENT - OBJECTIVE : TO DEVELOP EQUIPMENT (NON-OBTRUSIVE AND LABORATORY TYPE), AND METHODS TO MEASURE A WIDE VARIETY OF IAQ PARAMETERS. STATUS : Five units of the Fresenius type briefcase sampler are being assembled. This sampler has, in addition to the traditional measurements (carbon monoxide, particles, and nicotine), devices to measure volatile organic compounds and to check the microbial load of the indoor environment.

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- **NEURATH - VENTILATION REGIMES** - OBJECTIVE : TO STUDY THE INFLUENCE OF DIFFERENT TYPES OF VENTILATION, AND CONCOMITANT EFFICACIES OF AIR REPLACEMENT ON IAQ. STATUS : Experiments to fully characterise the air flow behaviour of the displacement ventilation chamber are ongoing. The air-permeable carpet from R&D Richmond will be tested with respect to the release of volatile organic compounds.

- **INBIFO - HUMAN CONTRIBUTIONS TO STALE AIR** - OBJECTIVE : TO RELATE STALENESS OF AIR TO HUMAN METABOLIC COMPOUNDS. STATUS : Further work has been done to identify the GC peak in the "body odor" sample that is not present in sidestream smoke. So far it has not matched the retention time of the reference substances. Scans made with a mass spectrometer attached to the GC are now under evaluation.

- **NILSEN, TRONDHEIM UNIVERSITY - NICOTINE CONTENT OF HUMAN HAIR AS A POSSIBLE MONITOR FOR ETS EXPOSURE** - OBJECTIVE : TO ESTABLISH WHETHER OR NOT THE NICOTINE DEPOSITS FOUND IN HAIR COULD GIVE A QUANTITATIVE INDICATION OF ETS EXPOSURE. STATUS : Hair samples exposed to a saturated nicotine atmosphere in the pilot study have shown some saturation effects with longer exposures, and a higher percentage nicotine loss under extensive washing. The possible role of hair surface area is being investigated.

- **GORROD/SCHWARTZ/WAHREN, NICOTINE METABOLISM STUDIES** - OBJECTIVE: TO DESCRIBE AND MEASURE METABOLIC PATHWAYS OF NICOTINE. STATUS : A report is being written on the progress of synthesis of nicotine metabolites and minor tobacco alkaloids during the last year. Two visiting scientists, Dr. and Mrs. LEE, have been hired to work on the project until October, 1991. Their first project will be to synthesis gram quantities of highly pure anabasine. (GORROD) Enthusiastic responses were received from scientists about writing chapters for a reference book titled "Nicotine : Absorption, Distribution, Metabolism and Excretion". A detailed schedule is now being prepared.

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- SCHNEIDER - COMPARING RISK FACTORS IN THE MODERN ENVIRONMENT -
OBJECTIVE : TO INVESTIGATE AND ANALYSE MATHEMATICAL MODELS FOR
RISK ASSESSMENT UNDER COMPETING RISK FACTORS AND CONFOUNDING
CONDITIONS. STATUS : The computerised model to calculate
mortality patterns was demonstrated and discussed. It is now in
the phase of extensive debugging and refining. Despite its
preliminary status, the model renders an improved insight into
the relation between diseases and population development.

- FRESENIUS - NICOTINE AND RELATED ALKALOIDS IN FOOD - OBJECTIVE:
TO CHECK A VARIETY OF WIDELY USED FOOD AND SPICES FOR THE
PRESENCE OF NICOTINE, NORNICOTINE, ANABASINE AND COTININE, AND TO
DETERMINE THE AMOUNTS QUANTITATIVELY. STATUS : After a
preparatory phase for method validation, a contract was signed
which initially covers the analyses of nicotine, and some of the
more prominent minor alkaloids, in selected groups of foodstuff
which are found in the daily diet (i.e. teas, spices, vegetables,
and other plants).

- LEE / GARDINER - AVIAN CONTACTS AND RELATED DISEASES -
OBJECTIVE : TO DEVELOP QUESTIONNAIRES AND CARRY OUT INTERVIEWS TO
OBTAIN INFORMATION ON THE INFLUENCE OF CONTACTS WITH PET BIRDS IN
THE DEVELOPMENT OF LUNG DISEASES. STATUS : The interviews are
being carried out at approximately 8 cases per week, 45 cases and
their respective controls having been completed so far.

- WEETMAN - REVIEW OF ASSUMPTIONS MADE BY TECHNICAL COMMITTEES
WHEN DECIDING ON 'SAFE' EXPOSURE LEVELS - OBJECTIVE : TO IDENTIFY
THE SETS OF ASSUMPTIONS USED BY VARIOUS TECHNICAL COMMITTEES IN
SETTING 'SAFE' LEVELS OF EXPOSURE TO PUTATIVE INDUSTRIAL HAZARDS.
STATUS : Some 160 committees have been identified so far which
deal with the questions mentioned in the objectives. They will be
classified according to their official status (self-appointed,
governmental, etc.).

(2) SCIENTIFIC BRIEFINGS, MEDIA WORK - A scientific briefing was
given to PM legal representatives from New York.

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(3)-PATENTS :

METHOD FOR ADHERING PACKS FOR CIGARETTES - FTR0115. Philip Morris London, New Application. At the request of PM London this application has been prepared and sent to the inventors for review. As soon as we have the final approval, instructions will be given to Reddie & Grose (R&G) to file the priority application in the British Patent Office.

PNEUMATIC TRANSPORT OF TOBACCO. European Patent Application No. 88810749 - FTR0074. The European Patent Office examiner has objections based on the prior art. Similar objections were received from the United States Patent and Trademark Office (USPTO) examiner, but the US patent has since been granted. We have instructed Bovard to respond, detailing our inventive step.

GIFT PACKET FOR CIGARETTE - FTR0112, NEW SHOULDER PACKET - FTR0113, FLAT CARTON FOR CIGARETTE PACKETS - FTR0114. New design Applications. All the details and hand made prototypes have been given to R&G with a request to prepare Design Applications for these cases and to send them to us for approval, prior to filing.

ANTI-BLOCKING DEVICE FOR PNEUMATIC TOBACCO FEEDING. European Patent Application No. 90810178 - FTR0095. The European Patent Office has laid open this application under serial No. 0390732 with a search report. We have instructed Bovard to file the request for examination in the European Patent Office.

TRIPLE TUBE-IN-TOW FILTER - FTR0110. A revised draft of this application has been received from R&G and reviewed by the inventors. R&G has been instructed to file the British priority application and a request for an International Search.

METHOD FOR CHECKING THE PROPER HOOK-UPS IN A TUBING SYSTEM FTR0099. Based on German priority these applications were filed : in Japan on September 7, 1990 under assignment No. 238852/90, on September 10, 1990, in Argentina under assignment No. 317800, in

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Brazil under assignment No. 9004478, and in East Germany (before reunification) under assignment No. APG 01M/3439126, in Australia on September 11, 1990 under assignment No. 62354/90, and in Korea on September 12, 1990 under assignment No. 90-14337.

MIRROR PACKET. Swedish Design Application No. 89-1048 FTR0086. The Swedish Patent Office examiner rejected this application in the oral hearing on grounds of obviousness. On the advice of the EEC Packaging Department, it has been decided to abandon this application in Sweden. U.S. Design Patent Application No. 07/415,539. The draft of the response to the US examiner's action will be reviewed with the appropriate FTR personnel and the response will be filed with the US examiner before the required deadline.

HEXAGONAL PACKET FOR CIGARETTES. U.S. Design Patent Application No. 166151 - FTR0078. The USPTO has issued an Advisory Action in which the examiner has maintained the rejection, asserting that he has correctly applied the relevant legal standards. Although we have the possibility of appeal against this decision, it will not be done because the chances of success in this case are quite small.

AUTOMATIC SORTING SCALE - FTR0093. After the final approval by the inventor, this application has now been filed in the USPTO with executed documents and assigned No. 582087.

SIDESTREAM SMOKE COLLECTION APPARATUS - FTR0098. European Patent Application (claiming the British priority) has been filed designating Germany, Great Britain, France, Italy, The Netherlands, Switzerland, and Belgium.

SKEW CUT FILTER - FTR0068. Contrary to our previous report subsequent applications will not be filed in Saudi Arabia, Qatar, Bahrain and UAE. Corresponding applications in the EPO and the United States have matured to patents in the meantime.

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TUBE IN TOW FILTER. Norwegian Patent Application No. 882621 FTR0072. The Norwegian Patent Office examiner has raised some objections to the claims of this application. We have agreed to make minor amendments with a request to grant this patent.

DUAL SWING WING PACKET. U.S. Design Patent Application No. 166152 - FTR0076. To overcome the USPTO examiner's objection, which were based primarily on a legal argument, we have agreed to Fish & Neave's (F&N) response being filed in the USPTO.

GIFT PACKET - FTR0112, NEW SHOULDER PACKET - FTR0113, FLAT CARTONS - FTR0114 / I, II. The drafts of these design applications have been received from R&G. We have made the necessary amendment and instructed R&G to file the British priority applications for these three cases.

UNLOADING UNIT FOR LABEL PACKS. U.S. Patent Application No. 07/358105 FTR0075. COMPRESSION AND THRESHING UNIT FOR TOBACCO. U.S. Patent Application No. 389180 - FTR0084. AUTOMATIC CIGARETTE PAPER FEEDING AND SPLICING DEVICE. U.S. Patent Application 268975 - FTR0073. The USPTO has issued a Notice of Allowance and Allowability. F&N have been instructed that we are not aware of any additional prior art and that they should arrange to pay this issue fee.

PROCESS AND DEVICE TO CONTROL THE QUALITY OF AN OBJECT - FTR0117 Contemplated as a new Swiss Patent Application. The draft has been reviewed with the inventors and the modified version has been submitted to Bovard.

CIGARETTE PACKET WITH OVAL BASE SURFACE - FTR0071. US Design Patent Application No. 07/095242. The second non-final Examiner's Action was issued by the USPTO. The examiner has addressed only some of the points raised in our last response. The corresponding comments and instructions will be given to F&N for a response due in January 1991.

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WINDOW PACKET FOR CIGARETTES AND CHEWING GUMS - FTR0077. US Design Patent Application No. 07/166153. The response to the examiner's action was filed by F&N in the USPTO in accordance to our instructions.

CIGARETTE AND FILTER - PARADOXE - FTR0091. European Patent Application No. 8930624. The publication of the European Search Report occurred on October 17, 1990. Our associates in Turkey have requested a search on this application in their country.

AMCS, Filter production control process - FTR0097. US Patent Application No. 07/553117. The USPTO has issued a Notice of Recordation of Assignment document and recorded assignment of this application to FTR.

NEW LIGHTER PACK - FTR0103. British Patent Application No. 9008398.1. R&G was instructed to prepare the filing of a European Patent Application designating all countries except Luxembourg, and also a US application. The filing of the new application will be deferred until we have the second European Search Report so that we can decide which claims to include.

LIGHTER PACKS I, II and III - FTR0104 A/B/C. A new International Design Registration Application was filed on October 10, 1990, claiming priority from Great Britain Registered Design Applications, numbers 2006108, 2006109 and 2006110. All states were designated, namely Benelux, Benin, France, Germany (reunited), Hungary, Italy, Liechtenstein, Monaco, Senegal, Surinam, Switzerland, Egypt, Holy See, Indonesia, Morocco, The Netherlands Antilles, Spain, Tunisia and Vietnam.

MACHINE FOR CONTROLLING THE FLOW OF TOBACCO BEFORE TRIMMING - FTR0108. Swiss Patent Application No. 2121/90-7. Instructions have been given to Bovard to have the Swiss Federal Intellectual Property Office draw up an International Search Report. The foreign filing for this case will be defined with Bovard once this report is received.

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DOUBLE PACKET FOR CIGARETTES - FTR0106. British Design Application No. D 2006684. Based on Great Britain priority, the new US Design Patent Application was filed in the USPTO. The new International Design Application, claiming priority in Great Britain, was also filed. All states have been designated, namely Benelux, Benin, France, Germany, Hungary, Italy, Liechtenstein, Monaco, Senegal, Surinam, Switzerland, Egypt, Holy See, Indonesia, Morocco, The Netherlands Antilles, Spain, Tunisia, and Vietnam.

DISTRIBUTOR - FTR0109. Swiss Patent Application No. 2915/90-0. The new Swiss Patent Application was filed on September 7, 1990.

(4) -WEEKLY HIGHLIGHTS :

Thursday 1st and Friday 2nd : IAM - Attended the workshop on "Molecular Events in Lung Carcinogenesis", organised in Bern by the Swiss Society for Oncology. It is to be noted that tobacco was "mentioned", but not "attacked". Most of the papers were of high scientific standard. One of the participants was R. SARACCI of IARC. Contact was established with some scientists, especially with Dr U.A. MEYER (Biozentrum Basel).

Monday 5th and Tuesday 6th : IAM - Attended the "European Industrial Hygiene Conference" in Milan. Tobacco was not mentioned during the sessions attended, nor does it appear in the published material. It was an opportunity to meet and have informal discussions with some scientists. Also attended, in Rome, the award ceremony of the Italian Philip Morris Scientific and Technical Prize which was delivered in the presence of the Ministry of Research and Universities. It also provided the opportunity of meeting other Italian scientists. HER - Visited Prof. ROGER PERRY, Imperial College London, to discuss the draft report entitled, "Survey of Indoor Air Quality in the Working Environment" and the continuation of the research project for another biennial period. Suitable objectives for ongoing research could be : (a) effects on the overall IAQ of using carbon dioxide

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levels to control ventilation in offices, (b) measuring of air flow characteristics in offices by tracer gas techniques, and improvement of the air flow, (c) measurements of the pollutants in the outside air used for ventilation, and (d) comparison of said measurements in warm and cold climates.

Monday 12th : HER / PEM - Joint meeting with R&D (both Neuchâtel and Richmond) to discuss the environmental issues of pesticides, additives, product specifications, non-tobacco materials and manufacturing practices. The concerns were on how to gather and share relevant information on laws and regulations, and how to monitor compliance with the regulations.

Tuesday 13th : IAM/HER/PIC/PEM/ANB - An informal presentation was given to Messrs LEE POLLAK (General Counsel, PMI), CHARLES WALL (Ass. General Counsel, PM COS) and ALEX HOLTZMAN (Consultant, PM COS) on the role and programs of S&T Neuchâtel. Dr W. FINK (R&D, Neuchâtel) provided information on related R&D programs and his role with the Verband.

Thursday 15th : IAM - Attended in Cologne the presentations given by the INBIFO scientific staff to Messrs A. HOLTZMAN, C. WALL and Drs J. CHARLES and R. CARCHMAN. HER - Phone call to Dr VETTORAZZI to discuss the work undertaken by him on behalf of CORESTA (summary report on the current usage of dithiocarbamates against blue mold on tobacco). It is progressing well and it will be possible to present a first draft of this report to the members of the ACAC (Agrochemicals Advisory Committee) of CORESTA at the next meeting (January 6, 1991, at the Tobacco Worker's Conference, Winston-Salem).

Friday 16th : HER - Meeting with ULRICH CRETZ, CA manager EEMA, and Dr U. KREUTER, consultant for Statistics, on a study which was recently published by BIGA (Bundesinstitut fuer Gesundheit am Arbeitsplatz, "Federal Institute for a Healthy Workplace", Bern). This study encompassed a lot more parameters than the LINK/KREUTER study on IAQ and ventilation, such as illumination,

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noise, and psychological factors. The stance on smoking related questions is rather balanced. The aim of the meeting was to compare the mathematical and statistical basis of both studies.

Monday 19th : HER - The technical preparation for a pilot study to measure IAQ and ventilation efficiency in public transport has been completed. The briefcase sampler for carbon dioxide has been tested, and methods of data storage and transfer to computer spreadsheet prepared. The practical implementation of the project and the organisation of test rides will be done by Dr J.J. PIADE of R&D. It is planned to test the efficiency of air exchange by measuring carbon dioxide concentrations during several trips. These trips should include variations of other parameters, such as type of compartment, peak versus non-peak hours, and absence or presence of smoking.

Wednesday 21st : IAM - Meeting in Lausanne with Professor B. HIRT, director of the Swiss Experimental Cancer Research Institute (ISREC) to discuss and finalise the agreement of support of his research on the Papilloma Virus which should start January 1991. HER / PEM - Visit of Prof. BERTHOLD SCHNEIDER to S&T to demonstrate the capabilities of his computer based program for correlating selected diseases with demographic variables, such as mean life expectancy or survival rate.

Thursday 22nd : HER - Attended "POLLUTEC 90" in Lyon, France. This international exhibition showed the latest developments in instrumentation for measuring air, soil, and water pollution. IAM / PEM - Attended the meeting of the TAC Scientific Committee in London. Principal topics were : 1) Tobacco Product Labelling Regulations, 2) Liaison with LGC, 3) TAC Indoor Air Quality Booklet and, 4) Reports by the TAC consultants, Dr F.J.C. ROE and PETER LEE. 5) Select Committee of Environment hearings. Held an afternoon meeting with Professor JOHN GORROD where he presented a review of what has been achieved from our support of his nicotine metabolite studies, and also on the progress of compiling chapters for a book on recent advances in nicotine metabolism.

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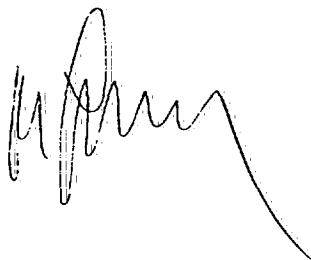
Friday 23rd : IAM / PEM - Visit to Illustra in London with Mr. A. FILIPPONE, PM Corporate Services Inc., Brussels to review Italian version of the video "Why People Smoke".

Monday 26th : HER - Visit to S&T of Dr LAZAR HERZFELD of Herzfeld Laboratories, Basel and his assistant, Miss ROTH. Together with Dr DIETER SCHULTHESS, QA-FTR, possible objectives for contractual research and/or analytical work were discussed. IAM - Meeting in Bern at the Federal Office of Public Health (OFSP) to discuss with the officials, the revision of Article 420a of the Food Ordinance (list of permitted additives to tobacco products). The delegates of the OFSP were : Dr H. STRAUSS (acting Director) E. TREMP (Chemist) DR J. SCHLATTER (Toxicologist). The delegates of the ASFC were : Mr. J-C. BARDY (Director) Drs Y. ROMANENS (Scientific Attaché) J. WILD (Burrus) and IAM. The discussion took place in a pleasant atmosphere and in a cooperative spirit. It was decided to establish a working group (E. TREMP, J. SCHLATTER and a number of industry specialists) to review Article 420a. The basis of the work is the establishment of a "positive" list. The German, French and English additive lists will be examined for comparison.

Tuesday 27th : IAM - Meeting in Fribourg of the industry working group "Article 420a" to prepare for the future meeting with the OFSP delegation.

Thursday 29th : HER - Visit to TNO, Delft, to discuss the progress made in the extramural projects, (a) correlation of gravimetry and light scattering for RSP determination, and (b) improvement of ventilation in aircraft.

Friday 30th : HER - Discussion with Dr. ULRICH KREUTER on the statistical statements contained in a recently published report on Swiss workplaces (BIGA, see November 16th).



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