

SUMMARY OF FRC PROGRAM EFFORT

Critical to B&W Business Needs and Should be Done at B&W (A)

| <u>FRC Work Area</u> | <u>Subject</u> | <u>FRC Effort (MY)</u> |
|----------------------|--|------------------------|
| 911.01 | Tobacco Modification | 4.8 |
| .100 | Improvement of smoking quality | |
| .200 | Product-precursor relationships | |
| 911.04 | Filter Materials | (1.5)* |
| .200 | Carbon and zeolite filters | |
| 911.06 | Chemosensory research | (1.0) |
| .100 | Impact and irritation | |
| .200 | Aftertaste | (2.0) |
| .300 | Body and mouthful | (2.0) |
| 911.07 | Special analytical projects | (1.0) |
| .100 | Smoking superiority - ROOT technology | |
| .200 | Labelled studies | (0.5) |
| .300 | Other investigations - PG derivatization | (1.0) |
| 911.08 | Smoke formation and transfer | (1.9) |
| .300 | Compound migration | |
| 911.09 | Quality: Tobacco physical properties | 1.5 |
| .100 | Tobacco rod physical properties | |
| 911.11 | Reduced ignition potential cigarette | 1.0 |
| .100 | Direct method development | |
| .200 | Indirect method development | |
| 911.13 | Additives and materials guidance | (1.0) |
| .100 | Additives and materials guidance panel | |
| 911.15 | CORESTA, etc. (RIP, Pesticides) | <u>0.2</u> |
| | | 19.4 |

* Indicates a B&W estimate based on FRC program elements.

() Indicates a B&W estimate based on our assessment of FRC program elements

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|----------------------|--|------------------------|
| 911.01 | <i>Tobacco Modification</i> | 4.8 |
| .100 | <i>Improvement of smoking quality</i> | |
| .200 | <i>Product-precursor relationships</i> | |
| 911.04 | <i>Filter Materials</i> | (1.5)* |
| .200 | <i>Carbon and zeolite filters</i> | |
| 911.06 | <i>Chemosensory research</i> | (1.0) |
| .100 | <i>Impact and irritation</i> | |
| .200 | <i>Aftertaste</i> | (2.0) |
| .300 | <i>Body and mouthful</i> | (2.0) |
| 911.07 | <i>Special analytical projects</i> | (1.0) |
| .100 | <i>Smoking superiority - ROOT technology</i> | |
| .200 | <i>Labeled studies</i> | (0.5) |
| .300 | <i>Other investigations - PG derivanzation</i> | (1.0) |
| 911.08 | <i>Smoke formation and transfer</i> | (1.9) |
| .300 | <i>Compound migration</i> | |
| 911.09 | <i>Quality: Tobacco physical properties</i> | 1.5 |
| .100 | <i>Tobacco rod physical properties</i> | |
| 911.11 | <i>Reduced ignition potential cigarette</i> | 1.0 |
| .100 | <i>Direct method development</i> | |
| .200 | <i>Indirect method development</i> | |
| 911.13 | <i>Additives and materials guidance</i> | (1.0) |
| .100 | <i>Additives and materials guidance panel</i> | |
| 911.15 | <i>CORESTA, etc. (RIP, Pesticides)</i> | <u>0.2</u> |
| | | 19.4 |

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SUMMARY OF FRC PROGRAM EFFORT

Important, but not critical to current business needs,
but will become more important long-term (B)

| <u>FRC Work Area</u> | <u>Subject</u> | <u>FRC Effort (MY)</u> |
|----------------------|--|------------------------|
| 9:1.03 | Ultralight weight structures | 2.0 |
| .100 | Ultralight weight materials based on tobacco | |
| 9:1.07 | Smoking quality superiority | |
| .300 | Other investigations - sulphur compounds in smoke | (1.0) |
| 9:1.12 | Bioassays | (3.0) |
| .100 | In vitro genotoxicity bioassays | |
| .200 | Estimation of in-vivo genotoxic activity | |
| .300 | Development of methods for non-genotoxic assessment of additives | (0.4) |
| .400 | Development of methods for non-genotoxic assessment of additives | — |
| | | 6.4 |

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SUMMARY OF FRC PROGRAM EFFORT

Important but should be done outside of B&W (C)

| <u>FRC Work Area</u> | <u>Subject</u> | <u>FRC Effort (MY)</u> |
|----------------------|--|------------------------|
| 911.04 | Filter materials | (0.9) |
| .100 | Degradability of cellulose acetate filters | |

Not Critical to B&W Business Needs (D)

| <u>FRC Work Area</u> | <u>Subject</u> | <u>FRC Effort (MY)</u> |
|----------------------|--|------------------------|
| 911.02 | Total sidestream reduction | 0.9 |
| .100 | Project FUSE | |
| .200 | Evaluations of new papers | |
| 911.05 | Tar modification | |
| .100 | Tobacco based smoking materials | 3.6 |
| 911.06 | Chemosensory research | (1.7) |
| .100 | Impact and irritation | (0.5) |
| | (Contract work, stereoisomers of nicotine and menthol, magnesium ion effect, irritancy of vapor phase) | |
| | (Hydrophobic/phillic effects, non-human tests for irritation) | |
| .400 | Chemosensory effects due to smoking behavior | |
| 911.07 | Special analytical projects | (2.0) |
| .400 | Support services: Chemical analysis | |
| .500 | Support services: Specialized analysis | |
| .600 | Components of tobacco and smoke database | |

SUMMARY OF FRC PROGRAM EFFORT
Not Critical to B&W Business Needs (D)

| <u>FRC Work Area</u> | <u>Subject</u> | <u>FRC Effort (MY)</u> |
|----------------------|---|------------------------|
| 911.08 | Smoke formation and transfer | (0.9) |
| .100 | Compound release and transfer | |
| .200 | Sidestream formation mechanisms | |
| 911.10 | ETS | 2.2 |
| .100 | The fundamental nature of ETS | |
| .200 | Determination of personal exposure to ETS | |
| 911.13 | Additives and materials guidance | |
| .100 | Materials guidance panel (Partial) | (2.4) |
| 9.1.14 | Technical support CAC | 0.2 |
| 9.1.16 | LIS | 2.0 |
| | Administration | <u>3.4</u> |
| | | 19.8 |

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