



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

CANMET

Canada Centre
for Mineral
and Energy
Technology

Centre canadien
de la technologie
des minéraux
et de l'énergie

ENERGY RESEARCH PROGRAM (SUPPLY); PROJECT ES 1-RESOURCE AND RESERVE

ASSESSMENT: COAL QUALITY & PEAT

PROGRESS REPORT - JULY 1, 1975 - SEPTEMBER 30, 1975

(SUPPLEMENT NO.1 TO REPORT ERP/ERL 75-135 (TR))

T.E. Tibbets

Energy Research Laboratories

November 1975

ERP/ERL 75-137 (TR)

ENERGY RESEARCH PROGRAM

Report ERP/ERL 75-137 (TR)

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Supplementary Progress Report
(July 1, 1975-September 30, 1975)

Project ES1

Energy Research Program, Supply

Resource & Reserve Assessment: Coal Quality & Peat

by

T.E. Tibbetts *

Project ES1 - Resource and Reserve Assessment: Coal Quality & Peat

INTRODUCTION

The following is a Progress Report covering the period July 1, 1975 to September 30, 1975 on research activities under Energy Research Program (Supply) Project ES1, Resource and Reserve Assessment: Coal Quality and Peat.

This is Supplement No. 1 to Report No. ERP/ERL 75-135(TR) which outlined the overall objectives, background and work plans for the various Commitments under this project and the progress from January 1, 1975 to June 30, 1975.

The structure of Project ES1, consisting formally of "Elements" and "Commitments" is identified below followed by an interim progress report on each of the Commitments.

Also included in this report is a schedule identifying the manpower expectations in terms of man years (MY) for the current year and the (estimated) time directed to the respective commitments during the first three quarters of 1975. For the purpose of this schedule a man year consists of 260 man days. The smallest significant time unit is considered to be .001 man year, approximately 2 man hours.

* Project Leader and Head, Coal & Peat Resources Evaluation, Energy Research Laboratories, CANMET, Department of Energy, Mines & Resources, Ottawa.

STRUCTURE OF PROJECT ES1-RESOURCE & RESERVE ASSESSMENT: COAL QUALITY & PEAT
(E= Energy Research Program S= Supply Activity)

| <u>Element</u> | <u>Commitment</u> |
|---|---|
| ES1.1 Federal Provincial Coal Inventories | ES1.1.00 Consulting & Scientific Services |
| | ES1.1.01 Evaluation of Nova Scotia Coal Resources |
| | ES1.1.02 Evaluation of Lignite Resources of the Ravenscrag Formation of Saskatchewan |
| ES1.2 Quality of Coals for Heating, Electric Power Generation & Metallurgical Markets | ES1.2.00 Consulting & Scientific Services |
| | ES1.2.01 Evaluation of Commercial Coals from Western Canadian Mines |
| | ES1.2.02 Evaluation of Commercial Coals from Eastern Canadian Mines |
| | ES1.2.03 Development of Computerized Data Bank of Coking Properties of Coals |
| ES1.3 Quality Trends of Coal in Seams | ES1.3.00 Consulting & Scientific Services |
| | ES1.3.01 Determination of Patterns of Variations in Levels of Sulphur & Other Constituents in Cape Breton Coals |
| ES1.4 Canadian Peat Resources-Inventory, Science & Technology | ES1.4.00 Consulting & Scientific Services |
| | ES1.4.01 Assessment & Application of Quality Parameters of Peat & Peat Deposits |
| | ES1.4.02 Betterment of Scientific and Technical Expertise of Canada Through the International Peat Society |
| | ES1.4.03 Peat Standards - Classification, Nomenclature & Test Methods |

- ES1.5 Methodology of Trace Element Analysis
 - ES1.5.00 Consulting & Scientific Services
 - ES1.5.01 Development of Methods for Determination of Mercury in Canadian Coals

- ES1.6 Committee Services (Scientific and Technical Institutes)
 - ES1.6.01 The Institute of Briquetting and Agglomeration
 - ES1.6.02 The Canadian Institute of Mining & Metallurgy
 - ES1.6.03 The 6th International Strata Control Conference

- ES1.7 Standardization: Coal & Coke
 - ES1.7.00 Consulting & Scientific Services
 - ES1.7.01 Standardization of Test Methods (Coal & Coke)-ASTM
 - ES1.7.02 Standardization of Test Methods (Coal & Coke - ISO/TC 27

- ES1.8 Analytical Support Functions of the Solid Fuel Analysis Laboratory
 - ES1.8.01 Analysis of Coal Samples for Element ES1.1 (Federal-Provincial Coal Inventories)
 - ES1.8.02 Analysis of Coal Samples for Element ES1.2 (Quality of Coals for Heating, Electric Power Generation & Metallurgical Markets)
 - ES1.8.03 Analytical Services for Government Departments Related to Fuel Purchases
 - ES1.8.04 Investigation and Development of New Analytical Procedures

PROJECT: ES1 - RESOURCE & RESERVE ASSESSMENT: COAL QUALITY & PEAT

| ELEMENT COMMITMENT | PROFESSIONAL (P) MY BY QUARTER | | | | TECHNICAL (T) MY BY QUARTER | | | | TOTAL | |
|--|-----------------------------------|--------------|--------------|---|--------------------------------|--------------|--------------|---|--------------|--------------|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | P* | T* |
| | | | | | | | | | 1975 | 1975 |
| ES1.1 FEDERAL PROVINCIAL COAL INVENTORIES | | | | | | | | | | |
| ES1.1.00 CONSULTING & SCIENTIFIC SERVICES | 0.025 | 0.025 | 0.025 | | - | - | - | | 0.100 | - |
| ES1.1.01 EVALUATION OF NOVA SCOTIA COAL RESOURCES | 0.025 | 0.035 | 0.032 | | 0.020 | 0.020 | 0.150 | | 0.150 | 0.650 |
| ES1.1.02 EVALUATION OF LIGNITE RESOURCES OF THE RAVENSCRAG FORMATION OF SASKATCHEWAN | 0.025 | 0.033 | 0.015 | | 0.900 | 0.900 | 0.000 | | 0.080 | 0.000 |
| | <u>0.075</u> | <u>0.093</u> | <u>0.072</u> | | | | | | <u>0.330</u> | <u>0.650</u> |
| ES1.2 QUALITY OF COALS FOR HEATING, ELECTRIC POWER GENERATION & METALLURGICAL MARKETS | | | | | | | | | | |
| ES1.2.00 CONSULTING & SCIENTIFIC SERVICES | 0.010 | 0.010 | 0.012 | | 0.000 | 0.040 | 0.010 | | 0.050 | 0.050 |
| ES1.2.01 EVALUATION OF COMMERCIAL COALS FROM WESTERN CANADIAN MINES | 0.040 | 0.010 | 0.040 | | 0.000 | 0.023+ | 0.054+ | | 0.100 | 0.100+ |
| ES1.2.02 EVALUATION OF COMMERCIAL COALS FROM EASTERN CANADIAN MINES | 0.001 | 0.005 | 0.005 | | 0.050 | 0.010 | 0.090 | | 0.100 | 0.200 |
| ES1.2.03 DEVELOPMENT OF COMPUTERIZED DATA BANK OF COKING PROPERTIES OF COALS | | | | | | | | | ? | ? |
| | <u>0.051</u> | <u>0.025</u> | <u>0.057</u> | | <u>0.050</u> | <u>0.073</u> | <u>0.154</u> | | <u>0.250</u> | <u>0.350</u> |
| | | | | | | | | | + | + |
| | | | | | | | | | 1.2.03 | 1.2.03 |
| ES1.3 QUALITY TRENDS OF COAL IN SEAMS | | | | | | | | | | |
| ES1.3.00 CONSULTING & SCIENTIFIC SERVICES | 0.005 | 0.001 | 0.005 | | 0.000 | 0.000 | 0.000 | | 0.010 | 0.000 |
| ES1.3.01 DETERMINATION OF PATTERNS OF VARIATIONS IN LEVELS OF SULPHUR & OTHER CONSTITUENTS IN CAPE BRETON COALS | 0.001 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | | 0.010 | 0.100 |
| | <u>0.006</u> | <u>0.001</u> | <u>0.005</u> | | <u>0.000</u> | <u>0.000</u> | <u>0.000</u> | | <u>0.020</u> | <u>0.100</u> |

* INDICATED IF OTHER THAN T.E. TIBBETTS OR D.J. O'BRIEN, FOR PROFESSIONAL AND TECHNICAL RESPECTIVELY. + O.E. Humeniuk, WRL.

1975 - MANYEARS INPUT TO RESEARCH COMMITMENTS - PROFESSIONAL/TECHNICAL

PROJECT: ES1 - RESOURCE & RESERVE ASSESSMENT: COAL QUALITY & PEAT

| ELEMENT COMMITMENT | PROFESSIONAL (P) MY BY QUARTER | | | | TECHNICAL (T) MY BY QUARTER | | | | TOTAL | |
|--|-----------------------------------|--------------|--------------|---|--------------------------------|---|--------|---|--------------|------------|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | P* 1975 | T* 1975 |
| ES1.4 CANADIAN PEAT RESOURCES-INVENTORY, SCIENCE & TECHNOLOGY | | | | | | | | | | |
| ES1.4.00 CONSULTING & SCIENTIFIC SERVICES | 0.025 | 0.030 | 0.025 | | - | - | - | | 0.100 | - |
| ES1.4.01 ASSESSMENT & APPLICATION OF QUALITY PARAMETERS OF PEAT AND PEAT DEPOSITS | 0.020 | 0.010 | 0.010 | | - | - | 0.008* | | 0.040 | 0.010* |
| ES1.4.02 BETTERMENT OF SCIENTIFIC & TECHNICAL EXPERTISE OF CANADA THROUGH THE INTERNATIONAL PEAT SOCIETY | 0.050 | 0.055 | 0.040 | | - | - | - | | 0.150 | - |
| ES1.4.03 PEAT STANDARDS-CLASSIFICATION, NOMENCLATURE & TEST METHODS | 0.001 | 0.000 | 0.001 | | - | - | - | | 0.010 | - |
| | <u>0.096</u> | <u>0.095</u> | <u>0.076</u> | | | | | | <u>0.300</u> | |
| ES1.5 METHODOLOGY OF TRACE ELEMENT ANALYSIS | | | | | | | | | | |
| ES1.5.00 CONSULTING & SCIENTIFIC SERVICES | | | | | | | | | | |
| ES1.5.01 DEVELOPMENT OF METHODS FOR DETERMINATION OF MERCURY IN CANADIAN COALS | | | | | | | | | | |
| ES1.6 COMMITTEE SERVICES (SCIENTIFIC & TECHNICAL INSTITUTES) | | | | | | | | | | |
| ES1.6.01 THE INSTITUTE OF BRIQUETTING & AGGLOMERATION | 0.003 | 0.001 | 0.020 | | - | - | - | | 0.025 | |
| ES1.6.02 THE CANADIAN INSTITUTE OF MINING & METALLURGY | 0.009 | 0.015 | 0.010 | | - | - | - | | 0.025 | |
| ES1.6.03 THE 6TH INTERNATIONAL STRATA CONTROL CONFERENCE | 0.010 | 0.020 | 0.010 | | - | - | - | | 0.050 | |
| | <u>0.022</u> | <u>0.036</u> | <u>0.040</u> | | | | | | <u>0.100</u> | |

* George Anderson

PROJECT: ES1 - RESOURCE & RESERVE ASSESSMENT: COAL QUALITY & PEAT

| ELEMENT COMMITMENT | PROFESSIONAL (P) MY BY QUARTER | | | | TECHNICAL (T) MY BY QUARTER | | | | TOTAL | |
|---|-----------------------------------|---|---|---|--------------------------------|---|---|---|------------|------------|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | P* 1975 | T* 1975 |
| ES1.7 STANDARDIZATION: COAL & COKE | | | | | | | | | | |
| ES1.7.00 CONSULTING & SCIENTIFIC SERVICES | | | | | | | | | | |
| ES1.7.01 STANDARDIZATION OF TEST METHODS ON COAL & COKE-ASTM | | | | | | | | | | |
| ES1.7.02 STANDARDIZATION OF TEST METHODS ON COAL & COKE-ISO/TC27 | | | | | | | | | | |
| ES1.8 ANALYTICAL SUPPORT FUNCTIONS OF THE SOLID FUELS ANALYSIS LABORATORY | | | | | | | | | | |
| ES1.8.01 ANALYSIS OF SAMPLES FOR ELEMENT ES1.1 (FEDERAL PROVINCIAL COAL INVENTORIES) | | | | | | | | | | |
| ES1.8.02 ANALYSIS OF SAMPLES FOR ELEMENT ES1.2 (QUALITY OF COALS FOR HEATING, ELECTRIC POWER GENERATION & METALLURGICAL MARKETS) | | | | | | | | | | |
| ES1.8.03 ANALYTICAL SERVICES FOR GOVERNMENT DEPARTMENTS RELATED TO FUEL PURCHASES | | | | | | | | | | |
| ES1.8.04 INVESTIGATION AND DEVELOPMENT OF NEW ANALYTICAL PROCEDURES | | | | | | | | | | |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| | | |
|----------------------------|----------|--|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ESI.1 | Federal Provincial Coal Inventories |
| Commitment | ES1.1.00 | Consulting & Scientific Services |

SUMMARY OF PROGRESS: Contributions related to actual "commitments" e.g. ES1.1.01 are mentioned where appropriate.

Some discussions were held with respect to the possible inventory of the B.C. Coal Resources, including the Dominion Coal Blocks; and Ontario Onakawana lignite deposit

A proposal for an inventory of New Brunswick coal resources was reviewed and thoroughly discussed in meetings with officials of the N.B. Department of Natural Resources. Various suggestions have been incorporated in the proposals dealing with the coal analysis, particularly related to funding. Sampling procedures, analyses and data handling and processing need to be detailed. Early approval of the project by EMR was recommended and is expected. It is anticipated that CANMET laboratories will be designated responsible for the coal chemistry. It is also anticipated that CANMET will have representation on a technical sub-committee, which, in all federal-provincial resource projects, is established to advise the project management committee. (T.E. Tibbetts represents CANMET on the joint federal-provincial coal resource project committees with Nova Scotia and Saskatchewan.

The project is expected to take 3 years, starting in 1975.
CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF

PROGRAM MANAGEMENT: The proposal for evaluating N.B. coal Resources includes estimates for coal chemistry totalling \$25,000. This amount would support a coal analyst at the Point Edward laboratory for 2½ years. It is expected that the first year of the program will coincide with the Nova Scotia coal resource inventory and therefore a time-sharing formula is possible.

| | |
|--------------------------|-------|
| MY breakdown for quarter | MY |
| Research Officer | 0.025 |
| Other Professionals | |
| Technicians | |
| Total | 0.025 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

| | | |
|----------------------------|----------|--|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource and Reserve Assessment: Coal Quality & Peat |
| Element | ES1.1 | Federal-Provincial Coal Inventories |
| Commitment | ES1.1.01 | Evaluation of Nova Scotia Coal Resources |

SUMMARY OF PROGRESS: A meeting of the project technical subcommittee was held in July at which proposals for drilling sites by the project geologist were reviewed and recommendations passed to the management committee. The committee also recommended acceleration of the drilling program through private sector contracts.

During the period 104 core samples were prepared and analysed; these originated from sites in Pictou County, Debert, Salt Springs, Chimney Corner, Maccan and Kempton areas.

T.E. Tibbetts visited the P.E. Laboratory to supervise new equipment installation and resolve analytical problems. Operational difficulties with the new calorimeter were overcome. Staff training proceeded satisfactorily.

A proposal concerning computerization of the coal chemistry file was drafted with Dr. J.H. Dyck, Saskatchewan Research Council. The proposal was examined and revisions requested. A revised proposal is to be submitted to the project technical subcommittee in December for consideration. The proposal involves essentially modifications of the coding forms and computer program developed and being used as part of the lignite resources evaluation program in Saskatchewan. It would be undertaken in four stages: design of a generalized coding form to record analytic, site co-ordinates, sample interval and other necessary data; implement documents and procedures - communication of data and coding form useage; modification of existing computer programs to accommodate the specifications of the revised coding forms; and conversion of existing file to the modified format.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF

PROGRAM MANAGEMENT:

- (1) Funds are required to provide minor alterations at the P.E. Lab i.e. concrete base & pillars to allow isolation of analytical balances presently affected by floor vibrations.
- (2) Representation was made at the project technical subcommittee meeting for funds (budgeted) to support laboratory staff at P.E. Possible lay-off will be entertained if committed funds not available at end of year.
- (3) An appeal is made to management to support the proposal for data processing in order to realize the full benefits to the particular regional coal inventory and a national data bank. At least half of the funds will be required from sources other than the Nova Scotia coal inventory project.

| MY breakdown for quarter | MY |
|-----------------------------|-------|
| Research Officer (TET) | 0.032 |
| Other Professionals | -- |
| Technicians (D.O'Brien-PEI) | 0.150 |
| Total | 0.182 |

*Does not include incremental MY from accounts.

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

| | | |
|----------------------------|----------|---|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessments: Coal Quality & Peat |
| Element | ES1.2 | Federal-Provincial Coal Inventories |
| Commitment | ES1.2.02 | Evaluation of Lignite from the Ravenscrag Formation of Saskatchewan |

SUMMARY OF PROGRESS: Analytical work continued with analyses of composite samples of the various seam intersections for ash constituents. It is expected that the ash analyses will be substantially completed in time to publish the information in the project report. Computer verification of chemical data continued. An exceptions report has been issued and is being processed for sources of errors (exceptions).

Bulk samples were collected by drilling in the Wood Mountain and Cypress (Shaunavon) areas. These samples of approx. 6000 lbs. each were sent to the Western Regional Laboratory and the Combustion Research Laboratory for cleaning and combustion trials. Testing of these samples is proceeding with completion target of 31 December.

A draft agreement was prepared for Canada and Saskatchewan to participate in a joint program for provisions of the electronic data processing required to complete the coal chemistry and geologic files, and to create and manipulate a file of digitized geophysical log data in conjunction with the completed file of coal chemistry and geologic data.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

(1) A cheque for \$28,000. was received from Saskatchewan for combustion and cleaning trials on high ash lignite.

(2) Funds are required to support the proposal for data processing as outlined by SRC to EDS.

| | |
|--------------------------|-------|
| MY breakdown for quarter | MY |
| Research Officer (TET) | 0.015 |
| Other Professionals | |
| Technicians | |
| Total | 0.015 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER: T.E. Tibbetts

| LEVEL | CODE | TITLE |
|----------------|----------|--|
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.2 | Quality of Coal for Heating, Electric Power Generation and Metallurgical Markets |
| Commitment | ES1.2.00 | Consulting & Scientific Services |

SUMMARY OF PROGRESS:

A number of industrial and other enquiries were received and answered concerning the quality of coal produced in various parts of Canada.

Reference is made to the services provided MRP Project MP-6 in supplying samples of coal mine and plant by-products to evaluate the potential as a source of Alumina.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------------|-------|
| Research Officer | 0.012 |
| Other Professionals | - |
| Technicians (D.O'Brien-PEI) | 0.010 |
| Total | 0.022 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| | | |
|----------------------------|----------|---|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.2 | Quality of Coals for Heating, Electric Power Generation and Metallurgical Markets |
| Commitment | ES1.2.01 | Evaluation of Commercial Coals from Western Canadian Mines |

SUMMARY OF PROGRESS:

To the end of September, 39 samples were collected by WRL representing the production of commercially prepared coals from 17 Mines in British Columbia, Alberta and Saskatchewan.

Twenty of the samples were received at the ERL and prepared for analysis.

Four samples of coal mine and coal cleaning plant shales (rejects) and a sample of power plant fly ash were collected and analysed for alumina content. This provides input to the "Security of Supply" Project MP-6 (MRP) - alternate sources of alumina.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

ERL through this Element is supporting the MRP Project MP-6 "Security of Supply" whereby coal mine and coal cleaning plant wastes as well as power plant fly ash are being examined for possible sources of alumina. Separate funding has not been provided for this input.

| | |
|-------------------------------|-------|
| MY breakdown for quarter | MY |
| Research Officer | 0.040 |
| Other Professionals | |
| Technicians (Humeniuk-WRL) | 0.054 |
| Total | 0.094 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER: T.E. Tibbetts

| LEVEL | CODE | TITLE |
|----------------|----------|---|
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.2 | Quality of Coals for Heating, Electric Power Generation and Metallurgical Markets |
| Commitment | ES1.2.02 | Evaluation of Commercial Coals from Eastern Canadian Mines |

SUMMARY OF PROGRESS:

Discussions were held and preliminary arrangements made with coal mine operators and power plant management and supervisory staff for co-operation and assistance (labour) in a program of sampling commercially prepared coals. Further sampling is scheduled for Nova Scotia sites (November, December) and New Brunswick sites (December). Analysis returns were received on schedule.

Sampling of coal mine and coal cleaning plant by-product shales and clays and power plant flyash was scheduled to provide input to "security of supply" Project MP-6 (alternate sources of alumina). The results were reported to Project Leader MP-6.

CHANGES IN WORK PLANS:

Most of the analytical determinations are now being scheduled in the P.E. Laboratory. The Ottawa laboratory will continue to provide ash fusion, ash constituents and ultimate analyses data on selected samples.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

(1) Lack of funds are delaying sampling required to provide full market coverage. Management is requested to encourage approval of submission put forward for labour intensive seasonal activity ("winter works").

(2) Attention to input to MRP P-6 for which no funds were provided.

| MY breakdown for quarter | MY |
|--------------------------------|-------|
| Research Officer | 0.005 |
| Other Professionals | |
| Technicians (D.O'Brien PET) | 0.090 |
| Total | 0.095 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: J.C. Botham |
|----------------------------|----------|---|
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.2 | Quality of Coals for Heating, Electric Power Generation and Metallurgical Markets |
| Commitment | ES1.2.03 | Development of Computerized Data Bank of Coking Properties of Coals |

SUMMARY OF PROGRESS:

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| | |
|--------------------------|----|
| MY breakdown for quarter | MY |
| Research Officer JCB | ? |
| Other Professionals ? | ? |
| Technicians | |
| Total | |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER: T.E. Tibbetts

| LEVEL | CODE | TITLE |
|----------------|----------|--|
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.3 | Quality Trends of Coal in Seams |
| Commitment | ES1.3.00 | Consulting & Scientific Services |

SUMMARY OF PROGRESS:

A number of enquiries were handled concerning the physical and chemical properties of coals from formerly operating mines in Cape Breton, Springhill and New Brunswick, particularly related to coal beneficiation and trends of total and forms of sulphur. Efforts are being made to up-grade some of the reports which contain the only known records of these coals.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.005 |
| Other Professionals | |
| Technicians | |
| Total | |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER: T.E. Tibbetts

| LEVEL | CODE | TITLE |
|----------------|----------|--|
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.3 | Quality Trends of Coal in Seams |
| Commitment | ES1.3.01 | Determination of Patterns of Variations in Levels of Sulphur and Other Constituents in Cape Breton Coals |

SUMMARY OF PROGRESS:

Because of lack of support staff, no progress was made during the third quarter of the year.

CHANGES IN WORK PLANS:

Sampling must await possible support through labor intensive employment programs ("winter work") or other sources.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

Management is requested to encourage approval of submission for "winter works" funding.

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.000 |
| Other Professionals | -- |
| Technicians | 0.000 |
| Total | 0.000 |

CANMET - Interim Progress Report

PERIOD COVERED: July 1, 1975 - September 30, 1975

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER: T.E. Tibbetts

| LEVEL | CODE | TITLE |
|----------------|----------|---|
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource and Reserve Assessment: Coal Quality & Peat |
| Element | ES1.4 | Canadian Peat Resources - Inventory, Science & Technology |
| Commitment | ES1.4.00 | Consulting and Scientific Services |

SUMMARY OF PROGRESS:

Provided consulting services through written and telephone response to several individuals, industries, government departments and agencies.

Reviewed a submission by the Province of New Brunswick to DREE and EMR for an energy resources evaluation which includes a proposal to evaluate the potential (resource) and utilization of peat with particular reference to the economically depressed north east portion of the Province. The objectives of the proposal would be to carry out a peat inventory throughout the Province and feasibility studies of its utilization as a fuel, coke producing source, activated carbon and various secondary uses such as jiffy pots, adsorbents, filters and insulation. Estimated cost of the project is \$166,000.

Consulting service rendered to the Province of Newfoundland concerning peat deposits in Newfoundland and inventory methodology.

As a member of NRC's Subcommittee Muskeg, T.E. Tibbetts assisted in the organization of the 16th Annual Muskeg Research Conference to be held in Montreal in October, 1975.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

The approval of the proposal for a peat inventory likely would require the services of T.E. Tibbetts on a technical subcommittee which is normally required to monitor such projects under the Federal-Provincial agreements.

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.025 |
| Other Professionals | - |
| Technicians | - |
| Total | 0.025 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
|----------------------------|----------|--|
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.4 | Canadian Peat Resources-Inventory, Science & Technology |
| Commitment | ES1.4.01 | Assessment and Application of Quality Parameters of Peat and Peat Deposits |

SUMMARY OF PROGRESS:

Preliminary reviews were made of information available on peat deposits of Newfoundland. A formal request will be forthcoming for assistance in assessing the quality of peat from several deposits in the province and possible use for fuel.

Evaluations were made of peat samples from two properties in Quebec at the request of land owners. Sufficient information was provided concerning the properties and sampling stations for the data to qualify as input for a national peat inventory.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| | |
|--------------------------|-------|
| MY breakdown for quarter | MY |
| Research Officer | 0.010 |
| Other Professionals | - |
| Technicians | 0.008 |
| Total | 0.018 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
|----------------------------|----------|---|
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.4 | Canadian Peat Resources-Inventory, Science & Technology |
| Commitment | ES1.4.02 | Betterment of Scientific & Technical Expertise of Canada Through International Peat Society |

SUMMARY OF PROGRESS:

The Secretary-Treasurer CNC-IPS continued to direct the affairs of the Secretariat, Canadian National Committee of the International Peat Society. Several items of scientific and technical nature, including Peat Abstracts, were distributed to the Membership. Preliminary planning was undertaken for a possible group expedition to the 5th International Peat Congress which will take place in Poznan, Poland, September, 1976.

As Secretary-Treasurer, CNC-IPS and Vice-President IPS, T.E. Tibbetts, attended the Annual Meeting of Council of IPS in Alnarp, Sweden and the IPS Symposium on the Combustion of Peat in Finland in September (a report is being prepared on that Symposium).

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.040 |
| Other Professionals | - |
| Technicians | - |
| Total | 0.040 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

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|----------------------------|----------|--|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality and Peat. |
| Element | ES1.4 | Canadian Peat Resources-Inventory, Science & Technology |
| Commitment | ES1.4.03 | Peat Standards-Classification, Nomenclature and Test Methods |

SUMMARY OF PROGRESS:

Continued liaison with ASTM Headquarters, Washington, D.C. concerning the possible dissolution of ASTM Committee D-29, Peat Mosses, Humus and Related Materials. Since the establishment of certain standards and test methods interest in support of the committee has sharply declined as reflected in the number of members. T.E. Tibbetts, the present Chairman, has canvassed the existing membership to ascertain the merits of continuing the work of the Committee.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.001 |
| Other Professionals | |
| Technicians | |
| Total | 0.001 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
|----------------------------|----------|--|
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.5 | Methodology of Trace Element Analysis |
| Commitment | ES1.5.00 | Consulting & Scientific Services |

SUMMARY OF PROGRESS: This Commitment consists of providing scientific information on the determination of trace elements in Canadian Coals.

1. Information was provided to the Research & Productivity Council of Province of New Brunswick on available analytical methods for the determination of mercury in Minto Coal, as it may relate to the mercury content of fish caught in the St. John River. Information was provided on commercial laboratories capable of carrying out such test work.
2. Information provided to Cominco, Trail B.C. re methods of analysis for trace zinc, copper, lead & sulphur in coal using X-ray methods.
3. Information provided Saskatchewan Dept. Mineral Resources re trace elements in Saskatchewan lignite. This work is to be undertaken as Part of Federal-Provincial drilling program.

CHANGES IN WORK PLANS: No changes anticipated.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.005 |
| Other Professionals | - |
| Technicians | - |
| Total | 0.005 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

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|----------------------------|----------|---|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
| LEVEL | CODE | TITLE |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.5 | Methodology of Trace Element Analysis |
| Commitment | ES1.5.01 | Development of Methods for the Determination of Mercury in Canadian Coals |

SUMMARY OF PROGRESS:

Two methods have been studied, namely the Double Gold Amalgam Method, and the Bomb Combustion Method. As the former is more complicated and requires considerable manipulation, is more expensive and has no better repeatability, the Bomb Combustion Method has been chosen for standardization. Both methods use the flameless atomic adsorption finish.

The final quarter will be used to standardize the method for use as a routine test.

CHANGES IN WORK PLANS: Using the same method, the determination of other trace elements will be investigated. This will require the creation of further commitments as they develop.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

W.J. Montgomery
A. Dureau

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.004 |
| Other Professionals | 0.000 |
| Technicians | 0.020 |
| Total | 0.024 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975

ENERGY RESEARCH LABORATORY

RESEARCH OFFICER:

| LEVEL | CODE | TITLE |
|----------------|----------|--|
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.6 | Committee Services (Scientific & Technical Institutes) |
| Commitment | ES1.6.01 | The Institute of Briquetting & Agglomeration |

SUMMARY OF PROGRESS:

T.E. Tibbetts attended the Fourteenth Biennial Conference of IBA, Hyannis, Mass. in August, 1975. Proceedings of the Conference are being prepared. T.E. Tibbetts was re-elected to the Executive Committee and the Program & Proceedings Committees. All Canadian members of IBA indicated pleasure in being asked to host the 15th Biennial Conference to be held in the greater Montreal area in 1977.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.020 |
| Other Professionals | |
| Technicians | |
| Total | 0.020 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

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|----------------------------|----------|--|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.6 | Committee Services (Scientific & Technical Institutes) |
| Commitment | ES1.6.02 | The Canadian Institute of Mining & Metallurgy |

SUMMARY OF PROGRESS:

As Chairman of the CIM Coal Division's Publications Committee T.E. Tibbetts was responsible for the review of several technical papers with a view to publication by the CIM including, "Quality Assessment of Saskatchewan Lignite Resources", "The Development of the Selby Coalfield", "The Role of Coal Preparation in the Cape Breton Coal Industry", "Direct Cast Stripping of Thin Coal Seams", "Methane Pressure and Flow Measurements in Coal and Surrounding Strata" and Development of Occupational Health Services in Cape Breton Mines".

A meeting of the Technical Program Committee was held in Montreal in September to set the stage for the 78th AGM of CIM to be held in Quebec City, 25-29 April, 1976. It was decided that the theme of the Meeting would be, "Management of the Mineral Resources".

An assessment of the qualifications of possible candidates for the Coal Division to nominate for Distinguished Lecturer's Award was undertaken to be completed by 1 December.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

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|--------------------------|-------|
| MY breakdown for quarter | MY |
| Research Officer | 0.010 |
| Other Professionals | |
| Technicians | |
| Total | 0.010 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

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|----------------------------|----------|--|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: T.E. Tibbetts |
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.6 | Committee Services (Scientific & Technical Institutes) |
| Commitment | ES1.6.03 | The 6th International Strata Control Conference |

SUMMARY OF PROGRESS:

As Secretary of the International Organization Committee and Secretary of the Canadian Executive Committee, T.E. Tibbetts continued essential planning and co-ordination of the various inputs to the conference organization.

A preliminary overall conference budget was set up with indicated revenues of \$80,000.

Deadlines for all aspects of the conference operations were established with 1 January, 1976 as the indicated final date for submission of titles of papers.

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.010 |
| Other Professionals | |
| Technicians | |
| Total | 0.010 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30th September, 1975.

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
|----------------------------|----------|--|
| LEVEL | CODE | |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.7 | Standardization (Coal & Coke) |
| Commitment | ES1.7.00 | Consulting & Scientific Services |

SUMMARY OF PROGRESS: Information provided to Devco - D.J. MacLeod re
Methods of Analysis of chlorine in coal. Sysco - R. Rose

CHANGES IN WORK PLANS:

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | .010 |
| Other Professionals | |
| Technicians | |
| Total | 0.010 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| | | |
|----------------------------|----------|---|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
| LEVEL | CODE | |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.7 | Standardization: Coal & Coke |
| Commitment | ES1.7.02 | Standardization of Physical & Chemical Test Methods On Coal & Coke - ISO/TC 27. |

SUMMARY OF PROGRESS:

As Secretariat of ISO/TC 27 WG13-Ash Analysis forwarded 3 proposed methods of analysis for coal ash, covering the determination of the 10 major constituents, Silica, Alumina, Iron, Titanium, Calcium, Magnesium, Phosphorus, Sulphur, Sodium and Potassium and Barium and Manganese which are found in more than trace amounts in many foreign coals. A classical method, an instrumented method using spectrophotometric procedures and an atomic absorption method are being considered for standardization by six participating countries.

CHANGES IN WORK PLANS:

This is a continuing assignment from ISO/TC 27 and will terminate on submission of a draft standard for international consideration.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.113 |
| Other Professionals | |
| Technicians | 0.016 |
| Total | 0.129 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30th September, 1975.

| | | |
|----------------------------|----------|---|
| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
| LEVEL | CODE | |
| CANMET Program | E | Energy |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.7 | Standardization (Coal & Coke) |
| Commitment | ES1.7.01 | Standardization of Physical & Chemical Test Methods on Coal & Coke ASTM D-5 |

SUMMARY OF PROGRESS:

Conducted meetings of Executive Committee and Main Committee at Virginia Beach, Virginia. Suggested revisions to standards relating to Free Swelling Index, Giesler Plastometer and provided input into methods of analysis of coal ash, and trace elements.

CHANGES IN WORK PLANS:

This work will continue. Considerable effort will be made to standardize analytical methods for mercury and other trace elements in coal and coal ash.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

It should be recognized that the Department and the country as a whole received benefits proportional to the input we provide to the work of ASTM in standardization of methods for coal and coke. This is a working committee from which the members obtain information and come in contact with workers in the same fields of endeavour.

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.024 |
| Other Professionals | -- |
| Technicians | 0.024 |
| Total | 0.048 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| ENERGY RESEARCH LABORATORY | | RESEARCH OFFICER: W.J. Montgomery |
|----------------------------|----------|---|
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource and Reserve Assessment: Coal Quality & Peat |
| Element | ES1.8 | Analytical Functions of Solid Fuels Analysis Laboratory |
| Commitment | ES1.8.01 | Analysis of Coal Samples for Element ES1.1 |

SUMMARY OF PROGRESS:

39 Samples Analysed for ES1.1.01 - Nova Scotia Coal Resources
110 " " " ES1.1.02 - Ravenscrag Formation Saskatchewan

CHANGES IN WORK PLANS: NIL

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.048 |
| Other Professionals | 0.000 |
| Technicians | 0.561 |
| Total | 0.609 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| ENERGY RESEARCH LABCRATORY | | RESEARCH OFFICER: W.J. Montgomery |
|----------------------------|----------|---|
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource and Reserve Assessment: Coal Quality & Peat |
| Element | ES1.8 | Analytical Functions of Solid Fuels Analysis Laboratory |
| Commitment | ES1.8.02 | Analysis of Coal Samples for Element ES1.2 |

SUMMARY OF PROGRESS:

13 Samples from Commitment ES1.2.01 were analysed.

CHANGES IN WORK PLANS:

NIL

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|--------|
| Research Officer | 0.0005 |
| Other Professionals | 0.0005 |
| Technicians | 0.076 |
| Total | 0.0770 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

| ENERGY RESEARCH LABGRATORY | | RESEARCH OFFICER: W.J. Montgomery |
|----------------------------|----------|---|
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource and Reserve Assessment: Coal Quality & Peat |
| Element | ES1.8 | Analytical Functions of Solid Fuels Analysis Laboratory |
| Commitment | ES1.8.03 | Analytical Services for Government Departments Related to Fuel Purchases. |

SUMMARY OF PROGRESS:

Analysis of 8 samples of coal for DND and 1 sample for Northern Canada Power Commission.

CHANGES IN WORK PLANS:

NIL

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | .0005 |
| Other Professionals | .0005 |
| Technicians | .0160 |
| Total | .0170 |

CANMET - Interim Progress Report

PERIOD COVERED: 1 July, 1975 - 30 September, 1975.

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|----------------------------|----------|---|
| ENERGY RESEARCH LABCRATORY | | RESEARCH OFFICER: W.J. Montgomery |
| LEVEL | CODE | |
| CANMET Program | E | Energy Research Program |
| Activity | S | Supply |
| Project | ES1 | Resource & Reserve Assessment: Coal Quality & Peat |
| Element | ES1.8 | Analytical Functions of the Solid Fuels Analysis Laboratory |
| Commitment | ES1.8.04 | Investigation & Development of New Analytical Procedures |

SUMMARY OF PROGRESS:

X-ray analysers from four companies were investigated. 25 samples of ash of known values were submitted. The values for 15 were given to be used for standards. Results were returned by Ortec, Finnigan, Edax and Datamex. The most precise, were those of Ortec, which fell well within the checking units specified by ASTM for Wet Chemical analyses of coal ash. Plans have been made to purchase the Ortec equipment.

CHANGES IN WORK PLANS:

Plans are being made to investigate the use of Specific Ion Electrodes for the determination of fluorine in coal.

MATTERS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE LABORATORIES OF PROGRAM MANAGEMENT:

| MY breakdown for quarter | MY |
|--------------------------|-------|
| Research Officer | 0.002 |
| Other Professionals | |
| Technicians | 0.003 |
| Total | 0.005 |