NY.0-13-1
3720

no ltr 12/12/94 NY.0-13

1.21.1

C

MEMORANDUM

TO: FILE

DATE 10/19/87

FROM: Andrew Wallo

SUBJECT: Elimination of Fredric-Flader

SITE NAME: FREDRIC FLADER, DIV. Eaton MANUFACTURING Co.

ALTERNATE NAME: Frederic-Flader

CITY: 583 Division Street N. Tonawanda STATE: NY

OWNER(S)

Past: Fredric Flader Current: _____

Owner contacted ☐ yes ☒ no; if yes, date contacted _____

TYPE OF OPERATION

☒ Research & Development

- ☐ Production scale testing
- ☐ Pilot Scale
- ☐ Bench Scale Process
- ☐ Theoretical Studies
- ☐ Sample & Analysis

☐ Facility Type

- ☒ Manufacturing
- ☐ University
- ☐ Research Organization
- ☐ Government Sponsored Facility
- ☐ Other _____

☐ Production

☐ Disposal/Storage

TYPE OF CONTRACT

- ☐ Prime
- ☒ Subcontractor
- ☐ Purchase Order

☐ Other information (i.e., cost + fixed fee, unit price, time & material, etc) _____

Contract/Purchase Order # Sub #3 to W-7405-ENG-36 and Sub 207 to ANL

CONTRACTING PERIOD: Late 1940's

OWNERSHIP:

	AEC/MED OWNED	AEC/MED LEASED	GOVT OWNED	GOVT LEASED	CONTRACTOR OWNED	CONTRACTOR LEASED
LANDS	☐	☐	☐	☐	☒	☐
BUILDINGS	☐	☐	☐	☐	☒	☐
EQUIPMENT	☐	☐	☐	☐	☐	☐
ORE OR RAW MATL	☐	☐	☐	☐	☐	☐
FINAL PRODUCT	☐	☐	☐	☐	☐	☐
WASTE & RESIDUE	☐	☐	☐	☐	☐	☐

AEC/MED INVOLVEMENT AT SITE

Control
- ☐ AEC/MED managed operations
- ☐ AEC/MED responsible for accountability
- ☐ AEC/MED overviewed operations
- ☒ Contractor had total control
- ☐ unknown

☐ Health Physics Protection
- ☒ Little or None
- ☐ AEC/MED responsibility
- ☐ Contractor responsibility

MATERIALS HANDLED:

Type (on basis of records reviewed)

- ☒ No Radioactive
- ☐ Natural Radioactive from Feed Materials Production
  - ☐ Ore
  - ☐ Refined Source Material
  - ☐ Residue
- ☐ Natural Radioactive Material from Non-Nuclear Activities
- ☐ Man-Made
- ☐ Other _____

Comment Records are not totally clear on the work Fredrick Flader did, however, it appears it was auxiliary equipment to support generation of power. One subcontract may have involved the production of electronics (HCU 2/12/47) as it related to the effect of Radiation on Vacuum tubes

Quantities (on the basis of records reviewed)

- ☒ None
- ☐ Production Quantities
- ☐ Small Amounts

Comment None of the records indicate the company had radioactive material

OTHER PERTINENT FACTS:

☐ Facility was Licensed

- ☐ During AEC/MED-Related Operations
- ☐ For Similar Activities
- ☐ For Other Activities

Comment _____

☐ Commercial Production Involving Radioactive Material during AEC/MED Operations

☐ Facility was Decontaminated and Released

- ☐ Availability of Close Out Records
  - ☐ None
  - ☐ Some
  - ☐ Sufficient

☐ Radioactive Status:

	YES	MAYBE	PROBABLY NOT	NOT
Contaminated	___	___	___	X
Potential for Exposure (accessible)	___	___	___	X

QUANTITY OF RECORDS AVAILABLE:

☑ Very Little ☐ Some ☐ Sufficient

PROBABILITY OF FINDING ADDITIONAL RECORDS:

☑ Low ☐ Possible ☐ High

RECOMMENDATIONS:

☑ Eliminate
☐ Consider for Remedial Action
☐ Collect More Data

Comment No record of the company handling Radioactive material

REFERENCES
- 2/12/47 Hull to FRY - Data Transmitted to Fredric-Flader re: Exposure of Vacuum Tubes in Pile
- 4/29/49 Hilberry to Hawkins - Consulting Services Subcontracts in process of Negotiation
- Select Chapters (Book I, Volume Y, chapter 1 and Book 8, Vol. 3, App 5) MED History (~~Tapes~~ MicroFilm)
- Notes From Library Review By C. Young 9/18/86

SUMMARY Fredric-Flader provided consulting services and supported development of Auxiliary equipment ~~etc~~ relating to Nuclear power. No records were found to indicate they handled radioactive material at their Site.

AEC/MED INVOLVEMENT AT SITE

Control
- ☐ AEC/MED managed operations
- ☐ AEC/MED responsible for accountability
- ☐ AEC/MED overviewed operations
- ☐ Contractor had total control
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- ☐ Man-Made
- ☐ Other _____

Comment _____

_____

Quantities (on the basis of records reviewed)

- ☐ None
- ☐ Small Amounts
- ☐ Production Quantities

Comment _____

_____

OTHER PERTINENT FACTS:

☐ Facility was Licensed

- ☐ During AEC/MED-Related Operations
- ☐ For Similar Activities
- ☐ For Other Activities

Comment _____

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☐ Facility was Decontaminated and Released

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☐ None ☐ Some ☐ Sufficient

☐ Radioactive Status:

	YES	MAYBE	PROBABLY NOT	NOT
Contaminated	___	___	___	___
Potential for Exposure (accessible)	___	___	___	___

FREDERICK FLADER

DATE	FILE#	FROM	TO	SUBJECT	SITES	BOX #	
09/18/86	3.2	ADDRESSES		INFORMATION OBTAINED BY C. YOUNG AT THE BUFFALO AND ERIE COUNTY PUBLIC LIBRARY ON 9/18/86 - ADDRESSES FOR BUSINESS AND INDUSTRIAL FIRMS (REPUBLIC STEEL,UNIVERSAL CARLOADING,MAGNUS,CRANE, CONTINUED IN SITES SECTION)	AMERICAN BRASS, ATLAS STEEL, BUFFALO FORGE, BUFLAVAK (BLAW-KNOX), CURTISS-WRIGHT, AMERICAN MACHINE & FOUNDRY, ALLEGHENY LUDLUM, BUFFALO PIPE, BLISS & LAUGHLIN,HONDAILLE,FREDERICK FLADER EATON MULTIPLE	LIBRARY	1925
04/29/49	3.1CHD	HILBERRY, N.	HAWKINS, H.	LIST OF SUBCONTRACTS IN PROGESS OF NEGOTIATION	MULTIPLE, ALLIS-CHALMERS, BABCOCK & WILCOX, COMBUSTION ENGINEERING, COMMONWEALTH EDISON, ELLIOTT CO., FREDERIC-FLADER, MONSANTO CHEMICAL CO., NORTHRUP, PURDUE, SARGENT & LUNDY, GRIFFELS & VALLET	10/64	2235

no record of Radioactive material

Argonne National Laboratory
CHICAGO, ILLINOIS

Noted
Action
Recd MAY 2 - 1949 N.H.
Ans 1949
File

April 29

To H. G. Hawkins, Jr. Assistant Business Manager

From N. Hilberry Deputy Director

Ref: Your Memo of April 12 on Consulting Services Subcontracts in Process of Negotiation

On behalf of the Laboratory Director's Office the following subcontracts in process of negotiation are herewith approved.

Allis-Chalmers	No. 214
Babcock & Wilcox	No. 205
Combustion Engineering	No. 210
Commonwealth Edison	No. 219
Elliott Company	No. 206
Fredric-Flader	No. 207
Monsanto Chemical Co.	No. 208
Northrop Aircraft, Inc.	No. 209
Purdue University	No. 211
Sargent & Lundy	No. 195
Giffels & Vallet	No. 223
Smith, Hinchman & Grylls	No. 224

Subcontract No. 217 with DeLaval Steam Turbine is approved subject to review of the list of names to be submitted.

It is our understanding that subcontract No. 215 has been turned down by the Foster-Wheeler Company.

N. Hilberry

cy

cc W. H. Zinn
Reading File

9/22/86
Info obtained from the Buffalo & Erie County Public Library on 9/18/86.

9/18/86 Buffalo / Erie County Library

American Car & Foundry
~~not in Nov 1956 Directory~~

Business and Industrial Firms
in
*HC
108.C8 Buffalo and Vicinity
B855 Manufacturers Employing 50 or more
1956 Non-Manufacturers Employing 40 or more
A
Directory
Compiled and Published
by the
Buffalo Chamber of Commerce
Nov. 1956

The American Brass Company
70 Sayre St.
Copper & copper alloys in sheets, strip and tubes

Atlas Steel Casting Company
1963 Elmwood Ave.
Ferrous steel carbon & low alloy castings

Buffalo Forge Company
490 Broadway
Fans, ventilating equipment, Drying machines

Buffalo Pipe & Foundry
Box 55, Station B

~~*HC~~
~~102.B8~~
~~B855~~
~~19~~

1958
1959 Directory of

*HC
102.B8
B855
1958/1959

Same title as above.

The American Brass Company
Atlas Steel Casting Company.

Bliss & Laughlin, Inc.
110 Hopkins St.
Cold Finished Steel.

Buffalo Forge Company
Buffovak Equipment Div.

Houdaille Industries, Inc.
Buffalo Hydraulics Div.
537 East Delavan Ave.
Hydraulic Shock Absorbers, Vibration
Dampers

American Machine & Foundry Company

N Tonawanda

Fredric Flader, Div.
Eaton Manufacturing Co.

583 Division Street
Development and Research of
Aircraft & Industrial Compressors,
Turbo Jet Engines & Gas Turbines

*HC
108.A8
B855
1953

SAME TITLE AS
above
March 1953

The American Brass Company
Buffalo Branch

American Car & Foundry Company
William J. Jackel, Whs Mgr.
370 Babcock St.
Special fabricated metal products

Buffalo Forge Company
Buflovak Equipment Division
Hondaillaille - Hershey Corporation
Buffalo Div. - Same products as before

Republic Steel Corp
Buffalo Div
1175 S. Park Ave
Steel bars, billets, die roll.
Rig iron -

3.6.1

CP-5

pages.
containing 0 figures
Copy No. 7 of 7 copies, Series A

See att for ANL HLH 1.

[redacted]

February 12, 1947

RECEIVED
JUL 18 1949
SERVICES

To: Colonel A. H. Frye, Jr.
Attention: E. R. Fleury

From: H. L. Hull

Subject: Data to be Transmitted to Fredric Flader, Inc. re Exposure of Vacuum Tubes in Pile

Attached is some preliminary data on the effect of pile radiation on vacuum tubes which we have obtained for Fredric Flader, Inc. This data is encouraging though obviously preliminary. It will be advisable for Flader, Inc. to make a thorough study in accordance with their proposed program.

Will you please forward this data to Fredric Flader, Inc., N.E.P.A., through appropriate channels. For your information, I gave Mr. Carl L. Frederick most of this information informally on February 2, 1947 and have so advised Mr. Chapman when he telephoned for information on February 6.

H. L. Hull
Associate Director

HLH:pp
5 Encs.: Memo dated 2-5-47, Confidential, ANL-HLH-1, Copies 1 through 5, Series A, Subject: Exposure of Vacuum Tubes in Pile

CC: W. H. Zinn
R. J. Creagan
T. Brill
Reading File

CLASSIFICATION CHANGED
TO: NOT CLASSIFIED
E. D. Pollett 4-9-65
Authority of: USAEC
4-9-65 D. Corbett

[redacted]

REPRODUCED AT THE NATIONAL ARCHIVES

Classification removed
by authority of
Maj. Gen. L. R. Groves.
F. P. Fallowfield.

~~SECRET~~

MD H - Bk I Vol 4, Ch 1

~~This document consists of 31 pages~~
~~Copy No. 3 of 5 Series A~~
cy (1)

MANHATTAN DISTRICT HISTORY

BOOK I - GENERAL

VOLUME 4 - AUXILIARY ACTIVITIES

CHAPTER 1

LEGISLATIVE CONTACTS OF MANHATTAN DISTRICT

~~SECRET~~

~~SECRET~~

Classification removed by authority of Maj. Gen. L. R. Groves.
F. P. Fallon field

MANHATTAN DISTRICT HISTORY

BOOK I - GENERAL

VOLUME 4 - AUXILIARY ACTIVITIES

CHAPTER 1

LEGISLATIVE CONTACTS OF MANHATTAN DISTRICT

[redacted]

upon a research program for concrete which has incorporated into it a high percentage of finely divided metallic iron. First results indicated some promise for this material as a superior shielding, but work along this line was not far enough advanced by December 1946 for any definite conclusions to be made.

e. Coolant. - The problem of a primary coolant to remove the heat generated in the high temperature pile was not too difficult a solution since the relative advantages of several suitable primary coolants have been known for some time. With the specific operating conditions of the Daniels pile in mind and with the existing knowledge of all materials that were suitable for this purpose it was not too difficult to select the most desirable. Helium has been chosen as the primary coolant for the pile.

f. Power Generation Components. - Development of this phase of the program was not under the primary jurisdiction of the Manhattan District. The overall program was approved by the District for execution by the Monsanto Chemical Company, but it was felt that the cooperating industrial concerns were the best suited and the most capable for selecting the best designed components for this system. The conditions under which the system was to operate were given to the cooperating industrial group and several designs for various pieces of equipment were subsequently submitted by the following companies to serve as the basis for further design evaluations:

(1) Boiler designs were submitted by Babcock and Wilcox, Foster Wheeler Corporation and Combustion Engineering Co.

SECRET

(2) Designs for a number of pieces of auxiliary equipment which are required were submitted by the following companies: Frederick Flader Incorporated, American Blower Company, Allis-Chalmers Manufacturing Company, Buffalo Forge Company, DeLaval Steam Turbine Company, Westinghouse Electric Company, and Spencer Turbine Company.

The steam turbine-generator set will probably be supplied by the Navy.

g. Chemical Processing. - A major factor in the continued operation of a power pile will consist of the chemical processing of the fuel after it has been discharged from the pile. The normal process for maintaining fuel in the pile is to charge fresh fuel into one face of the pile, at the same time discharging spent fuel from the opposite face. A period of radioactive decay, under water, is required before chemical processing of the isotopes and fission products from the spent fuel can be accomplished. Final designs for chemical processing are based on recent investigations concluded at the Argonne National Laboratory, California Radiation Laboratory, Hanford Engineer Works and Clinton Laboratories.

9. Other Stationary Piles.

a. The Zinc Pile. - Designed to operate at 1000 kilowatts, this pile is primarily a breeder pile (References 6, 7 & 8) and at the present time there is no indication that the power generated will be put to useful purposes. The term "breeder pile" refers to the ability of a chain-reacting pile to reproduce fissile material. In the [illegible] fuel uranium pile, [illegible]

[illegible] Book 8, vol 3, app. A5

[illegible]

[illegible]

APPENDIX A5

SCHEDULE SHOWING TOTAL COSTS RESEARCH CONTRACTS

CONTRACTOR	CONTRACT NO.	AMOUNT OF CONTRACT	EXPENDITU[illegible] REIMBURSE[illegible] UNDER CONTR[illegible]
[illegible] Institute of Technology	W-7401-Eng-63	$ 25,000.00	$ 22,644.[illegible]
[illegible] President and Fellows of Harvard College	W-22-075-Eng-54	20,000.00	2,441.[illegible]
[illegible] Research Foundation	W-7405-Eng-146	18,000.00	11,370.[illegible]
[illegible] State University Research Foundation	W-7405-Eng-93	204,750.00	196,398.[illegible]
[illegible]kman & Stevens, Inc.	W-26-021-Eng-17	$25 per day plus traveling expenses for consultant services not to exceed 105 days.	2,947.[illegible]
Union Carbide & Carbon Research Laboratories	W-7405-Eng-273	Consultant fees & expenses estimated cost, $5000 per year.	2,503.[illegible]
Chadwick & Associates	W-7405-Eng-36 Subcontract No. 2	40,200.00	**[illegible]
Frederic Flader	W-7405-Eng-36 Subcontract No. 3	100,000.00	**[illegible],990.[illegible]
Regents of the University of California	W-7405-Eng-36	51,000,000.00	*31,987,200.[illegible]
			$32,296,857.[illegible]

* Includes Welfare Fund of	$1,000,000.00
Collateral Fund	500,000.00
Credit under Mod. 1 Funds	3,753,719.23
Does not include Cash Advance Payment of	2,000,000.00
Total of $[illegible] obligated by contractor	

* [illegible] total of reimbursements under Con- [illegible] Not included in page [illegible]

CLASSIFICATION CANCELLED OR
CHANGED TO
BY AUTHORITY OF Maj Gen L R Groves
BY [illegible] DATE 10/15/57

APPENDIX A5

SCHEDULE SHOWING TOTAL COSTS RESEARCH CONTRACTS

[illegible]RACTOR	CONTRACT NO.	AMOUNT OF CONTRACT	EXPENDITURE REIMBURSED UNDER CONTRACT
Cal[illegible]ute of Technology	W-7401-Eng-63	$ 25,000.00	$ 22,644.06
Th[illegible]d Fellows of Harvard College	W-22-075-Eng-54	20,000.00	2,441.64
F[illegible] Foundation	W-7405-Eng-146	18,000.00	11,370.72
[illegible]versity Research Foundation	W-7405-Eng-93	204,750.00	196,398.76
[illegible]evens, Inc.	W-26-021-Eng-17	$25 per day plus traveling expenses for consultant services not to exceed 105 days.	2,947.15
[illegible]rbide & Carbon Research Laboratories	W-7405-Eng-273	Consultant fees & expenses estimated cost, $5000 per year.	2,503.84
[illegible]ick & Associates	W-7405-Eng-36 Subcontract No. 2	40,200.00	**23,359.35
[illegible]deric Flader	W-7405-Eng-36 Subcontract No. 3	100,000.00	**47,990.84
Regents of the University of California	W-7405-Eng-36	51,000,000.00	*31,987,200.66
			$32,296,857.02

* Includes Welfare Fund of $1,000,000.00
Collateral Fund 500,000.00
Credit under Mod. 1 Funds 3,753,719.23
Does not include Cash Advance Payment of 2,000,000.00
Total of $35,926,965.00 obligated by contractor.

** Included in total of reimbursements under Contract No. W-7405-Eng-36. Not included in page totals.

CLASSIFICATION CANCELLED OR
[illegible]

SA6200228770000

[redacted]

Declassified 9/16/76 ERDA JAD

Book I, V-4, Ch-2

later the District approved development of a definite program for establishment of a northcentral national laboratory at Argonne along the lines recommended by the Advisory Committee and according to the procedure suggested by Dr. Daniels. (Reference 5.) At the 8-9 March meeting of the Manhattan Project's Advisory Committee on Research and Development, the proposed District program with respect to the establishment of the new national laboratory was approved. In general, the Project's Advisory Committee felt strongly that plans for establishing national regional laboratories for research in nuclear science should be supported by the Government, in cooperation with the various neighboring universities and research institutions in particular regions. The broad outlines of organization should follow those proposed in the case of Argonne, with a board of directors chosen from the participating institutions in each area, to cooperate with the Manhattan District in determining the programs to be undertaken by the various regional laboratories. Each laboratory should be administered by a financially responsible agency acceptable to both the District and the participating institutions. In the case of the new Argonne Laboratory, specific approval was given to the District's general plans and the proposed organization.

f. Establishment of the Council of Participating Universities. Shortly afterwards, Colonel Nichols invited the 25 northcentral institutions recommended by the Advisory Council, on 5 December 1945, to send representatives to the initial meeting of the Council of Participating Universities for Operation of Argonne, scheduled for 5 and 6 April 1946. At this conference, the cooperating institutions elected a board of

DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Pp 2.11, and 2.20 thru 2.22 only
CONFIRMED TO BE UNCLASSIFIED
DOE/OFFICE OF DECLASSIFICATION
HERBERT SCHMIDT A.D.D. DATE:
HRSchmidt, 6/10/02

[redacted]

(1)

02SA20B000148

SECURITY INFORMATION

found. After further discussion the Board of Governors unanimously agreed that the new permanent site should be located in the Chicago area within a few minutes drive of the present laboratory. Dr. W. H. Zinn then proposed a site highly recommended by his laboratory staff, which was located on the Des Plaines River near the present facilities and comprised some 4000 acres. After a tour of inspection the Board of Governors unanimously recommended that the War Department obtain this area as the permanent location for the Argonne National Laboratory. District approval of the proposed site was still pending on 31 December 1946.

3. Brookhaven National Laboratory.

a. Initiation of Program. - Following the end of the war a number of educational, scientific, medical and engineering institutions in the New York region, which had been interested in wartime developments in nuclear science, became concerned with the need in the northeastern area of the United States for certain of the large and expensive equipment necessary for further research in this field, such as chain-reacting piles, and betatrons, cyclotrons, and other high energy accelerators. Specifically, it was felt that the Government should support a nuclear science research laboratory in the area, in which the various institutions could participate, similar to the proposed Argonne National Laboratory in the northcentral region.

On the 14th of January, 1946, Dean George B. Pegram of Columbia University took the initiative in inviting the heads of 17 institutions interested in research laboratories, in the general

RESTRICTED DATA
ATOMIC ENERGY ACT 1946

Philadelphia to New Haven region centering in New York, to meet at Columbia on 16 January, to explore the situation in greater detail. (Reference 11.)

At the very time that this meeting was being arranged, Dean H. S. Taylor and Professor H. D. Smyth of Princeton University were formulating plans for a similar gathering to be held at their own university. The two separate efforts were consolidated at the Columbia meeting on 16 January 1946, at which 35 representatives from 18 institutions (including Columbia University) were present.

It was decided at this meeting to request the establishment of a nuclear science research laboratory by the District in the northeast area, and Dean Pegram advised General Groves of this decision in a letter dated 19 January 1946, which he was authorized to sign on behalf of each of the following participating institutions (Reference 13):

Bartol Research Foundation, Swarthmore, Pa.

Bell Telephone Laboratories, N.Y.C.

Board of Higher Education, New York City
(for The City College, Hunter College, Brooklyn College and Queens College)

Department of Genetics, Cold Spring Harbor, N.Y.
(Carnegie Institution of Washington)

Columbia University, N.Y.C.

Cornell University Medical College, N.Y.C.

Fordham University, N.Y.C.

Institute for Advanced Study, Princeton, N.J.

Long Island College of Medicine, N.Y.C.

RESTRICTED DATA
ATOMIC ENERGY ACT 1946

Memorial Hospital, N.Y.C.

New York University, N.Y.C.

Polytechnic Institute of Brooklyn, N.Y.C.

Princeton University, Princeton, N.J.

Research Corporation, N.Y.C.

Rockefeller Institute for Medical Research, N.Y.C.

Rutgers University, New Brunswick, N. J.

Standard Oil Development Company, N.Y.C.

Stevens Institute of Technology, Hoboken, N. J.

University of Pennsylvania, Philadelphia, Pa.

Yale University, New Haven, Conn.

In reply to this letter General Groves designated Colonel K. D. Nichols (then Brigadier General) to meet with members of the group on 6 February to discuss the plan more extensively. At this conference three main points were brought out:

(1) The District was seriously considering the proposal.

(2) The laboratory should not be a "regional" one but "national". However, it was agreed that the preeminent resources of the New York region, in scientific personnel and other respects, made that area a particularly advantageous location.

(3) The whole case would be much strengthened if it were backed by Universities from Baltimore to Cambridge rather than those concentrated merely in the New York area. This was particularly true since M.I.T. had already approached the District for support of a laboratory to be set up in the vicinity of Cambridge.

Declassified 9/10/76 ERDA JAD

Book I, V-4, Ch-2

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RESTRICTED DATA
ATOMIC ENERGY ACT 1946

SECURITY INFORMATION

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Cornell University Medical College, N.Y.C.

Fordham University, N.Y.C.

Institute for Advanced Study, Princeton, N.J.

Long Island College of Medicine, N.Y.C.

RESTRICTED DATA
ATOMIC ENERGY ACT 1946

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(1) The District was seriously considering the proposal.

(2) The laboratory should not be a "regional" one but "national". However, it was agreed that the preeminent resources of the New York region, in scientific personnel and other respects, made that area a particularly advantageous location.

(3) The whole case would be much strengthened if it were backed by Universities from Baltimore to Cambridge rather than those concentrated merely in the New York area. This was particularly true since M.I.T. had already approached the District for support of a laboratory to be set up in the vicinity of Cambridge.