COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1436003859B4

ORGANIZATION:
University of Missouri - Columbia The University of Missouri System
215 University Hall
Columbia, MO 65211-3020

DATE: 07/23/2012
FILING REF.: The preceding agreement was dated 04/05/2011

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

<table>
<thead>
<tr>
<th>SECTION I: INDIRECT COST RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EFFECTIVE PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>PRED.</td>
</tr>
<tr>
<td>TYPE</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>PROV.</td>
</tr>
</tbody>
</table>

**BASE**
Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of $25,000.
ORGANIZATION: University of Missouri - Columbia The University of Missouri System
AGREEMENT DATE: 07/23/2012

SECTION I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%) LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>16.60 Columbia</td>
<td>Med Sch Employees</td>
</tr>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>19.60 All</td>
<td>All Oth Employees</td>
</tr>
<tr>
<td>FIXED</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>22.00 Columbia</td>
<td>Med Sch Employees</td>
</tr>
<tr>
<td>FINAL</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>23.00 All</td>
<td>All Oth Employees</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2013</td>
<td>Until amended</td>
<td>&quot;Use same rates and conditions as cited for FYE 6/30/13.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

** DESCRIPTION OF FRINGE BENEFITS RATE BASE:
Salaries and wages.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. FICA is specifically identified to each employee and is charged individually as direct costs. The fringe benefits included in the rate(s) are listed in the Special Remarks Section of this agreement.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

FRINGE BENEFITS:

Disability Insurance
Worker's Compensation
Life Insurance
Unemployment Insurance
Health Insurance
Dental Insurance
Retirement
Tuition Remission
Wellness Program

Equipment Definition - Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.
ORGANIZATION: University of Missouri - Columbia The University of Missouri System
AGREEMENT DATE: 07/23/2012

SECTION III: GENERAL

A. LIMITATIONS:
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to the rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

University of Missouri - Columbia The University of Missouri System

[INSTITUTION]

[Signature]

Natalie Knauff

(NAME)

Vice President for Finance & Administration

(TITLE)

[DATE] 8/13/2012

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[AGENCY]

[Signature]

Arif Karim

(NAME)

Director, Central States Field Office

(TITLE)

[DATE] 7/24/2012

IRS REPRESENTATIVE: Theodore Foster

Telephone: (314) 767-3261
July 23, 2012

Ms. Natalie Krawitz  
Vice President for Finance and Administration  
University of Missouri – Columbia  
215 University Hall  
Columbia, MO 65211

Dear Ms. Krawitz:

A copy of a facilities and administrative (F&A) cost and fringe benefit (FB) Rate Agreement are being faxed to you for your signature. This Agreement reflects an understanding reached between your organization and a member of my staff concerning F&A and FB rates that may be used to support your claim for these indirect costs on grants and contracts with the Federal Government.

Please have the Agreement signed by an authorized representative of your organization and fax or email it to me, retaining the copy for your files. Our fax number is (214) 767-3264 and email address is theodore.foster@psc.gov. We will reproduce and distribute the Agreement to the appropriate awarding organizations of the Federal Government for their use.

The Office of Management and Budget (OMB) has requested that we reach an agreement with each institution on components for the published F&A cost rates. The attached form(s) are provided for that purpose. Please sign the form(s) and return them with an agreement.

In addition, your FB cost rates for fiscal year ending June 30, 2012 based on actual costs for the fiscal year June 30, 2010 and FB cost rates for fiscal year ending June 30, 2013 based on actual costs for fiscal year ended June 30, 2011 over-recovered (+) or under-recovered (-) amounts are listed below:

<table>
<thead>
<tr>
<th></th>
<th>2010/2012</th>
<th>2011/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical School Employees</td>
<td>$(3,877,406)</td>
<td>$(488,607)</td>
</tr>
<tr>
<td>All Other Employees*</td>
<td>$(21,938,307)</td>
<td></td>
</tr>
<tr>
<td>All Employees*</td>
<td></td>
<td>$(1,771,789)</td>
</tr>
</tbody>
</table>

The fixed rate for fiscal year ended June 30, 2010 and June 30, 2011 are considered final.

* The FYE 2012 FB carryforward includes all non Medical School employees for the University of Missouri – Columbia, St. Louis and the Kansas City campuses and for Missouri University of Science & Technology. In addition, the FYE 2013 carryforward will be allocated to all four campuses based on non Medical School employees’ salaries and wages (S&W) and all future carryforward amounts will be based solely on University of Missouri - Columbia’s S&W and FB.
An F&A and FB cost proposal, together with supporting information and the certified audit financial statement, is required each year. Thus, your next FB cost proposal based on actual costs for the fiscal year ending June 30, 2012 is due in our office by December 31, 2012 and your next F&A proposal based on actual costs for the fiscal year ending June 30, 2015 is due in our office by December 31, 2015.

Since this is an integral part of the Negotiation Agreement, please note your acceptance by signing in the space provided below.

Sincerely,

[Signature]

Arif Karim, Director
Division of Cost Allocations
Central States Field Office

Enclosures

ACCEPTANCE

University of Missouri - Columbia
Institution

[Natalie Kravitz]
Signature

[Natalie "Nikki" Krawitz]
Name

date "Vice President for Finance - Admin"
Title

8/13/2012
Date
<table>
<thead>
<tr>
<th>FY</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Components of the Published Facilities & Administrative Cost Rate**

**Components:**
- Instruction
- Research
- Other Spens Act
- Administration
- Facilities
- Total

**Rate Type:** FY Covered by Rate

**Rate:** 0

University of Michigan - Ann Arbor
COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1436003859A1
ORGANIZATION:
University of Missouri-Kansas City The
University of Missouri System
215 University Hall
Columbia, MO 65211-3020

DATE: 07/23/2012
FILING REF.: The preceding agreement was dated 04/05/2011

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FIXED</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFFECTIVE PERIOD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>50.00</td>
<td>On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>51.00</td>
<td>On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>30.00</td>
<td>On Campus</td>
<td>Other Spon. Act.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>26.00</td>
<td>Off Campus</td>
<td>All Programs</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2013</td>
<td>50.00</td>
<td>On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2013</td>
<td>06/30/2016</td>
<td>51.00</td>
<td>On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>49.00</td>
<td>On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>30.00</td>
<td>On Campus</td>
<td>Other Spon Act</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>07/30/2016</td>
<td>26.00</td>
<td>Off Campus</td>
<td>All Programs</td>
</tr>
</tbody>
</table>

Page 1 of 5
<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROV</td>
<td>07/01/2016</td>
<td>Until</td>
<td>Amended</td>
<td>&quot;Use same rates and conditions as those cited for FYE 06/30/16.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**BASE**

Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of $25,000.
ORGANIZATION: University of Missouri- Kansas City The University of Missouri System
AGREEMENT DATE: 07/23/2012

SECTION I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>19.60</td>
<td>All</td>
<td>All Other Employees</td>
</tr>
<tr>
<td>FINAL</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>23.00</td>
<td>All</td>
<td>All Employees</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2013</td>
<td>Until</td>
<td></td>
<td></td>
<td>&quot;Use same rates and conditions as cited for FYE 6/30/13.&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>amended</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** DESCRIPTION OF FRINGE BENEFITS RATE BASE:
Salaries and wages.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. FICA is specifically identified to each employee and is charged individually as direct costs. The fringe benefits included in the rate(s) are listed in the Special Remarks Section of this agreement.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

FRINGE BENEFITS:

Disability Insurance
Worker's Compensation
Life Insurance
Unemployment Insurance
Health Insurance
Dental Insurance
Retirement
Tuition Remission
Wellness Program

Equipment Definition -
Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.
ORGANIZATION: University of Missouri- Kansas City The University of Missouri System

AGREEMENT DATE: 07/23/2012

SECTION III: GENERAL

A. LIMITATIONS:
The rates in this agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates in not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purposed by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to the rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rates in this Agreement, the organization should (1) credit such costs to the affected program and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:
University of Missouri- Kansas City The University of Missouri System

(INSTITUTION)
Natalie Bernard

(SIGNATURE)
Natalie "Nikki" Knauitz

(NAME)
Vice President for Finance and Admin

(TITLE)
8/13/2012

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:
DEPARTMENT OF HEALTH AND HUMAN SERVICES

(DEPARTMENT)

(SIGNATURE)
Arif Karim

(NAME)
Director, Central States Field Office

(TITLE)
7/23/2012

(DATE)

FEDERAL REPRESENTATIVE:
Theodore Foster

(ADDRESS)

(TELEPHONE): (214) 767-3261
July 23, 2012

Ms. Natalie Krawitz
Vice President for Finance and Administration
University of Missouri – Kansas City
215 University Hall
Columbia, MO 65211

Dear Ms. Krawitz:

A copy of a facilities and administrative (F&A) cost and fringe benefit (FB) Rate Agreement are being faxed to you for your signature. This Agreement reflects an understanding reached between your organization and a member of my staff concerning F&A and FB rates that may be used to support your claim for these indirect costs on grants and contracts with the Federal Government.

Please have the Agreement signed by an authorized representative of your organization and fax or email it to me, retaining the copy for your files. Our fax number is (214) 767-3264 and email address is theodore.foster@psc.gov. We will reproduce and distribute the Agreement to the appropriate awarding organizations of the Federal Government for their use.

The Office of Management and Budget (OMB) has requested that we reach an agreement with each institution on components for the published F&A cost rates. The attached form(s) are provided for that purpose. Please sign the form(s) and return them with an agreement.

In addition, your FB cost rates for fiscal year ending June 30, 2012 based on actual costs for the fiscal year June 30, 2010 and FB cost rates for fiscal year ending June 30, 2013 based on actual costs for fiscal year ended June 30, 2011 over-recovered (+) or under-recovered (-) amounts are listed below:

<table>
<thead>
<tr>
<th></th>
<th>2010/2012</th>
<th>2011/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other Employees*</td>
<td>$(21,938,307)</td>
<td>$(672,462)</td>
</tr>
<tr>
<td>All Employees*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fixed rate for fiscal year ended June 30, 2010 and June 30, 2011 are considered final.

* The FYE 2012 FB carryforward includes all non Medical School employees for the University of Missouri – Kansas City, Columbia, and the St. Louis campuses and for Missouri University of Science & Technology. In addition, the FYE 2013 carryforward will be allocated to all four campuses based on non Medical School employees’ salaries and wages (S&W) and all future carryforward amounts will be based solely on University of Missouri – Kansas City’s S&W and FB.
Ms. N. Krawitz
July 23, 2012
Page 2 of 2

An F&A and FB cost proposal, together with supporting information and the certified audit financial statement, is required each year. Thus, your next FB cost proposal based on actual costs for the fiscal year ending June 30, 2012 is due in our office by December 31, 2012 and your next F&A proposal based on actual costs for the fiscal year ending June 30, 2015 is due in our office by December 31, 2015.

Since this is an integral part of the Negotiation Agreement, please note your acceptance by signing in the space provided below.

Sincerely,

[Signature]

Arif Karim, Director
Division of Cost Allocations
Central States Field Office

Enclosures

ACCEPTANCE

University of Missouri – Kansas City
Institution

Natalie Krawitz
Signature

Vice President for Finance Admin
Name

Natalie "Nkk." Krawitz
Title

8/13/2012
Date
COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1436003859
ORGANIZATION:
Missouri University of Science & Technology (formerly University of Missouri - Rolla)
215 University Hall
Columbia, MO 65211-3020

DATE: 07/23/2012
FILING REF.: The preceding agreement was dated 04/05/2011

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FIXED</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
</tr>
</thead>
</table>

**EFFECTIVE PERIOD**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%) LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>51.50 On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>44.00 On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>34.00 On Campus</td>
<td>Other Spon. Act.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>26.00 Off Campus</td>
<td>All Programs</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2013</td>
<td>51.50 On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2013</td>
<td>06/30/2016</td>
<td>52.50 On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>44.00 On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>34.00 On Campus</td>
<td>Other Spon Act</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>26.00 Off Campus</td>
<td>All Programs</td>
</tr>
</tbody>
</table>
Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of $25,000.
**SECTION I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>19.60</td>
<td>All</td>
<td>All Other Employees</td>
</tr>
<tr>
<td>FINAL</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>23.00</td>
<td>All</td>
<td>All Employees</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2013</td>
<td>Until amended</td>
<td></td>
<td></td>
<td>&quot;Use same rates and conditions as cited for FYE 6/30/13.&quot;</td>
</tr>
</tbody>
</table>

**DESCRIPTION OF FRINGE BENEFITS RATE BASE:**
Salaries and wages.
ORGANIZATION: Missouri University of Science & Technology
(formerly University of Missouri - Rolla)
AGREEMENT DATE: 7/23/2012

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:
The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. FICA is specifically identified to each employee and is charged individually as direct costs. The fringe benefits included in the rate(s) are listed in the Special Remarks Section of this agreement.

TREATMENT OF PAID ABSENCES
Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

FRINGE BENEFITS:
- Retirement
- Disability Insurance
- Tuition Remission
- Worker's Compensation
- Unemployment Insurance
- Health Insurance
- Life Insurance
- Dental Insurance
- Wellness Program

Equipment Definition - Equipment means an article of nonexpandable, tangible personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.
ORGANIZATION: Missouri University of Science & Technology
(formerly University of Missouri - Rolla)
AGREEMENT DATE: 07/23/2012

SECTION III: GENERAL

A. LIMITATIONS:
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purposed by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement requires prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected program, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

[Institution]

[Natalie Krawitz]

[SIGNATURE]

[Natalie "Niki" Krawitz]

[NAME]

[Vice President for Finance & Admin]

[TITLE]

[8/19/2012]

[DATE]

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Agency]

[Arif Karim]

[SIGNATURE]

[NAME]

[Director, Central States Field Office]

[TITLE]

[7/23/2012]

[DATE]

[7091]

[HIS REPRESENTATIVE: Theodore Foster]

[Telephone: (214) 767-3261]
July 23, 2012

Ms. Natalie Krawitz  
Vice President for Finance and Administration  
The University of Missouri System  
Missouri University of Science & Technology  
215 University Hall  
Columbia, MO 65211

Dear Ms. Krawitz:

A copy of a facilities and administrative (F&A) cost and fringe benefit (FB) Rate Agreement are being faxed to you for your signature. This Agreement reflects an understanding reached between your organization and a member of my staff concerning F&A and FB rates that may be used to support your claim for these indirect costs on grants and contracts with the Federal Government.

Please have the Agreement signed by an authorized representative of your organization and fax or email it to me, retaining the copy for your files. Our fax number is (214) 767-3264 and email address is theodore.foster@psc.gov. We will reproduce and distribute the Agreement to the appropriate awarding organizations of the Federal Government for their use.

The Office of Management and Budget (OMB) has requested that we reach an agreement with each institution on components for the published F&A cost rates. The attached form(s) are provided for that purpose. Please sign the form(s) and return them with an agreement.

In addition, your FB cost rates for fiscal year ending June 30, 2012 based on actual costs for the fiscal year June 30, 2010 and FB cost rates for fiscal year ending June 30, 2013 based on actual costs for fiscal year ended June 30, 2011 over-recovered (+) or under-recovered (-) amounts are listed below:

<table>
<thead>
<tr>
<th></th>
<th>2010/2012</th>
<th>2011/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other Employees*</td>
<td>$21,938,307</td>
<td>$(290,424)</td>
</tr>
</tbody>
</table>

The fixed rate for fiscal year ended June 30, 2010 and June 30, 2011 are considered final.

* The FYE 2012 FB carryforward includes all non Medical School employees for the Missouri University of Science & Technology as well as the Columbia, St. Louis and the Kansas City campuses. In addition, the FYE 2013 carryforward will be allocated to all four campuses based on non Medical School employees' salaries and wages (S&W) and all future carryforward amounts will be based solely on Missouri University of Science & Technology’s S&W and FB.
An F&A and FB cost proposal, together with supporting information and the certified audit financial statement, is required each year. Thus, your next FB cost proposal based on actual costs for the fiscal year ending June 30, 2012 is due in our office by December 31, 2012 and your next F&A proposal based on actual costs for the fiscal year ending June 30, 2015 is due in our office by December 31, 2015.

Since this is an integral part of the Negotiation Agreement, please note your acceptance by signing in the space provided below.

Sincerely,

[Signature]

Arif Khan, Director
Division of Cost Allocations
Central States Field Office

Enclosures

ACCEPTANCE

Missouri University of Science & Tech.
Institution

[Signature]

Natalie "Nikki" Krawitz
Name

Vice President for Finance & Admin
Title

8/15/2012
Date
<table>
<thead>
<tr>
<th>Year</th>
<th>Institution</th>
<th>Research</th>
<th>Other Spine</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Components of the Published Facilities & Administrative Cost Rate**

- Research
- Other Spine
- ACT

Note: The table data is not fully visible or legible due to the image quality.
COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1636003859E1
ORGANIZATION:
University of Missouri- St Louis The
University of Missouri System
215 University Hall
Columbia, MO 65211-3020

DATE: 07/23/2012
FILING REF.: The preceding agreement was dated 04/05/2011

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTIO N I: INDIRECT COST RATES
RATE TYPES: FIXED FINAL PROVID. (PROVISIONAL) PRED. (PREDETERMINED)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>51.00</td>
<td>On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>51.50</td>
<td>On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>35.00</td>
<td>On Campus</td>
<td>Other Spon. Act.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2009</td>
<td>06/30/2012</td>
<td>26.00</td>
<td>Off Campus</td>
<td>All Programs</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>51.00</td>
<td>On Campus</td>
<td>Organized Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>51.50</td>
<td>On Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>35.00</td>
<td>On Campus</td>
<td>Other Spon. Act.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2012</td>
<td>06/30/2016</td>
<td>26.00</td>
<td>Off Campus</td>
<td>All Programs</td>
</tr>
</tbody>
</table>

Page 1 of 5
Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of $25,000.
ORGANIZATION: University of Missouri- St Louis The University of Missouri System  
AGREEMENT DATE: 07/23/2012

SECTION I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%) LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>19.60 All</td>
<td>All Other Employees</td>
</tr>
<tr>
<td>FINAL</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>23.00 All</td>
<td>All Employees</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2013</td>
<td>Until amended</td>
<td>&quot;Use same rates and conditions as cited for FYE 6/30/13.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

** DESCRIPTION OF FRINGE BENEFITS RATE BASE: 
Salaries and wages.
ORGANIZATION: University of Missouri- St Louis The University of Missouri System
AGREEMENT DATE: 7/23/2012

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. PICA is specifically identified to each employee and is charged individually as direct costs. The fringe benefits included in the rate(s) are listed in the Special Remarks Section of this agreement.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

FRINGE BENEFITS:

Retirement
Disability Insurance
Tuition Remission
Worker's Compensation
Unemployment Insurance
Health Insurance
Life Insurance
Dental Insurance
Wellness Program

Equipment Definition -
Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.
ORGANIZATION: University of Missouri- St Louis The University of Missouri System
AGREEMENT DATE: 07/23/2012

SECTION III: GENERAL

A. LIMITATIONS:
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative costs as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) similar types of costs have been accorded consistent accounting treatment; and (4) the information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations, the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected program, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

[Signature]
Nate Krawitz

[Title]
Vice President for Finance & Admin

[Date]
7/13/2012

ON BEHALF OF THE FEDERAL GOVERNMENT:

[Signature]
Arti Karim

[Title]
Director, Central States Field Office

[Date]
7/21/2013

[Telephone]
9600

[Representative]
Theodore Foster

[Telephone]
(214) 767-3261
July 23, 2012

Ms. Natalie Krawitz  
Vice President for Finance and Administration  
University of Missouri – St. Louis  
215 University Hall  
Columbia, MO 65211

Dear Ms. Krawitz:

A copy of a facilities and administrative (F&A) cost and fringe benefit (FB) Rate Agreement are being faxed to you for your signature. This Agreement reflects an understanding reached between your organization and a member of my staff concerning F&A and FB rates that may be used to support your claim for these indirect costs on grants and contracts with the Federal Government.

Please have the Agreement signed by an authorized representative of your organization and fax or email it to me, retaining the copy for your files. Our fax number is (214) 767-3264 and email address is theodore_foster@psc.gov. We will reproduce and distribute the Agreement to the appropriate awarding organizations of the Federal Government for their use.

The Office of Management and Budget (OMB) has requested that we reach an agreement with each institution on components for the published F&A cost rates. The attached form(s) are provided for that purpose. Please sign the form(s) and return them with an agreement.

In addition, your FB cost rates for fiscal year ending June 30, 2012 based on actual costs for the fiscal year June 30, 2010 and FB cost rates for fiscal year ending June 30, 2013 based on actual costs for fiscal year ended June 30, 2011 over-recovered (+) or under-recovered (-) amounts are listed below:

<table>
<thead>
<tr>
<th></th>
<th>2010/2012</th>
<th>2011/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other Employees*</td>
<td>$(21,938,307)</td>
<td>$(377,870)</td>
</tr>
<tr>
<td>All Employees*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fixed rate for fiscal year ended June 30, 2010 and June 30, 2011 are considered final.

* The FYE 2012 FB carryforward includes all non Medical School employees for the University of Missouri – St. Louis, Columbia, and the Kansas City campuses and for Missouri University of Science & Technology. In addition, the FYE 2013 carryforward will be allocated to all four campuses based on non Medical School employees’ salaries and wages (S&W) and all future carryforward amounts will be based solely on University of Missouri – St. Louis’s S&W and FB.
Ms. N. Krawitz  
July 23, 2012  
Page 2 of 2  

An F&A and FB cost proposal, together with supporting information and the certified audit financial statement, is required each year. Thus, your next FB cost proposal based on actual costs for the fiscal year ending June 30, 2012 is due in our office by December 31, 2012 and your next F&A proposal based on actual costs for the fiscal year ending June 30, 2015 is due in our office by December 31, 2015.

Since this is an integral part of the Negotiation Agreement, please note your acceptance by signing in the space provided below.

Sincerely,

[Signature]

Arif Karim, Director  
Division of Cost Allocations  
Central States Field Office  

Enclosures  

ACCEPTANCE  

University of Missouri – St. Louis  
Institution  

[Signature]  

Natalie "Nikki" Krawitz  
Name  

Vice President for Finance & Admin  
Title  

8/13/2012  
Date