1.0 BACKGROUND AND PURPOSE

Research Institutes, Centers and Basic Initiatives at Mines provide a venue for collaboration that helps faculty research to prosper by creating a rich environment for collaboration across colleges and departments, providing administrative and technical support, and making strategic investments in large, new initiatives that address national and global grand challenges. Technical and Professional Service Enterprises support research programs by making large, expensive instrumentation available to all researchers on campus and providing a mechanism for supporting commercialization of research results by industry.

This policy defines the types of Institutes, Centers, Initiatives and Enterprises that are authorized at Mines and summarizes the primary characteristics of each. Guidelines for creation, operation and termination are contained in the relevant VPRTT Procedure. Technical and Professional Service Enterprises also must conform to Mines’ Educational Business Activities Policy.

2.0 POLICY

To support the accomplishment of its research mission, the University recognizes the following types of institutionally-sanctioned Institutes, Centers, Initiatives and Enterprises:

- **Research Center** – An administrative unit that brings together groups of faculty with similar or complementary interests and expertise to do research on complex problems that benefit from collaboration. They may apply for IDC return status when in full, stable operation meeting criteria contained in the Procedure for Requesting IDC Return Status.

- **Research Institute** – Large, multi-dimensional research program that brings together researchers from across the institution to address high-priority, national and global grand challenges. They are developed in partnership with the VPRTT, who may delegate operational and administrative authority to the Director.

- **Basic Research Initiative** – Provides funding such as fellowships to help faculty and students explore new directions in research and education. Supported by philanthropic gifts through the CSM Foundation, unrestricted grants to departments or colleges, or institutional funds, their lifetime normally is limited to one year.

- **Technical Service Center** – Provides testing, fabrication and computing services to internal and external researchers using facilities that are too large, expensive or complex to be supported by individual PIs or Research Centers. They recover costs through user fees.

- **Professional Service Enterprise** – Provides industry sponsors with access to the school’s base of scientific knowledge and expertise; increase the value of sponsored research by supporting commercialization, and build relationships that encourage other forms of support.
The table in Appendix A summarizes the characteristics of each type of center.

3.0 PROCEDURES FOR CREATING CENTERS

The purpose of the next section is to outline the procedures for creating and operating research and service centers at the Colorado School of Mines.

A. RESEARCH CENTER

Research Centers are administrative units that bring together groups of faculty with similar or complementary interests and expertise to do research on complex problems that benefit from collaboration. They may apply for IDC return status when in full, stable operation meeting criteria contained in Section 4. Requesting Indirect Cost Return Status.

1. Essential characteristics:
   - Research projects and programs are expected to make original contributions to the body of knowledge in their field
   - Research proposals should be commensurate with the institution’s mission, goals and priorities and must be approved by the Department Head and College Dean
   - Projects must qualify for the Fundamental Research Exemption under federal export controls
     - Results are expected to be published according to Graduate School guidelines
     - Data and results may not be proprietary and must be archived and made accessible to the public as required by guidelines for federal funding
     - All research must be conducted by CSM faculty and students (including full-time, registered undergraduates, Graduate Research Assistants and Post-Doctoral Fellows)
   - All projects must include substantial contributions by graduate students
     - Students normally have 12 month Graduate Research Assistant appointments or Fellowships at the funding levels published by the Dean of Graduate Studies
     - Graduate students normally perform research that will be used for their theses
   - Sponsors must bear the full cost of research (including Indirect Costs) unless institutional policies or state or federal guidelines dictate otherwise;
   - The Center must be approved and managed according to the remainder of this policy.

2. Formation:
   a. The faculty will prepare a formal center proposal and The proposal will include:
      - The proposed name of the Center, which may include “center” or other term appropriate to the mission and goals
      - A description of the mission and research agenda for the proposed Center
      - A funding plan and proof of funding sources (such proof could be letters of intent from possible consortium members, acceptance of grants, etc.)
      - A list of involved faculty
      - Requests for any space needs
      - A plan for annual accountability reporting to the Department Head or College Dean including specific milestones the center intents to achieve
   b. The proposal will be submitted to the appropriate Department Head(s), who will append a
recommendation and forward it to the appropriate College Dean(s)
c. After reviewing the proposal and consulting with the Department Head(s), the College Dean(s) will make a decision regarding awarding Center status
d. If the proposal is approved, the College Dean(s) will notify the Center faculty of the decision and assign reporting authority to a specific Department Head or College Dean
e. The reporting authority will be responsible for allocating space, appointing the director and, in consultation with the newly appointed Director, for making recommendations on non-student staff hires for the Center
f. Once the Center has been approved and a Center Director is appointed, the reporting authority will notify the VPRTT Office and the Office of Research Administration (ORA) of the new center, its title and reporting authority
g. The office of the VPRTT will
   • Notify the VPFO of the new center
   • Update the research website
   • Add the center to the official list of approved centers

3. Management:
a. The Center Director will
   • Have sole authority to determine which proposals are to be submitted through the Center
   • Have the same authority as a Principal Investigator to manage the operations of the Center
b. At the end of each fiscal year, the Center Director will prepare an accountability report as agreed during the Center approval process
c. The reporting authority will review the annual accountability report, evaluate the progress of the Center and provide feedback to the Center Director
e. Within three months after the end of the fiscal year, the reporting authority will send a summary of the Center status and progress to the College Dean, who will forward it to the VPRTT with a recommendation for continuation and/or change in status

4. Termination:
a. Following the annual review, the reporting authority (College Dean or Department Head) may recommend termination of a Center
b. The appropriate College Dean will have the final decision regarding termination
c. Criteria for a center to be terminated include but are not limited to
   • Mission of the center has changed
   • Center funding can no longer sustain its mission
   • Faculty participation has decreased substantially
d. If a Center is terminated, the College Dean must notify the VPRTT and ORA promptly
B. RESEARCH INSTITUTE

Research Institutes address national and global grand challenges that are identified by the CSM administration as being a high priority related to one or more of the central strategic areas of the institution. A Research Institute may incorporate existing or new Research Centers and multiple projects with government and non-government sponsors, including industry consortia. All essential characteristics and procedures for creating and operating a Research Center apply to Research Institutes except as follows.

1. Essential characteristics:
   - Initial planning and proposal preparation must be done in partnership with the VPRTT
   - Institutes are approved by and report to the VPRTT
   - Institutes may receive institutional support for planning, proposal preparation and early-phase operations that is above and beyond standard F&A return.

2. Formation:
   Creation of a Research Institute typically requires one or more years of developing strategies, planning and laying groundwork with potential government and industry sponsors. Because each Institute is unique, there is no formal process for creating a Research Institute; however it is common for Institutes to evolve as follows.
   a. Faculty who wish to propose formation of an Institute should
      • Prepare a one- or two-page summary of the concept
      • Discuss it with the appropriate College Deans and Department Heads
      • Send the concept paper to the VPRTT with the endorsement of a College Dean
   b. Alternatively, the VPRTT and/or College Deans may propose formation of an Institute in conjunction with or as a result of strategic planning
   c. Upon receipt of a concept paper, the VPRTT will consult with faculty, College Deans and/or Department Heads as necessary to refine the concept
   d. At any time in this process, the VPRTT has the authority to decide whether to create an Institute or terminate the process
      • Approval of an Institute will include granting IDC Return status
   e. Upon approval of a new Institute, the office of the VPRTT will
      • Notify the VPFO and ORA of the new Institute
      • Update the research website
      • Add the Institute to the official list of approved centers
   f. Following consultation with the Provost and VPFO, the VPRTT may authorize institutional support for a new Institute that may include (but is not limited to)
      • Planning and proposal-preparation support including summer salary, buy-out of teaching responsibilities, administrative assistance and travel
      • Cost sharing and matching commitments for proposals
      • Early-phase funding for startup operations, including accelerated IDC return

3. Management:
   a. The VPRTT is responsible for appointing the Institute Director and making recommendations to the Provost on hiring staff for an Institute
   b. The Institute Director will have the same responsibilities and authority as a Research Center Director
   c. The Director will report to the VPRTT
      • At least quarterly on the activities of the Institute and progress toward long-term goals
• Immediately if there are any changes in goals or sponsorship
• Any time there are developments internally, nationally or globally that may affect the future of the Institute.

d. All research and/or technical or professional service done by an Institute must conform to the same research guidelines as a Research Center
• Exceptions to these guidelines must be approved by the VPRTT, Provost and VPFO

4. Termination:
   a. If, at any time, the VPRTT concludes that an Institute no longer will receive university support and no longer is identified as a high priority for the university, its Institute status will be terminated
   b. With the concurrence of the appropriate College Dean, it may be converted to a Research Center, in which case the VPRTT will transfer management responsibility to the appropriate College Dean or Department Head
   c. The Institute’s IDC Return status will be terminated, and it must re-apply as a Center and have IDC Return status approved through the standard process
   d. The VPRTT will notify the Provost, VPFO and ORA of termination of the Institute and any subsequent action (such as conversion to a Research Center)

C. BASIC RESEARCH INITIATIVE

A Basic Research Initiatives provides funding such as fellowships to help faculty and students explore new directions in research. Supported by philanthropic gifts through the CSM Foundation, unrestricted grants to departments or colleges, or institutional funds, their lifetime normally is limited. All essential characteristics and procedures for creating and operating a Research Center apply to Basic Research Initiatives except as follows.

1. Essential Characteristics
   - Research projects and programs are expected to explore novel ideas to determine:
     - Their potential for making new contributions or identifying new challenges
     - Their applicability to the University’s long-range strategies and priorities
     - The opportunity for breakthroughs in addressing grand challenges
     - The possibility of a revolution in fundamental understanding of an area of science
   - Basic Research Initiatives typically are not expected to solve specific problems or make predictable contributions
   - Support normally is developed in consultation with potential sponsors, and proposals with detailed research plans or predictable outcomes are not appropriate
   - Initiatives must meet all of the requirements for philanthropic gifts, including:
   - The sponsor may not influence the design of research projects or selection of faculty and students
   - There may be no deliverables beyond periodic reports of activity
   - BRI funds may not be used to support research activities funded by other means wherein deliverables are required or industrial partners may benefit directly
   - Intellectual Property belongs to the University but is not expected to be commercialized without additional applied research and development
   - Projects normally do not pay IDC or faculty salaries except for summer salary or for teaching relief
1. Formation
   a. Basic Research Initiatives may be conceived by faculty, select CSM staff (administrative faculty, Foundation staff, etc.) or potential sponsors
   b. The concept should be discussed with the appropriate College Dean(s), VPRTT and Provost, who will decide whether to support it and develop funding
   c. If they decide to proceed, they will designate a College Dean to oversee the process
   d. The Dean will authorize the appropriate faculty and staff to consult with potential sponsors and submit a Basic Research Initiative Concept Paper that includes
      • A description of the concept to be investigated
      • A list of faculty and staff who might be involved in the Initiative
      • Resources that will be needed and potential sponsors
      • A proposed budget including cost sharing or other contributions from the university
      • The proposed name of the Initiative, which may include “center” or “institute” or other term appropriate to the concept
      • Identification of any space or special instrumentation needs
      • A management structure and procedures that include oversight and feedback at the department, college and/or university level as appropriate
      • A plan for submitting activity reports at appropriate intervals
   e. The Concept Paper will be submitted to the designated College Dean
   f. After reviewing the proposal and consulting with the Department Head, the Dean will forward a recommendation to the Provost and the VPRTT
   g. If the Provost and VPRTT approve the Concept Paper, the Dean will authorize faculty and staff to begin negotiations with potential sponsors and/or the Foundation
   h. When the final agreement or donation letter is approved by the VPRTT and signed by the sponsors, and when funding is received, the College Dean will
      • Appoint a Principal Investigator
      • Allocate space as necessary
      • Designate spending authority
   i. The office of the VPRTT will
      • Notify the VPFO of the new initiative
      • Update the research website
      • Add the BRI to the official list of approved centers

3. Management
   a. The Principal Investigator will have full authority to manage the operations of the Initiative and determine what research will be conducted by faculty and students
   b. The Principal Investigator will be responsible for submitting activity reports to the Dean as outlined in the Concept Paper and the final agreement or donation letter
   c. The Dean will review the annual accountability report, evaluate the progress of the Initiative and provide feedback to the Principal Investigator
   d. Within three months after the end of each fiscal year, the Dean will send a summary of the Initiative status and progress to the Provost and the VPRTT

4. Termination
   a. Normally a Basic Research Initiative will end when the funding in the original grant has been expended
   b. As that point approaches, the responsible Dean and the Initiative faculty will review the results of the research and will forward a recommendation to the Provost and VPRTT as to whether the results warrant continuation of the project
c. If the Provost and the VPRTT conclude that the results warrant continuation of the project, the

d. Dean will proceed as follows
  • If the results support continued basic research in the concept, the Dean will authorize the
    Principal Investigator and the appropriate administration staff to negotiate with existing
    and/or other sponsors for continuation of the Basic Research Initiative and to seek
    additional funding through appropriate channels
  • If the results suggest that there would be support (financial and scientific) for an
    expanded research program in one of the University’s focus areas, the Dean will
    encourage the Principal Investigator to initiate efforts to develop a sponsored research
    program in this area

D. TECHNICAL SERVICES ENTERPRISE

A Technical Service Center provides testing, fabrication and computing services to internal and
external researchers using facilities that are too large, expensive, complex or specialized to be
supported by individual PIs or Research Centers. They recover costs through user fees. These
Centers serve the institution’s research, enterprise and educational program equally by ensuring
access to advanced technology and must adhere to the following guidelines.

1. Essential Characteristics:
   Ø All major instruments and equipment purchased, in any part, with funds from the
     Administration must be housed in and operated by a Technical Service Center
   Ø The facilities and instruments must be open to all CSM faculty and students
   Ø Data and results belong to the user (individual or group)
   Ø Technical Service Centers must organize and operate in accordance with the Colorado School
     of Mines Service Center Procedures which can be found at http://inside.mines.edu -
     Policies/Governance – Policies – Research – Service Center Policy
   Ø All users, including off-campus, must be charged in accordance with the Service Center
     Policy
   Ø The center must have a plan for equipment depreciation and maintenance and must set aside
     funds to purchase upgrades, additional or replacement equipment in the future
   Ø Internal clients must fulfill all requirements for the Export Controls Fundamental Research
     Exemption or they must certify in writing either that Export Controls do not apply to the data
     and results or that necessary Export Control permissions have been obtained
   Ø External clients must certify in writing that Export Controls do not apply to the data and
     results or that necessary Export Control permissions have been obtained.

2. Formation
   The creation of a Technical Service Center can be initiated by faculty, Department Heads or
   College Deans as follows:
   a. The person or group desiring a Technical Service Center will nominate a faculty or staff
      member to be the Director
   b. The nominee for Director will prepare a formal center proposal and submit it to the next
      highest administrative level
   c. The proposal will include
      • A list of instruments and facilities to be managed and operated by the center;
      • A financial plan (including how rates are determined) to recover operating costs,
        depreciation and IDC in accordance with the Service Center Policy

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• A list of faculty and staff involved in operation of the Center
• A list of prospective users and anticipated levels of use
• Requests for any space needs
• A plan for annual accountability reporting to the Department Head or College Dean
d. Department Heads and College Deans are authorized to approve or deny requests for Technical Service Centers
e. If a Technical Service Center is approved, the approving authority (Department Head or College Dean) will
   • Appoint a director and make recommendations on staff hires
   • Notify the Office of Research Administration and the office of the VPRTT
   • Contact the Chair of Research Council to schedule a presentation on the Center
f. The office of the VPRTT will
   • Notify the VPFO of the new center
   • Update the research website
   • Add the center to the official list of approved center

3. Management
   a. Technical Service Centers are normally managed by research faculty, and students may be employed as GRA’s or Research Associates
   b. The Center Director will generate an annual report for the Dean who will evaluate the center on its progress. A summary report will be sent to the VPRTT Office for their review. The Dean may request additional information with more-details if they feel there may be a basis for a sunset review of the Center

4. Termination
   a. As a result of their annual review of a Technical Service Center, the Dean may recommend termination of the Center. The decision of the Dean will be final and may not be appealed. Criteria for termination include but are not limited to
   b. Mission of the center has changed
   c. Charges aren’t covering costs of managing the Center and operating and maintaining the instruments
   d. Faculty and student use of the instruments has dramatically decreased
   e. If a Technical Service Center is terminated as a result of a sunset review, the Center Director will transfer authority over the equipment to the appropriate Dean or Department Head along with any funds remaining in the Center accounts

E. PROFESSIONAL SERVICES ENTERPRISE
Professional Service Enterprises provide industry sponsors with access to the school’s base of scientific knowledge and expertise; increase the value of sponsored research by supporting commercialization, and build relationships that encourage other forms of support.

1. Essential Characteristics
   Professional Service Enterprises normally are managed by research faculty
   - Tenured faculty may participate as consultants or through charge-out (with approval of their College Dean) or summer salary
   - Students may be employed as Research Associates but not GRAs
   - Sponsor employees and other external scientists who meet CSM’s qualifications may be appointed as Visiting Scholars with the approval of the Provost
   - Post-doctoral Fellows normally do not participate because of publication restrictions
Data produced may be confidential, and results may be proprietary, may be excluded from theses and dissertations, and may be subject to publication restrictions.

Intellectual Property may belong to the sponsor or be shared with restrictions.

All costs (operation, administration and facilities, including full IDC at the non-government rate) must be paid in full by the sponsor.

A Professional Service Enterprise is not eligible for IDC Return.

All activities must adhere to the institution’s Educational Services Policy.

All sponsors of a Professional Service Enterprise, whether consortium members or individual project sponsors, must certify in writing that Export Controls do not apply to the data and results or that necessary Export Control permissions have been obtained.

2. Formation
   a. Research Faculty interested in establishing a Professional Service Enterprise will work with the appropriate Department Head and industry partner(s) to prepare and present a proposal to the appropriate College Dean that includes:
      • An Enterprise Mission statement
      • By-Laws, including plans for the administration of the Enterprise
      • Details about the relationship of the work of the Enterprise to active CSM research
      • Long-term professional service and administrative agendas
      • A funding plan and proof of funding sources
      • A list of involved faculty
      • The structure and role of an Advisory Board, if applicable
      • Requests for any space needs
      • A plan for annual accountability reporting to the Department Head, College Dean and VPRTT.
   b. If the Dean approves, the proposal will be forwarded to the VPRTT and the Provost, either of whom may request a verbal presentation in addition to the written proposal.
   c. The VPRTT and Provost will review the proposal and determine whether the proposed Enterprise is in the best interest of the University.
   d. If the Enterprise is approved:
      • The Department Head, in consultation with the Dean, will be responsible for appointing a Center Director and recommending any staff hires.
      • The Director must contact the Chair of Research Council to schedule a presentation.
   e. The office of the VPRTT will:
      • Notify the VPFO of the new center
      • Update the research website
      • Add the center to the official list of approved centers.

3. Management
   a. A Professional Service Enterprise will be managed and operated according to the guidelines for a Research Center, including the requirement for an annual report.

4. Termination
   a. As a result of their annual review of a Professional Service Enterprise, the Department Head or College Dean may recommend termination of the Enterprise.
   b. The decision of the Dean will be final and may not be appealed.
   c. Criteria for termination include but are not limited to:
      • Mission of the Enterprise has changed
      • There no longer is a strong link to active CSM research
      • Sources of funding are not sufficient to support the operation.
• Faculty participation has dramatically decreased
d. Upon termination, the Enterprise Director will transfer authority over the staff and any facilities to the appropriate College Dean or Department Head along with any funds remaining in the Enterprise accounts.
4.0 REQUESTING INDIRECT COST RETURN STATUS FOR YOUR CENTER

Research Centers and Institutes that have large, stable, funded research programs may be authorized to receive return of a portion of the Indirect Costs collected on Center or Institute projects to help cover the cost of administration and operation. The IDC Return Policy defines the amount that will be returned and the Center Policy defines the circumstances under which the return will be authorized. The following section of this Center Procedure describes the steps to be taken to request approval of IDC Return Status for a qualifying center and the criteria to be used in making a decision.

This policy uses the common terms “Indirect Cost (IDC)” or “overhead” to refer to the technically-correct “Finance & Administration (F&A) Cost.” Normally, on all fully-overheaded, on-campus projects, the local administration (DA) portion of the ONR rate calculation is returned to the appropriate Department Head for administrative support and research development, according to the university’s Indirect-cost Return Policy. The university’s Center Policy states that a Research center “…may apply for IDC return status when in full, stable operation meeting criteria contained in the ‘Procedure for Requesting IDC Return Status’.” If approved, the IDC that normally is returned to the Department Head will be returned to the Center beginning with the first day of the next month following approval. The distribution of indirect cost that is returned to centers is regulated by the University’s Indirect Cost Return Policy.

1. Criteria to receive IDC return status
   a. In order to receive IDC Return Status, a Center must demonstrate that it both is capable of and willing to use the return to grow the funding and scope of the Center.
   b. Criteria for fulfilling that expectation include
      - The Center must provide assurance that it is a sustainable financial entity
      - The Center must have By-Laws that define the goals and operational structure
      - There must be a financial plan that describes the anticipated use of IDC Return

2. Procedure to request IDC-return status
   a. To request IDC Return Status, the Center Director must submit a request to the appropriate College Dean containing the following information
      - A discussion of how the Center fits the strategic goals and priorities of the institution
      - Evidence that it is a sustainable financial entity as indicated by funded research by members of the Center and a proven track record of multiple billing cycles
      - A set of By-Laws that includes
        • Mission statement
        • Organizational structure
        • Long-term research strategy and educational agenda
        • Process for collaborative decision making
      - A plan for the use of overhead return, including
        • Strategic investment in research
        • Support for Center operations and administration
        • Capital expenditures
   b. If the IDC Return Status proposal is acceptable to the Dean
      - The Center Director will contact the Chair of the Research Council to arrange to present the proposal to the Council
      - Research Council members will discuss the proposal with their departments and convey any concerns regarding the Center to the Council Chair
      - The Council will assess the viability of the center and determine if there is overlap in the research being presented with research currently being performed on campus.
      - The council will forward their assessment and the Dean’s evaluation to the VPRTT for a decision.
      - If approved by the VPRTT, that office will
        • Notify ORA and the VPFO that the Center has been awarded IDC Return Status
        • Request that the appropriate IDC Return accounts will be established
        • Authorize any deviation from the standard Department return rate with
3. Annual Review
   a. The Director of each Center with F&A Return Status will generate an annual report for the appropriate Department Head and College Dean.
   b. The report will contain the following:
      - Number of proposals submitted and total amount requested
      - Number of Awards and total amount received
      - Number of participating faculty members and departments
      - Total Expenditures for the current fiscal year including how much was spent on
        - Personnel (research faculty, graduate students, summer salaries for tenured/tenure-track faculty, academic-year charge-out, other staff)
        - Operations (supplies and expenses, capital expenditures, subcontracts, overhead)
      - Total Overhead Return and how it was spent
      - Changes to By-Laws following submittal for approval of F&A Return Status
      - Progress or milestones to meet the Center’s strategic goals
      - Products of research (Patents, Publications, Sponsor reports, Presentations, etc.)
      - Institutional, national and international service
      - National and international recognitions (invited lectures, honors or awards, etc.).
   c. The Department Head and College Dean will evaluate
      - The center’s progress in fulfilling its mission and meeting its goals
      - The financial strength and stability of the Center
      - The currently-allocated space to ensure it is being utilized appropriately
      - The use of IDC Return to advance the agenda of the Center
   d. The College Dean will forward a copy of the Center Annual Report to the VPRTT along with an evaluation of the status and progress of the Center.

4. Sunset Review
   a. If the annual review raises questions about whether the Center is meeting the expectations for F&A Return Status, the College Dean or VPRTT may request additional information.
   b. After reviewing any additional information and consulting with the Center Director, Department Head and College Dean as appropriate, the VPRTT may make a decision regarding continuing or terminating the Center’s IDC Return status.
   c. Alternatively, the VPRTT may put the Center on probation and require more-frequent reporting until the next Annual Report.

5. Termination
   a. Criteria for termination of a center’s IDC Return status include but are not limited to:
      - Current research does not conform to the Center’s mission and goals
      - The research products of the Center do not meet expectations
      - Faculty and/or student participation has decreased
      - Center funding no longer generates enough IDC return to allow effective use
      - The Center mission no longer fits institutional goals and priorities
      - IDC return is not being used to enhance the research agenda
   b. If the VPRTT decides to terminate IDC Return Status for the Center, that office will
      - Notify ORA and the VPFO that the IDC Return Status has been terminated
      - Send a request to the VPFO that the appropriate IDC Return be stopped as of the end of the month in which the decision was made
      - Direct the College Dean to work with the Center Director to transfer any remaining IDC return (after current obligations have been met) from the Center to the appropriate Department Head and faculty members under the IDC Return Policy.