

Final  
Annual Evaluation Report  
Of  
Argonne National Laboratory (ANL)  
For The Period  
October 1, 2002 through September 30, 2003  
(Fiscal Year 2003)

Performed by the Department of Energy, Chicago Operations Office, Argonne Area Office  
(CH-AAO)

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## 1.0 Summary Evaluation:

In accordance with the performance-based contract with DOE, the University of Chicago is responsible for the management and operation of Argonne National Laboratory (ANL). This contract requires DOE to establish formal expectations and to perform an annual performance evaluation of the University of Chicago for that contract work. The payment of fee to the University of Chicago is contingent on the results of the annual DOE performance evaluation. Since the inception of the ANL performance-based contract in 1995, the University of Chicago performance has been rated very highly by the sponsoring DOE Program Offices and by the DOE Chicago Operations Office Argonne Area Office (CH-AAO).

For FY-03, the overarching performance expectations assigned to the ANL Contract were:

**Science and Technology:** ANL will deliver innovative, forefront science and technology consistent with the DOE strategic goals. ANL will conceive, design, construct, and operate world-class user facilities, all in a safe, environmentally sound and efficient manner.

**Contractor Management:** The University of Chicago will provide leadership, guidance, and oversight that add value to the overall management of ANL.

**Operations:** ANL will conduct all work and operate facilities cost effectively and with distinction, integrated with and supportive of its missions in science, technology, energy, and environment, while being fully protective of its workers, its users, the public, and the environment.

As required under the contract, individual performance measures and system assessment measures were established for these three overarching performance expectations. For FY-03, the University of Chicago was rated as "Outstanding" (the highest rating) for the Science and Technology (both ANL-E and ANL-W) and the Contractor Management Performance Measures by CH-AAO. The Operations expectation includes the Infrastructure and the Integrated Safety Management Performance Measures. The Integrated Safety Management Performance Measure was rated as "Excellent" (the second highest rating). The ANL-E Infrastructure Performance Measure was rated as "Excellent". For the twelve General Operations System Assessment Measures (SAMs), the University of Chicago received an overall "Outstanding" rating.

Based on the FY-03 DOE ratings, the University of Chicago earned \$2,907,575, of a total possible \$2,997,500 for the management and operation of Argonne National Laboratory. This is 97% of the total available fee.

## 2.0 Background:

Beginning in June 1995, the DOE has maintained a performance-based contract with the University of Chicago for the management and operation of Argonne National Laboratory (ANL). Effective October 1, 1999, the performance-based Contract between the United States DOE and the University of Chicago was renewed for a second 5-year term. The success of the performance-based concept, implemented in the previous contract

(October 1995 - September 1999), led to the decision to continue the performance-based management approach for the ANL contract through September 2004.

In accordance with the terms of the ANL contract, the CH-AAO establishes formal performance expectations at the beginning of each fiscal year and evaluates the performance of the University of Chicago against those performance expectations at the end of each fiscal year. For FY-03, Appendix B of the ANL contract includes two performance categories. These two categories are Mission Critical Performance Measures and General Operations System Assessment Measures. Both of these performance categories are evaluated annually using a pre-defined process. A formal evaluation by CH-AAO is a key part of the rating process. This report is the documentation of that annual rating process. The first performance category, "Mission Critical (Performance Measures)", or Performance Measures as referred to within this report, are tied directly to the annual fee earned by the University of Chicago. For FY-03, there are four Performance Measures. The second performance category, "General Operations (Systems Assessment Measures)" or SAMs is not tied directly to fee. For FY-03, there are twelve SAMs.

For FY-03, the Performance Measures that directly impact fee include four areas: 1) Science and Technology, 2) Contractor Management, 3) Integrated safety Management, and 4) Infrastructure. All of these Performance Measures are considered critical to successfully achieving the ANL Science and Technology Mission. Critical is defined as historically having a direct and significant impact on the ability of ANL to successfully achieve the outstanding science and technology mission. For the twelve SAMs, these measures are considered important to ANL successfully achieving their science and technology mission, but for FY-03 have not been deemed to be critical to the successful accomplishment of the ANL mission. If the data demonstrate that a SAM is directly and significantly impacting ANL's ability to meet its science and technology mission, then it will be elevated to a fee-bearing performance measure.

Appendix B of the ANL contract requires the University of Chicago to perform an annual self-assessment that is considered by the CH-AAO in its overall evaluation of the University of Chicago performance. The University of Chicago Self-Assessment provides additional data including accomplishments and self-identified opportunities for improvement that assist in determining the complete picture of the University of Chicago performance. CH-AAO reviewed the University of Chicago Self-Assessment to determine the following:

- 1) significant activities/issues that the University of Chicago has not identified in their self-assessment that would support an increase or reduction in their final rating for the assigned functional area.
- 2) significant issues that ANL has identified in their self-assessment that were either under-assessed or over-assessed in determining a final rating for the assigned functional area.
- 3) overall self-assessment quality and completeness.

For the Science and Technology Performance Measure, the University of Chicago conducts a highly regarded peer review process as its self-assessment. Copies of the documented peer reviews are provided to CH-AAO and appropriate DOE-HQ Program sponsors. A critical component of the annual performance evaluation is a separate evaluation of the ANL science and technology work by the sponsoring DOE

Headquarters (HQ) Program Offices. The DOE-HQ Program sponsors evaluation includes, as input, the results of the University of Chicago Science and Technology self-assessment. The University of Chicago Self-Assessment is included as a Reference to this report.

The CH-AAO evaluation includes both the “objective” Contract performance expectations for each area and the “subjective” aspects that include significant accomplishments, opportunities for improvement, results of other appraisals, and any other data that is relevant to the Laboratory’s performance. The overall process for evaluating ANL performance and determining the annual fee is described in Attachment A to this report.

For FY-03, the University of Chicago was rated as “Outstanding” (the highest rating) for the Science and Technology and Contractor Management. An “Excellent” rating (the second highest rating) was given for the Integrated Safety Management Performance Measure. The ANL-E Infrastructure Performance Measure was rated as “Excellent”. For the twelve General Operations System Assessment Measures (SAMs), the University of Chicago received an overall “Outstanding” rating. An “Outstanding” rating means that ANL significantly exceeds the standard of performance; that noteworthy results have been achieved. An “Excellent” rating means that ANL exceeds the standard of performance, although there may be room for improvement in some elements; better performance in all other elements more than offset this. A fee table in the contract, negotiated each year along with the individual performance measures, is used to determine the annual monetary fee earned based on the assigned adjectival ratings.

A detailed evaluation of the SAMs by CH-AAO confirmed that an overall “Outstanding” rating was appropriate. This means that the University of Chicago performance in General Operations exceeds the standard of performance established for management and operating contractors for multi-purpose laboratories. For some SAMs, there remains room for improvement but, in general, better performance in other areas more than offset the areas in need of improvement.

### **3.0 Evaluation of Performance Measures**

Table 1 is a summary of the four FY-03 Performance Measure ratings for ANL. The ratings assigned to each of these four Performance Measures (three in Critical Operations and one in Science and Technology) have a direct impact on the fee calculations.

#### **3.1 Science and Technology**

An overall rating of “Outstanding” was assigned to the University of Chicago for their performance in the area of Science and Technology. This critical area represents 65% of the total fee for FY-03. Fifty-five percent is assigned to Part I - Argonne East Science and Technology Program while ten percent is assigned to Part II - Argonne West Science and Technology Program. The Science and Technology Performance Measure is based on the following DOE-HQ evaluations:

- Office of Science and Technology evaluation dated (*draft as of 2/3/04*)
- Office of Nuclear Energy, Science and Technology evaluation, dated (*to be included*)
- Energy Efficiency and Renewable Energy, dated (*unlikely to receive input*)

The detailed DOE-HQ Program evaluations are included as Attachment B to this report. The highly regarded peer review process, conducted by the University of Chicago during FY-03, supports this overall rating of "Outstanding" in Science and Technology. A list of the Peer Review Reports is included as Attachment C. CH-AAO accepts the evaluations of the DOE-HQ Program Sponsors.

### **3.1.1 Part I – Argonne East**

ANL operates three National User Facilities, discussed below, that served more than 2300 users and had an average reliability exceeded 96%. Some specific ANL-E accomplishments during FY-03 include:

There have been a number of significant achievements made by ANL during FY-2003. These include the following ANL accomplishments for facility operation:

- 1) The operation of the Advanced Photon Source (APS) continues to achieve X-ray availability of greater than 96% for user beam in FY-2003. The APS exceeded expectations for beam current, flexibility, and beam stability.
- 2) The Intense Pulsed Neutron Source (IPNS) operation continues to achieve run cycles in FY-2003 that exceed 99% reliability with very high availability of service to users.
- 3) ANL continues to enhance the capability of the ATLAS facility with the addition of submodules for the Hadronic Calorimeter.
- 4) Construction of the Center for Nanoscale Materials advanced in FY-2003 with final preparations to begin construction. In addition, the new CNM Director Dr. Eric Isaacs, previously of Bell Laboratories, is considered a notable and significant addition to the leadership of this facility.
- 5) ANL, as a member of the Midwestern Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research participates in the research program to be conducted at the NIH funded Regional Biocontainment Laboratory (RBL). The RBL will be constructed at ANL starting in FY-2004.
- 6) ANL has worked closely with the FBI and the Illinois Emergency Management Agency to provide a Joint Operations Center at ANL in support of the U.S. Homeland Security initiative.

ANL scientists received the following science and technology awards in FY-2003:

- 7) Dr. Alexei Abrikosov of ANL was awarded the 2003 Noble Prize in Physics for his work in superconductivity and superfluidity.
- 8) ANL received three R&D 100 awards again in FY-2003 for the development of the Scanning Confocal Electron Microscope used in the studies of nanomaterials, the Large-Area Ultrananocrystalline Diamond Film and Deposition System used in the development of microchip-based retinal

prosthesis to restore sight, and the Nanostructured Carbide Derived Carbon being used to seal pumps and to extend automotive engine life.

- 9) R&D Magazine named Dr. Ian Foster of ANL as the 2003 "Innovator of the Year" for his work in developing advanced distributed computing, or grid, technologies.
- 10) Dr. Jorge More and Dr. Todd Munson received the 2003 Beale-Orchard-Hayes Prize for Excellence in Computational Mathematical Programming for their work in solving optimization problems over the internet.
- 11) Dr. Orlando Auciello received an Outstanding Technical Achievement Award from the Hispanic Engineer Achievement Award for his achievements in thin film science and technology.
- 12) ANL's reputation in the field of superconductivity continues to advance. Dr. George Crabtree was awarded the Kamerlingh Onnes prize for pioneering experiments on vortex matter and Dr. Victor Vinokur was awarded the John Bardeen Prize for his contributions on vortex matter theory.

ANL scientific and technological accomplishments for FY-2003 include:

- 13) At the APS, the three-dimensional crystal structure of the main protease from the coronavirus that causes Severe Acute Respiratory Syndrome (SARS) was identified and examined. This discovery is expected to represent a major step in the development of new drugs to inhibit SARS virus replication.
- 14) Advances at ANL in battery material development have enabled the development of a rechargeable microbattery, superior to existing lithium-ion batteries, for powering an implantable microsimulator, designed to restore nerve and muscle function in patients.
- 15) In the area of astrophysics, the ATLAS facility demonstrated that specific metal formation reactions, known to occur in stars, were much more likely to occur than previously estimated. In addition, it was experimentally determined that the mass of specific Se isotopes impacts the X-ray bursts from explosive astrophysical events and the rate of synthesis of elements heavier than iron.
- 16) ANL continued to work with NASA to develop non-destructive techniques of leading-edge structural subsystems for the space shuttle wings.
- 17) The July 2003 issue of Physics Today reported on the experimental confirmation at the APS of the creation of local structures which act as barriers to crystallization for metallic liquids.
- 18) During FY-2003 the University of Chicago Board of Governors conducted a peer review of the ANL Human Resources Program. The Peer Review Team provided high marks to ANL.
- 19) ANL conducted an internal Management Assessment of all ANL Divisions for implementation of the ANL ISM Program.

- 20) Two ANL scientists with the Materials Science Division received two top awards (Kamerlingh Onnes Prize and the John Bardeen Prize) from independent professional organizations for their work in superconductivity.
- 21) ANL and Michigan State University worked collaboratively to defend the Rare Isotopes Accelerator science and readiness to proceed before a subcommittee of the DOE's Nuclear Science Advisory Committee.

Other program sponsor accomplishments for FY-2003 include:

- 22) ANL has completed all of the planned Environmental Restoration Project (RCRA waste clean-up program) at the ANL-E site within schedule and under budget. ANL is the first SC Multi-Program Laboratory to complete its Environmental Restoration program.
- 23) ANL has again been recognized for excellence in the area of Pollution Prevention (P2). The ANL-E P2 program received the Secretarial Award as a Model Facility in the DOE Complex and received the Illinois Governor's P2 Award for continuous improvement.

While the overall ANL rating for Science and Technology is "Outstanding" the performance of the Research Program Management goal has been impacted by the delays in hiring a permanent Director for the Chemistry Division. In addition, the Fusion Program needs to focus on improving the quality of research plans, as well as meeting budget and schedule baselines. While improvements have been made with regard to the High Energy Physics Program performance and staffing from FY-02, some additional improvements are still warranted.

The Office of Science (SC) provides about one-half of the DOE-HQ funding to ANL and has consistently recognized the high quality of Science and Technology work at ANL. For FY-03, SC rated ANL as "Outstanding" for Science and Technology work.

### **3.1.2 Part II – Argonne West**

The Office of Nuclear Energy, Science, and Technology (NE) is the second largest DOE program sponsor of work at ANL. Most of this effort is conducted at ANL-W. For FY-03, based on the level of success in constructing and operating nuclear research and related facilities, ANL has been rated as "Outstanding" by NE. All DOE and Congressional commitments were met or exceeded. Under the Advanced Fuel Cycle Initiative, ANL is leading the national program in developing separation technologies and better defining the use of various reactor systems to transmute elements extracted from spent fuel and to validate the physics of transmutation systems. ANL-W continues to be recognized nationally and internationally for their successful production scale treatment of sodium-bonded spent nuclear fuel, high quality pyroprocessing research and development, and for the continuing development and characterization of waste forms. ANL has consistently met cost and schedule milestones for assigned work. The five ANL-W performance measures in this Part covered project cost and schedule compliance, infrastructure performance and other performance expectations. Each of these five performance measures was rated as outstanding. Some specific ANL-W accomplishments during FY-03 include:

- 1) ANL processed more than 3 tonnes of sodium-bonded EBR-II fuel including 479 kg in FY-03 in support of both technology development activities and agreement between DOE and the State of Idaho. Sufficient blanket fuel was treated to support an engineering-scale transuranic recovery demonstration to be performed in FY-04.
- 2) Laboratory scale tests with irradiated materials demonstrated commercial spent oxide fuel could be reduced to a metal form.
- 3) Laboratory scale tests demonstrated the electrochemical recovery of transuranics, including plutonium, from spent fuel using a liquid-cadmium cathode. This technology demonstrates the availability of a proliferation resistant advanced recycle technology.
- 4) ANL has demonstrated the successful operation of an aqueous UREX+ process to separate the main constituents of reactor fuel for re-use or disposal.
- 5) ANL-W successfully removed over 320 tons of material from the Radioisotope Power Source Program at the Mound Laboratory in Ohio to ANL-W by September 30, 2003, well ahead of schedule. A weld development laboratory has been established. Construction of a new facility began during FY-03.
- 6) ANL successfully fabricated first-of-a-kind, non-fertile metallic alloy fuels for actinide transmutation and initiated irradiation testing in the Advanced Test Reactor.

NE has consistently recognized the high quality of Science and Technology work at ANL and believes that the ANL-W management systems are key to supporting the above accomplishments.

### **3.2 Contractor Management**

The Contractor Management Performance Measure focuses on nine activities/objectives that demonstrate a corporate commitment by the University of Chicago to the management of ANL. These are:

- 1) skilled Laboratory leaders
- 2) effective succession planning
- 3) limited acting/interim assignments
- 4) timely strategic guidance
- 5) timely identification and resolution of overall performance issues
- 6) periodic reviews of major programs and operations
- 7) periodic reviews of management systems and processes
- 8) University of Chicago involvement in the self-assessment process
- 9) oversee ANL resolution of important issues

The Contractor Management Performance Measure accounts for 5% of the ANL fee. To achieve an Outstanding rating, the University of Chicago needs to achieve an “acceptable” determination on all nine activities/objectives. “Acceptable” is the highest

rating category for these activities/objectives. The University of Chicago achieved an “acceptable” rating for all nine objectives; therefore, an “Outstanding” rating was assigned by CH-AAO.

The University of Chicago continues to demonstrate the necessary leadership in the operation of the Laboratory. The leadership and level of involvement in ANL displayed by the University of Chicago President, Dr. Don Randel, is notable. The University of Chicago leadership team includes Dr. Thomas Rosenbaum who has supported the development of innovative mechanisms for joint research activities between the University of Chicago and ANL. In addition, the University of Chicago continued with its distinguished peer review process and has reviewed numerous ANL business systems. The University of Chicago representatives meet regularly with the CH-AAO to discuss initiatives and resolve issues. The relationship between DOE and the University of Chicago significantly exceeds the standard of performance. In addition, the University of Chicago Proposal for an NIH funded Regional BioContainment Laboratory at ANL demonstrates the University of Chicago cooperative involvement in the operation of the Laboratory.

The University of Chicago maintains a distinguished Board of Governors including distinguished scientists, including Nobel Laureates; senior managers from industry such as Lucent Technologies and IBM; and former government executives such as the former Chairman of the U. S. Nuclear Regulatory Commission. The Board of Governors continued their involvement in reviews of the ANL Science and Technology programs and the ANL business management systems and processes to assist in the analysis and guidance on the strategic direction of the Laboratory. The Board of Governors also meets regularly with the CH-AAO Area Office Manager to obtain input and provide feedback.

ANL Director, Hermann Grunder, ANL Deputy Director, Dr. Don Joyce, and other senior management positions including the Associate Laboratory Directors and the Chief Operating Officer, continue to demonstrate clear and convincing leadership of the Laboratory. In particular, both the ANL Director and the ANL Deputy Director have shown the necessary competence, aggressiveness, and responsiveness to DOE issues to support an “Outstanding” rating.

All senior ANL management positions are filled. A succession planning process is in place. Succession planning includes the requirement for a Deputy Division Director who can take the leadership position, if necessary.

The University of Chicago self-assessment process continues to improve. The University of Chicago performs a detailed mid-year self-assessment and provides the documented results to CH-AAO at the time of the DOE mid-year assessment. This mid-year self-assessment aids in identifying problems and issues so they can be resolved as early as possible. ANL and the University of Chicago recognize that while the Appendix B expectations are important for measuring performance, these formal expectations do not represent the complete performance picture. The self-assessment results are a clear indication that ANL and the University of Chicago are using the self-assessment process to realistically evaluate their performance and identify areas where they believe enhanced performance is needed for them to become a truly outstanding Laboratory.

### **3.3 Integrated Safety Management (ISM)**

The objective of the ANL Integrated Safety Management System (ISMS) is to prevent or minimize potential adverse effects on workers, the public, property, and the environment as a consequence of Laboratory activities. The ISM Program also ensures that the ANL Environment, Safety, and Health (ES&H) Program is applied effectively by line management as an integral part of the R&D mission of the Laboratory. Integrated Safety Management is one of the four FY-03 Mission Critical Performance Measures that focus on the operation of the Laboratory. ISM performance accounts for 20% of the fee.

The CH-AAO evaluation of the ANL ISM Program is based on a combination of objective data that are directly related to the ISM Performance Measure, as well as a combination of objective and subjective input that comes from a variety of sources, such as CH-AAO ES&H Functional Area Reviews, Facility Representatives' observations, audits, inspections, appraisals, and various operational awareness activities. An important source of information is the ANL FY-03 Self-Assessment and the CH-AAO Manager's overall evaluation of ANL Management responsiveness to ISM issues.

The Integrated Safety Management Performance Measure has been rated "Excellent" by both ANL and CH-AAO. ANL has a validated ISM System in place and CH-AAO believes that ANL continues to maintain and improve an effective ISM program. For FY-03, there have been significant ES&H-related achievements. In particular, CH-AAO notes that through exemplary management leadership and worker involvement, ANL-W made outstanding progress in reducing the "Days Away, Restricted or Transferred" case rate to 0.17, far below the ANL-W goal of 1.18. Other examples of achievements include, a timely response to the May 2002 OA inspection, revision of the ANL-E Title V Air Permit, maintaining DOELAP accreditation for external and internal dosimetry and maintaining excellent communications with CH-AAO. When compared to the other nine Office of Science Laboratories for specific safety metrics, ANL performance in Total Recordable Case Rate for FY03 is 21% below the SC average. ANL performance in Days Away, Restricted, or Transferred Case Rate was just above the SC average for FY03.

The CH-AAO standard of performance for ISM has been and will continue to be very high. ANL performance, when measured against the individual performance expectations in the ANL contract, is rated as "Excellent". No additional factors or mitigations have been identified that would change that rating. Therefore, the overall CH-AAO rating for the ANL FY-03 ISM Program is "Excellent".

CH-AAO believes that ANL continues to make progress toward a mature ISM System. The ANL Management commitment to a safe work environment and an effective partnering relationship with DOE has been evidenced in FY-03 by an improving overall Argonne safety culture, a cooperative process for developing improved performance objectives and measures, productive weekly meetings with CH-AAO, and frequent positive interactions with DOE staff. As a specific example of progress, significant attention was devoted in FY-03 to the Alpha-Gamma Hot Cell Facility to minimize radiation exposures.

The ANL Self-Assessment is generally complete and addresses a broad spectrum of ANL ISM activities, accomplishments, and opportunities for improvement. The quality of the ANL Self-Assessment continues to improve.

CH-AAO concurs that opportunities for improvement, self-identified by ANL/University of Chicago, exist in the areas of 1) improvement in “lagging” divisions’ implementation of ISM, 2) timeliness of reporting for OSHA and ORPS-reportable events, (3) evaluation of ORPS incidents to improve corrective actions and lessons learned, and (4) completion of the Cultural Resource Management Plan.

Line Management responsibilities for environmental protection represents an additional opportunity for improvement. The ANL Self-Assessment did not specifically address a Notice of Violation that was issued in November 2002 for Hazardous Waste Permit Conditions at ANL-W. Stewardship of ecological resources represents an important part of the ANL ISM Program, and CH-AAO expects ANL to make significant progress in this area in FY04. Effective environmental reviews early in the planning process for new construction (including consistent wetland protection considerations) are critical to minimizing impacts to construction project schedules.

There remain significant opportunities for improvement in the radiation protection program. These include intra-Laboratory communications, access to certain areas, “ownership” of certain processes, and internal reviews.

In summary, CH-AAO agrees with the ANL Self-Assessment and final rating of “Excellent”. Overall, CH-AAO is satisfied with the continuing progress being made, the level of cooperation with DOE, and the continued ANL commitment to ISM excellence.

### **3.4 ANL Infrastructure**

ANL Infrastructure includes both Project Management and Facility Management. The ANL Infrastructure Performance Measure represents a total of 10% of the fee. Specific activities associated with the ANL infrastructure management include construction, upgrades, maintenance of facilities and infrastructure, and environmental projects. The CH-AAO evaluation of ANL is supported by a number of reviews, inspections, and audits conducted by CH-AAO during FY-03.

Based on performance expectations, CH-AAO rated the ANL Infrastructure Performance Measure as “Excellent”. ANL successfully completed one major project in FY-03 when measured against CH-AAO approved project baselines. ANL-E execution of the environmental restoration project continues to be a success story within the DOE complex. However, delays in the execution of the Fire Safety Improvements Project – Phase IV and gaps identified in the implementation of the ANL project management system within PFS warrants a rating of “Excellent”. During this performance period the Fire Safety Improvements Project – Phase IV had to be re-baselined because of schedule issues. This project was placed on the SC Watchlist and identified in the report to the Undersecretary as “requiring management attention”. The project was subsequently completed in the first quarter of FY04; however the delays in completing this project and ANL’s response had a negative impact on ANL’s rating in the area of project management. ANL performed a self-assessment for compliance with DOE’s Project Management Manual and identified several gaps in the implementation of ANL’s PM Manual. ANL has identified corrective actions and developed a schedule for implementing both divisional and laboratory-wide actions. During FY04, ANL will be implementing and institutionalizing project management improvements that will ensure the delivery of future projects within approved baselines. CH-AAO believes that the corrective actions underway will correct the project management issues.

Maintaining the ANL infrastructure has consistently been a Laboratory priority for the last 10 years. ANL performance in maintaining the Laboratory infrastructure is considered “above average” when compared to the suite of Office of Science Laboratories and “well above average” when compared to the suite of SC Multi-Program Laboratories. ANL continues to be aggressive in the identification and execution of construction and maintenance activities and projects to ensure that the ANL plant and facilities are ready to serve the needs of the ANL research community.

CH-AAO recognizes the achievements for ANL-E during FY-03. These include:

- 1) ANL has completed a number of shipments of Contact Handled TRU Waste to WIPP with the remainder to be shipped to WIPP prior to end of CY-03. ANL also supported the transfer, characterization and shipment to WIPP of TRU waste from Missouri University Research Reactor (MURR). This meets a commitment to the ANL stakeholders and allows ANL to be the first SC Laboratory to complete its CH TRU Waste shipments to WIPP.
- 2) ANL has completed all of the planned RCRA waste clean-up work for the ANL-E site and received a finding of “No Further Action” from the State of Illinois Environmental protection Agency. ANL is the first SC Multi-Program Laboratory to complete its RCRA waste clean-up program.
- 3) Argonne East has again been recognized for excellence in the area of Pollution Prevention (P2). The ANL-E P2 program received the Secretarial Award as a Model Facility in the DOE Complex and received the Illinois Governor’s P2 Award for continuous improvement.
- 4) ANL completed a detailed self-assessment of ANL’s performance to DOE Manual 413.3 “Project Management for the Acquisition of Capital Assets” and established a centralized Project Management Office to facilitate in the development and execution of all ANL projects, regardless of funding organization.

Facility management includes the overall effectiveness of the site maintenance and energy management programs. FY-03 Facility Management accomplishments include:

- 1) continued decrease in emergency work requests to less than 1% of all work requests
- 2) continued involvement with industry and other governmental entities in facilities operation benchmarking which has resulted in efficiency and cost improvements
- 3) reductions in specific environmental discharges and implementing habitat restoration work activities
- 4) maintaining building occupancy above 98%
- 5) eliminated electrical distribution system interruptions as a result of wildlife incursions

- 6) continued to prepare and manage ESHI issues/deficiencies via the ESH&I Priority process
- 7) Provided technical support to CH-AAO and DOE-HQ to facilitate the awarding of \$2M Delivery Order under the Energy Savings Performance Contract (ESPC) for third-party financing of energy savings retrofits.
- 8) assisted DOE in the negotiation of special rates for electricity (4% lower than regulated rates) and natural gas (\$50K a year in cost avoidance and \$200-300K per year inventory savings)

Based on the above evaluation, CH-AAO has assigned an “Excellent” rating in the Infrastructure Management Critical Performance Measure.

#### **4.0 Evaluation of System Assessment Measures**

The SAMs provide information to support an evaluation of the overarching performance expectation for ANL “General Operations”. This section is organized by using the DOE-HQ Office of Science (SC) Expectations as topical headings. These SC expectations are in place for the SC Management and Operating Contractors. The individual SAMs were grouped according to the appropriate SC expectation. For FY-03, the CH-AAO evaluation of the University of Chicago performance resulted in an overall rating of “Outstanding” for the SAMs.

#### **4.1 Business Management Expectation**

For the ANL business management systems, compliance and internal controls continue to meet DOE requirements. Enhancements in these business systems continue without increasing the overall staff levels or costs. Eight of the ten ANL business management systems were rated as “Outstanding”. One was rated as “Excellent” and one business management system was rated as “Good”. For FY-03, CH-AAO began a change in the management of the ANL contract by focusing on the validation or certification of ANL systems, while reducing the emphasis on approving individual transactions. The Business Management SAMs include:

- 1) Counterintelligence
- 2) Cyber Security
- 3) Diversity
- 4) Financial Management
- 5) Human Resources
- 6) Information Management
- 7) Integrated Safeguards and Security
- 8) Legal Management
- 9) Personal Property
- 10) Procurement

#### **4.1.1 Counterintelligence**

The Counterintelligence SAM includes an evaluation of the effectiveness of the following sub-programs:

- 1) Program Planning and Management
- 2) Foreign Visits and Assignments
- 3) Investigations
- 4) Counter-intelligence Cyber-Security
- 5) Foreign Travel – Briefing/Debriefing
- 6) Analysis and CI Awareness/Training

The Director of the Office of Counter Intelligence at DOE-HQ submitted a written evaluation of ANL performance of FY-03 performance to CH-AAO. This evaluation proposed an “Outstanding” rating and provided a detailed basis for the rating. A Counterintelligence review of ANL-E was conducted by DOE-HQ in September 2003 where it was determined that the Counterintelligence sub-program areas were rated as “Excellent”, the highest rating that can be achieved in this area for this type of review. Some noteworthy practices were identified. The ANL-W Counter-intelligence program was inspected in July 2003 and the overall Program was rated as “Satisfactory” which was the highest rating for this type of review. The ANL Counterintelligence Program includes a full suite of briefings, debriefings, interviews, training, and investigations. CH-AAO rates ANL as “Outstanding” for the Counterintelligence Program.

#### **4.1.2 Cyber-Security**

“Cyber-Security” is associated with maintaining the safe and secure use of information technology at ANL. This includes establishing robust and integrated architectures; developing procedures and conducting appropriate training; and providing detection and remediation systems. Cyber-security is considered a significant part of the effective operation of the science and technology program at ANL.

For the Cyber Security System Assessment Measure, the ANL Cyber Security Program was reviewed by the DOE-OA in April 2003, and received a positive rating of “Effective Performance” (the highest rating). OA identified ANL as a model site with regard to balancing the needs of cyber security with the needs of the ongoing science program. Cyber Security was also included as a topical area in the May 2003 CH Safeguards and Security Inspection of ANL-W. This inspection resulted in no findings and a rating of “Satisfactory”, the highest rating for this inspection. While minor deficiencies were noted in each review/inspection, these did not impact the overall performance of the overall ANL cyber security program. ANL continued to refine their systems that control foreign access to ANL computer systems and introduced additional filters to control information through the world wide web. During FY-03, ANL revised its Cyber Security Program Plan to reflect the dynamic nature of cyber security and actively participated in the development of an SC Cyber Security Program Plan. For Cyber Security, ANL received an “Outstanding” rating.

#### **4.1.3 Diversity**

For the Diversity SAM, ANL obtained an overall rating of “Outstanding” when compared to the Appendix B performance expectations. The number of Women Professionals at ANL achieved the target increases in FY-03 for a rating of “Outstanding”, while the percentage of Historically Underrepresented Minority Professionals at the Laboratory maintained a rating of “Excellent”. ANL Management has established commendable standards for their diversity-related programs for

women and minorities at ANL. Program budgets have been constrained, some downsizing has occurred, and very little recruitment is being conducted by ANL at this time, so the ability to impact women and minority status at ANL has decreased. ANL Management has expressed their belief that continued innovative actions are needed to meet the aggressive goals of their affirmative action program. The creation of the Diversity Council to strategically plan achieving diversity at ANL is especially noteworthy. This level of commitment is one of the key ingredients to effectively reach the FY-2004 Laboratory goals described in the self-assessment. ANL received awards from various sources indicating the Laboratory's support for diversity including the receipt of a DOE 2003 EEO/Diversity Best Practices Award, as well as receiving an "Outstanding" evaluation as a result of the University of Chicago Human Resource Peer Review which included a review of diversity.

#### **4.1.4 Financial Management**

Financial Management includes accounting and budget management. For the Financial Management SAM, ANL has consistently been found to have adequate and effective internal management controls and effective cash and debt management practices to assure the safeguarding of DOE financial assets. Uncosted balances are controlled, vendors are paid on time, audit findings are resolved quickly, and the Laboratory continues to control overhead. Based on the year-end results, all three financial management performance metrics were in the "Outstanding" range. An area of concern, which was identified during the mid-year review, in cost vs. obligations was resolved and adequately addressed in the self-assessment. In addition, the FY-02 Opportunities for Improvement have all been addressed. CH-AAO provided an "Outstanding" rating for this functional area.

#### **4.1.5 Human Resources**

The overall management of Human Resources continues to be rated as "Outstanding" by CH-AAO based on the Appendix B performance expectations. ANL Human Resources maintains the ability to attract and maintain qualified staff. The continued focus of the CH-AAO assessment was placed on a Balanced Scorecard assessment of the ANL performance. All seven Balanced Scorecard measures were achieved. The University of Chicago assembled a Special Advisory Committee that included participants from other national laboratories, as well as business leaders from the private sector to conduct a peer review of the Human resources program at ANL. The Special Advisory Committee determined that the ANL HR business practices were exemplary. ANL negotiated a cost reduction in the prescription drug program and in health care costs by instituting the Coordination of Benefits Program. It is also noteworthy that there have been no work stoppages by any of the ten ANL employee unions in the last ten years. CH-AAO is pleased with the results of the Balanced Scorecard Measures. ANL has agreed to evaluate the results of the 2003 Benefit Value Study during FY-04 to determine if any actions are needed.

#### **4.1.6 Information Management**

Information Management includes the Research Library System, Scientific and Technical Publishing, Records Management, and Telecommunications. The overall management of Information Management is rated as "Outstanding" by CH-AAO based on the Appendix B performance expectations. CH-AAO concurs with the Laboratory's

year-end overall self-assessment rating of “Outstanding”. At mid-year the Laboratory received a rating of “Outstanding” with the understanding that the year-end rating would be contingent upon completion of the Information Architecture Strategic Planning Process.

ANL's strategic planning process for business information and support systems was formalized by the CIO in FY 2003. This process integrates the IT investment activities of the Operations and Scientific divisions. The process establishes management review procedures to meet new business system requirements and identifies adequate resources required to implement the requirements. The implementation of the new process in FY 2003 has resulted in the scientific and Operations organizations acquiring a lab-wide collaboration tool, project management tool and a document management system. In addition, ANL completed several other significant achievements in FY-03 that resulted in improved efficiencies of the IM function. Examples of these achievements include the consolidation of all Operations IT staff, hardware and software within the CIO's office and the creation of a Scientific Computing Solutions Coordinator position to facilitate the coordination of laboratory-wide Operations and Scientific computing solutions.

#### **4.1.7 Integrated Safeguards and Security**

The objective of the Integrated Safeguards and Security Management (ISSM) Program at ANL is to provide the necessary and appropriate protection, at both ANL sites for special nuclear material, information, personnel, and property. As required by DOE Order 470.1, the ANL Safeguards and Security was evaluated for its effectiveness in the following sub-programs:

- 1) program management
- 2) information security
- 3) materials control and accountability
- 4) personnel security

For FY-03, the Integrated Safeguards and Security Management SAM was rated by CH-AAO as “Outstanding”. DOE-CH conducted a Safeguards and Security inspection of ANL-E during the first quarter of FY-03 and rated all topical areas as “Satisfactory”, the highest rating. DOE-HQ OA conducted an inspection of ANL-E in the third quarter of FY-03 and rated all areas as “effective performance”, the highest rating for this type of review. DOE-CH reviewed the ANL-W Safeguards and Security Program in the first quarter of FY-03 and OA reviewed the same programs in the third quarter of FY-03. Both inspections identified findings which were quickly corrected. ANL has completed a number of significant accomplishments in FY-03. The most significant is the continued upgrade of physical protection systems at ANL-W. ANL's Training Approval Program (TAP) was updated and approved this year by the National Nonproliferation Security Institute. ANL continues to demonstrate innovative approaches to meeting the requirements for the Foreign Visits and Assignments Program and the Export Control Program. During FY-03, ANL has also successfully responded to a number of unplanned requests involving safeguards and security issues, conducted refresher briefings, and revised the ANL-E Safeguards and Security Plan. In support of the ISSM, ANL has worked closely with the FBI and the Illinois Emergency Management Agency to provide a Joint Operations Center in support of the U.S. Homeland Security initiative.

#### **4.1.8 Legal Management**

CH-AAO rates the ANL Legal Services as “Outstanding” based on a detailed review by the CH Assistant Chief Counsel’s Office against the Appendix expectations. The review included a validation of the ANL Self-Assessment, a determination that ANL legal systems complied with DOE requirements, and that they were likely to continue to do so. ANL was determined to have quality, timely, and cost effective legal services that protect the interests of the Laboratory and the Government. No significant non-compliances were identified with ANL’s approved Litigation Management Program. ANL’s copyright requests and litigation notifications were appropriate and complete, enabling DOE to provide quick approvals. Numerous efforts were identified to enhance the ANL Legal Department’s protection of Laboratory generated data.

ANL is to be commended on the revisions to their Code of Ethics, Statement of Business Conduct, and the Deferred Compensation Plan. ANL also gave increased consideration to Alternate Dispute Resolution techniques including techniques to minimize the risk of disputes. These litigation avoidance efforts include an ombudsperson, third party hotline service, training, and seminars. The ANL Legal Department is considered to be very well run. Innovation and process improvements are strengths of ANL. These strengths are evidenced by numerous benchmarking efforts, individual and organizational development opportunities and the overall proactive efforts of the ANL Legal Department. CH-AAO is impressed with the benefits that have accrued from the Client Interest Group Initiative and the quarterly meetings between CH Legal Counsel and the ANL Legal Department. Good communication and a close cooperative working relationship between ANL and DOE have helped to meet tight schedules.

#### **4.1.9 Personal Property**

The overall management of the ANL Personal Property System is rated as “Good” by CH-AAO based on the Appendix B performance expectations. The Appendix B expectations for the Personal Property SAM focus on implementing the Balanced Scorecard. In addition, the rating includes the results of two independent reviews that were conducted this year which addressed the property management system at ANL. The first review was conducted by an advisor to the Director of the Office of Science, while the second review was conducted by the DOE-IG. Both reviews of the ANL-E Personal Property System identified issues. Corrective actions are underway. At the mid-year performance period, the Laboratory received a “good/excellent” rating with the comment that the year-end rating would be based on resolution of a number of significant issues. While some issues were addressed, the following issues and our comments concerning the resolution of these issues follow:

- Resolution of the findings identified by the SC review – *Corrective actions were not completed by scheduled dates.*
- Compliance with the DOE Property Management Regulations regarding walk-throughs – *ANL had not implemented the walk-thru process as of 10/01/03. No schedule has been provided.*

- Preparation of a summary assessment that identified the percentage of property inventory (sensitive & equipment items) that is lost or misplaced during FY03. In addition, ANL was to describe their procedure for write-offs – *This information was not provided.*

Communication issues between ANL and CH-AAO have also been identified. Given the above, DOE is only able to support a rating of “Good” for the ANL Personal Property Management function. The issues identified above are considered significant elements for FY-03 in rating the ANL Property Management System. It appears that ANL continues to work toward meeting DOE’s property-management requirements. No specific ANL-W issues were identified.

#### **4.1.10 Procurement**

The overall management of Procurement is rated as “Excellent” by CH-AAO based on the Appendix B performance expectations. The rating focuses on the successful implementation of a Balanced Scorecard and the ANL Self-Assessment that was consistent with the system indicators as agreed to between CH-AAO and ANL for FY-03. Overall, ANL scored very high on the Balanced Scorecard. The ANL Procurement Department is well managed. Both the ANL AMOS and PARIS procurement systems support the effectiveness and efficiency of ANL procurement operations. However, recent audits (Procurement Evaluation and Review Team (PERT), Office of Science, and DOE Office of Inspector General), raised important issues relating to ANL competition policies and practices.

Further, the DOE HQ Office of Science performed a review of the ANL Property Management System, which surfaced issues concerning oversight and management of ANL subcontractor-held property. As such, ANL Procurement policies and practices may not adequately account for subcontractor-held property. As of this report, policy revisions were made in FY-04.

CH-AAO and ANL staff have been working together to address and resolve the findings raised by the different audits/reviews. CH-AAO fully expects that the issues will be adequately resolved in early FY-04.

#### **4.2 Stakeholder Relations Expectation**

Stakeholder Relation includes the following two SAMS:

- 1) Communications and Trust
- 2) Technology Transfer

##### **4.2.1 Communications and Trust**

Communications and Trust performance is critical to the success of all DOE National Laboratories. “Trust” is a measurement of the effectiveness of the relationship between the Laboratory and the local community, including key stakeholders. “Communications” is the foundation for the trust relationship and also measures the interactions between DOE and ANL, as well as, the University of Chicago. Communications and Trust are areas where the University of Chicago/ANL has consistently demonstrated a high level of performance. While CH-AAO established

some objective metrics for Communications and Trust within Appendix B of the contract, subjective performance evaluations are unavoidable and viewed as an important element of the rating.

Communications and Trust was rated as “Outstanding” by CH-AAO for FY-03, based on the overall ANL performance, as measured by the objective and subjective information. ANL continues to work cooperatively with CH-AAO in support of the Community Leaders Round Table and other outreach programs. A cooperative relationship is clearly evidenced in the interactions between ANL Management and DOE (both the CH-AAO Office and DOE-HQ). In addition, the communications between the University of Chicago and DOE have been notable.

ANL Management continues to place a priority on the establishment and maintenance of a very positive relationship between ANL and the local communities, including key stakeholders. In addition, the relationship between the University of Chicago/ANL and the State of Illinois has been exceptional. ANL acquired \$36M from the State of Illinois for constructing the Center for Nano-Scale Materials Building at the APS. During FY-03, the University of Chicago hired a new Director of Communications and Public Affairs and she has taken several initiatives that provide the necessary leadership and direction for communications activities across the Laboratory.

#### **4.2.2 Technology Transfer**

With respect to the ANL Technology Transfer Program, which includes the Work-for-Others Program, ANL maintains a strong relationship with “other than DOE” sponsors. ANL has placed an emphasis on minimizing processing cycle times. Customer satisfaction is high and repeat work is common. The University of Chicago and ANL management have increased their emphasis on ensuring that useful technologies are identified and available to US industry. CH-AAO rates the ANL Technology Transfer as “Outstanding”.

### **5.0 Other Issues/Relevant Factors/Opportunities for Improvement**

For FY-03, all but three of the final CH-AAO performance ratings were the same as those proposed by the University of Chicago in the University of Chicago Self-Assessment. This consistency between DOE identifying expectations and ANL/University of Chicago understanding and satisfying those expectations continues to improve and reflects the following factors:

- 1) improved overall University of Chicago/ANL performance.
- 2) increased ANL and University of Chicago management attention to ANL issues (both self-identified and those identified by DOE).
- 3) improved quality and objectivity in the University of Chicago/ANL end-of-year self-assessment.
- 4) development of a University of Chicago mid-year self-assessment to identify issues as early as possible and to take appropriate corrective action.
- 5) improved CH-AAO mid-year evaluations of ANL performance. This includes identification of issues and a more thorough review of the University of Chicago/ANL mid-year self-assessment.

For those issues that remain from the FY-03 CH-AAO evaluation, discussions have been conducted between CH-AAO and ANL and corrective actions are underway by ANL.

#### **6.0 Fee Determination:**

For the Mission Critical Performance Measures, ANL achieved an “Outstanding” rating for the Science and Technology Performance Measure (both ANL-E and ANL-W), and the Contractor Management Performance Measure. The Integrated Safety Management System Performance Measure and the Infrastructure Performance Measure were rated as “Excellent”. Therefore, the summary level Mission Critical Operations Performance Measures were rated as “Excellent”. Attachment E uses the performance ratings to calculate a total earned FY-03 fee of \$ 2,9075,575. The final rating for General Operations SAMs is an “Outstanding”. No fee is tied to the General Operations SAM rating.

**TABLE 1  
SUMMARY OF FY- 2003  
PERFORMANCE MEASURE RATINGS**

**Section I - Science and Technology**

<b>Appendix B Number</b>	<b>Performance/ Functional Area</b>	<b>ANL Self-Assessment Ratings Based on Appendix B Performance Expectations</b>	<b>CH-AAO Rating Based on Appendix B Performance Expectations</b>
I.1	Science and Technology	Outstanding	Outstanding

**Section II - Mission Critical Operations**

<b>Appendix B Number</b>	<b>Performance/ Functional Area</b>	<b>ANL Self-Assessment Ratings Based on Appendix B Performance Expectations</b>	<b>CH-AAO Rating Based on Appendix B Performance Expectations</b>
I.1	ANL-West Management	Outstanding	Outstanding
I.2	Contractor Management	Outstanding	Outstanding
I.3a	Integrated Safety Management	Excellent	Excellent
I.3b	Infrastructure	Outstanding	Excellent

**Table 2**  
**Summary of FY-2003**  
**System Assessment Measure Ratings**

**Section III - General Operations**

<b>Appendix B Number</b>	<b>Functional Area</b>	<b>ANL Self Assessment Rating Based on Appendix B Performance Expectations</b>	<b>CH-AAO Rating Based on Appendix B Performance Expectations</b>
<b>II.1 Business Management</b>			
II.1.a	Counterintelligence	Outstanding	Outstanding
II.1.b	Cyber Security	Outstanding	Outstanding
II.1.c	Diversity	Outstanding	Outstanding
II.1.d	Financial Management	Outstanding	Outstanding
II.1.e	Human Resources	Outstanding	Outstanding
II.1.f	Information Management	Outstanding	Outstanding
II.1.g	Integrated Safeguards and Security	Outstanding	Outstanding
II.1.h	Legal Management	Outstanding	Outstanding
II.1.i	Personnel Property	Excellent	Good
II.1.j	Procurement	Outstanding	Excellent
<b>II.2 Stakeholder Relations</b>			
II.2.a	Communications and Trust	Outstanding	Outstanding
II.2.b	Technology Transfer	Outstanding	Outstanding
<b>Summary for Operations</b>		<b>Outstanding</b>	<b>Outstanding</b>

*ANL, through their self-assessment process determined that a weighted average of all the System Assessment Measures would be an "Outstanding" rating. CH-AAO has determined that an appropriate weighted average is an "Outstanding".*

## **7.0 References**

Appendix B “Performance Criteria and measures” of the Contract between the University of Chicago and DOE for the Management and Operation of Argonne National Laboratory (W-31-109-ENG-38)

The University of Chicago “Argonne National Laboratory Self-Assessment of Operations Performance” dated November 30, 2003.

The University of Chicago “Mid-Year Self-Assessment of Operations Performance” dated May 15, 2003

**Attachment A**  
**Evaluation Process**

## Attachment A Evaluation Process

### 1.0 Background:

On May 24, 1995, the University of Chicago and the U.S. Department of Energy (DOE) established a new performance based contract for the management and operation of Argonne National Laboratory (ANL). Effective October 1, 1999, the performance-based Contract between the United States DOE and the University of Chicago was renewed for a second 5-year term. The contract includes the use of performance expectations agreed to each year in advance by DOE and the University of Chicago, as standards against which ANL's scientific/technical, managerial, and operational performance are evaluated. The University of Chicago's performance is evaluated and rated each year, at the end of the year, against the agreed-to performance expectations. While the selected performance expectations are considered critical for measuring ANL's success, they are not viewed as a comprehensive basis for evaluating ANL performance. Peer reviews, audits, appraisals, and other reviews conducted during the evaluation period are also considered.

An important part of the performance-based contract is the use of a contractor self-assessment. Each year, the University of Chicago is required to perform a formal, comprehensive self-assessment of their overall performance. This self-assessment examines the University of Chicago performance against each of the performance expectations and includes other factors that the University of Chicago believes are important to the success of the ANL mission. Finally, DOE conducts an evaluation of the University of Chicago's performance. This evaluation is based on the CH-AAO review of the University of Chicago Self-Assessment, the University of Chicago's success in meeting the contractual performance expectations, as well as peer reviews, audits, appraisals, and other reviews conducted by DOE and others during the evaluation period. The CH-AAO evaluation determines the fee to be awarded by DOE to the University of Chicago under the contract.

### 2.0 Process:

Each year, prior to the beginning of the fiscal year, ANL performance expectations are negotiated between the University of Chicago and CH-AAO. The ANL contract is then modified each year to include the negotiated performance expectations. For FY-03, a total of seventeen functional areas were selected for measuring ANL performance. ANL performance is divided into two distinct categories. The first category, Performance Measures is fee-bearing. The second category, System Assessment Measures is not fee-bearing. The Performance Measures are sub-divided into Science and Technology and Mission Critical Operations. The second category, System Assessment Measures is also known as General Operations and is subdivided into Business Management and Stakeholder Relations. Weighting factors are also agreed to for each of the functional areas prior to the beginning of the fiscal year.

For the CH-AAO evaluation of the ANL "Operations" performance, a three-step process is performed annually at the end of the evaluation period. These steps are:

- 1) The University of Chicago evaluates their own performance against agreed to expectations for the Performance Measures and System Assessment Measures.
- 2) The University of Chicago performs a self-assessment of their overall performance. This self-assessment is based on their performance against the Performance Measures and System Assessment Measures evaluated under step #1 above and other relevant factors that they believe directly affect performance.
- 3) CH-AAO conducts an evaluation of the University of Chicago performance including an evaluation of the University of Chicago Self-Assessment. CH-AAO validates the University of Chicago performance against the contractual expectations (Performance Measures and System Assessment Measures and identifies and considers other relevant factors that directly influence the evaluation of University of Chicago performance.

If there are disagreements between CH-AAO and University of Chicago on individual ratings, then CH-AAO meets with the University of Chicago/ANL staff to determine if additional information is available that should be considered in the final evaluation and rating. Several sessions were conducted at mid-year based on the CH-AAO mid-year evaluation and the end of the FY-03 evaluation period.

For the DOE-HQ evaluation of the ANL "Science and Technology" performance, a four-step process is performed annually. The ANL-E and ANL-W Science and Technology Programs are evaluated separately. These steps are conducted at the end of each evaluation period:

- 1) CH-AAO requests and receives appraisals from the DOE-HQ Program Organizations that fund significant Science and Technology work at ANL.
- 2) CH-AAO develops a single rating for the ANL-E Science and Technology Program based on the evaluations that were received from the DOE-HQ Program Offices. A final rating for the ANL-E Science and Technology Program is developed by weighting each DOE-HQ Program rating by the level of funding provided by that Program Office.
- 3) A separate rating is developed for ANL-W based on the sponsor's evaluation of the Science and Technology work performed at ANL-W. A final rating for the ANL-W Science and Technology Program is developed by weighting each DOE-HQ Program rating by the level of funding provided by that Program Office.
- 4) CH-AAO prepares an attachment to this Report that summarizes the ANL-E and ANL-W Science and Technology performance rating.

### 3.0 Data Sources for CH-AAO Evaluation:

The University of Chicago Self-Assessment and the individual ratings of ANL performance against the Performance Measures and System Assessment Measures are key data to the CH-AAO evaluation. Validation of the performance measures data is also performed by CH-AAO. For the performance evaluations in the areas of operations, input comes from

the CH-AAO staff, CH functional divisions and offices that support CH-AAO in oversight of particular laboratory functions, as well as from HQ functional units.

CH-AAO has primary responsibility for evaluating the University of Chicago performance under the Mission Critical Operations and General Operations categories, with the exception of Science and Technology, The DOE-HQ Program Offices have primary responsibility for evaluating the University of Chicago performance under the Science and Technology category. Table 1 and Table 2 of the CH-AAO Annual Evaluation Report list all of the functional areas and the adjectival ratings assigned by both CH-AAO and University of Chicago for FY-03. CH-AAO has responsibility for preparing the Annual Evaluation Report and determining the total fee to be awarded based on the individual ratings.

Input to the Science and Technology summary appraisal was solicited from sources having a significant interface with the University of Chicago and ANL. Input from DOE-HQ Program Offices has been solicited by CH-AAO for providing feedback and rating ANL programs. Where possible, consolidated input for a single program was requested at the DOE Assistant Secretarial level. The University of Chicago also conducts peer reviews for Science and Technology and this information is made available to DOE-HQ.

#### 4.0 Rating System

For FY-03, adjectival ratings were:

Outstanding	Significantly exceeds the standard of performance; achieves noteworthy results.
Excellent	Exceeds the standard of performance. Although there may be room for improvement in some elements, better performance in all other elements more than offset this.
Good	Meets the standard of performance. Deficiencies do not substantively affect performance.
Marginal	Below the standard of performance; deficiencies are serious and may affect overall results: management attention and corrective action are required.
Unsatisfactory	Significantly below the standard of performance; deficiencies are serious, may affect overall results, and urgently require senior management attention.

The Standard of Performance is that which is reasonably expected of Management and Operating Contractors on the basis of applicable orders and regulations and on observations of the performance of comparable R&D organizations. It includes, for example, making effective use of sound management judgment, administrative, and business practices within existing funding constraints.

**Attachment B**  
**DOE-HQ Program Office Evaluations**

## **Attachment C**

### **List of University of Chicago Peer Review Reports**

*University of Chicago Reviews for ANL Conducted in FY-2003*

<b><u>Programmatic Reviews</u></b>
Materials Science Division
Advanced Photon Source
Environmental Assessment Division
<b><u>Business Systems</u></b>
Division of Educational Programs

**Attachment D**

**Selected Performance Reports and Comments**

**Attachment E**  
**Fee Calculations**

**Attachment E  
Fee Calculation**

A. Science and Technology Part I – Argonne East (55% of the fee)

Two DOE-HQ Program Offices (sponsors) responded to a written request for an annual rating of ANL for the Science and Technology work that they sponsored at ANL-E. The Final report reflects the ratings assigned by the Program sponsors.

<u>Sponsor</u>	<u>FY-03 Program Sponsor Funding</u>	<u>Rating</u>	<u>Points</u>
Office of Science	\$ 240M	Outstanding	960
Office of Nuclear Energy, Science, and Technology	\$ 70M	Outstanding	280
Total Funding	\$ 310 M		
Total Points 960			1240

Final weighted average is:  $1240/310 = 4.00$  (Outstanding)

The Final weighted average uses the individual Program funding level as a weighting factor. The funding amounts were taken from the FY-03 ANL Institutional Plan. The funding numbers are rounded to the nearest \$5M. Only those DOE-HQ Program Offices that provide more than \$5M per year were solicited for ratings. Only DOE-HQ Office of Science provided an evaluation for ANL-E. The points column in the above table was calculated by multiplying the individual Program sponsor funding level by a numerical rating assigned to the rating where:

Outstanding = 4; Excellent = 3; Good = 2; Marginal = 1; Unsatisfactory = 0

B. Science and Technology Part II - Argonne West (10% of fee)

The Science and Technology Program at ANL-W is evaluated separately. The Office of Nuclear Energy, Science, and Technology (NE) is the primary sponsor for ANL-W. The NE rating for ANL is an “Outstanding”. CH-AAO agrees with this rating.

C. Fee Calculation (Using the performance ratings)

Outstanding for Science and Technology (ANL-E) (55%)	\$ 1,648,625.00
Outstanding for Science and Technology (ANL-W) (10%)	\$ 299,750.00
Outstanding for Contractor Management (5%)	\$ 149,875.00
Excellent for Integrated Safety Management (20%)	\$ 539,550.00
Excellent for Infrastructure (10%)	\$ 269,775.00

Total earned fee for FY-03 is: \$ 2,907,575.00

Attachment E  
System Assessment Measure Rating

Attachment E Fee Calculation - System Assessment Measures

<u>Number</u>	<u>Functional Area</u>	<u>Rating</u>	<u>Weight</u>	<u>Score</u>
Business Management				
3.a	Counterintelligence	4	0.06	0.24
3.b	Cyber Security	4	0.08	0.32
3.c	Diversity	4	0.1	0.4
3.d	Financial Management	4	0.1	0.4
3.e	Human Resources	4	0.1	0.4
3.f	Information Management	4	0.04	0.16
3.g	Integrated Safeguards and Security	4	0.1	0.4
3.h	Legal Management	4	0.06	0.24
3.j	Personal property	2	0.1	0.2
3.k	Procurement	3	0.1	0.3
Stakeholder Relations				
4.a	Communications and Trust	4	0.08	0.32
4.b	Technology Transfer	4	0.08	0.32
	Total	45	1.0	3.70
Final Score is				3.70

The final rating for the System Assessment Measures (General Operations) is: 3.70 for an “Outstanding” rating.

where:

Outstanding = 4  
 Excellent = 3  
 Good = 2  
 Marginal = 1  
 Unsatisfactory = 0