

Annual Assessment Report
Of
Argonne National Laboratory
For The Period
October 1, 2000 through September 30, 2001
(Fiscal Year 2001)

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 perform an annual performance evaluation of the University of Chicago for that contract work. The annual payment of fee to the University of Chicago is contingent on the results of the annual DOE 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-01, the Science and Technology Performance Measure and three Critical Operations Performance Measures are fee-bearing. The contract also contains sixteen System Assessment Measures (SAMs) for the General Operations of ANL. These sixteen SAMs are not fee-bearing.

For FY-01, the University of Chicago/ANL Science and Technology performance was rated as "Outstanding" (the highest rating). For the "Critical Operations" Performance Measures, the University of Chicago/ANL received an "Outstanding" for Leadership, an "Excellent" rating (the second highest grade) for Environment, Safety, and Health, and an "Outstanding" for Infrastructure. For the General Operations SAMs, that do not directly impact fee, the University of Chicago received an overall "Outstanding" rating.

Based on the FY-01 fee calculations, the University of Chicago earned \$2,776,416.00 of a total possible \$2,832,500.00 for the management and operation of Argonne National Laboratory.

2.0 Background:

Beginning in June 1995, the DOE has had 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 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 through September 2004.

In accordance with the terms of the ANL contract, the CH-AAO assesses the performance of the University of Chicago on an annual basis. For FY-01, Appendix B of the ANL contract includes two performance categories. These two categories are Critical Operations Performance Measures and General Operations System Assessment Measures. Both of these performance categories are evaluated separately using a pre-defined process. This process includes an evaluation by the CH-AAO and the assignment of an adjectival rating. The first performance category, "Performance Measures", is tied directly to the annual fee earned by the University of Chicago. For FY-01, there are four Performance Measures, which include a Performance Measure for Science and Technology and three Critical Operations Performance Measures. The second performance category, "Systems Assessment Measures" is assessed and rated by CH-AAO however, the results are not tied directly to fee. The sixteen SAMs represent an evaluation of the "General Operations" of the ANL facility.

For FY-01, the Performance Measures that directly impact fee include four areas: 1) Science and Technology, 2) Leadership, 3) Environment, Safety, and Health, and 4) Infrastructure. The latter three performance measures are considered Critical Operations Performance Measures because they are deemed to have the most significant impact on the overall operation of ANL. For FY-01 a change was made in the Infrastructure Performance Measure by sub-dividing Infrastructure into three parts and evaluating them separately. The Infrastructure Performance Measure includes an "Infrastructure ANL-E", an "Infrastructure ANL-W" and a "Cyber-Security" section. For the sixteen SAMs, CH-AAO provides performance expectations at the beginning of the year and monitors ANL performance during the year. At the end of the fiscal year, CH-AAO assesses ANL performance against those expectations using the data collected during the fiscal year.

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. 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 significant component of the CH-AAO annual performance evaluation is a separate assessment of the science and technology work by the sponsoring DOE Headquarters (HQ) Program Offices. The DOE-HQ Program sponsor evaluation includes the results of the University of Chicago Science and Technology self-assessment.

For each of the three Critical Operations Performance Measures and the sixteen General Operations SAMs, the University of Chicago provides a self-assessment to CH-AAO as input to the CH-AAO annual performance evaluation. The self-assessment addresses specific topics outlined in individual understandings between ANL and CH-AAO functional counterparts. The CH-AAO assessment of each area consists of objective ratings of the Contract performance expectations for each area and descriptions of more 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 University of Chicago Self-Assessment is included as a Reference to this report.

For the FY-01 Performance Measures, ANL achieved a rating of "Outstanding" (the highest rating possible) for Science and Technology. For the Critical Operations Performance Measures, ANL received an "Outstanding" rating for Leadership, an "Excellent" rating (the second highest rating possible) for Environment, Safety and Health, and an "Outstanding" rating in Infrastructure. An "Outstanding" rating means that ANL significantly exceeds the standard of performance; that noteworthy results have been achieved and; very difficult tasks are accomplished in a timely manner. 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. The overall process for evaluating ANL performance and determining the annual fee is described in Attachment A to this report.

While the sixteen SAMs are evaluated separately, a summary assessment and rating is also developed. The summary assessment of the SAMs performed by CH-AAO determined that an "Outstanding" rating means that ANL's overall performance in General Operations exceeds the standard of performance established for management and operating contractors for multi-purpose laboratories. For some Performance Measures and SAMs, there remains room for improvement but, in general, better performance in other areas more than offset these areas in need of improvement.

3.0 Evaluation of Performance Measures

Table 1 is a summary of the four FY-01 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 ANL for their performance in the area of Science and Technology. This critical area represents 55% of the total fee for FY-01. The Science and Technology Performance Measure is based on the following DOE-HQ evaluations:

- Office of Science and Technology evaluation dated February 4, 2002
- Office of Nuclear Energy, Science and Technology evaluation, dated January 16, 2002.
- Energy Efficiency and Renewable Energy, dated December 21, 2001.
- Defense Nuclear Nonproliferation, dated December 20, 2001

These evaluations are included as Attachment B to this report. The highly regarded peer review process conducted by the University of Chicago during FY-01 supports this overall rating of "Outstanding" in Science and Technology. A list of the Peer Review Reports is included as Attachment C. Some specific ANL accomplishments during FY-01 include:

- 1) Operation of the Advanced Photon Source (APS) continues to exceed expectations by implementing a "top-up" mode to ensure constant beam current and increased flexibility and improved beam stability. At the same time, the APS has increased the Storage Ring beam brilliance by reducing the emittance by a factor of two.
- 2) Operation of the Intense Pulsed Neutron Source continues with very high reliability and availability of service to users. The IPNS Facility installed new hardware and software for data collection and analysis while operating at levels reaching 99.7% efficiency and at a current exceeding 16 microamps.
- 3) Operation of the ATLAS Facility continues to be very successful. The ATLAS Facility experimenters implemented a new detection system to measure extremely small concentrations of Argon-39. This isotope can be used to study processes that occur on a very short timeframe.

- 4) ANL received an R&D 100 award for development of a catalyst for fuel cells that can help to bring the fuel cell technology to the marketplace.
- 5) ANL has developed a small-angle x-ray scattering detector that can be used to measure soot formation in combustion engines.

The Office of Science (SC) provides over 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-01, SC has rated ANL as "Outstanding" for Science and Technology work. The level of success in constructing and operating nuclear research and related facilities has been rated overall as "Outstanding" by the Office of Nuclear Energy, Science, and Technology. ANL also received an "Outstanding" from the Office of Energy Efficiency and Renewable Energy (EE) with special emphasis on the EE programs for automotive improvements. The Office of Arms Control and Nonproliferation (NN) assigned an "Outstanding" rating to ANL for the work performed by ANL in reduced enrichment for research and test reactors program and for the spent fuel disposition program.

Accompanying the ratings, the program sponsors commented on areas for possible continuing improvement in FY-01. The University of Chicago and ANL should review the attached program sponsor comments in Attachment B to ensure that the issues are understood and appropriate actions can be taken. In particular, these comments include:

Based on a variety of reviews conducted over FY-01, the Office of Nuclear Energy, Science, and Technology raised some concerns for the ANL-W lessons learned program, root cause analysis, ANL-W corrective action plans, and ANL-W emergency planning. These concerns impacted individual ratings but not their overall "Outstanding" rating.

CH-AAO accepts the evaluations of the DOE-HQ Program Sponsors. No program or operational issues were considered significant enough by the CH-AAO to initiate discussions with DOE-HQ to effect any changes in the rating for Science and Technology.

3.2 Leadership

The Leadership Performance Measure focuses on six objectives:

- 1) skilled Laboratory leaders
- 2) effective succession planning
- 3) enhanced ANL business operations
- 4) University of Chicago involvement in the self-assessment process
- 5) efficient operations resulting from management assessments and initiatives
- 6) strategic guidance in key ANL mission areas

There is also a separate Leadership category, Section 4.1 of this report, related to specific SAMs that discuss the management of staff resources.

The Leadership Performance Measure accounts for 8% of the ANL fee. The Leadership

Performance Measure was modified for FY-01 with the addition of an objective for enhanced University of Chicago involvement in the ANL self-assessment process. An "Outstanding" rating requires an acceptable rating against all six objectives. CH-AAO believes that an "Outstanding" rating is appropriate.

ANL and the University of Chicago successfully achieved all of the six required Leadership objectives. The ANL Director and ANL Deputy Director have demonstrated clear and convincing leadership of the Laboratory. Both individuals have shown the necessary competence, aggressiveness and responsiveness to DOE issues to support an "Outstanding" rating. Succession planning at ANL has been in place for several years. This process allowed the hiring of a Chief Operating Officer, a key position for ANL, to be expedited.

The University of Chicago involvement in the operation of the Laboratory has seen a number of notable improvements, such as the development of additional 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 reviewed numerous ANL business systems. During FY-01, this included a peer review of the Cyber-Security Systems at ANL. Another important Leadership achievement was the issuance of a quality self-assessment at mid-year that required only up-dating and minor improvements by the end of the performance period.

The University of Chicago maintains a distinguished Board of Governors including a Nobel Laureate, as well as, senior managers from Lucent Technologies and IBM. The Scientific and Technical Advisory Committee (STAC) of the Board of Governors continued their involvement in reviews of the ANL Science and Technology programs to ensure that they supported the strategic direction of the Laboratory.

3.3 Environment, Safety, and Health (ES&H)

The objective of the ES&H Program at ANL is to maintain the effectiveness of the ANL Integrated Safety Management System (ISMS). The goal of ISMS is to prevent injuries, fatalities, and incidents of illness by eliminating worker exposure to hazards and ensuring environmental quality. ES&H is one of the three FY-01 Critical Operations Performance Measures. Appendix B also includes ES&H as a System Assessment Measure. The CH-AAO rating for ANL for the FY-01 ES&H Program is an "Excellent". ES&H performance accounts for 20% of the fee.

Based solely on an evaluation of the expectations in Appendix B of the ANL contract, ANL would receive an "Outstanding" rating. Based on the ANL self-assessment results, ANL modified this rating to an "Excellent". While the Appendix B expectations are important for measuring ES&H performance, these expectations do not represent the complete ES&H performance picture. Based on the identification of several opportunities for improvement, CH-AAO concurs with the ANL self-assessment that an "Excellent" rating is a more appropriate overall rating for the ES&H area.

The ANL Self-Assessment addressed a spectrum of ANL ES&H activities, and resulted in the assignment of "Excellent" ratings to the ES&H portions of both Critical Operations and General Operations. These ratings are based on objective data related to Performance Measures and System Assessment Measures, and subjective input from

significant accomplishments, opportunities for improvement, appraisal results, etc.

To identify other factors that impacted the overall ANL ES&H rating, CH-AAO reviewed the ANL self-assessment for the following:

- a. Any significant issues that ANL has not identified in their self-assessment that would support an increase or reduction in their final rating for the assigned functional area.
- b. Any 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.
- c. An analysis of self-assessment quality and completeness.

The quality of the ANL self-assessment has improved significantly from FY-00. ANL management's commitment to a safe work environment and an effective partnering relationship with DOE has been evidenced in FY01 by:

- 1) an improving overall Argonne safety culture
- 2) a cooperative process for developing improved performance objectives and measures
- 3) productive weekly meetings with CH-AAO
- 4) frequent positive interactions with DOE staff

Overall, CH-AAO believes that significant progress has been made in FY01 toward a commitment to excellence in environment, safety and health. It should be noted that ANL ES&H performance against the quantitative ES&H expectations in Appendix B has been commendable. The ES&H Performance Measures include 6 expectations. ANL achieved an "Outstanding" rating in five of them.

The AAO assessment of ANL's ES&H performance for FY01 is based on information collected from the AAO ES&H Program Reviews, Facility Representatives' observations, investigations of incidents and accidents, and various operational awareness activities, as well as a careful review of ANL's Self Assessment of Operations Performance. In addition, information from external reviews and actions (e.g., regulatory inspections, DOE Program Office, and DOE independent oversight reviews) has been considered.

The ANL EQO Division completed independent ISM assessments of every ANL Division. This was an excellent effort providing valuable confirmation that the ANL ISM program is being implemented successfully across all Divisions of the Laboratory. DOE participated in this activity as an observer. A roll-up of the Division assessments identified no significant Lab-wide issues.

The ANL PAAA program, identified as an FY-00 issue, continues to improve. Supporting evidence includes the Laboratory's investigation of and corrective actions related to the Cyclotron radon release incident and the results of the August 2001 AAO PAAA Program Review. Some improvements are still needed in identification and screening of potential PAAA issues and management and independent assessments.

The most significant weaknesses concern QA program non-compliances, internal assessment program weaknesses, and emergency management program weaknesses.

Improvements in these areas will continue to be of significant interest to DOE in FY02.

In summary, CH-AAO agrees with the ANL self-assessment and final rating of "Excellent". Overall CH-AAO is very satisfied with the overall progress being made, the level of cooperation with DOE and the ANL commitment to ES&H excellence. CH-AAO believes that an "Excellent" rating is appropriate because it considers both the significant ANL ES&H accomplishments and the ES&H issues during FY-01.

3.4 Infrastructure

For FY-01 a change was made in the Infrastructure Performance Measure by subdividing the Infrastructure Performance Measure into three parts and evaluating them separately. The Infrastructure Performance Measure represents a total of 17% of the fee and includes an "ANL-E Infrastructure", an "ANL-W Infrastructure" and a "Cyber-Security" section. Infrastructure includes the construction, upgrades, and maintenance of facilities and infrastructure, environmental projects, as well as, other work that is managed as a project. These projects directly support the ANL mission. CH-AAO rates ANL as "Outstanding" for the ANL-E Infrastructure, an "Outstanding" for the ANL-W Infrastructure and an "Excellent" for Cyber-security.

Based on performance expectations, the ANL-E Infrastructure portion of the Performance Measure was rated by ANL and by CH-AAO as "Outstanding". No significant issues were identified in the ANL self-assessment or other data analyzed by CH-AAO to change that conclusion. The ANL-E Infrastructure performance accounts for 5% of the FY-01 fee. This performance measure includes ANL-E activities associated with the environmental management. ANL continues to be very aggressive in the achievement of cost and schedule baselines for construction and maintenance projects. Specific credit is given to Rudy Bouie, the ANL Chief Operating Officer, for the overall condition of the ANL infrastructure and the high Infrastructure performance ratings. Mr. Bouie worked tirelessly for over 30 years, until his untimely death in FY-01, to ensure that the ANL plant and facilities were ready to serve the needs of the ANL research community.

CH-AAO recognizes the achievements for ANL-E during FY-01. These include:

- 1) Completed the Electrical Systems Upgrade, Phase III
- 2) Established the capability to characterize contact handled TRU waste for shipment to WIPP
- 3) Received a White House Closing the Circle Award for the Central Supply Facility
- 4) Received a DOE Pollution Prevention Award for the ANL Affirmative Procurement Program
- 5) Awarded the "Best in Midwest" for its RCRA clean-up program from the US EPA Region V
- 6) An outside audit of ANL Steam Plant operations identified ANL as above average in a benchmarking study

The environmental management work at ANL-E continues to be highly rated. ANL is working closely with CH-AAO to proceed aggressively to restore those portions of the ANL-E site where approved restoration plans are in place. It should be noted that the

Decontamination and Decommissioning work at ANL-E was not funded in FY-02 due to changes in the DOE-HQ Environmental Management funding priorities.

The ANL-W Infrastructure activities include the EBR-II Closure Project and the Spent Fuel Processing Project sponsored by the Office of Nuclear Energy, Science, and Technology. This is the first year that these activities were managed and evaluated as projects. ANL has instituted a workable project management system that includes approved baselines and an earned value system. Project reports have been timely and informative. Overall communications between ANL and DOE have improved significantly. Both of these projects exceeded the baseline goals established for them in FY-01. While some weaknesses were identified in the overall management of the operations associated with this work, ANL management has aggressively sought and implemented solutions, so that these weaknesses did not impact the ability of the Lab to accomplish the work successfully. Therefore, the weaknesses were not viewed as significant. Overall, the ANL-W Infrastructure activities were rated as "Outstanding".

In previous evaluations, the Infrastructure Cyber-security work was rated as part of information management SAM, because it was part of the unclassified computer security system. In FY-01 cyber security was elevated to the Infrastructure Performance Measure to ensure adequate attention is paid to resolving issues in this area. These issues represented vulnerabilities within the ANL computer systems. ANL has developed a Cyber Security Program Plan (CSPP) to address these issues and vulnerabilities. ANL continues to follow the key elements of their plan. During FY-01, the University of Chicago/ANL took the initiative to perform a peer review of their cyber-security system. This review was chaired by a representative from the University of Chicago and included participants from other DOE Laboratories as well as industry. DOE was invited as observers. Very positive results and a number of suggestions for improvements were identified. During FY-01, ANL has had few serious intrusions in their computer systems. Cyber-security is considered a significant aspect to the effective operation of the science and technology program at ANL. While ANL achieved the individual performance expectations for this SAM, ANL reduced their rating to an "Excellent" as part of their management self-assessment to reflect the remaining needs and issues in cyber-security. Based on the significance of the issues that have been identified and the steady progress that ANL has made in correcting these issues, CH-AAO agrees with the "Excellent" rating.

CH-AAO agrees with the overall "Outstanding" rating in the Infrastructure Critical Operations Performance Measure and has seen a continuously improving process for the management of the facility infrastructure and cyber-security. A number of reviews, inspections, and audits were conducted during FY-01 that support this rating for ANL.

4.0 Evaluation of System Assessment Measures

For FY-01, the University of Chicago/ANL self-assessment indicated that their overall rating for the General Operations SAMs should be an "Outstanding". The CH-AAO assessment of University of Chicago/ANL performance agrees that an overall rating of "Outstanding" is appropriate for the SAMs. There was one SAM where the CH-AAO summary rating differed (lower rating) from the University of Chicago/ANL self-assessment rating. This was:

1) Work-for-Others

(Outstanding to Excellent)

Additional details on the CH-AAO assessment for Work-for-Others are provided below. This section is organized by using the DOE-HQ Office of Science Expectations. The SAMs were grouped according to the appropriate expectation.

4.1 Leadership Expectation

The Leadership Expectation includes those management systems that directly involve staff resources, such as the Human Resources and Affirmative Action/Diversity Programs. This does not include management systems included in the Leadership Performance Measure.

For the Affirmative Action/Diversity SAM and based on the performance expectations and self-assessment, ANL rated an "Excellent". There are two specific expectations for this SAM in FY-01. Program budgets have been constrained so very little recruitment is being conducted by ANL at this time. ANL has an extensive outreach program and the Division of Educational Programs supports a variety of activities in recruiting minorities and women. CH-AAO believes that an overall rating of "Excellent" is appropriate.

The overall management of Human Resources continues to be rated as "Outstanding" by both ANL and the CH-AAO based on the Appendix B performance expectations. The focus on FY-01 was for ANL to perform a Balanced Scorecard assessment of their performance, analyze the employee survey information, and to produce a self-assessment that could be used to certify the ANL Human Resources Compensation Program. No significant issues were raised by ANL in the self-assessment, or by CH-AAO during the review of the self-assessment that would result in a change in this rating. CH-AAO provided an overall rating of "Outstanding".

4.2 ES&H Expectation

Based on the performance expectations under the ES&H SAM and the ANL self-assessment, ANL determined that an "Excellent" rating was appropriate for ES&H. CH-AAO also rated ANL as "Excellent" in ES&H. As in previous years, CH-AAO chose to closely link the ES&H Performance Measure and the ES&H SAM. The basis for this linkage is that there is only one ES&H Program at ANL. CH-AAO believes that the ANL performance under the Integrated Safety Management System continues to see significant progress.

The ES&H SAM includes eleven ES&H expectations. ANL received an "Outstanding" in three of them. Six were rated as "Excellent" and none were below a "Good" rating. Some weaknesses were identified in the ES&H planning activities and the accident/incident reporting. CH-AAO believes that the ANL ES&H self-assessment was objective, which is an important step in addressing weaknesses and continuous improvement.

4.3 Infrastructure Expectation

The Infrastructure SAM includes the following activities:

- 1) milestone schedule performance
- 2) maintenance program
- 3) facility maintenance
- 4) energy management initiatives

Based on the Appendix B performance expectations and the ANL self-assessment, the Infrastructure SAM was rated by ANL as "Outstanding". Each of the four expectations was rated as "Outstanding". The ANL self-assessment in this area continues to improve. The FY-01 self-assessment identified some areas of improvement and planned actions to address these opportunities for improvement. None of these areas of improvement are considered significant weaknesses by CH-AAO. Notable accomplishments include:

- 1) the continued overall effectiveness of the site maintenance management program, including an upgrade of the preventive maintenance system
- 2) the continued decrease in energy usage from baselines
- 3) completion of energy management initiatives such as the chiller retrofits, resulting in cost savings
- 4) continued involvement with industry in facilities operation benchmarking
- 5) reductions in specific environmental discharges and ensuring habitat restoration work activities continue
- 6) maintaining building occupancy at about 98%

CH-AAO agrees with the overall rating of "Outstanding" for the Infrastructure SAM.

4.4 Business Operations Expectation

The Business Operations SAMs include:

- 1) Financial Management
- 2) Human Resources
- 3) Diversity
- 4) Procurement
- 5) Personal Property
- 6) Intellectual Property
- 7) General Law
- 8) Scientific and Technical Information
- 9) Information Management
- 10) Safeguards and Security
- 11) Counter-Intelligence

Based on the self-assessments for the Business Operations SAMs, ANL achieved an "Outstanding" rating for eight of the eleven. The CH-AAO review of the ANL self-assessment in these areas supports these ratings.

For the ANL business systems, compliance and internal controls continue to meet DOE requirements. Enhancements in these business systems also continue without increasing the overall staff levels or costs. While these areas were rated as "Outstanding" or "Excellent", opportunities for improvement were identified. These improvements should be evaluated and where appropriate, become part of the FY-02

planning.

The Appendix B expectations for the Personal Property SAM focuses on implementing the Balanced Scorecard and developing a High Risk Property Program for DOE validation. Management of high-risk personal property is a requirement under the DOE Property Management Regulations. The University of Chicago/ANL self-assessment rated their performance for Personal Property as an "Excellent". CH-AAO agrees with this rating. The self-assessment included the results of the Balanced Scorecard Program. A DOE validation of the High Risk Property Program was performed in FY-01. Only minor issues were identified with the ANL personal Property System. The "Excellent" rating represents a significant increase in performance for this area. The challenge remains for sustaining this level of performance throughout FY-02.

The objective of Safeguards and Security program at ANL is to provide the necessary and appropriate protection, at both ANL sites for special nuclear material, information, personnel, and property. Safeguards and Security includes an assessment of the effectiveness of the following sub-programs:

- 1) program planning and management
- 2) protection program operations
- 3) information security
- 4) material control and accountability
- 5) personnel security

For FY-01, based on the ten Appendix B performance expectations, the Safeguards and Security SAM was rated by ANL as "Outstanding". Based on the ANL self-assessment, ANL believes that an "Excellent" rating is appropriate. Safeguards and Security is deemed to be a sensitive area with very high expectations and where little credit is assigned to corrective actions, after a problem has occurred. ANL has identified a number of significant accomplishments in FY-01. The most significant are the successful compensatory measures and the upgrade of physical protection systems at ANL-W. Noteworthy management attention and progress have occurred in the construction and installation of physical protection systems at ANL-W. CH-AAO commends ANL on this successful effort. In addition, ANL has had to respond to a number of DOE requested changes that resulted from the September terrorist attacks. ANL is also commended on their responsiveness to these requests. CH-AAO concurs with the overall rating of "Excellent" for Safeguards and Security SAM.

The Counter-intelligence SAM includes an assessment 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) Personnel Security
- 6) Analysis/Threat Assessment

An inspection in September 2001 determined that these Counter-intelligence sub-programs were rated as "Satisfactory", the highest rating that can be achieved in this area. The internal ANL rating and ANL self-assessment concluded that an

“Outstanding” rating was appropriate. There is a recognition within CH-AAO that significant progress has occurred in Counter-intelligence at ANL during FY-01. Issues identified in FY-01, such as the previous “Marginal” rating at ANL-W have been corrected. ANL has taken additional actions to hire a Cyber-Security Technical expert, as well as to maintain, populate, and analyze ANL counter-intelligence data. A Counter-Intelligence Program briefing and interview program has been put in place. CH-AAO believes that there are several areas identified as opportunities for improvement in FY-02. These include pre-travel briefings for foreign travel, host briefings for foreign visitors, an exchange of threat assessments among the CH Laboratories, and the need for clearances for cyber-security staff. Because of the sensitive nature of the work in this area, monthly status meetings are also planned for FY-02 to ensure that issues are discussed on a timely basis. None of these opportunities for improvement are significant enough to lower the Counter-intelligence rating. Overall, the ANL Counter-Intelligence Program has made great strides during FY-01 that reflect the hard work put into this program. CH-AAO believes that this Program should be rated as an “Outstanding”.

4.5 Stakeholder Relations Expectation

Stakeholder Relation includes the following three SAMS:

- 1) Communications and Trust
- 2) Technology Transfer
- 3) Work for Others

Stakeholder Relations is an area where ANL has consistently demonstrated a high level of performance. In particular, Communications and Trust was rated as “Outstanding” based on the performance expectations, ANL self-assessment, and the DOE assessment of overall ANL performance during FY-01. ANL has continued to work cooperatively with DOE-CH in support of the Community Leaders Round Table and outreach programs. ANL planned and began the implementation of an “Open House” but this was cancelled because of the terrorist attacks within the US and the increased security posture for DOE facilities. ANL Management has supported the establishment of a very positive relationship between ANL and the local communities and stakeholders. Opportunities for improvement in FY-02 include the need for a permanent manager for the Argonne Office of Public Affairs (OPA) and a closer working relationship between the scientific divisions and OPA at the Laboratory that would lead to the consideration of more coverage of discoveries/developments at the Laboratory.

Based on the ANL self-assessment, ANL believes that an “Outstanding” rating is appropriate for Work-for-Others. ANL maintains a strong relationship with “other than DOE” sponsors. Repeat work is common. CH-AAO rated ANL as “Excellent”. This rating is based on a lack of responsiveness to inquiries and inconsistencies in the reporting of Work-for-Others data. Concerning the Technology Transfer Program, CH-AAO understands that some management changes are underway. 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

No significant issues of a common or general nature were identified for FY-01. Previously identified issues, such as the use of the Balanced Scorecard approach have not resulted in significant problems during FY-01 in grading the Laboratory's performance using the 5 grade Appendix B rating system (Outstanding, Excellent, Good, Marginal, Unsatisfactory). Also, the quality of the ANL self-assessments has increased significantly. The self-assessments are more objective than in previous years and the increased quality is evidence of the continued involvement of the University of Chicago and ANL management.

6.0 Fee Determination:

ANL achieved an Outstanding rating for the Science Performance Measure, Leadership Performance Measure, and the Infrastructure Performance Measure (ANL-E Infrastructure and ANL-W Infrastructure were rated as "Outstanding" while Cybersecurity was rated as "Excellent"). The Environment, Safety and Health Performance Measure was rated as "Excellent". Attachment E uses the performance ratings to calculate a total earned FY-01 fee of \$2,776,416.00. The final rating for General Operations SAMs is an "Outstanding"; however, no fee is tied to this rating.

**TABLE 1
SUMMARY OF FY- 2001
PERFORMANCE MEASURE RATINGS**

Appendix B Number	Functional Area	ANL Ratings Based Solely on Appendix B Performance Expectations	ANL Ratings based on the ANL Self-assessment	CH-AAO Summary Rating
I	Science and Technology	Outstanding	Outstanding	Outstanding
II.1	Leadership	Outstanding	Outstanding	Outstanding
II.2	Environment, Safety, and Health	Outstanding	Excellent	Excellent
II.3	Infrastructure	Outstanding	Outstanding	Outstanding

The Critical Operations Performance Measures are fee-bearing and include Environment, Safety, and Health, Leadership, and Infrastructure Functional Areas.

The Infrastructure Performance Measure (Appendix B Section II.3) consists of the following three major topics that have specific fee assigned to them.

Appendix B Number	Functional Area	ANL Ratings Based Solely on Appendix B Performance Expectations	ANL Ratings based on the ANL Self-assessment	CH-AAO Summary Rating
II.3.A	Infrastructure - ANL-E	Outstanding	Outstanding	Outstanding
II.3.B	Infrastructure - ANL-W	Outstanding	Outstanding	Outstanding
II.3.C	Infrastructure - Cyber-Security	Outstanding	Excellent	Excellent

Table 2
 Summary of FY-2001
 System Assessment Measure Ratings

Appendix B Number	Functional Area	ANL Self Ratings Based Solely on Appendix B Performance Expectations	ANL Self-assessment Ratings	CH-AAO Summary Rating
Environment, Safety and Health				
III.1	Environment, Safety and Health	Excellent	Excellent	Excellent
Infrastructure				
III.2	Infrastructure	Outstanding	Outstanding	Outstanding
Business Operations				
III.3.a	Financial Management	Outstanding	Outstanding	Outstanding
III.3.b	Human Resources	Outstanding	Outstanding	Outstanding
III.3.c	Diversity	Excellent	Excellent	Excellent
III.3.d	Procurement	Outstanding	Outstanding	Outstanding
III.3.e	Personal Property	Excellent	Excellent	Excellent
III.3.f	Intellectual Property	Outstanding	Outstanding	Outstanding
III.3.g	General Law	Outstanding	Outstanding	Outstanding
III.3.h	Scientific and Technical Information	Outstanding	Outstanding	Outstanding
III.3.i	Information Management	Outstanding	Outstanding	Outstanding
III.3.j	Safeguards and Security	Outstanding	Excellent	Excellent
III.3.k	Counter-Intelligence	Outstanding	Outstanding	Outstanding
Stakeholder Relations				
IV.a	Communications and Trust	Outstanding	Outstanding	Outstanding
IV.b	Technology Transfer	Outstanding	Outstanding	Outstanding
IV.c	Work for Others	Outstanding	Outstanding	Excellent
Summary for Operations		Outstanding	Outstanding	Outstanding

ANL, through their self-assessment process determined that a weighted average of all the System Assessment Measures would be a low "Outstanding" rating. CH-AAO has determined that an appropriate weighted average is a low "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 15, 2001.

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). The contract includes the use of performance measures agreed to each year in advance by DOE and the University of Chicago, as standards against which ANL's scientific, technical, operational, and managerial performance are evaluated. Performance measures are adjectivally rated. The definitions of the five adjectival ratings used in these evaluations are found in Table 1. While the selected performance measures are considered critical for measuring ANL's success, they are not viewed as a comprehensive basis for evaluating ANL performance. Each year, the University of Chicago/ANL is required to perform a formal, comprehensive self-assessment of their overall performance. This self-assessment examines the ANL performance against the performance measures and includes other factors that the University of Chicago/ANL believes are important to the success of the ANL mission. Finally, DOE conducts an assessment of ANL's performance in "Science" and "Operations". This assessment is based on the CH-AAO review of the University of Chicago/ANL self-assessment, as well as, the results of the contractual performance measures, peer reviews, audits, appraisals, and other reviews conducted during the evaluation period. The CH-AAO assessment determines the fee to be awarded by DOE to the University of Chicago under the contract.

Four performance periods have been completed under the performance-based contract. The first performance period covered the time frame from the time the new contract was signed on August 1, 1995 to the end of FY-96. The sixth performance period is for FY-01 and is covered by this report.

2.0 Process:

Each year, prior to the beginning of the fiscal year, performance measures are negotiated between the University of Chicago and CH-AAO. For FY-01, a total of nineteen functional areas were selected for measuring ANL performance. ANL performance is divided into two distinct categories. The first category, Science includes one functional area while the second category, Operations includes 18 functional areas. Operations are further subdivided into Critical Operations and General Operations. The Science Performance Measure and the Critical Operations Performance Measures are fee-bearing. The General Operations area consists of System Assessment Measures (SAMs) that are not fee-bearing. Weighting factors are also agreed to for each of the functional areas prior to the beginning of the fiscal year. The ANL contract is modified each year to include the negotiated performance measures and their weights.

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

- 1) ANL evaluates their own performance against agreed to Performance Measures and SAMs.
- 2) ANL performs a self-assessment of their overall performance during the performance period. This self-assessment is based on their performance against the Performance Measures and SAMs evaluated under step #1 and also considers other relevant factors that directly affect performance.
- 1) CH-AAO conducts an assessment of ANL's performance based on the ANL self-assessment; validates the ANL performance against the contractual performance measures; and identifies and considers other relevant factors that directly influence the assessment of ANL's performance.

If there are disagreements between CH-AAO and University of Chicago on functional area ratings, then CH-AAO will meet with ANL functional area staff to determine if additional information is available that should be considered in the final evaluation and rating. Several sessions were conducted at the end of the FY-01 evaluation.

For the DOE-HQ assessment of the ANL "Science" performance, a three-step process is performed annually. 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 work at ANL.
- 2) CH-AAO develops a single rating for Science based on the evaluations that were received from the DOE-HQ Program Offices. A final rating for Science and Technology is developed by weighting each DOE-HQ Program rating by the level of funding provided by that Program Office.
- 3) CH-AAO prepares an Annual Assessment Report that summarizes ANL performance and establishes the basis for a fee determination.

3.0 Data Sources for CH-AAO Assessment:

The ANL self-assessment and the individual ratings of ANL performance against the Performance Measures and System Assessment Measures are key data for input to the CH-AAO assessment. CH-AAO validation of the performance measures data is also performed. For the performance evaluations in the areas of administrative management and operations support, 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 assessing ANL performance under the Operations category. The DOE-HQ Program Offices have primary responsibility for assessing ANL performance under the Science and Technology category. Table 1 and Table 2 of the CH-AAO Annual Assessment Report list all of the functional areas and the adjectival ratings assigned by both CH-AAO and ANL for FY-01. The CH-AAO has responsibility for preparing the Annual Assessment 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 -HQ Program Offices has been solicited from CH-AAO for providing feedback and rating ANL programs. Where possible, consolidated information for program ratings at the DOE

Assistant Secretarial level was requested. The University of Chicago also conducts peer reviews for Science and Technology and this information is made available to DOE.

4.0 Rating System

Outstanding	Significantly exceeds the standard of performance; achieves noteworthy results; accomplishes very difficult tasks in a timely manner.
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; assigned tasks are carried out in a completely acceptable manner - timely, efficiently and economically. Deficiencies do not substantively affect performance.
Marginal	Below the standard of performance; deficiencies are such that 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, prompt corrective action is required.

NOTE: 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, administrative, and business practices within existing funding constraints.

Attachment B
DOE-HQ Program Office Evaluations