



# **PDUFA II**

# **Five-Year Plan**

**1998**

**- 1999 - 2000 - 2001 - 2002**

**Department of Health and Human Services**  
**FOOD AND DRUG ADMINISTRATION**  
**Office of Management and Systems**

**July 1, 1998**



July 1, 1998

Dear Stakeholder,

We at the Food and Drug Administration take great pride in our achievements in implementing the Prescription Drug User Fee Act of 1992 (PDUFA). With the substantial additional resources made available under that Act, significant improvements were made in the drug application review process between 1992 and 1997. During this same period, the agency reduced, by about 40%, the length of time it required to review new drug and biologic license applications, without compromising review soundness and quality.

The Agency received the prestigious Innovations in American Government Award in late 1997 for these achievements. More importantly, Congress recognized these achievements by authorizing PDUFA for five more years, through 2002, as a part of the Food and Drug Administration Modernization Act of 1997. We refer to this amended and extended Act as PDUFA II, and to the original Act as PDUFA I. PDUFA II will provide additional resources over the next five years. Those resources are provided to enable FDA to meet a new set of ambitious goals for both product development and review.

To assure that PDUFA II is at least as successful as PDUFA I, FDA initiated an intensive planning effort, challenging responsible FDA components to map out what they must accomplish over the next five years and what investments they must make each year to meet these demanding new goals. The result is this PDUFA II Five-Year Plan.

In our continuing efforts to maximize the availability and clarity of information about our review processes and plans, we are sharing this plan with all who have an interest and are making it available on the Internet (at "[www.fda.gov/oc/pdufa2/5yrplan.html](http://www.fda.gov/oc/pdufa2/5yrplan.html)"). Annual adjustments to this plan are envisioned to reflect changing circumstances, including workload and fee revenue adjustments. We welcome comments, and will consider them as future adjustments are made. Comments should be addressed to the Dockets Management Branch (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Room 1061, Rockville, MD 20852, and should refer to Docket No.98N-0495.

Michael A. Friedman, M.D.

Acting Commissioner of Food and Drugs

## Executive Summary

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The Prescription Drug User Fee Act of 1992 (PDUFA I) provided substantial additional resources and staffing that enabled FDA to accelerate its drug evaluation process without compromising review quality. That Act expired on September 30, 1997. However, the Food and Drug Administration Modernization Act (FDAMA) of 1997 amended PDUFA I and extended it through September 30, 2002 (PDUFA II). FDAMA also commits FDA to substantially faster review times for some applications, new goals for meetings and dispute resolution, and the transition to electronic receipt and review of applications by the year 2002.

PDUFA II authorizes FDA to collect an estimated \$740 million in fees over 5 years. This plan, initiated at the direction of the Deputy Commissioner for Management and Systems, is FDA's blueprint for investing these resources. It is the product of bottom-up planning by the three FDA components directly responsible for meeting these goals: (1) the Center for Drug Evaluation and Research (CDER), (2) the Center for Biologics Evaluation and Research (CBER), and (3) the Office of Regulatory Affairs (ORA). The plan lets the centers and ORA know in advance the amount of PDUFA fees each may expect annually through 2002. This approach is a significant departure from planning under PDUFA I and should facilitate the work of CDER, CBER, and ORA in meeting the PDUFA II goals.

This plan begins with a statement of purpose, provides background information on PDUFA and the new goals, and discusses the 10 major assumptions on which the plan is based. Included is the assumption that this plan is dynamic and will be reassessed each fiscal year through 2002. The individual plans of CDER, CBER, and ORA are then summarized, followed by an overhead summary and an Agency summary.

Of the anticipated \$740 million in PDUFA fees over 5 years, \$456 million will be used to maintain improvements achieved in PDUFA I and to sustain the additional 659 staff-years of program effort each year that made those improvements possible. The remaining \$284 million will be invested by FDA over 5 years to enable FDA to meet the new PDUFA II goals. About one-third will be spent on pay and benefits for additional human resources (325 more FTE's by 2002), one-third will support the additional staff and enhance the review process, and the remaining one-third will be spent on information technology capabilities supporting the application review process and enabling electronic receipt and review of applications.

Of the full \$740 million FDA expects to collect, the distribution will be: 58 percent for pay and benefits for additional staff (983 more staff-years in 2002 than in the drug evaluation process in 1992); 10 percent for operating expense costs to support these staff and further improve the drug evaluation process; 13 percent for information technology to enable FDA to achieve the electronic submission goals and to operate more efficiently; 10 percent for overhead; 4 percent for centrally paid costs such as telecommunications and facilities; 3 percent for rental payments to the General Services Administration (GSA); and 1 percent reserved for contingencies. By organization, the distribution will be: 56 percent to CDER; 20 percent to CBER; and 6 percent to ORA. The rest is support: 10 percent for overhead; 4 percent for telecommunications, facilities, and other centrally paid items; 3 percent for rent payments to GSA; and 1 percent for contingencies.

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## **Purpose**

This plan sets out, in broad terms, a 5-year blueprint for investing the substantial resources FDA will collect under the recently amended and extended Prescription Drug User Fee Act (PDUFA). FDA must ensure that these resources are used to meet challenging new goals associated with PDUFA. The plan will help ensure that resources are allocated to achieve these goals. This plan provides long-term assurance to the responsible FDA components about the allocation of resources expected to be available each year. Annual reviews will be conducted and adjustments will be made over time as actual changes in workload and revenues replace original estimates and as unanticipated contingencies occur and new technologies develop.

## **Background**

### **PDUFA I**

The Prescription Drug User Fee Act (PDUFA) of 1992 provided FDA with increasing levels of resources for the review of human drug applications. Fees that FDA collected from drug and biologic firms, 1993 through 1997, were to be used to reduce the time required to evaluate certain human drug applications without compromising review quality. Letters from the Commissioner of Food and Drugs to Congressional Committee Chairmen detailed these goals. By 1997, these fees were providing FDA with an additional \$87.5 million a year to devote to the drug evaluation process.

FDA spent these new resources primarily to acquire personnel to review human drug applications and to update the information technology (IT) infrastructure supporting the drug review process. FDA staff dedicated to these reviews in the Center for Drug Evaluation and Research (CDER), the Center for Biologics Evaluation and Research (CBER) and the Office of Regulatory Affairs (ORA) increased over 57 percent during this period--from 1,147 staff-years in 1992 before PDUFA was enacted to 1,806 staff-years by 1997. FDA has submitted annual Performance and Financial Reports to Congress on progress in streamlining the drug review process and use of the PDUFA fees.

The growing recognition of FDA's success in ensuring that these resources were well used culminated in late 1997 when FDA was awarded the prestigious Innovations in American Government Award. This award, jointly sponsored by the Ford Foundation and the Harvard University John F. Kennedy School of Government, in partnership with the Council for Excellence in Government, honored FDA's achievement in combining user fees and management principles to develop a new drug approval process that is predictable, accountable, and scientifically sound while making drugs available to the public more quickly.

PDUFA contained a "sunset" provision that caused its automatic expiration on September 30, 1997. Without further legislation, FDA would not have been able to continue to collect and spend the PDUFA fees essential to maintain the review process improvements after that date.

### **PDUFA II**

Congress worked with the regulated industry and the Administration to ensure PDUFA's continuation. As a result, the Food and Drug Administration Modernization Act (FDAMA) was signed by President Clinton on November 21, 1997. Subtitle A of Title 1 of FDAMA amended PDUFA and extended it through September 30, 2002. This extension authorizes funds that will enable FDA to accomplish increasingly challenging goals over the next 5 years. These new goals were set forth in letters from the Secretary of Health and Human Services to Congressional Committee Chairmen on November 12, 1997. PDUFA, as amended and extended by FDAMA and with its new goals, is referred to as PDUFA II and its predecessor is now referred to as PDUFA I.

PDUFA II authorizes appropriations that will provide FDA with resources to sustain the larger drug review staff developed in the last 5 years and to achieve the even more stringent new goals.

### New Goals

The new goals of PDUFA II are enormously challenging, diverse, and resource intensive. Major components of the review process will be accelerated further. Many of the goals will require the development and issuance of guidance documents. Goals are established in totally new areas, such as meetings with industry and dispute resolution. The development of infrastructure and tools necessary to move to electronic application receipt and review will also be essential. The following table provides an overview and comparison of the major goals by the end of PDUFA I and the end of PDUFA II.

**Comparison of Goals at the End of PDUFA I and PDUFA II**

Goal Activity	PDUFA I	PDUFA II
Complete review of priority original new drug applications and efficacy supplements	90% in 6 months	90% in 6 months
Complete review of standard original new drug applications and efficacy supplements	90% in 12 months	90% in 10 months
Complete review of manufacturing supplements	90% in 6 months	90% in 4 months if prior approval needed
Complete review of resubmitted new drug applications	90% in 6 months	90% of class 1 in 2 months and 90% of class 2 in 6 months
Respond to industry requests for meetings	No Goal	90% within 14 days
Meet with industry within set times	No Goal	90% within 30, 60, or 75 days, depending on type of meeting
Provide industry with meeting minutes	No Goal	90% within 30 days
Communicate results of review of complete industry responses to FDA clinical holds	No Goal	90% within 30 days
Resolve major disputes appealed by industry	No Goal	90% within 30 days
Complete review of special protocols	No Goal	90% within 45 days
Electronic application receipt and review	No Goal	In place by 2002

## Assumptions

Taking advantage of experience gained during PDUFA I, this plan is based on ten major assumptions. A discussion of each of these assumptions follows.

### 1. The program increases funded by PDUFA I will be maintained over the course of PDUFA II.

The fees collected during PDUFA I funded activities have become an integral part of FDA's resources for reviewing human drug applications. In 1997, two-thirds of these funds were spent on pay and benefits for an additional 659 Full Time Equivalents (FTE's) above the level of effort FDA was expending on the review of human drug and biologic applications in 1992. The remaining one-third of the funds were used to provide operating support, IT support, centrally funded support (for indirect costs such as utilities and telecommunications), rent, and overhead costs. The continuation of these 659 work-years of effort in the centers and ORA is crucial to FDA's ability to review drug and biologic applications rapidly. These resources are the foundation for building improvements mandated by PDUFA II.

PDUFA II ensures that these additional human resources (referred to as the PDUFA I additive base FTE's) continue to be dedicated to the drug review process over the next 5 years. They are allocated as follows:

**PDUFA I Additive Base FTE's by Component**

Year	CDER	CBER	ORA	Total
1998	398	187	74	659
1999 and Beyond	418	167	74	659

Adjustments in these allocations may be made if warranted by workload changes.

The 5-year estimated costs associated with these PDUFA I additive base activities are detailed in the table on the next page and reflect:

- Annual pay and benefit cost increases of 5 percent (based on 5 years' experience).
- Center support costs of \$9,000 per FTE increased at 3 percent annually. These are base costs and exclude past allocations for specific projects or needs.
- ORA's support costs of \$16,000 per FTE (largely due to ORA's travel costs for pre-approval inspections) increased at 3 percent annually.
- Center support cost estimates also include research support funds for CBER of \$590,000 in 1998 and \$295,000 in 1999 (discontinued after 1999).
- Overhead calculated as a percent of center/ORA pay and benefits (a formula prescribed by the Office of the Assistant Secretary for Finance and found reasonable by Arthur

- Andersen, a major accounting firm, and validated by Inspector General audits).
- Central account and rent estimates are based on 1997 actual costs and inflated at 5 percent annually, based on experience over the past five years.

**PDUFA I Additive Base Fund Estimates (\$000)**

Item	1998	1999	2000	2001	2002	*Total
Pay and Benefits for 659 Center/ORAs FTE's	\$61,366	\$64,600	\$67,830	\$71,222	\$74,783	\$339,802
Center/ORAs Support Costs	\$7,021	\$6,919	\$6,823	\$7,027	\$7,238	\$35,028
Overhead	\$10,889	\$11,182	\$11,465	\$11,862	\$12,336	\$57,734
Central Accounts	\$4,230	\$4,442	\$4,664	\$4,897	\$5,142	\$23,373
<b>*Total</b>	<b>\$83,506</b>	<b>\$87,143</b>	<b>\$90,782</b>	<b>\$95,008</b>	<b>\$99,499</b>	<b>\$455,937</b>

\*Numbers may not add due to rounding.

- Fee revenues available to FDA will be based on annual increases of 7 percent in fee-paying applications and inflation increases of 3 percent.

During discussions leading to the enactment of PDUFA II, both industry and FDA participants focused on the largely unanticipated increase in application review workload during PDUFA I and the need to ensure increasing revenues if this trend continues in PDUFA II. The following table, derived from the Federal Register Notices FDA published each year as a part of its fee-setting process, summarizes the increasing workload.

**PDUFA Application Workload Data by Year**

Year	Full Application Equivalents	Percent Change from Previous Year	Allowance for Waivers or Reductions	Basis for Next Year's Fees	Percent Change from Previous Year
1993	116			116	
1994	129	11.2%	5	124	6.9%
1995	137	6.2%	6	131	5.6%
1996	157	14.6%	16	141	7.6%
1997	192	22.3%	40	152	7.8%

Based on this information, excluding 1997 data unavailable during discussions that led to PDUFA II, negotiators agreed that it was reasonable to include a workload adjustor in PDUFA II--one

that would cause FDA resources to increase or decrease as the workload fluctuated. The statute was crafted so that FDA fee revenues would increase in any year FDA receives more than 142 full application equivalents paying fees (the number that was used to set the fee level each year in the statute) and decrease if FDA receives less than 142 full application equivalents paying fees in any year.

As part of these negotiations, FDA analyzed the effect of both increasing and decreasing workload levels and of inflation. Industry and FDA negotiators agreed that the most reasonable planning scenario was a continued yearly increase in fee-paying application workload of 7 percent and in inflation of 3 percent. Attachment 1 details the resource implications of these workload and inflationary increases and the fees and total fee revenue that FDA would receive through 2002 if these assumptions prevail.

PDUFA fees for 1998 were based on a workload of 152 full application equivalents, after allowing for waivers and reductions. This is 7 percent more than the 142 full application equivalents used to set the fees in the statute. For 1998, the inflation adjustment was 2.45 percent. The Federal Register Notice of December 9, 1997 (Attachment 2) documented the application of the inflation and workload adjustment factors.

These assumptions (7 percent yearly increase in fee-paying workload and 3 percent inflationary increase) are the basis of this plan--for projecting both revenues and workload. Workload changes and inflation will have to be closely monitored and adjustments made to these numbers, as warranted. Based on these assumptions, the fees that FDA expects to collect and spend each year of PDUFA II are:

**Anticipated PDUFA Fee Collections by Year**

<b>Item</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Total</b>
<b>Fees Anticipated</b>	\$117,122	\$132,273	\$145,435	\$167,168	\$177,915	\$739,913

Availability of these revenues will provide an unusual measure of stability to this program and enable program managers to develop realistic plans for meeting the new goals.

**3. Each year FDA will spend approximately the same amount it collects in fees, maintaining adequate carryover balances at the end of each year.**

If FDA spends approximately as much as it collects each year, it will use all of the PDUFA II revenues collected over the 5 years. This assumption is possible because FDA began PDUFA II with a carryover balance--the PDUFA fees FDA collected but did not obligate by the end of the fiscal year and which are "carried over" for use in a future fiscal year. At the end of 1997, the carryover cash and accounts receivable amounted to about \$47.3 million. If FDA spends approximately the amount it collects each year, a similar carryover balance will continue at the end of each fiscal year. A carryover balance is necessary at the end of each year to ensure adequate operating funds in the first 4 months of each new fiscal year.

Each year, two-thirds of the PDUFA fees (product and establishment fees) are not paid to FDA until January 31--4 months after the fiscal year starts. The other one-third (application fees) is spread out over the year. For estimation purposes, this portion is distributed evenly over 12 months. These application fees in aggregate would cover FDA costs for 1½ months of the first 4 months of the fiscal year. FDA needs to carry forward at least 2⅔ months of operating costs into each new fiscal year to cover expenses until the product and establishment fees are received on January 31. (This concept is also discussed on pages 22-23.)

**4. About \$284 million will be available over 5 years for PDUFA II enhancements.**

If the total amount needed to sustain the PDUFA I initiatives derived under Assumption 1 is subtracted from the total revenues FDA expects to have available each year under Assumption 2, the net available for allocation to meet the PDUFA II goals is derived. Net available is the increment available to FDA over and above the PDUFA I additive base resources already invested to support and maintain the 659 additional FTE's in the centers and ORA. This is the amount available for additional investments over the next 5 years to meet the PDUFA II goals.

**Revenues Anticipated and Net Available for Allocation (\$000)**

Item	1998	1999	2000	2001	2002	Total
<b>Fees Anticipated</b>	\$117,122	\$132,273	\$145,435	\$167,168	\$177,915	<b>\$739,913</b>
<b>PDUFA I Additive Base</b>	\$83,506	\$87,143	\$90,782	\$95,008	\$99,499	<b>\$455,937</b>
<b>Net Available</b>	<b>\$33,616</b>	<b>\$45,130</b>	<b>\$54,653</b>	<b>\$72,160</b>	<b>\$78,416</b>	<b>\$283,976</b>

**5. All statutory conditions necessary for PDUFA to operate will be met each year.**

The law allows FDA access to PDUFA II revenues only if three conditions are met. This plan assumes the following statutory conditions will be met:

- FDA appropriations (exclusive of user fees) in future years must total at least as much as FDA received in 1997, with some adjustments.
- Each year FDA must spend at least as much from appropriated funds (exclusive of user fees) on the process for review of human drugs as it spent from appropriations (exclusive of user fees) on this process in 1997, with some adjustments.
- PDUFA fee revenues may be collected and spent only to the extent provided each year in FDA's appropriation.

**6. Funds planned for acquiring human resources may be spent on either hiring or contracting.**

To develop cost estimates, it was assumed that human resources would be acquired by hiring additional employees. The centers and ORA should not feel constrained in how necessary

additional human resources are acquired. They are encouraged to utilize contract support any time it is more practical or cost effective than hiring.

**7. The amount FDA pays for rent for PDUFA and other programs will no longer be capped beginning in 1999.**

For several years the congressional appropriations committees have maintained a cap on the amount of rent FDA pays the General Services Administration (GSA). The President's 1999 budget proposes to remove that cap and require FDA to pay full GSA rent charges just as other government departments and agencies do. Upon removal of the cap, the amount of rent that FDA will pay for all programs, including the human drug review process, will almost double--increasing from \$46.3 million in 1998 to \$88.3 million in 1999. The share of rent payable for the human drug review process will increase by \$5.4 million. This plan assumes that the rent cap will be removed beginning in 1999 and that rent costs thereafter will increase for inflation (3 percent annually).

**Estimated Rental Payments to GSA for PDUFA Program by Source of Funds (\$000)**

<b>Rent Paid to GSA</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>From Rent Appropriation</b>	\$6,466	\$6,559	\$6,704	\$6,858	\$7,016
<b>From PDUFA Fees</b>	\$0	\$5,428	\$5,643	\$5,859	\$6,083
<b>Total Rent Paid to GSA</b>	<b>\$6,466</b>	<b>\$11,987</b>	<b>\$12,347</b>	<b>\$12,717</b>	<b>\$13,099</b>

Should this assumption prove incorrect, the amounts planned for increased rent costs will be transferred to the contingency reserve (Assumption 8).

**8. A small but increasing amount will be held in a contingency reserve each year after 1999.**

The likelihood that unanticipated events will occur increases each succeeding year of the plan. To cope with these events, a small but increasing amount will be held in a contingency reserve each year after 1999. One such contingency is utility costs that FDA did not have to pay in 1997 and earlier but may have to pay in the future. However, these contingency reserves are being kept to a minimum in order to allocate as much of the planned revenue to the centers and ORA as possible to implement their plans. All funds anticipated during 1998 and 1999 are allocated in the plan.

Contingency reserves of \$1 million, \$2 million, and \$5 million are planned for fiscal years 2000, 2001, and 2002, respectively. In addition, if GSA rent remains capped in 1999 or later years, funds planned for GSA rent increases will be added to the contingency reserve. Potential claims on this reserve will be assessed in the second quarter of each fiscal year and allocations will be

made by the end of the second quarter. Funds not required for contingencies will then be allocated among CDER, CBER, and ORA for PDUFA needs.

**9. Total PDUFA funding from appropriations and fees should increase by almost 45 percent over the course of PDUFA II.**

The above assumptions permit a projection of revenues available for the review of human drug applications through 2002. The revenues resulting from PDUFA II will allow program funding to increase by over 45 percent over the 5 years of this program--from \$232 million in 1997 to \$338 million in 2002. Although large, this increase is less than the compounded increase in workload (7 percent) and inflation (3 percent) that forms the basis of these revenue projections. Workload and inflation increases alone, when compounded, exceed 55 percent over 5 years.

This PDUFA II 5-year plan is based on the total revenue stream shown in the table below. These funds can be invested for maximum security in addressing the challenges of the new goals and the growing workload.

**Projection of Funds Available for the Human Drug Application Review Process (\$000)**

Source of Funds	1997 Actual	1998 Estimate	1999 Estimate	2000 Estimate	2001 Estimate	2002 Estimate
S&E Appropriations	\$141,493	\$141,493	\$143,525	\$146,682	\$150,056	\$153,507
Rent Appropriations	\$6,466	\$6,466	\$6,559	\$6,704	\$6,858	\$7,016
Fees from Industry	\$84,289	\$117,122	\$132,273	\$145,435	\$167,168	\$177,915
<b>*Total Funds</b>	<b>\$232,249</b>	<b>\$265,081</b>	<b>\$282,357</b>	<b>\$298,821</b>	<b>\$324,082</b>	<b>\$338,438</b>

\*Numbers may not add due to rounding.

**10. The plan will be reassessed and revised annually.**

All allocations in the plan are subject to review and reassessment early in each fiscal year as figures for workload and revenue for the previous year are available and better estimates for the next year's revenues are made. Of course, adjustments will have to be made based on these assessments. But the plan will continue to have value as the baseline from which future changes will be made. This annual reassessment process is discussed further on page 26.

## **Plans**

The planning process for meeting new PDUFA II goals began during discussions with industry in the last year of PDUFA I. As new goals were proposed, resource implications were also estimated and discussed. These ongoing discussions over many months resulted in the new goal letters of November 12, 1997 and the PDUFA II resource levels and adjustors to achieve the goals were enacted in the statute.

Less than a month after President Clinton signed FDAMA, the Deputy Commissioner for Management and Systems allocated the first round of PDUFA II resources. He asked CDER, CBER, and ORA to develop individual 5-year plans detailing resources needed over the course of PDUFA II. These organizations were also asked to work together on specific plans and milestones for achieving paperless application receipt and evaluation.

The Office of Management and Systems (OMS) worked closely with CDER, CBER, and ORA to integrate their plans into an overall FDA plan. The primary focus of this effort was to ensure sound plans supporting PDUFA II goals. An analysis of the IT portions of each component's plan is contained in a separate PDUFA II Information Management Five-Year Plan (Attachment 3). That plan identifies the final IT amounts planned and the rationale. It also outlines the process for releasing funds held in reserve, the process for securing funds for projects not credentialed by FDA's Technical Review Board, and general instructions regarding performance reviews and clearance procedures.

The overall plan resulting from this process provides a sound framework for the investments needed to ensure FDA success with PDUFA II. The following pages summarize the planned distribution of PDUFA II funds to each component (CDER, CBER, and ORA) over the next 5 years and ends with an FDA Plan Summary. The two largest demands will be: (1) additional human resources to meet the more stringent application review times under PDUFA II goals and (2) IT investments to achieve paperless application receipt and review by the end of PDUFA II.

## CDER Plan Summary

CDER developed a detailed overall plan for the 5 years of PDUFA II. It is supported by individual plans and estimates from various CDER components. The plan, after discussion and adjustments agreed to by CDER, would require an additional \$163.8 million over 5 years. The tables on page 13 present a year-by-year resource summary with three principal components: (1) personnel and support, (2) review process enhancements, and (3) information technology.

### Personnel and Support

The largest portion of CDER's request is for funds to hire and support additional staff for the drug evaluation process. This represents \$91.4 million (56 percent) of CDER's total plan. CDER would be able to add 240 more FTE's to the drug review process by 2002. This number is in addition to the PDUFA I additive base of 418 FTE's and CDER's appropriated PDUFA base of 749 FTE's--for a total PDUFA effort of 1407 FTE's by 2002.

CDER developed an algorithm to estimate its staffing needs for its largest review component--the Office of Review Management (ORM)--over the 5 years of PDUFA II. The PDUFA work units completed and FTE's utilized in 1997 were used to calculate work units processed per FTE. Work units for 2002 were then estimated using projected growth in each submission category based on experience over the past 5 years. Weighting factors for each submission category were included to account for the increased PDUFA II goals. These growth and weighting factors, along with PDUFA II goals, were analyzed in ORM senior staff meetings and adjustments were made as a result.

The estimated work units for 2002 were then calculated using these growth and weighting factors. The results were divided by the 1997 work units per FTE to estimate the total PDUFA FTE's needed. The current PDUFA FTE ceiling was subtracted to determine the additional number of FTE's needed by 2002. This methodology supports the 147 additional FTE's requested for ORM. The increase of 60 FTE's for the Office of Pharmaceutical Sciences (OPS), which is responsible for the chemistry and pharmacology reviews, is based on the ORM increase. Increases for the other components, totaling 33 FTE's, were based on specific needs of each component to support the achievement of PDUFA II goals.

After discussions with CDER, it was agreed that the 1998 FTE increase would be limited to an additional 23 for the non-ORM and non-OPS components of CDER (supported by 3 months payroll, assuming an average "on-board" date of July 1). Substantial increments are provided for ORM and OPS in 1999.

The Personnel and Support subtotal also includes funds to acquire more space for this additional staff--\$3.8 million over the 5 years. This amount will probably be used to pay increased space rental costs to GSA and will be held in reserve until arrangements are made for acquisition of this additional space.

## Review Process Enhancements

The second component of CDER's plan is funding for a number of enhancements to the application review process. CDER plans \$11.9 million (7 percent of the total plan) for this purpose. These improvements span many offices which directly contribute to or support the attainment of PDUFA II goals. It includes funds to: standardize and improve review practices, expedite the validation of methods in new drug applications, train reviewers, increase clinical trial inspections, and improve PDUFA time reporting systems. Also included are estimated travel funds for International Conference on Harmonization (ICH) meetings that will promote accelerated drug development through agreements on shared standards for use in the United States, Japan, and European pharmaceutical authorities. The actual distribution of these funds will be decided each year by the Office of External Affairs which coordinates ICH activities.

## Information Technology

The final component of CDER's plan is \$60.7 million (37 percent of the total) for IT enhancements for the drug approval process and includes three parts: (1) funds to develop the capability for electronic application receipt and review by FY 2002 account for \$19.7 million; (2) funds for replacing CDER's management information system account for \$9 million, plus another \$3 million held in reserve; and, (3) funds for many other IT enhancements that support the PDUFA II goals (such as replacement of one-third of the personal computers of the reviewers every 3 years and overall maintenance and upgrading of CDER's data systems and networks that support PDUFA) account for \$21.5 million over 5 years, plus another \$3.4 million in reserve. The CDER IT reserve also includes another \$3 million that is tentative, pending further discussion with FDA's Office of the Chief Information Officer (OCIO).

The IT part of the plan was compared to industry practices and standards utilizing outside contract support. As a result, some adjustments were made and other amounts are held in reserve until more complete plans for their use are agreed to between CDER and the OCIO. The OCIO will advise CDER on how funds held in reserve can be released and any other clearance processes for planned funds for IT projects.

The table at the bottom of the following page summarizes the total PDUFA funds added to CDER each year. The first three lines show the amounts to support the PDUFA I additive base funds. The fourth line shows the total PDUFA II plan request and the last line shows the total of the PDUFA fee revenues planned for CDER each year.

# CDER Plan Summary Tables--PDUFA II

## Plan for Funds in Addition to PDUFA I Additive Base (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
PDUFA I Additive Base FTE's	398	418	418	418	418	
Total Additive PDUFA FTE's in This Plan (1)	421	556	591	626	658	
Additional FTE's Planned (Increment Each Year)	23 23	138 115	173 35	208 35	240 32	
Salary and Benefits for Additional FTE's (2)	\$490	\$12,350	\$16,256	\$20,522	\$24,863	\$74,480
Operating Support for Additional FTE's (3)	\$207	\$1,279	\$1,652	\$2,046	\$2,431	\$7,615
Startup Costs for New FTE's (One-time) (4)	\$219	\$1,093	\$333	\$333	\$304	\$2,280
Recruitment/Relocation/Renos/Security	\$1,221	\$550	\$500	\$500	\$500	\$3,271
OMS Reserve for Additional Space		\$690	\$865	\$1,040	\$1,200	\$3,795
<b>Subtotal--Personnel and Support</b>	<b>\$2,137</b>	<b>\$15,961</b>	<b>\$19,605</b>	<b>\$24,440</b>	<b>\$29,298</b>	<b>\$91,441</b>
ICH Support (5)	\$420	\$420	\$420	\$420	\$420	\$2,100
Redesign of Scientific Review Process	\$3,392	\$1,536	\$1,747	\$1,560	\$1,581	\$9,816
<b>Subtotal--Process Enhancements</b>	<b>\$3,812</b>	<b>\$1,956</b>	<b>\$2,167</b>	<b>\$1,980</b>	<b>\$2,001</b>	<b>\$11,916</b>
Electronic Submissions	\$4,979	\$4,897	\$4,371	\$2,780	\$2,660	\$19,687
Document Management	\$1,772	\$2,847	\$2,073	\$1,176	\$1,177	\$9,045
Other Electronic Initiatives (6)	\$4,998	\$4,750	\$4,748	\$3,503	\$3,544	\$21,543
Reserve Pending OIRM Approval (7)	\$939	\$2,845	\$2,894	\$1,860	\$1,850	\$10,388
<b>Subtotal--Information Technology</b>	<b>\$12,688</b>	<b>\$15,339</b>	<b>\$14,086</b>	<b>\$9,319</b>	<b>\$9,231</b>	<b>\$60,663</b>
<b>Total Plan</b>	<b>\$18,637</b>	<b>\$33,256</b>	<b>\$35,858</b>	<b>\$35,739</b>	<b>\$40,530</b>	<b>\$164,020</b>

(1) PDUFA Additive Base FTE's (preceeding line) plus Additional FTE's Planned.

(2) Salary and benefits estimated at \$85,228 in 1998 and escalated at 5% annually thereafter. The 1998 amount is reduced by 75% for a July 1 estimated on-board date.

(3) Operating Support per FTE at \$9,000 per year and inflated at 3% annually beginning in 1999.

(4) \$9,500 per FTE is added only once, in first year the FTE is provided, for start-up costs.

(5) Estimate only: actual distribution of ICH funds will be decided each year by the Office of External Affairs.

(6) Includes \$780,000 for enhancing either CDER or ORA automated system for reporting inspection results.

(7) Funds in this line include \$900,000 for integration with ORA systems. Reserves will be released after FDA Chief Information Officer (CIO) has approved uses. \$3 million of these reserves is tentative pending discussions with the CIO.

## Total Additive PDUFA Funds for CDER--Base and Plan (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
Base Payroll for 418 FTE's (5% Inflation) *	\$40,517	\$44,333	\$46,549	\$48,877	\$51,321	\$231,596
Base Operating Funds (3% Inflation)	\$3,582	\$3,875	\$3,991	\$4,111	\$4,234	\$19,793
Subtotal--Base Allotment	\$44,099	\$48,207	\$50,540	\$52,988	\$55,555	\$251,389
Total for PDUFA II Five-Year Plan	\$18,637	\$33,256	\$35,858	\$35,739	\$40,530	\$164,020
<b>Total PDUFA Additive Funds--CDER</b>	<b>\$62,736</b>	<b>\$81,464</b>	<b>\$86,398</b>	<b>\$88,726</b>	<b>\$96,085</b>	<b>\$415,409</b>

\* Payroll Base is for 398 FTE's in 1998 and 418 Each Year Thereafter (20 FTE's Transferred from CBER)

## **CBER Plan Summary**

CBER also developed a detailed overall plan for the 5 years of PDUFA II, incorporating estimates based on information supplied by the various CBER components. This plan, after discussion and adjustments agreed to by CBER, would require an additional \$59 million. A year-by-year resource summary of CBER's plan is on page 16. It has the same three principal components as the CDER plan: (1) personnel and support, (2) review process enhancements, and (3) information technology.

### **Personnel and Support**

CBER is planning to hire and support additional staff for the drug evaluation process. This represents \$19.5 million (33 percent) of their total request. This investment would enable CBER to add 57 FTE's to the application review process by 2002--in addition to its PDUFA I additive base of 167 FTE's and its PDUFA appropriated base of 292 FTE's--for a total PDUFA effort of 516 FTE's by 2002. In addition CBER will also reprogram 39 FTE's from PDUFA research work to application review work in the first 3 years of PDUFA II. Thus, the real increase in review staff is 96 FTE's (57 added with PDUFA II resources and 39 PDUFA I additive base FTE's reprogrammed into review). Considering the reprogramming of the 39 FTE's, this component would constitute about 50 percent of the CBER plan.

CBER used a different approach than CDER to develop FTE estimates. The CBER planning and budget staff used detailed information on past staff time and resources devoted to PDUFA. This information came from CBER's Resource Reporting System combined with information from discussions with senior review staff to develop estimates for additional staff needed to support each of the PDUFA II goals over the 5 years. In CBER's plan the additional FTE's needed each year were arrayed with the specific PDUFA II goals. The summary results of that analysis are found on the line labeled "Total FTE's Needed to Meet PDUFA II Goals" near the top of the first table on page 16. That total is then reduced by the 13 FTE's that CBER will reprogram from PDUFA research to review activities in each of the first 3 years of PDUFA II to arrive at the net additional FTE's needed each year.

The total funds in CBER's plan for Personnel and Support includes pay and benefits for the additional FTE's and operating costs to support them. The Personnel and Support subtotal also includes funds for acquiring space to house the additional staff--\$710,000 over the 5 years. This amount will probably be used to pay increased space rental costs to GSA and will be held in reserve until arrangements are made for acquisition of this additional space.

### **Review Process Enhancements**

The second component of CBER's plan is funding for enhancements to the application review process. CBER plans \$5 million (9 percent of the total plan) for this purpose. These improvements span several offices which contribute to attaining PDUFA II goals. Included are

funds to train reviewers, increase pre-approval inspections, and cost increases for CBER's Document Control Center related to increasing application volume and the transition to electronic applications. Also included are estimated travel funds for ICH meetings that will promote accelerated drug development through agreements on shared standards for use in the United States, Japan, and European pharmaceutical authorities. The actual distribution of these ICH funds will be decided each year by the Office of External Affairs which coordinates ICH activities.

### Information Technology

The final component of CBER's plan is the largest--\$34.4 million (58 percent of the total plan) for IT enhancements supporting the drug approval process. It has three parts: (1) funds to develop the capability for electronic application receipt and review by FY 2002 account for \$9.6 million; (2) funds for replacing CBER's document tracking system with state-of-the-art capabilities account for \$9.9 million; and (3) funds for many other IT enhancements that support the PDUFA II goals (such as replacement of one-third of the personal computers of the reviewers every 3 years and overall maintenance and upgrading of CBER's data systems and networks that support PDUFA) account for \$10.2 million over 5 years, plus another \$4.7 million held in reserve.

The IT part of the plan was compared to industry practices and standards utilizing outside contract support. As a result, some adjustments were made and other amounts are held in reserve until more complete plans for their use are agreed to between CBER and the FDA OCIO. The OCIO will advise CBER on how funds held in reserve can be released and any other clearance processes for planned funds for IT projects.

The table at the bottom of the following page summarizes the total PDUFA funds added to CBER each year. The first three lines show the amounts to support the PDUFA I additive base funds. The fourth line shows the total PDUFA II plan request, and the last line shows the total of the PDUFA fee revenues planned for CBER each year.

# CBER Plan Summary Tables--PDUFA II

## Plan for Funds in Addition to PDUFA I Additive Base (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
PDUFA I Additive Base FTE's	187	167	167	167	167	
Total Additive PDUFA FTE's in This Plan (1)	203	198	204	215	224	
Total FTE's Needed to Meet PDUFA II Goals	29	57	76	87	96	
FTE's Reprogrammed from Research	-13	-26	-39	-39	-39	
<b>Net Additional FTE's Requested</b>	<b>16</b>	<b>31</b>	<b>37</b>	<b>48</b>	<b>57</b>	
(Increment Each Year)	16	15	6	11	9	
Salary and Benefits for Additional FTE's (2)	\$309	\$2,517	\$3,154	\$4,296	\$5,357	\$15,633
Operating Support for Additional FTE's (3)	\$144	\$287	\$353	\$472	\$577	\$1,834
Startup Costs for New FTE's (One-time) (4)	\$152	\$143	\$57	\$105	\$86	\$542
Moves and Renovations		\$200	\$200	\$200	\$200	\$800
OMS Reserve for Additional Space			\$185	\$240	\$285	\$710
<b>Subtotal--Personnel and Support</b>	<b>\$605</b>	<b>\$3,146</b>	<b>\$3,949</b>	<b>\$5,313</b>	<b>\$6,505</b>	<b>\$19,518</b>
Review Process Improvements	\$976	\$1,038	\$875	\$883	\$890	\$4,662
ICH (5)	\$80	\$80	\$80	\$80	\$80	\$400
<b>Subtotal--Process Enhancements</b>	<b>\$1,056</b>	<b>\$1,118</b>	<b>\$955</b>	<b>\$963</b>	<b>\$970</b>	<b>\$5,062</b>
Electronic Submissions	\$1,453	\$2,153	\$1,753	\$2,103	\$2,103	\$9,565
Document Management	\$4,228	\$2,359	\$1,617	\$917	\$817	\$9,938
Other Electronic Initiatives	\$2,044	\$2,646	\$2,223	\$1,744	\$1,557	\$10,214
Reserve Pending OIRM Approval (6)	\$225	\$825	\$1,200	\$1,175	\$1,275	\$4,700
<b>Subtotal--Information Technology</b>	<b>\$7,950</b>	<b>\$7,983</b>	<b>\$6,793</b>	<b>\$5,939</b>	<b>\$5,752</b>	<b>\$34,417</b>
<b>Total Plan</b>	<b>\$9,611</b>	<b>\$12,247</b>	<b>\$11,697</b>	<b>\$12,215</b>	<b>\$13,227</b>	<b>\$58,997</b>

- (1) PDUFA Additive Base FTE's (preceding line) plus Net Additional FTE's Requested (bolded line below).
- (2) Salary and benefits estimated at \$77,315 in 1998 and escalated at 5% annually thereafter. The 1998 amount is reduced by 75% for a July 1 estimated on-board date.
- (3) Operating Support per FTE at \$9,000 per year and inflated at 3% annually beginning in 1999.
- (4) \$9,500 per FTE is added only once, in first year the FTE is provided, for start-up costs.
- (5) Estimate only: actual distribution of ICH funds will be decided each year by the Office of External Affairs.
- (6) Funds in this line include \$450,000 for integration with ORA systems. Reserves will be released after FDA Chief Information Officer has approved uses.

## Total Additive PDUFA Funds for CBER--Base and Plan (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
Base Payroll for 167 FTE's (5% Inflation) *	\$15,800	\$14,966	\$15,715	\$16,500	\$17,325	\$80,307
Base Operating Funds (3% Inflation) **	\$2,273	\$1,843	\$1,595	\$1,642	\$1,692	\$9,045
Subtotal--Base Allotment	\$18,073	\$16,809	\$17,309	\$18,143	\$19,017	\$89,352
Total New Request	\$9,611	\$12,247	\$11,697	\$12,215	\$13,227	\$58,997
<b>Total PDUFA Additive Funds--CBER</b>	<b>\$27,684</b>	<b>\$29,057</b>	<b>\$29,006</b>	<b>\$30,357</b>	<b>\$32,244</b>	<b>\$148,349</b>

\* Payroll Base is for 187 FTE's in 1998 and 167 each year thereafter (20 FTE Transferred to CDER).

\*\* Operating Base is reduced by \$295,000 in 1999 and 2000 as PDUFA additive research is phased out.

## ORA Plan Summary

After reviewing the initial plans of CDER and CBER, ORA developed an overall plan for the 5 years of PDUFA II, reflecting resources required for the field workforce to ensure that PDUFA II goals are met. This plan, after discussion and adjustments agreed to by ORA, will require an additional \$13.3 million over 5 years. The table at the top of page 19 presents a year-by-year resource summary of ORA's plan. It has the same three principal components as the center plans: (1) personnel and support, (2) review process enhancements, and (3) information technology.

### Personnel and Support

ORA's plan depends on PDUFA funds for additional staff for the increasingly tight timetable for pre-approval inspections. This use represents \$6.7 million (50 percent) of the total plan. This investment would enable ORA to add 28 more FTE's to the application review process by 2002 (in addition to ORA's PDUFA I additive base of 74 FTE's and its PDUFA appropriated base of 106 FTE's) for a total PDUFA effort of 208 FTE's. In 2001 and 2002, as mutual recognition agreements with the European Union become effective, some of these resources will manage international agreements rather than conduct pre-approval inspections. The result is an increase of about 16 percent above ORA's current level of 180 FTE's devoted to PDUFA work. These additional staff are needed to: (1) increase pre-approval inspections as the application workload grows, (2) meet the tighter review timetables for many applications mandated by PDUFA II, and (3) maintain and improve ORA's current establishment record system which will be increasingly used in lieu of custom pre-approval inspections.

No increases for additional space are included in the ORA plan for Personnel and Support because the additional personnel will be deployed in locations around the country with available space. The support cost for an ORA FTE is kept at \$16,000 per year (the amount allocated for an ORA FTE during PDUFA I) based on the expectation of frequent travel including international travel for pre-approval inspections.

### Review Process Enhancements

The second component of ORA's plan is \$3.3 million (25 percent of the total plan) for enhancements to support pre-approval inspection work. These enhancements include equipment, training, and time accounting. Inadequate laboratory equipment to analyze samples collected during pre-approval inspections has delayed field completion of pre-approval inspection work. For PDUFA II, ORA plans \$1.3 million over 5 years to purchase specific pieces of equipment required to analyze pre-approval inspection samples. ORA is also planning on \$900,000 over 5 years for PDUFA-related training. ORA's training needs are exacerbated because the 180 staff-years currently devoted to PDUFA represent time spent by over 600 different employees. Training and refresher courses for those who conduct PDUFA pre-approval inspections or analyze samples collected have to be provided for more employees than expected for 180 staff-years of work. The amount requested for training will meet this need. ORA's process

enhancement subtotal also includes \$1 million to be held in reserve for work in FY 1999 to upgrade and improve its PDUFA time accounting system and to make it comparable to CDER and CBER systems. ORA's current system was designed over 25 years ago and needs to be updated. This amount will be reserved for ORA in 1999 pending better estimates of the cost of redesigning the ORA system.

### Information Technology

The final component of ORA's plan is \$3.3 million (25 percent of the total) to enable the field offices to receive and review electronic applications to enable field staff to prepare for pre-approval inspections. The requested funds will allow ORA to develop and update its information management infrastructure to allow paperless application processing. In addition, \$1.4 million is included in the CDER and CBER requests to ensure their information systems are integrated with ORA's. CDER's plan also includes \$780,000 for upgrading either CDER's or ORA's automated system for reporting inspection results; if ORA's system is chosen, then this \$780,000 will also be allocated to ORA. The FDA OCIO will send information to ORA on any other clearance processes for planned funds for IT projects.

The table at the bottom of the following page summarizes the total PDUFA funds added to ORA each year. The first three lines show the amounts to support the PDUFA I additive base funds. The fourth line shows the total PDUFA II plan request, and the last line shows the total of the PDUFA fee revenues planned for ORA each year.

## ORA Plan Summary Tables--PDUFA II

### Plan for Funds in Addition to PDUFA I Additive Base (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
PDUFA I Additive Base FTE's	74	74	74	74	74	
Total Additive PDUFA FTE's in This Plan (1)	74	81	88	95	102	
Additional FTE's Planned (Increment Each Year)	0 0	7 7	14 7	21 7	28 7	
Salary and Benefits for Additional FTE's (2)	\$0	\$468	\$984	\$1,549	\$2,169	\$5,170
Operating Support for Additional FTE's (3)	\$0	\$115	\$238	\$367	\$504	\$1,224
Startup Costs for New FTE's (One-time) (4)	\$0	\$67	\$67	\$67	\$67	\$266
<b>Subtotal--Personnel and Support</b>	<b>\$0</b>	<b>\$650</b>	<b>\$1,288</b>	<b>\$1,983</b>	<b>\$2,740</b>	<b>\$6,661</b>
Equipment	\$230	\$275	\$275	\$275	\$330	\$1,385
Training	\$148	\$270	\$175	\$133	\$175	\$901
Reserve for Time-Accounting Study		\$1,000				\$1,000
<b>Subtotal--Process Enhancements</b>	<b>\$378</b>	<b>\$1,545</b>	<b>\$450</b>	<b>\$408</b>	<b>\$505</b>	<b>\$3,286</b>
Electronic Submissions	\$165	\$193	\$313	\$501	\$551	\$1,723
Document Management		\$11	\$11	\$11	\$21	\$54
Other Electronic Initiatives	\$360	\$273	\$261	\$261	\$399	\$1,554
<b>Information Technology (5)</b>	<b>\$525</b>	<b>\$477</b>	<b>\$585</b>	<b>\$773</b>	<b>\$971</b>	<b>\$3,331</b>
<b>Total Plan</b>	<b>\$903</b>	<b>\$2,672</b>	<b>\$2,323</b>	<b>\$3,164</b>	<b>\$4,216</b>	<b>\$13,278</b>

(1) PDUFA Additive Base FTE's (preceding line) plus Additional FTE's Planned.

(2) ORA pay and benefits based on 1998 estimate of \$63,729 per FTE increasing at 5% annually.

(3) Operating Support per FTE at \$16,000 per year and inflated at 3% annually beginning in 1999.

(4) \$9,500 per FTE is added only once, in first year the FTE is provided, for start-up costs.

(5) This line does not include \$900,000 in CDER plan and \$450,000 in CBER plan over 5 years for integrating their systems with ORA's. It also does not include \$780,000 in CDER reserves for upgrading either CDER's or ORA's automated system for reporting inspection results, depending on which system is selected to upgrade.

### Total Additive PDUFA Funds for ORA--Base and Plan (\$000)

Note: Numbers Are Rounded and May Not Add

Category	1998	1999	2000	2001	2002	5-Year Total
Base Payroll for 74 FTE (5% Inflation)	\$5,049	\$5,301	\$5,567	\$5,845	\$6,137	\$27,899
Base Operating Funds (3% Inflation)	\$1,166	\$1,201	\$1,237	\$1,274	\$1,312	\$6,190
Subtotal--Base Allotment	\$6,215	\$6,502	\$6,804	\$7,119	\$7,449	\$34,089
Total New Request	\$903	\$2,672	\$2,323	\$3,164	\$4,216	\$13,278
<b>Total PDUFA Additive Funds--ORA</b>	<b>\$7,118</b>	<b>\$9,175</b>	<b>\$9,126</b>	<b>\$10,283</b>	<b>\$11,665</b>	<b>\$47,367</b>

## Overhead Summary

After the plans for CDER, CBER, and ORA were developed, the Office of Management and Systems estimated the overhead costs for PDUFA II and allocations of the overhead funds. This section provides background information on how overhead is calculated, how overhead funds are used, and summarizes plans for their use in PDUFA II.

### Overhead Calculation

As FDA developed PDUFA baseline costs in 1993, the Office of the Assistant Secretary for Finance prescribed the formula FDA uses to determine non-center headquarters (NCHQ) overhead costs. That formula conforms with generally accepted accounting principles and was found reasonable by Arthur Andersen consultants in subsequent annual audits. The formula is:

$$\text{Total Costs of NCHQ} \div (\text{Salary Costs of All of FDA} - \text{NCHQ Salary Costs}) = \text{Overhead Rate}$$

The salary costs used in this formula do not include any benefit costs. At the end of each fiscal year, the Office of Financial Management recalculates this overhead rate. To determine overhead costs attributable to the PDUFA activities, this rate is multiplied by the total PDUFA salary costs (excluding benefits) for CDER, CBER, and ORA. In 1997, FDA spent a total of \$232.2 million on the drug review process as defined in PDUFA, and the 1997 PDUFA overhead costs were \$23.6 million, or about 10 percent--a percent we expect to remain fairly stable through the year 2002. Agency-wide, overhead costs (NCHQ total costs) have fairly consistently amounted to about 10 percent of FDA's total costs. For 1998, the overhead for the PDUFA drug review process is estimated to be about \$25.3 million.

As with all PDUFA costs, this overhead has two components: (1) a portion paid from traditional appropriations, and (2) a portion paid from fees collected from industry. Under PDUFA I, the portion that must be paid from appropriations was the overhead amount FDA actually spent on this process in 1992, adjusted for cost increases since then. Under PDUFA II, that amount is further adjusted for actual costs FDA paid from appropriated funds in 1997. The adjusted overhead amount that must come from appropriations in 1998 is \$14.4 million. The difference between the total estimated overhead costs of \$25.3 million and the \$14.4 million that must be paid from appropriated funds is \$10.9 million. This is the amount of FDA's overhead costs to be paid from fees. Projections of these costs over the five years of PDUFA II are estimated in the chart below.

**Projected PDUFA Overhead and Source (\$000)**

Source	1998	1999	2000	2001	2002
<b>S&amp;E Appropriations</b>	\$14,402	\$14,608	\$14,930	\$15,273	\$15,624
<b>Fees from Industry</b>	\$10,889	\$13,758	\$14,809	\$16,123	\$17,518
<b>Total Overhead</b>	<b>\$25,291</b>	<b>\$28,366</b>	<b>\$29,739</b>	<b>\$31,396</b>	<b>\$33,142</b>

## Use of Overhead Funds

The industry fees supporting overhead will be used in two ways: (1) direct PDUFA support, and (2) indirect support. The direct support funds will pay for specific increases to support the PDUFA program. The remainder is indirect support which pays for a portion of the non-center offices that provide agency-level managerial direction and support services for all FDA programs, including PDUFA.

At the end of PDUFA I, direct overhead support funded a total of 41 FTE's, at a cost of \$3.3 million. These FTE's were allocated to Office of the Commissioner components whose work was directly impacted by PDUFA--such as personnel, finance, IT, facilities, contracts, and reviewing waiver requests. Over the course of PDUFA II, it is envisioned that these direct overhead FTE's will increase by 15, for a total of 56. In addition, direct overhead funds will be allotted to the FDA OCIO for information management expenses in support of PDUFA II. OCIO will be responsible for developing and maintaining the FDA electronic gateway for the receipt of electronic PDUFA applications submitted to FDA. OCIO will also develop and implement IT standards for PDUFA-related programs and provide oversight for achieving the electronic submission goal. More information about the role and costs associated with OCIO support are provided in the PDUFA II Information Management Five-Year Plan (Attachment 3). A summary of the planned allocation of direct PDUFA overhead over the course of PDUFA II follows.

**Projected PDUFA Direct Overhead (\$000)**

Source	1998	1999	2000	2001	2002
<b>Direct FTE's</b>	49	52	54	56	56
<b>FTE Pay and Support*</b>	\$4,513	\$5,394	\$5,531	\$5,798	\$6,055
<b>IT Support</b>	\$438	\$1,447	\$664	\$352	\$360
<b>IT Reserves</b>			\$390	\$740	\$390
<b>Total</b>	<b>\$4,951</b>	<b>\$6,841</b>	<b>\$6,586</b>	<b>\$6,890</b>	<b>\$6,805</b>

\*Based on average salary and benefit cost of \$72,636 in 1998 escalated at 5% beginning in 1999, and \$9,000 per FTE for support costs escalated at 3% annually beginning in 1999.

## FDA Summary Plan

The Agency plan for PDUFA II is a composite of plans developed by CDER, CBER, and ORA. Tables 1-7 on pages 24 and 25 summarize the overall FDA plan. The discussion below summarizes information in each of these tables.

- Table 1 shows the \$456 million set aside over 5 years to maintain and support the additional staff hired under PDUFA I (referred to as the PDUFA I additive base) discussed in Assumption 1. It also shows for each year the total fee revenues expected and the amounts still available for allocation after the PDUFA I additive base funds have been subtracted from the total estimated fees available--a total of about \$284 million over the 5 years.
- Table 2 shows the allocation of \$290 million over 5 years, by component, planned to meet PDUFA II goals. The yearly amounts and totals for CDER, CBER, and ORA on the first three lines are from their individual plans. The next three lines show the increase in: (1) overhead, (2) central accounts, and (3) rental payments to GSA. These are necessary to accommodate the additional staff hired by the centers. The next to last line shows the reserve to be held back for contingencies in the later years of the plan (Assumption 8). The total plan allocates about \$6 million more than FDA expects to collect in fees over the 5 years of PDUFA II--which is explained in the discussion of Table 4 below.
- Table 3 shows the allocation of this \$290 million by expense category. About one-third of the increase will be spent for pay and benefits for 325 additional staff, one-third for IT enhancements, and one-third for other enhancements, operating expenses, overhead, rent, and contingencies. A summary of the additional FTE's planned each year above the PDUFA additive base levels on page 4 are shown below.

**PDUFA II Program FTE's Above the PDUFA I Additive Base**

Organization	1998	1999	2000	2001	2002
<b>CDER</b>	23	138	173	208	240
<b>CBER</b>	16	31	37	48	57
<b>ORA</b>		7	14	21	28
<b>Total</b>	<b>39</b>	<b>176</b>	<b>224</b>	<b>277</b>	<b>325</b>

- Table 4 (bottom of page 24) shows the difference between the projected fee revenues and expenditures each year and the estimated PDUFA carryover balances at the beginning and end of each year. In 1998, FDA will spend about \$4.5 million less than it expects to collect but, in 1999 and 2000, this plan calls for expenditures of about \$12 million and \$7 million more, respectively, than expected collections. FDA can do this because it began

1998 with about \$47.3 million in PDUFA carryover funds and accounts receivable. In the years 1998, 2001, and 2002, when the plan calls for FDA to spend less than it collects, the carryover balance will increase. In years 1999 and 2000, when the plan calls for FDA to spend more than it collects, these carryover balances will be utilized. This concept is reasonable and defensible considering the Agency's need to make heavier investments early in the 5 year period to meet its goals. Drawing on the carryover balances allows the Agency to plan to spend \$6 million more than it expects to collect.

The table below reflects the minimum carryover balances FDA should have at the end of each fiscal year in order to begin the following year with 2<sup>2</sup>/<sub>3</sub> months of operating funds (Assumption 3) and compares those amounts with planned carryover balances.

**Estimated Carryover Balance Needed and Planned--End of Each Fiscal Year (\$000)**

Item	1998	1999	2000	2001	2002
<b>Plan for Following Year</b>	\$144,825	\$152,263	\$160,033	\$176,223	\$185,034
<b>Needed Year-End Carryover</b>	\$32,200	\$33,900	\$35,600	\$39,200	\$41,200
<b>Carryover Balance in Plan</b>	\$51,579	\$39,477	\$32,649	\$39,514	\$41,207
<b>Difference -- Needed vs. Plan</b>	\$19,379	\$5,577	(\$2,951)	\$584	\$7

Carryover balances at these levels in the early years of the plan are essential in order to allow the expenditures planned in the second and third years of the plan. In aggregate, the carryover balances fall slightly below the minimum recommended level at the end of the year 2000 and are back to the minimum level in the last two years. Actual carryover balances are likely to be higher than those reflected in this plan.

- Tables 5 and 6 (page 26) summarize the allocation of the total \$746 million that FDA plans to spend over the 5 years of PDUFA II (PDUFA I additive base plus increases) by component and by expense category, respectively. The last column in both tables shows the percent of total PDUFA II funds planned over the next 5 years. By component, CDER will be allocated 56 percent, CBER 20 percent, ORA 6 percent, overhead 10 percent, central accounts 4 percent, rental payments to GSA 3 percent, and contingency reserve 1 percent. By expense category, 58 percent of the total PDUFA II revenues will be dedicated to pay and benefits for staff (either contract or direct hire), 10 percent for center/ORR operating costs, 13 percent for IT initiatives, 10 percent for overhead, 4 percent for central accounts, 3 percent for rental payments to GSA, and 1 percent for the contingency reserve.
- Table 7 (page 25) summarizes the total PDUFA FTE's planned each year, showing the number of FTE's paid from the salary and expense appropriations, the number of FTE's paid from fees and considered the PDUFA I additive base, and the number of FTE's added over the course of PDUFA II under this plan.

## FDA Plan Summary Tables--PDUFA II (\$000)

Note: Numbers Are Rounded and May Not Add

### 1. PDUFA I Additive Base and Estimated Funds Available

Item\Year	1998	1999	2000	2001	2002	TOTAL	Percent
Pay and Benefits for Centers/ORAs	\$61,366	\$64,600	\$67,830	\$71,222	\$74,783	\$339,802	75%
Base Operating Funds--Centers/ORAs	\$7,021	\$6,919	\$6,823	\$7,027	\$7,238	\$35,028	8%
Overhead	\$10,889	\$11,182	\$11,465	\$11,862	\$12,336	\$57,734	13%
Central Accounts	\$4,230	\$4,442	\$4,664	\$4,897	\$5,142	\$23,373	5%
<b>Total--PDUFA I Additive Base</b>	<b>\$83,506</b>	<b>\$87,143</b>	<b>\$90,782</b>	<b>\$95,008</b>	<b>\$99,499</b>	<b>\$455,937</b>	<b>100%</b>
<b>Total Estimated Fees Available</b>	<b>\$117,122</b>	<b>\$132,273</b>	<b>\$145,435</b>	<b>\$167,168</b>	<b>\$177,915</b>	<b>\$739,913</b>	
<b>Still Available for Allocation</b>	<b>\$33,616</b>	<b>\$45,130</b>	<b>\$54,653</b>	<b>\$72,160</b>	<b>\$78,416</b>	<b>\$283,976</b>	

### 2. Planned Allocation of Available Funds--by Component

Component\Year	1998	1999	2000	2001	2002	TOTAL	Percent
CDER	\$18,637	\$33,256	\$35,858	\$35,739	\$40,530	\$164,020	57%
CBER	\$9,611	\$12,247	\$11,697	\$12,215	\$13,227	\$58,997	20%
ORA	\$903	\$2,672	\$2,323	\$3,164	\$4,216	\$13,278	5%
Overhead	\$0	\$2,576	\$3,344	\$4,261	\$5,182	\$15,364	5%
Central Accounts	\$0	\$1,232	\$1,615	\$2,057	\$2,486	\$7,390	3%
Rental Payments to GSA		\$5,428	\$5,643	\$5,860	\$6,083	\$23,014	8%
Contingency Reserve	\$0	\$0	\$1,000	\$2,000	\$5,000	\$8,000	3%
<b>Total Allocations</b>	<b>\$29,151</b>	<b>\$57,412</b>	<b>\$61,481</b>	<b>\$65,295</b>	<b>\$76,724</b>	<b>\$290,062</b>	<b>100%</b>

### 3. Allocation of Available Funds--by Expense Category

Expense Category\Year	1998	1999	2000	2001	2002	Total	Percent
Pay and Benefits for Centers/ORAs	\$799	\$15,335	\$20,393	\$26,367	\$32,388	\$95,283	33%
Personnel Support	\$1,943	\$4,423	\$4,449	\$5,368	\$6,154	\$22,337	8%
Process Enhancements	\$5,246	\$4,619	\$3,572	\$3,351	\$3,476	\$20,264	7%
IT	\$21,163	\$23,799	\$21,464	\$16,031	\$15,954	\$98,411	34%
<b>Subtotal to Centers</b>	<b>\$29,151</b>	<b>\$48,176</b>	<b>\$49,878</b>	<b>\$51,117</b>	<b>\$57,972</b>	<b>\$236,294</b>	<b>81%</b>
Overhead	\$0	\$2,576	\$3,344	\$4,261	\$5,182	\$15,364	5%
Central Accounts	\$0	\$1,232	\$1,615	\$2,057	\$2,486	\$7,390	3%
Rental Payments to GSA		\$5,428	\$5,643	\$5,860	\$6,083	\$23,014	8%
Contingency Reserve		\$0	\$1,000	\$2,000	\$5,000	\$8,000	3%
<b>Total</b>	<b>\$29,151</b>	<b>\$57,412</b>	<b>\$61,481</b>	<b>\$65,295</b>	<b>\$76,724</b>	<b>\$290,062</b>	<b>100%</b>

### 4. Difference Between Plan and Available, and Projected Year-End Carry-Over Balances

Category\Year	1998	1999	2000	2001	2002
Difference Between Plan & Available	\$4,465	(\$12,282)	(\$6,828)	\$6,865	\$1,693
Est. Carry-Over Balance-Year Beginning	\$47,294	\$51,759	\$39,477	\$32,649	\$39,514
<b>Est. Carry-Over Balance-Year End</b>	<b>\$51,759</b>	<b>\$39,477</b>	<b>\$32,649</b>	<b>\$39,514</b>	<b>\$41,207</b>

## FDA Plan Summary Tables--PDUFA II (\$000) Continued

Note: Numbers Are Rounded and May Not Add

### 5. FDA Summary of all PDUFA Additive Resources--by Component

Component\Year	1998	1999	2000	2001	2002	TOTAL	Percent
CDER	\$62,736	\$81,464	\$86,398	\$88,726	\$96,085	\$415,409	56%
CBER	\$27,684	\$29,057	\$29,006	\$30,357	\$32,244	\$148,349	20%
ORA	\$7,118	\$9,175	\$9,126	\$10,283	\$11,665	\$47,367	6%
Overhead	\$10,889	\$13,758	\$14,810	\$16,123	\$17,518	\$73,098	10%
Central Accounts	\$4,230	\$5,674	\$6,279	\$6,954	\$7,628	\$30,763	4%
Rental Payments to GSA	\$0	\$5,428	\$5,643	\$5,860	\$6,083	\$23,014	3%
Contingency Reserve	\$0	\$0	\$1,000	\$2,000	\$5,000	\$8,000	1%
<b>Total</b>	<b>\$112,657</b>	<b>\$144,555</b>	<b>\$152,263</b>	<b>\$160,303</b>	<b>\$176,222</b>	<b>\$746,000</b>	<b>100%</b>

### 6. FDA Summary of all PDUFA Additive Resources--by Expense Category

Expense Category\Year	1998	1999	2000	2001	2002	TOTAL	Percent
Pay and Benefits for Centers/ORA	\$62,165	\$79,935	\$88,224	\$97,589	\$107,172	\$435,085	58%
Operating Funds--Excluding IT	\$14,210	\$15,961	\$14,843	\$15,747	\$16,868	\$77,629	10%
Information Technology	\$21,163	\$23,799	\$21,464	\$16,031	\$15,954	\$98,411	13%
Overhead	\$10,889	\$13,758	\$14,810	\$16,123	\$17,518	\$73,098	10%
Central Accounts	\$4,230	\$5,674	\$6,279	\$6,954	\$7,628	\$30,763	4%
Rental Payments to GSA	\$0	\$5,428	\$5,643	\$5,860	\$6,083	\$23,014	3%
Contingency Reserve	\$0	\$0	\$1,000	\$2,000	\$5,000	\$8,000	1%
<b>Total</b>	<b>\$112,657</b>	<b>\$144,555</b>	<b>\$152,263</b>	<b>\$160,303</b>	<b>\$176,222</b>	<b>\$746,000</b>	<b>100%</b>

### 7. FDA Summary of all PDUFA FTE's for CDER, CBER, and ORA

Expense Category\Year	1998	1999	2000	2001	2002
Base FTE's Paid from Appropriations	1,147	1,147	1,147	1,147	1,147
PDUFA I Additive Base FTE's	659	659	659	659	659
FTE's Added for PDUFA II	39	176	224	277	325
<b>Total</b>	<b>1,845</b>	<b>1,982</b>	<b>2,030</b>	<b>2,083</b>	<b>2,131</b>

## Annual Reassessments

This plan represents a significant departure from resource planning and allocation under PDUFA I. With PDUFA II, FDA should be moving into a more predictable resource environment. This long-term plan lets the centers and ORA know at the outset the amounts each may expect each year. This early information will facilitate the work required to meet the PDUFA II goals. The plan is very aggressive, with revenue assumptions based on constant workload increases. Actual workload and revenues must be monitored closely.

The plan is meant to be a dynamic framework for the investments FDA must make. It will be updated in the second quarter of each fiscal year. That update will take into account the actual accomplishments, workload, revenues, and expenses of the previous fiscal year and the planned accomplishments, workload, revenues and fees to be charged in the current year, as set out in the annual Federal Register fee adjustment notice.

If revenues are expected to be at levels lower than the assumptions of this plan, or if actual PDUFA expenditures by CDER, CBER or ORA in the previous year are significantly less than the amounts allocated, then cutbacks in hiring and other expenses will be required. On the other hand, if PDUFA revenues exceed planned amounts because workload increases at a rate greater than planned, the additional revenues will need to be allocated to cope with workload increases. Also, if unforeseen contingencies do not necessitate using the contingency reserve, it will be allocated by the end of the second quarter of each year.

During PDUFA II, FDA's Office of Management and Systems will look closely at PDUFA costs and workload. If that assessment indicates that PDUFA workload is out of kilter with the distribution of resources in this plan then adjustments will be made.

Because all funds FDA expects to collect have been planned, adjustments made by the centers and ORA each year will generally be within the total amounts already planned for them each fiscal year. For example, if an unplanned IT item becomes a high priority, then cutbacks will have to be made in other components of that organization's plan (such as other IT items, hiring, or operating support) in order to fund that need. It is expected that most of the adjustments over the 5 years should fall into this category.

# PDUFA II Fee and Revenue Estimation Worksheet

Assumes 7% Increasing Rate of Full Application Equivalents -- Basis of Negotiations with Industry

	1998	1999	2000	2001	2002
Statutory Full Application Fee	\$250,704	\$256,338	\$256,338	\$267,606	\$258,451
Inflation Percentage	1 2.45%	5.52%	8.69%	11.95%	15.31%
Fee per Full Application, after Inflation	\$256,846	\$270,497	\$278,612	\$299,585	\$298,016
Estimated Equivalent of Full Applications	2 152	163	174	186	199
<b>Est. Total Application Fee Revenue</b> After Accounting for Waivers	\$39,040,592	\$44,090,983	\$48,478,442	\$55,722,735	\$59,305,115
<b>Est. Total Product Fee Revenue</b>	\$39,040,592	\$44,090,983	\$48,478,442	\$55,722,735	\$59,305,115
Estimated # of Products	2100	2100	2100	2100	2100
Product Fee	\$18,591	\$20,996	\$23,085	\$26,535	\$28,241
<b>Est. Total Establishment Fee Revenue</b>	\$39,040,592	\$44,090,983	\$48,478,442	\$55,722,735	\$59,305,115
Estimated # of Establishments	275	275	275	275	275
Establishment Fee	\$141,966	\$160,331	\$176,285	\$202,628	\$215,655
<b>Estimate of Total Revenue</b>	\$117,121,776	\$132,272,950	\$145,435,325	\$167,168,206	\$177,915,346
Five-Year Total:					\$739,913,603

1 Calculated at 2.45% in 1998 and estimated at 3% each year thereafter.

2 Number of Full Application Equivalents after allowing for Exemptions and Waivers. Assumes 7% workload increase annually.

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Food and Drug Administration

#### Establishment of Prescription Drug User Fee Rates for Fiscal Year 1998

**AGENCY:** Food and Drug Administration, HHS.

**ACTION:** Notice.

**SUMMARY:** The Food and Drug Administration (FDA) is announcing the rates for prescription drug user fees for Fiscal Year (FY) 1998. The Prescription Drug User Fee Act of 1992 (the PDUFA), as amended by the Food and Drug Administration Modernization Act of 1997 (the FDAMA), authorizes FDA to collect user fees for certain applications for approval of drug and biological products, on establishments where the products are made, and on such products. Fees for applications for FY 1998 were set by the FDAMA, subject to adjustment for inflation. Total application fee revenues fluctuate with FDA application review workload. Fees for establishments and products are based on the revenues to be derived from applications.

**FOR FURTHER INFORMATION CONTACT:** Michael E. Roosevelt, Office of Financial Management (HFA-120), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-827-5088.

#### SUPPLEMENTARY INFORMATION:

##### I. Background

The PDUFA (Pub. L. 102-571), as amended by the FDAMA (Pub. L. 105-115), establishes three different kinds of user fees. Fees are assessed on: (1) Certain types of applications and supplements for approval of drug and biologic products, (2) certain establishments where such products are made, and (3) certain products (21 U.S.C. 379h(a)). When certain conditions are met, FDA may waive or reduce fees (21 U.S.C. 379h(d)). Under the PDUFA, as amended, one-third of the total user fee revenue for each FY must come from each of the three types of fees.

For 1998 through 2002, under the amendments enacted in the FDAMA, the total fee revenues and fee rates for application fees are set in the statute, but are to be adjusted annually for cumulative inflation since 1997. In addition, total application fee revenues are structured to increase or decrease each year as the number of applications submitted to FDA increases or decreases.

For 1998 through 2002, FDA is authorized to set fee rates for establishment and for product categories each year, so that the total fee revenue from each of these two categories will equal the total revenue FDA expects to collect from application fees that year. This procedure continues the arrangement under which one-third of the total user fee revenue comes from each of the three types of fees.

This notice establishes fee rates for FY 1998 for application, establishment, and product fees. These fees are retroactive to October 1, 1997, and will remain in effect through September 30, 1998. Prior to the enactment of the FDAMA, only half of the application fee was due upon submission of the application, and the second half was due when FDA issued an action letter after review of the application. Beginning in FY 1998, the entire application fee is due upon submission of the application to FDA. For fees already paid on applications and supplements submitted on or after October 1, 1997, FDA will bill applicants for the difference between fees paid and fees due under the new fee schedules and under the new requirement that application fees be paid in full at the time an application is submitted. For applications and supplements submitted after December 31, 1997, the new fee schedule must be used. Invoices for establishment and product fees for FY 1998 will be issued in December 1997, using the new fee schedules.

##### II. Inflation and Workload Adjustment Process

The PDUFA, as amended by the FDAMA, provides that fee rates for each FY shall be adjusted by notice in the **Federal Register**. The adjustment must reflect the greater of: (1) The total percentage change that occurred during the preceding FY in the Consumer Price Index (the CPI) (all items; U.S. city average), or (2) the total percentage pay change for that FY for Federal employees, as adjusted for any locality-based payment applicable to employees stationed in the District of Columbia. The FDAMA provides for this annual adjustment to be cumulative and compounded annually after 1997 (see 21 U.S.C. 379h(c)).

The FDAMA also structures the total application fee revenue to increase or decrease each year as the number of applications submitted to FDA increases or decreases. This provision allows revenues to rise or fall as FDA's workload rises or falls. To implement this provision each year, FDA will estimate the number of applications it anticipates receiving, based on its actual

receipts the previous year, and making an allowance for waivers and refunds. FDA has made similar estimates each year since 1993 under the PDUFA fee setting process. The number of applications estimated by this process will then be multiplied by the inflation-adjusted statutory application fee. This calculation will produce the FDA's estimate of total application fee revenues to be received each year.

The PDUFA also provides that FDA shall adjust the rates for establishment and product fees so that the total revenues from each of these categories will be equal to the revenues FDA expects to collect from application fees that year. The PDUFA, as amended, provides that the new fee rates based on these calculations be published within 60 days after the end of each FY (21 U.S.C. 379h(c)(2)).

##### III. Inflation and Workload Adjustment for Application Fees and Total Application Fee Revenue

The FDAMA provides that the application fee rates set out in the statute be adjusted each year for cumulative inflation. It also provides for total application fee revenues to increase or decrease, based on increases or decreases in FDA's application review workload.

##### A. Inflation Adjustment to Application Fees

Application fees are assessed at different rates for qualifying applications depending on whether the applications require clinical data on safety or effectiveness (other than bioavailability or bioequivalence studies) (21 U.S.C. 379h(a)(1)(A), and 379h(b)). Applications that require clinical data are subject to the full application fee. Applications that do not require clinical data and supplements that require clinical data are assessed one-half the fee of applications that require clinical data. If FDA refuses to file an application or supplement, 75 percent of the application fee is refunded to the applicant (21 U.S.C. 379h(a)(1)(D)).

The application fees described above are set out in the FDAMA for 1998 (\$250,704 for applications requiring clinical data, and \$125,352 for applications not requiring clinical data or supplements requiring clinical data) (21 U.S.C. 379h(b)(1)), but must be adjusted for inflation. For FY 1997, the total increase in the CPI was 2.15 percent, whereas the increase in applicable Federal salaries for FY 1998 is 2.45 percent. The higher of these, 2.45 percent, is to be used for computing the inflation adjustment for FY 1998. Since

1998 is the first year after 1997, the base year from which inflation accumulates and is compounded, there is no cumulative, compounded inflation from previous years to be added to this percentage for FY 1998. The adjusted application fee rates are computed by applying the inflation percentage for FY 1998 (102.45 percent) to the FY 1998 statutory application fee rates stated above. For FY 1998 the adjusted application fee rates are \$256,846 for applications requiring clinical data, and \$128,423 for applications not requiring clinical data or supplements requiring clinical data. These amounts must be submitted with all applications during FY 1998.

**B. Workload Adjustment and Total Application Fee Revenue**

Total application fee revenues for 1998 will be determined by the number of applications FDA receives from October 1, 1997, through September 30, 1998, multiplied by the fee rates calculated in the preceding paragraph. Before fees can be set for establishment and product fee categories, each of which are to equal total revenues FDA collects from application fees, FDA must estimate its total 1998 application fee revenues. To do this, FDA calculates the number of full application fees FDA received in 1997 and uses that figure as a basis for estimating 1998 application volume.

For FY 1997, FDA received, filed, and assessed fees for 118 applications that require clinical data, 19 applications that did not require clinical data, and 127 supplements that require clinical data. Because applications that do not require clinical data and supplements that require clinical data are assessed only one-half the full fee, the equivalent number of these applications subject to the full fee is determined by summing these categories and dividing by 2. This amount is then added to the number of applications that require clinical data to arrive at the equivalent number of applications subject to full application fees.

In addition, as of September 30, 1997, FDA assessed fees for one application that required clinical data, one application that did not require clinical data, and one supplement, all of which were refused filing or withdrawn before filing. After refunds, the full application paid one-fourth the full application fee and is counted as one-fourth of an application, and the application that did not require clinical data and the supplement each paid one-eighth of the full application fee and are each counted as one-eighth of an application.

Using this methodology, the approximate equivalent number of applications that required clinical data and were assessed fees in FY 1997 was 192, before any further decisions were made on requests for waivers or reductions. Under the FDAMA small businesses will receive a full waiver for their first application (rather than waiver of half the fee as was the case under the PDUFA). In addition, the FDAMA excludes from fees bulk biological products that are further manufactured, and provides new exceptions for certain orphan product applications and certain supplements for pediatric indications. Because of these changes, in FY 1998 FDA estimates that approximately 40 fewer equivalents of full applications will generate fees, or fees for them will be subject to waivers or reductions. This number is a substantial increase over the estimate that FDA would waive or reduce 16 equivalents of full fee applications made 1 year ago when fees for 1997 were established. Therefore, FDA estimates that approximately 152 equivalent applications that require clinical data will qualify for fees in FY 1998, after allowing for possible waivers or reductions.

The following calculations summarize the determination of FY 1998 application estimates, based on 1997 data:

- 118 applications that require clinical data, + (19+2) applications that do not require clinical data, + (127+2) supplements that require clinical data, + (1+4) applications that require clinical data and which FDA refuses to file or the sponsor withdraws before filing + (2+8) supplements which FDA refuses to file or the sponsor withdraws before filing minus 40 waivers, reductions or exceptions = 152 (the estimated number of "full fee" applications for FY 1998 based on FY 1997 experience, and rounded up).

The total FY 1998 application fee revenue is estimated by multiplying the adjusted application fee rate (\$256,846) by the equivalent number of applications projected to qualify for fees in FY 1998 (152), for a total estimated application fee revenue in 1998 of \$39,040,592. This is the amount of revenue that FDA is also expected to derive from establishment fees and from product fees.

**IV. Fee Calculations for Establishment, and Product Fees**

**A. Establishment Fees**

The FY 1997 establishment fee was based on an estimate of 250 establishments subject to fees. In FY

1997, 263 establishments qualified for fees before any decisions on requests for waivers or reductions were made. Under the FDAMA, the basis for assessment of establishment fees is amended. The responsibility for the fee is placed on the applicant whose product is manufactured at the facility, and not on the owner of the facility. Contract manufacturing establishments will now be subject to fees, to be paid by the applicant whose product is manufactured at that establishment. FDA believes this will subject additional establishments to fees, and estimates that approximately 275 establishments will qualify for fees in FY 1998 after allowing for possible waivers or reductions. Thus, the number 275 is used in setting the new establishment fee rate. The fee per establishment is determined by dividing the adjusted total fee revenue to be derived from establishments (\$39,040,592), by the estimated 275 establishments, for an establishment fee rate for FY 1998 of \$141,966 (rounded to the nearest dollar).

**B. Product Fees**

The FY 1997 product fee was based on an estimate that 2,200 products would be subject to product fees in FY 1997. For FY 1997, 2,267 products qualified for fees before any decisions on requests for waivers or reductions were made. FDA estimates that only 2,100 products will qualify for product fees in FY 1998, after allowing for the fact that about 140 antibiotic products and 11 products manufactured by state governments that paid fees in 1997 will no longer be subject to fees in 1998 under the FDAMA, and for the fact that an additional 17 large volume parenteral products that were subject to fees in 1997 are now regulated as generic drugs and will not be subject to fees in 1998. Accordingly, the FY 1998 product fee rate is determined by dividing the adjusted total fee revenue to be derived from product fees (\$39,040,592) by the estimated 2,100 products for a product fee rate of \$18,591 (rounded to the nearest dollar).

**V. Adjusted Fee Schedules for FY 1998**

The fee rates for FY 1998 are set out in the following table:

Fee category	Fee rates for FY 1998
Applications Requiring clinical data .....	\$256,846
Not requiring clinical data .....	\$128,423

Fee category	Fee rates for FY 1998
Supplements requiring clinical data ....	\$128,423
Establishments .....	\$141,966
Products .....	\$18,591

## VI. Implementation of Adjusted Fee Schedule

### A. Application Fees

Any application or supplement subject to fees under the PDUFA that is submitted after December 31, 1997, must be accompanied by the appropriate application fee established in the new fee schedule. FDA will bill applicants who submitted application fees between October 1, 1997, and December 31, 1997, based on the adjusted rate schedule.

### B. Establishment and Product Fees

By December 31, 1997, FDA will issue invoices for establishments and product fees for FY 1998 under the new fee schedules. Payment will be due by January 31, 1998. FDA will issue invoices in October 1998 for any products and establishments subject to fees for FY 1998 that qualify for fees after the December 1997 billing.

Dated: December 3, 1997.

William K. Hubbard,

Associate Commissioner for Policy Coordination.

[FR Doc. 97-32164 Filed 12-8-97; 8:45 am]

BILLING CODE 4160-01-F

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Food and Drug Administration

[Docket No. 97N-0151]

#### Agency Information Collection Activities; Announcement of OMB Approval

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

**SUMMARY:** The Food and Drug Administration (FDA) is announcing that a collection of information entitled "Applications for Exemption from Preemptions of Medical Device Requirements" has been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (the PRA).

**FOR FURTHER INFORMATION CONTACT:** Margaret R. Schlosburg, Office of Information Resources Management

(HFA-250), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-827-1223.

**SUPPLEMENTARY INFORMATION:** In the *Federal Register* of May 16, 1997 (62 FR 27059), the agency announced that the proposed information collection had been submitted to OMB for review and clearance under section 3507 of the PRA (44 U.S.C. 3507). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has now approved the information collection and has assigned OMB control number 0910-0129. The approval expires on July 31, 2000.

Dated: December 2, 1997.

William K. Hubbard,

Associate Commissioner for Policy Coordination.

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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Food and Drug Administration

[Docket No. 97N-0266]

#### Agency Information Collection Activities; Announcement of OMB Approval

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

**SUMMARY:** The Food and Drug Administration (FDA) is announcing that a collection of information entitled "Administrative Detention and Banned Medical Devices" has been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (the PRA).

**FOR FURTHER INFORMATION CONTACT:** Margaret R. Schlosburg, Office of Information Resources Management (HFA-250), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-827-1223.

**SUPPLEMENTARY INFORMATION:** In the *Federal Register* of July 16, 1997 (62 FR 38095), the agency announced that the proposed information collection had been submitted to OMB for review and clearance under section 3507 of the PRA (44 U.S.C. 3507). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has now approved the information collection and has assigned OMB control number 0910-0114. The

approval expires on September 30, 2000.

Dated: November 30, 1997.

William K. Hubbard,

Associate Commissioner for Policy Coordination.

[FR Doc. 97-32167 Filed 12-8-97; 8:45 am]

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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Health Care Financing Administration

[Document Identifier: HCFA-484]

#### Agency Information Collection Activities; Submission for OMB Review; Comment Request

In compliance with the requirement of section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995, the Health Care Financing Administration (HCFA), Department of Health and Human Services, has submitted to the Office of Management and Budget (OMB) the following proposal for the collection of information. Interested persons are invited to send comments regarding the burden estimate or any other aspect of this collection of information, including any of the following subjects: (1) The necessity and utility of the proposed information collection for the proper performance of the agency's functions; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

**Type of Information Collection Request:** Extension of a currently approved collection without change;  
**Title of Information Collection:** Attending Physician's Certification of Medical Necessity for Home Oxygen Therapy and Supporting Regulations 42 CFR 410.38 and 42 CFR 424.5; **Form Number:** HCFA-484 (OMB approval #0938-0534); **Use:** To determine oxygen is reasonable and necessary pursuant to Medicare Statute, Medicare claims for home oxygen therapy must be supported by the treating physician's statement and other information including estimate length of need (# of months), diagnosis codes (ICD-9) and:

1. Results and date of the most recent arterial blood gas PO<sub>2</sub> and/or oxygen saturation tests.

2. The most recent arterial blood gas PO<sub>2</sub> and/or oxygen saturation test performed EITHER with the patient in a chronic stable state as an outpatient, OR

**PRESCRIPTION DRUG USER FEE ACT  
(PDUFA II) INFORMATION MANAGEMENT  
FIVE-YEAR PLAN**

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Appendix A: Description of Current Major CDER ERSR Projects

Appendix B: Description of Current Major CBER ERSR Projects

Appendix C: Description of Current Major ERSR Agency/Cross Cutting Projects

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## **1.0 BACKGROUND**

The Prescription Drug User Fee Act of 1992 (PDUFA) provided FDA with increasing levels of resources for the review of human drug applications. That Act expired on September 30, 1997, but the FDA Modernization Act (FDAMA) of 1997 amended PDUFA and extended it through September 30, 2002 (PDUFA II). This extension will enable FDA to accomplish increasingly challenging goals over the next five years. PDUFA, as amended and extended by FDAMA, and with its new goals, is referred to as PDUFA II and its predecessor is now referred to as PDUFA I.

PDUFA II commits FDA to substantially faster review of some applications, to new goals for responding to industry requests for meetings and documenting outcomes of those meetings and for handling dispute resolutions, and to the transition to electronic receipt and review of applications by 2002. The new goals of PDUFA II are enormously challenging, diverse, and resource intensive. Major components of the review process will be accelerated further. Many of the goals will require the development and issuance of guidance documents. The development of infrastructure to provide the tools necessary to move to electronic application receipt and review will also be essential.

CBER, CDER, and the Office of Regulatory Affairs (ORA) have collaborated with the Office of the Chief Information Officer (OCIO) to develop an Agency-wide Information Management plan for investing PDUFA II information technology (IT) dollars in an Electronic Regulatory Submission and Review (ERSR) Program. This program and its component projects will support the transition from a largely paper-based regulatory submission and review environment to an electronic environment.

The FDA Chief Information Officer (CIO) also serves as the Associate Commissioner, Office of Information Resources Management (OIRM). In his role as Associate Commissioner, OIRM, responsibilities include the development, implementation and maintenance of the FDA wide-area network and entire telecommunications infrastructure, and the direct operational support for all offices and staffs within the Office of the Commissioner.

### ***1.1 Purpose of Plan***

The purpose of this document is to present how the ERSR projects fit into a single PDUFA IT Program. The Agency's PDUFA II Information Management Five-Year Plan describes the strategy for budgeting, executing, and managing PDUFA II IT funds during the period FY 1998 to FY 2002. This document provides a description of the PDUFA II ERSR Program, a milestone schedule for executing that program, and a description of the program management procedures and policies.

This document presents a budget plan and milestone schedule for major portions of the projects associated with the ERSR Program. The details and design specifications for several components will evolve over the next several months as the Centers refine their respective IT projects to better fit under the ERSR umbrella and to conform to FDAMA mandates. As a result, those programs will be reviewed again and this document will be updated to reflect the resulting budget and milestone details. In this regard, the PDUFA Information Management Five-Year Plan will serve as the baseline for monitoring and tracking ERSR projects over the next five years.

This document is intended to be a "living" document that provides a baseline for managing the expenditure of PDUFA II IT funds. The plan will be revisited annually to update forecasts, factor in actual expenses of previous years, and incorporate additional projects as they are identified. Mid-year progress reviews are also anticipated to assess progress toward planned milestones.

## ***1.2 FDAMA and PDUFA II Program Goals***

As part of PDUFA II, performance goals were set for the Center for Biologics Evaluation and Research (CBER) and the Center for Drug Evaluation and Research (CDER). Meeting these performance goals involves accelerating review of submissions (such as New Drug Applications (NDAs), Product License Applications (PLAs), Biologic License Applications (BLAs), efficacy supplements, and manufacturing supplements) over the next five years. The PDUFA performance goals also specifically call for the Agency to develop and update its information management infrastructure to allow, by fiscal year 2002, the paperless receipt and processing of Investigational New Drugs (INDs) and human drug applications, (as defined by PDUFA I), and related submissions.

The Agency's PDUFA II program provides funding to implement information technology initiatives that support the expedited approval of human drugs and biological products. FDAMA, in conjunction with the renewal of PDUFA, supports the Agency's transition from a largely paper-based regulatory submission and review environment to a new electronic paperless submission and review environment. This transition requires the Agency to fulfill three high-level objectives:

- Implement the ability to receive electronic submissions from regulated industry;
- Implement systems and procedures for reviewers to process submissions and generate review responses electronically; and
- Install any underlying or supporting technology necessary to handle this paradigm shift.

With regard to performance measures, the PDUFA II ERSR Program is in conformance with the Government Performance and Results Act (GPRA), FDAMA, the National Performance Review (implemented under the Agency's Performance Plan), the Paperwork Reduction Act, the Year 2000 Project, and Center-level strategic plans. Additionally, the Agency's commitment to implement Congressionally-mandated capital planning programs has driven the development of an integrated information management plan that achieves the performance goals of CDER and CBER in conjunction with ORA and the Agency's GPRA goals.

## ***1.3 IT Goals Supporting FDAMA and PDUFA II Program Goals***

FDAMA directs FDA to implement two major improvements related to IT:

- 1) Develop and update IT infrastructure to allow, by FY 2002, the paperless receipt and processing of INDs and NDAs/BLAs, and
- 2) Establish and maintain an information system to track the status and progress of each application or submission (including petitions, notifications, or other similar forms of requests) submitted to the Agency for action.

In addition to these IT-specific improvements, the Act directs FDA to meet new NDA/BLA review performance goals, adds new classification codes, and identifies new procedures (e.g., tracking of special protocols, resubmissions, meetings) which necessitate changes to existing information systems.

Activities to meet these FDAMA goals are augmented by Agency-wide efforts to meet IT goals established by the Agency's CIO. The CIO is leading the Agency's efforts to meet the challenge to maintain an aggressive application of new technology through an Agency-wide approach to investment selection and decision-making. Balance must be achieved between an increasing workload, unique Center business needs, and technology and information integration across the Agency. This balance requires review of Agency IT investments by FDA executive leadership, a sound technology base upon

which these applications will reside, and a viable set of Agency IT goals. To meet this challenge, the FDA is establishing an IT program to manage resources Agency-wide with the following goals:

- Facilitate information sharing within FDA by creating a common computing environment across the Agency;
- Reduce the regulatory burden on U.S. industry and the economy through the implementation of effective IT;
- Support the development of innovative technology solutions that support the regulatory process and improve the timely availability and ensure the safety of regulated products;
- Upgrade the FDA's ability to disseminate information to the public, academia, the scientific community, and industry through the evolution and sustainment of an integrated information environment throughout the Agency; and
- Create and sustain an effective IT Investment Review Process.

The objectives of the ERSR Program that support the Agency IT Goals are:

- Transition to a paperless, or near paperless, environment for program and administrative processes;
- Elimination of redundant or duplicate processes wherever feasible;
- Seamless, fast exchange of information within and across Centers and external to the Agency;
- Rigorous records management and document control, tracking, archiving;
- Robust electronic data interchange (EDI) capability for business and program data exchange;
- Standards-based information technology infrastructure; and
- Standards-based information repositories and data dictionaries.

### ***1.4 Document Organization***

This PDUFA II Information Management Five-Year Plan is organized as follows:

- Section 2.0 provides an overview of the PUDFA II ERSR Program and describes the functional areas of the program and their associated projects;
- Section 3.0 presents a master milestone schedule by functional area within ERSR; and
- Section 4.0 presents the process established for managing the ERSR Program.

A description of the major components of the ERSR Program for CDER and CBER are presented in Appendices A and B, respectively. Descriptions of the Agency/Cross-Cutting PDUFA II projects are provided in Appendix C. ERSR Program Costs are provided in Appendix D. A list of acronyms is included as Appendix E.

## **2.0 ELECTRONIC REGULATORY SUBMISSION AND REVIEW (ERSR) PROGRAM OVERVIEW**

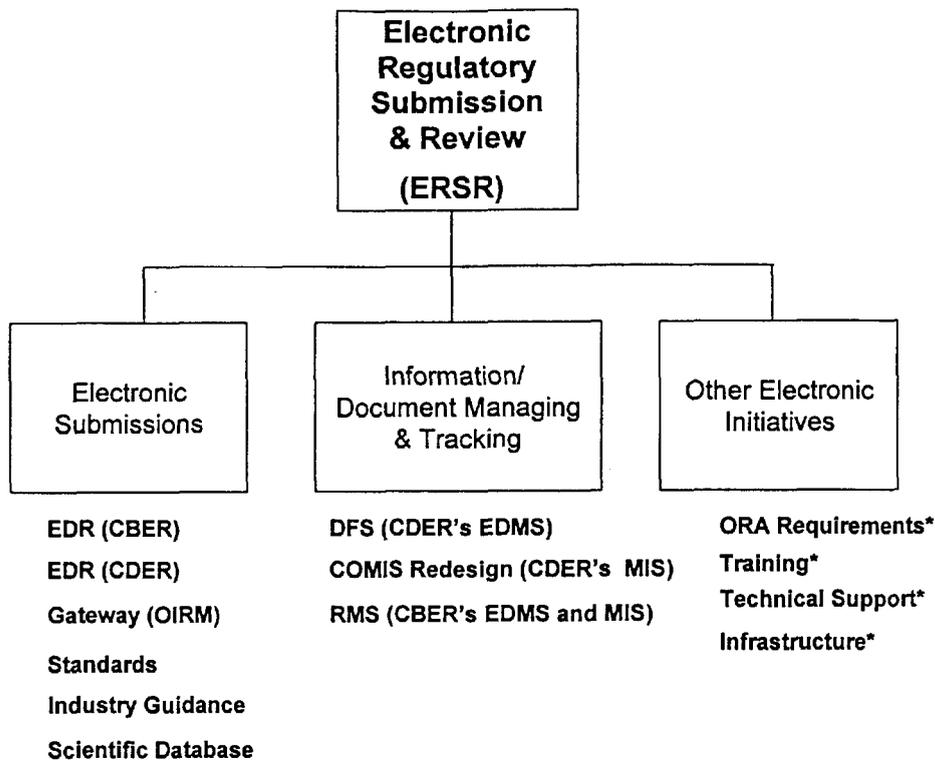
The ERSR Program supports the transition from a largely paper-based regulatory submission and review environment to an electronic environment. The ERSR Program is comprised of a variety of projects, each of which is designed to satisfy a different part of PDUFA. This overview of the ERSR Program includes descriptions of the current projects that are in different stages of development and implementation. Based on technological or business-related changes, it is expected that additional projects will be added or existing projects combined within the program during the five-year period covered by this plan.

The ERSR Program has been shared widely with industry since the mid-1990s via conferences and workshops sponsored by the Drug Information Association (DIA), collaboration with PhRMA's Regulatory Affairs Committee (RAC) and RAC's Electronic Regulatory Submissions (ERS) Working Group, participation in the International Conference on Harmonization (ICH) expert working groups, and presentations at industry trade meetings. Through this extensive collaboration within the Agency and with external parties, and as a result of subsequent voluntary pilots with regulated firms, the electronic submission of Case Report Tabulations (CRTs) and Case Report Forms (CRFs) in Portable Data Format (PDF) was implemented without major problems<sup>1</sup>. This early accomplishment under the ERSR Program demonstrates a successful partnership between the Agency and the industry it regulates. This partnership represents a critical success factor that will be key to achieving a paperless review by FY 2002.

The ERSR Program has been decomposed in an effort to simplify the management and enhance understanding for stakeholders. The projects within the ERSR Program are categorized in three functional areas: Electronic Submissions, Information/ Document Managing and Tracking, and Other Electronic Initiatives. The following paragraphs describe the functional areas and their associated projects and activities. Figure 1 shows the hierarchy of the three functional areas of ERSR and the projects and activities that currently comprise those areas.

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<sup>1</sup> CRTs and CRFs are paper-intensive portions of a new drug application. These parts often make up approximately two-thirds of the paper submitted with NDAs.



\*Activities cut across all three functional areas of the ERSR Program.

**Figure 1**

Figure 2 provides a conceptual view of the components of the ERSR Program. The explanation following Figure 2 presents the ERSR Program architecture and describes the configuration and information exchange between the various components of the ERSR Program.

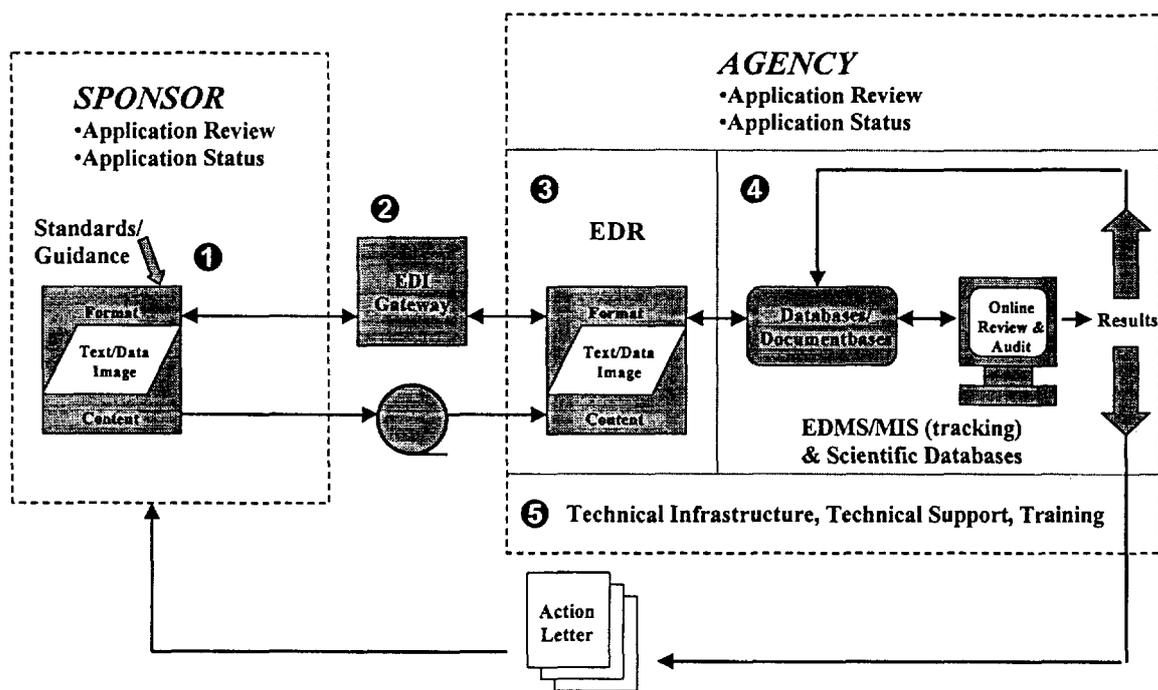


Figure 2

Guidance is prepared by the Agency so that pharmaceutical sponsors can submit their applications in conformance with applicable standards for format and content (1). Electronic submissions that conform to the standards and guidance established are transmitted via the electronic Gateway or submitted via acceptable physical media (2). The Electronic Document Room (EDR) accommodates the program area receipt, archive, and storage of these submissions (3). Reviewers and field inspectors are able to operate in an electronic review environment with appropriate access to IND/BLA/NDA tracking data (Management Information System (MIS)) electronic submissions and related historical review documents and access to tools (Scientific Databases). Resulting reviews are stored, routed, and can be retrieved again at a later date (Electronic Document Management System) (4). All aspects of the ERSR Program are supported by an infrastructure including standard hardware/software (e.g., desktops, network, office automation tools, servers, Internet/Intranet) and additional capabilities as needed, such as a secure e-mail package for communicating with regulated industry, field component review and inspection access, and analytical tools needed by reviewers for use with structured databases. In addition, there are foundational support aspects to the solution such as underlying technical architecture, training, and technical support (5).

## 2.1 Electronic Submissions

The PDUFA II Program goals call for an electronic submission capability to be established by the year 2002. The success of the Electronic Submissions portion of ERSR is dependent upon the accurate and thorough definition of data and reporting standards for the format and content of regulatory submissions and the dissemination of guidance for industry to prepare submissions.

Standards - FDA is involved in several standards-related projects to define the format and content of regulatory submissions. The Agency actively participates in activities of the International Conference on Harmonization (ICH), which is an enormous science-driven initiative to curtail regulatory duplication by working towards a common worldwide drug and biologic registration package. The ICH M2 Expert Working Group (EWG) focuses on Electronic Standards for Transmission of Regulatory Information. The goal of M2 is to identify, evaluate, and recommend appropriate and relevant standards to facilitate the electronic transfer of regulatory information between industry authorities and among regulatory agencies. CDER serves as the Rapporteur for the M2 EWG and CBER is a participant. The ICH M4 EWG focuses on Common Technical Documents (CTD) for the technical content of sections of the NDA.

Industry Guidance - Upon establishment of the standards, FDA provides written guidance for industry to follow in preparing electronic submissions. Guidance documents are posted in FDA's public docket. Industry training is provided at technical workshops and IT conferences hosted by organizations such as DIA. In September 1997, guidance entitled "Archiving Submissions in Electronic Format - NDAs" was published, allowing the first electronic submissions to be received in CDER without an accompanying paper copy. This guidance covers only electronic CRFs and CRTs. However, CDER is in the process of expanding the guidance to cover electronic submission for archive of the remaining NDA sections, as well as other document types such as Abbreviated New Drug Applications (ANDAs) and Drug Master Files (DMFs). CBER and CDER are collaborating on marketing applications as well as INDs. CBER has taken the lead on preparing guidance for electronic submission of INDs and BLAs, and those guidance documents currently are under staff review. The development and completion of guidance documents serve as the foundation for enabling regulated industry to exchange electronic submissions with the Agency.

Electronic submissions that conform to the established standards and guidelines will be transmitted via an electronic gateway or submitted via acceptable physical media. Systems involved in the successful implementation of the electronic submission area include the Electronic Document Room and the Agency's Electronic Gateway. In addition, structured databases, reference guides, and analytical tools needed by reviewers to perform standard analytical processes on electronic submissions directly from the desktop are an important component of the electronic submission area.

Electronic Document Room (EDR) - CDER established an EDR in FY 1997 to accommodate the receipt, archive, and storage of electronic CRFs and CRTs for NDAs -- text images in PDF for archive. Submissions come in on one of several physical media types as defined in the industry guidance posted in the public docket. A comparable interim facility for e-INDs and BLAs was established in CBER. CBER will begin development of the full EDR pending a comprehensive requirements study that will be completed in September 1998. As part of its comprehensive requirements study, CBER

will evaluate CDER's EDR for the feasibility of having a single document room facility process electronic submissions for both CBER and CDER. Between September 1997 and May 1998, CBER received approximately 6 electronic submissions and CDER received 27 electronic submissions.

Electronic Gateway - The Gateway has been designed and developed to serve as an Agency-level central point for receipt of secure Electronic Data Interchange (EDI) submissions (via Internet). Its Release 1.0 design provides an ability to decrypt, authenticate, validate, and route information to the FDA Centers. Release 1.0 of the Gateway was implemented to support the electronic transmission of adverse event reports for CDER and CBER into the Adverse Event Reporting System (AERS). The current production release is "receipt only". Requirements for two-way exchange of data will be considered in later releases. Successive releases will implement pre-approval types of electronic submissions. Release 2.0 includes a requirements study involving representatives from CBER, CDER, ORA, and regulated industry. The scope of Release 2.0 will be determined upon completion of the study.

Scientific Databases - Scientific Databases include structured databases, reference guides, and analytical tools needed by reviewers to perform standard analytical processes on electronic submissions directly from the desktop. Previously, CDER introduced the Entry Validation Application (EVA) pilot for electronic structured submissions of bioequivalence data that accompany generic drug applications. This program was funded out of appropriations and now is being expanded for use with NDAs - specifically for Chemistry, Manufacturing and Controls (CMC) data and biopharmaceutics data. It is especially valuable for chemistry supplements and annual reports where information is additive over a number of years. The potential outcomes of structured databases include, but are not limited to: data integration, data standards, better information sharing and exchange, and better tools to facilitate the review. Other tools include the Chem-X system which allows users to search chemical structures in three-dimensional form while conducting a CMC review.

## ***2.2 Information/Document Managing and Tracking***

The Information/Document Managing and Tracking area of the ERSR Program focuses on 1) providing an automated means for creating, managing, and archiving internally-generated review documents and 2) tracking the status and progress of submissions submitted to the Agency for action, generating mandatory user fee reports, and enabling tracking of milestones and workload statistics for improved management accountability. These two areas of focus are categorized as Electronic Document Management System (EDMS) and Management Information System (MIS), respectively. The following paragraphs describe those two areas and their respective component projects.

Electronic Document Management System (EDMS) - EDMS provides an automated means for creating, managing, and archiving internally generated review documents as well as for electronic signature of those documents. EDMS consists of several components that are designed to provide an easy to use, automated means for accessing information, documents, and communications pertaining to the IND/BLA/NDA review process. The objective of EDMS is to improve, through the use of information technology, the way CBER and CDER 1) route documents for comment/approval/audit/validation, 2) retrieve historical documents for reference, and 3) archive documents

in an electronic repository. Moreover, it may provide reviewers the capability to specify and route pertinent documents to ORA field staff.

In CDER, EDMS is performed by the Division Files System (DFS) that is currently operational in 10 new drug review divisions and offices and, upon completion, will support the needs of all new and generic drug review divisions.

In CBER, EDMS is performed by the Regulatory Management System (RMS), an integrated system for creating, managing and archiving internal review documents concerning a submission, as well as tracking the status of the submission. Portions of RMS are operational throughout the Center.

These systems are Center-specific due to differing business needs created by legislative statutes and mandates. However, both systems are being developed under the ERSR Program; therefore, the technical architecture for both is largely the same and consistent with the Agency's Information Systems Architecture (ISA) program. Further harmonization of systems depends heavily on the modification of current law and regulations.

*Management Information System (MIS)* - The MIS is the corporate database/application that is used to track status and progress of each submission (including petitions, notifications, or other similar forms of requests) submitted to the Agency for action. It is also used to generate mandatory user fee reports and to enable tracking of milestones and workload statistics for improved management accountability. The MIS is integrated with the EDMS to prevent data redundancies and ensure data integrity. Currently, a requirements analysis is being conducted to determine the feasibility of the MIS interfacing with other systems such as ORA's Field Accomplishments and Compliance Tracking System (FACTS) to provide and track status of assignments to ORA field staff.

In CDER this integration of MIS and EDMS is represented by the integration of the Corporate ORACLE Management Information System (COMIS) and DFS. In CBER, this integration is represented similarly by the RMS.

It is this integrated EDMS/MIS that will enable more timely application status information throughout the review (e.g., as each scientific discipline completes its review) in lieu of waiting until the entire review has been completed.

### ***2.3 Other Electronic Initiatives***

This functional area includes various activities associated with the technical infrastructure of the ERSR Program (e.g., acquiring, configuring, and implementing hardware and software). These often underlying activities support multiple projects and are coordinated with projects' functionality needs as appropriate. These items include standard hardware/software (e.g., desktops, network, office automation tools, servers, Internet/Intranet) needed to support the EDR, EDMS, MIS, and Scientific Databases. This functional area also includes additional capabilities as needed, such as a secure e-mail package for communicating with regulated industry and analytical tools needed by reviewers for use with structured databases. Other tools include library references such as the scientific Library Electronic Reference Network (LERN).

**ORA Requirements**

This functional area also includes addressing the needs for Center communication with ORA Field Offices. ORA's requirements will be integrated as appropriate with the ERSR-related functional capabilities developed in CBER and CDER. An analysis of the changes required to ORA's computing infrastructure is planned<sup>2</sup>. ORA envisions that they will need the capability to 1) provide each district office, each laboratory, some large resident posts on the network, and each regional office direct electronic access to the electronic documents maintained by CDER and 2) provide the ability to browse and search for the documents pre-authorized by CDER and download what they need when they need it. ORA does not require detailed access to CBER's BLA applications in the same context as in audits of CDER NDAs in accordance with CDER guidelines. One solution being considered is to provide a seamless dial-up capability to access the information needed by ORA and to have added electronic storage capability.

Funds have been included in the reserves for CBER and CDER and are earmarked for incorporating ORA requirements in their respective Centers. ORA must concur with the use of these funds before they are released.

The following table lists activities associated with "other electronic initiatives".

<b>CBER</b>	<b>CDER</b>	<b>OIRM</b>	<b>ORA</b>
<ul style="list-style-type: none"> <li>- Perform technical integration – desktop development</li> <li>- Purchase software – SAS, BackOffice</li> <li>- Fund infrastructure costs associated with WOC I cabling, Network Hardware, NT Network Operating System (NOS), IIP Labor</li> <li>- Purchase personal computers and local peripherals</li> <li>- Upgrade to MS Office Pro 97</li> </ul>	<ul style="list-style-type: none"> <li>- Perform technical integration – desktop development</li> <li>- Purchase software – SAS, BackOffice</li> <li>- Accommodate ORACLE database requirements</li> <li>- Replace Imaging System</li> <li>- Contract for Imaging technical support</li> <li>- Purchase personal computers, local peripherals, and local software</li> <li>- Upgrade to MS Office Pro 97</li> </ul>	<ul style="list-style-type: none"> <li>- ISA and Central Infrastructure Support for PDUFA-related activities</li> </ul>	<ul style="list-style-type: none"> <li>- Fund interface with FACTS to Center systems as appropriate</li> <li>- Purchase electronic document management system software</li> <li>- Fund infrastructure costs associated with ISDN Circuits, NT servers, Hub, and other network hardware and cable</li> <li>- Purchase personal computers, laptops, and local peripherals</li> <li>- Upgrade to MS Office Pro 97</li> </ul>

Infrastructure also includes the foundational support aspects of the ERSR Program which are common to CBER, CDER, and ORA's PDUFA II IT solution:

Technical Support – Provides support to end users for hardware/software installation, software development, maintenance, and trouble shooting.

Training – Covers provision of training for development staffs and end users sufficient to ensure qualified technical support to the ERSR Program and to allow reviewers to function in an electronic review environment.

<sup>2</sup> CDER and CBER are currently conducting a series of requirements gathering meetings with ORA program management and IT management to identify the functionality needs of the Field Offices. As ORA's needs are defined and CBER and CDER complete strategies for meeting those needs in their project planning, this document will be updated with appropriate milestones and schedule.

### 3.0 MASTER MILESTONE SCHEDULE

The schedule provided in this section represents the current plan, presented by functional area within ERSR, for accomplishing PDUFA II milestones over the next five years. This schedule does not include all milestones associated with the ERSR Program. Some activities are in the planning stages and, therefore, definite target completion dates are being formulated. As planning for these activities becomes more conclusive, this milestone schedule will be updated.

This schedule will be used to track progress toward meeting established milestone dates and will be updated regularly to include milestones as they are identified.

#### 3.1 Schedule for Electronic Submissions

The following table presents milestones and associated target completion dates for activities involved with the electronic submission portion of the ERSR Program. This schedule is consistent with performance goals cited in FDAMA, the FY 2000 GPRA Performance Plan, and Center planning documents.

Functional Area	Milestones	Target Date
<b>Electronic Submissions</b>		
1. Standards	<ul style="list-style-type: none"> <li>- ICH M2 Expert Working Group (EWG) for Electronic Standards for Transmission of Regulatory Information</li> <li>- ICH M4 EWG for Common Technical Documents (CTD) involving the technical content of sections of an NDA</li> </ul>	Ongoing  2/2000
2. Provide industry guidance for electronic submissions	<ul style="list-style-type: none"> <li>- Capability Electronic Submissions of CRFs and CRTs (partial NDA and PLA)</li> <li>- Full NDA (CDER)<sup>3</sup></li> <li>- ANDA (CDER)<sup>4</sup></li> <li>- Investigational New Drug Applications (IND) (CBER)</li> <li>- Biologics License Application (CBER)</li> <li>- All other document types (CDER and CBER)</li> </ul>	Completed 9/1999 9/2000 9/2000 9/2001 9/2002
3. EDR	<ul style="list-style-type: none"> <li>- Phase I – Accommodate E-CRFs and E-CRTs (CDER)</li> <li>- Phase I – Implement EDR (CBER)</li> <li>- Phase II – Capability to accept full Electronic NDA (CDER)</li> <li>- Phase II – Capability to accept full electronic BLAs (CBER)</li> <li>- Phase III a – Capability to accept ANDAs (CDER)</li> <li>- Phase III b – Capability to accept INDs (CBER)</li> <li>- Phase IV – Capability to accept all other document types (CBER and CDER)</li> </ul>	Completed 9/1999 9/1999 9/2001 9/2000 9/2000 9/2002
4. Gateway	<ul style="list-style-type: none"> <li>- Requirements Analysis (OIRM)</li> <li>- Release 2.0 – Pending by Requirements Analysis (OIRM)</li> <li>- Release 3.0 – Pending by Requirements Analysis (OIRM)</li> <li>- Release 4.0 – Pending by Requirements Analysis (OIRM)</li> </ul>	12/1998 10/2000 10/2001 10/2002
5. Scientific Databases	<ul style="list-style-type: none"> <li>- EVA for BA/BE data (CDER)</li> <li>- EVA for CMC and biopharmaceutics data piloted (CDER)</li> <li>- Drug-Drug Interaction (CDER)</li> <li>- Carcinogenicity (CDER)</li> <li>- Chem-X (CDER)</li> </ul>	Completed 9/2000 10/2002 10/2002 9/1998

<sup>3</sup> GPRA goals state that the Agency will post guidance in the public docket for the full NDA in FY 1999.

<sup>4</sup> GPRA goals state that the Agency will post guidance for public comment for the full ANDA in FY 2000; ANDA guidance will be posted in the public docket in FY 2000.

### 3.2 Schedule for Information/Document Managing and Tracking

The following table presents milestones associated with the EDMS and MIS portions of the ERSR Program. Some activities are still in the planning stages and, therefore, definitive target completion dates are being formulated. As planning for these activities becomes more conclusive, this milestone schedule will be updated.

Functional Area	Milestones	Target Date
Information/Document Managing and Tracking		
1. EDMS	DFS Phase 1 (CDER) DFS Phase 2 (CDER) RMS 3.0 (CBER)	12/1997 9/1999 10/1999
2. MIS	COMIS Phase 1 (CDER) COMIS Phase 2 (CDER) COMIS Phase 3 (CDER) EES for BiMo (CDER) RMS 2.0 <sup>1</sup> (CBER)	10/1999 5/2000 5/2001 10/2002 9-12/1998

<sup>1</sup> RMS Rollout: RMS 2.0 will be released coincident with the BLA final rule in the first quarter FY 1999. It will provide basic BLA tracking, as well as the IND tracking from RMS version 1.2. While the Biologics Regulatory Management System (BRMS) database will be maintained for analysis purposes, all active license applications in BRMS will be converted to the RMS 2.0 database, as well as the Document Accountability and Tracking System (DATS) replacement for DLS, the Lot Release System database (LRS), and the Blood Establishment Registration System database (BER). RMS 3.0, planned for the first quarter of FY 2000, will incorporate reviewer comments.

### 3.3 Other Electronic Initiatives

The following table presents milestones associated with the other electronic initiatives associated with the ERSR Program. These activities support multiple projects and are coordinated incrementally with functionality needs as appropriate.

Functional Area	Milestones	Target Date
Other Electronic Initiatives		
1. Technical Infrastructure	Technical Infrastructure	On-going (2)
2. Technical Support	Technical Support	As needed
3. Training	Training	As needed

(2) Dates are driven by implementation schedules for EDR, Scientific Databases, EDMS, and MIS.

### 3.4 Master Gantt Chart

Figure 3 provides a Gantt chart showing the target dates for ERSR milestones over the five-year PDUFA II period.

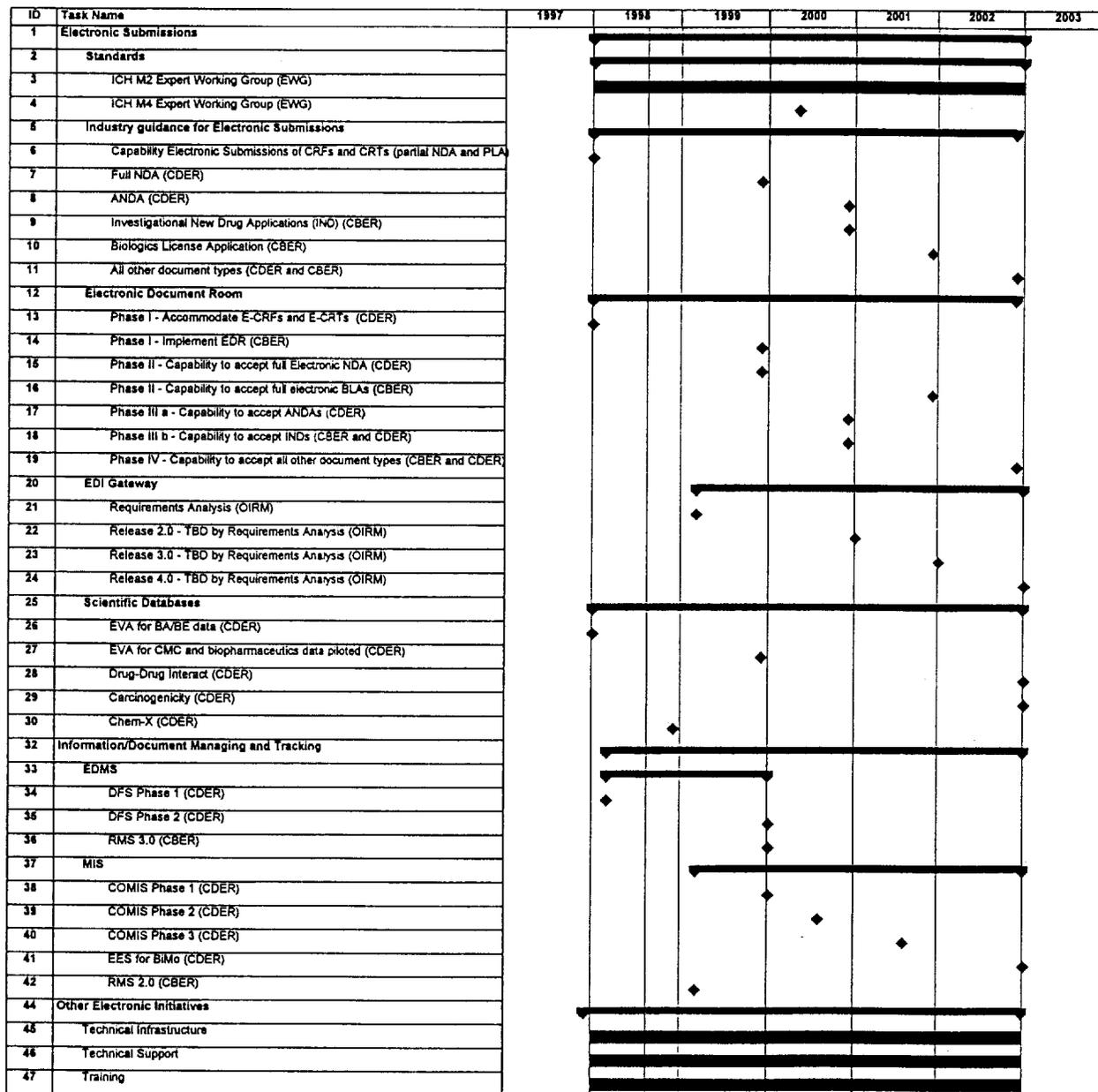


Figure 3

## **4.0 PROGRAM MANAGEMENT**

The Office of the CIO (OCIO) is responsible for ensuring that all PDUFA II IT investments support the Agency's common IT goals, fit into a common computing environment, and follow good IT management practices.

CBER, CDER, and ORA independently developed functional five-year spending plans. OCIO, in conjunction with an independent review of the individual spending plans, developed an Agency-level consolidated budget plan. The costs associated with that consolidated plan are presented in Appendix D.

Management of the ERSR Program will involve three integrated processes. First, ERSR projects will be reviewed for business and technical soundness through the IT Business Planning Process established by the Agency in accordance with the Clinger-Cohen Act of 1996. Second, the ERSR Program will be audited annually by an independent consultant who will work with the Centers/Offices to review and assess the economic soundness of PDUFA IT investments and monitor performance in meeting established milestones. Finally, during the initial independent review, funds for certain IT projects were placed in a "reserve" because these projects were considered to be in such a formative stage of their development as to preclude definite estimates of actual funding requirements. These reserve funds will be managed by a collaborative effort between the Centers/ORAs, the OCIO, and the Office of Financial Management (OFM).

### ***4.1 IT Business Planning Process***

Consistent with Department of Health and Human Services (DHHS) policies and recent legislation, including the Clinger-Cohen Act, the Agency has developed a process to become more accountable for the economic and efficient management of IT and to implement a sound and integrated IT architecture.

In FY 1997, the FDA defined and implemented an information technology business planning (ITBP) process. This process, begun with an initial focus on selected high priority IT projects, was developed in close collaboration with senior Agency managers. Throughout 1998, senior Agency management remained engaged in the refinement and expansion of the process to include all major IT investments within the Agency.

An integral part of the FDA business planning process is the review of the major IT investments to ensure that they are achieving defined performance goals which support the Agency mission, in terms of the project plan (i.e., milestones and resources) and expected outcomes (e.g., programmatic improvements), and are compliant with standards defined by the Agency's information systems architecture (ISA).

In FY 1998, the ITBP process has been utilized to review all existing ERSR IT projects. The ITBP process required the sponsoring PDUFA II Centers/Offices to prepare business cases for their IT investments. A business case is a narrative document that provides a consistent format to capture information such as business need, IT solution, costs, schedule (milestones), and performance measures.

All PDUFA II information technology investments will continue to be reviewed through this ITBP process. One major component of the ITBP process is a review of investments by a Technical Review Board (TRB) composed of Information Resource Management (IRM) Directors from each of the Centers/Offices. The goal of the TRB is to assess Agency IT investments with regard to the technical soundness of the investment, the consistency of the IT solution with the Agency's ISA, and the potential

redundancy of the investment with other Agency efforts. Once the TRB has completed its assessment and determined that there are no significant technical risks that could prevent successful implementation of the IT solution, the members “credential” the investment. Though projects may be “credentialed” by the TRB, members may raise technical issues that must be addressed by project managers but do not preclude a project from proceeding.

Specific ERSR projects already reviewed and “credentialed” by the TRB include: CBER’s Regulatory Management System (RMS), CDER’s Electronic Document Room (EDR), CDER’s Division File System (DFS), and OIRM’s EDI Gateway. These projects will be provided immediate access to PDUFA II funds and will be subject to periodic review of their performance against planned milestones.

Other PDUFA II projects (e.g., CBER’s EDR and CDER’s COMIS Redesign) are currently being defined and scoped and will be incorporated into this plan and reviewed by the TRB in the 1<sup>st</sup> quarter of FY 1999. Funds for development of these projects will not be released until 1) a business case supporting the project has been submitted to the OCIO and 2) the project has been reviewed through the ITBP process.

Other PDUFA II items not associated with a specific project or which support multiple projects may be reviewed independently by the OCIO to ensure compliance with Agency best practices and architecture standards.

#### ***4.2 Independent Review***

Following reauthorization of PDUFA, Five-Year Funding Plans covering PDUFA-related IT and personnel requirements were submitted by PDUFA-related FDA organizations for approval by the Deputy Commissioner for Management and Systems. The Deputy Commissioner for Management and Systems directed that the Office of Human Resources and Management Services (OHRMS) and the OCIO work collaboratively to review and assess the economic soundness of each PDUFA Center/Office’s PDUFA II Five-Year Plan. To that end, OHRMS worked with OFM and with the Centers/Offices to review the non-IT portions of the plans, and OCIO engaged the services of an independent contractor to work directly with the PDUFA Centers/Offices to assess the IT portions of the five-year plans. This section documents the process employed to conduct the IT review and presents the results achieved based on the analysis.

The submitted spending plans from CBER, CDER, and ORA collectively totaled in excess of \$107 million over the five-year planning horizon, or about 14.5 percent of the fees to be collected for the PDUFA II period.

The independent review process was accomplished by conducting a series of meetings with appropriate IT and other management personnel from each organization to discuss the underlying assumptions, and the derivation and support for each PDUFA II budget line item. Each session was designed to:

- Provide an open forum for mutually exploring opportunities to conserve resources (e.g., by reducing redundancies and inconsistent assumptions among the centers);
- Ensure a fair and consistent distribution of IT funding among the affected PDUFA II organizational units, and
- Guarantee that funding requests were driven by supportable business requirements.

A special effort was made to identify areas where the addition of funding to the originally submitted budgets would be both appropriate and beneficial from a business need perspective.

The primary focus of this independent review was to assure budget soundness in the Centers/Offices plans. If essential resource components were not identified in the plans, additions were made. By mutual agreement between OCIO and the Centers/ORAs, some budget line items were deleted and some resources were reduced.

The result of the independent review was a proposed budget plan (termed the "Proposed PDUFA II Five-Year IT Budget Plan") for each Center/Office for spending PDUFA II dollars between FY 1998 and FY 2002. This Proposed Five-Year PDUFA II IT Budget Plan, which totals \$103 million, was reduced from the original submissions of \$107 million. A further "temporary reduction", termed a "reserve" has been defined, which initially reduces the Proposed Five-Year PDUFA II IT Budget Plan from \$103 million to \$86.6 million. The "reserve" funds will be set aside for access by the PDUFA Centers/Offices when appropriate business conditions have been satisfied. ERSR Program costs are provided in Appendix D.

- *"Proposed PDUFA II Five-Year IT Budget Plan" Additions* – Among the largest additions included funding CDER and CBER Plans to provide electronic access by ORA's field investigators from approximately 50 sites (e.g., 21 District Offices, the larger Resident Post Offices, several Labs and selected smaller Resident Post locations). Other additions are as follows:
  - CBER: Infrastructure changes (e.g., cabling, network switches, servers, storage and other hardware and software), laptop requirements, and a new pre-market label data repository.
  - ORA: Funding for desktops and laptop equipment required by field offices and investigator personnel;
  - OIRM: Funds for expected PDUFA II electronic submission enhancements to the recently installed EDI gateway, and funds for contractor assistance to help with the Agency's major evolution in data architectures which is required to achieve a paperless environment by 2002; and funding for Phase 1 of Information Infrastructure Architecture (ISA) training, installation and networking requirements as these directly relate to the PDUFA II user base;
  - CBER and CDER: Funds for Independent Validation and Verification for Year 2000 and/or FDAMA needs at both CDER and CBER for systems that relate directly to PDUFA II.
- *"Proposed PDUFA II Five-Year IT Budget Plan" Reductions* – All Center and ORA original plan submissions were not consistent with standard ISA cost planning assumptions (for example, for workstations, monitors, servers, and required software), and thus, the funding requested in the plans was reduced. Where appropriate to the Agency, generally-accepted IT replacement lifecycles were adopted (e.g., monitors) which also reduced funding requirements. Further, personnel (FTE) expenses that had been included in the IT plans were removed. Other major reductions were developed from tighter re-estimates by the Centers of their new development and training needs.
- *Reserves* – During the reviews, six crucial IT projects were identified as being in such a formative stage of their development as to preclude definitive estimates of actual funding requirements, as well as, an accurate assessment of investment timing, that will be needed for their completion. Therefore, to assure adequate future funding for these six mission-critical priorities, center-specific reserves have been earmarked accordingly within the *Proposed Five-Year PDUFA II IT Budget Plan*. Portions of the reserve will require detailed analysis to

understand the justification before release of funds will be approved. Working in close cooperation with the PDUFA organizations, these funds will be released for use by an organization when 1) a business case supporting the additional expenditures has been submitted to OCIO and 2) the project has been included in the IT Business Planning process.

Overall, the proposed PDUFA II Five-Year IT Budget Plan represents a sound, appropriate PDUFA II budget for IT-related investments. It reinforces and supports the Agency's drive to a largely paperless, pre-market approval environment by the year 2002 as required by the reauthorized PDUFA II legislation.

### 4.3 "Reserve" Management

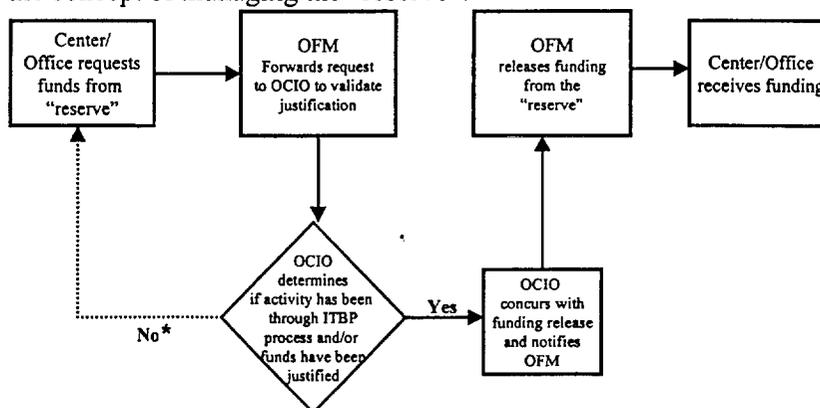
During the initial independent review, funds for certain IT projects were placed in a "reserve" because these projects were considered to be in such a formative stage of their development as to preclude definitive estimates of actual funding requirements. These reserve funds will be managed by a collaborative effort between the Centers/ORAs, OCIO, and the Office of Financial Management (OFM).

When a Center/Office identifies a need for funds to be released from their "reserve" budgets, they will send OFM a funding request. OFM will forward the request to OCIO, requesting notification that the activity is in the PDUFA Information Management Five-Year Plan and is approved for funding. OCIO will verify that the activity for which funding has been requested has been through the IT Business Planning process or that the activity has been justified by an independent review by OCIO to ensure compliance with Agency best practices and architecture standards.

If the activity is in the PDUFA Information Management Five-Year Plan and has been reviewed, OCIO will issue notification to OFM to release the funds. If the activity is not in the PDUFA Information Management Five-Year Plan or has not been reviewed through the IT business planning process, the requesting Center/Office will be notified by OCIO of the requirements needed for funds to be released. Requirements may include any or all of the following activities:

- Preparation of a business case or update of an existing business case;
- Review by the TRB; and/or
- An independent assessment by OCIO of non-project related activities.

Figure 4 presents the concept of managing the "reserve".



\*Center/Office will be notified that their activity will have to be reviewed and/or justified in order for funds to be released

Figure 4

## **APPENDIX A**

### **DESCRIPTION OF CURRENT MAJOR CDER ERSR PROJECTS<sup>5</sup>**

1. Electronic Document Room (EDR)  
*(credentialed by the TRB)*
2. Division File System (DFS)  
*(credentialed by the TRB)*

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<sup>5</sup>CDER is developing the business case for the COMIS Redesign Project. A business case for this project will be completed by 1<sup>st</sup> quarter of FY 1999 and subsequently reviewed by the TRB.

## 1. Electronic Document Room (EDR) *(credentialed by the TRB)*

### Business Need

CDER must provide the capability and capacity for electronic receipt and archive of electronic regulatory submissions. Ultimately, CDER's EDR will support receipt and archive of all regulatory submissions, including full New Drug Applications (NDAs), Abbreviated New Drug Applications (ANDAs), Investigational New Drugs (INDs), Drug Master Files, Annual Reports, OTC Monographs, etc.

### IT Solution

CDER established the EDR in FY 1997 to accommodate the receipt, archive, and storage of electronic Case Report Forms (CRFs) and Case Report Tabulations (CRTs) for New Drug Applications (NDAs). CDER has published Industry Guidance for submitting CRFs and CRTs without an accompanying paper copy. These CRFs and CRTs are being received in the EDR as text images in PDF format for archive.

Submissions come in to the EDR on one of several physical media types:

- Microsoft MS-DOS formatted 3 1/2" diskettes
- ISO 9660 CD-ROMS
- 8mm DLT tape created on VMS and NT systems

The EDR currently handles data submitted on 3 1/2" PC formatted diskettes or on ISO standard CD-ROMs on Windows 95 workstations. Data submitted on 20/40 DLT tapes is loaded directly on the VMS server or through the NT server's tape drive. Because CDER expects that there may be some sponsors who will submit applications by paper for the foreseeable future, the Center must continue to accommodate paper information flow.

The EDR equipment is located at CDER's Central Document Room (CDR). The equipment currently includes:

- an Alpha VMS server with a CD-ROM drive and a 20/40 DLT tape drive;
- a Windows 95 workstation with a CD-ROM drive (a CD-ROM changer and a 4mm DAT drive may be added at a later date);
- an INTEL Windows NT 4.0 server with a CD-ROM drive, a 20/40 DLT tape drive and running the Microsoft Internet Information Server (IIS) with Microsoft Frontpage Extensions; and
- at least one COMIS workstation.

The CDR is connected to the CDER VMS cluster in the Parklawn Building through a T1 communications line. Large datasets are moved manually to 20/40 DLT tapes. The shares which hold the electronic CRFs and CRTs may be located on the CDER cluster or on a server drive in any building that is part of the CDER wide area network. Below is a listing of the desktop and network components of the EDR system:

#### Desktop:

Pentium desktop computers with Windows 95, Pathworks, Documentum, TCP/IP, Microsoft Networking, Microsoft Office 95.

#### Network:

Digital Alpha and VAX servers running OpenVMS, Digital Alpha servers running Microsoft Windows NT, and Intel processor servers running Microsoft Windows NT

**Benefits**

Beneficiaries of the EDR project will be reviewers in CDER who will have electronic access to submissions. Plans include providing electronic access to this information to field offices within the Office of Regulatory Affairs (ORA). Regulated industry will benefit from an easier and faster submission process.

EDR will provide capability and capacity to receive and archive electronic submissions in accordance with the ERSR Program goals. The EDR will reduce overall costs of the document room contract and reduce the storage requirements. Target reductions in paper submissions are 25 percent in FY 1998, 50 percent in FY 1999, and 75 percent in FY 2000.

## **2. Division File System (DFS) (credentialed by the TRB)**

### **Business Need**

An Electronic Document Management System (EDMS) is a critical component of the Electronic Regulatory Submission and Review (ERSR) program. The goal of ERSR is to provide the capability and capacity for processing electronic regulatory submissions and reviews by the year 2002. The goal of EDMS is to provide an easy to use, automated means for creating, managing, electronic signature, and archiving internally generated documents pertaining to the IND/NDA review process. Within CDER, DFS is the application that meets the primary functional requirements of an EDMS. DFS makes it possible for CDER reviewers to file reviews electronically and access historical data and consult reviews on-line from their desktops rather than relying on paper copies. DFS greatly reduces manual filing, distribution, and data entry processes, thereby reducing the administrative burden on reviewers. In addition, DFS reduces data errors by having data automatically transferred to the Center-Wide ORACLE Management Information System (COMIS) rather than having it re-keyed and provides an electronic repository for internally generated documents.

### **IT Solution**

DFS provides for the creation, management, electronic signature, and archiving of internally generated review documents. DFS is being planned and implemented in two phases with each phase consisting of one increment each. Phase 1 (electronic repository) is currently being deployed. Phase 2 (additional functions such as updating COMIS) is under development.

The Decision Support System (DSS), a critical component of CDER's EDMS, was planned and implemented in one phase that consisted of three increments. Increment 1 (Windows-based interface to COMIS) has been deployed although performance improvements and other enhancements are currently being incorporated. Increment 2 (graphical Report of Assignments) was beta tested, however, the user group had concerns about visibility of the data and requested holding off on its deployment. Increment 3 (integration of DSS with other components) was completed and is operational.

DFS was first piloted in the Division of Oncology using LinkWorks but the pilot was unsuccessful. Based on an extensive tool study, Documentum was selected as a replacement and approved by CDER's IT Coordinating Committee (ITCC). Another pilot was conducted in Oncology using Documentum and it was successful. DFS is now operational in one new drug review divisions and offices. DFS will be rolled out to the remaining new drug review divisions by the end of calendar year 1998.

### **Benefits**

Primary beneficiaries will be IND/NDA reviewers in CDER, as well as the Center's FOI Staff who will use DFS as their document management system. Regulated industry will benefit from speedier access to status information and ultimately faster turnaround on IND and NDA reviews. The public will benefit because new safe and effective drugs will reach the marketplace sooner. DFS provides the following benefits:

- **Management Information:** DFS supports a core business function of the Center—the review and approval of INDs and NDAs. DFS will provide management with up-to-the-minute information about the new drug review process. DFS answers critical questions such as the reviews that have been completed for a particular submission, the reviewers' analyses and recommendations, who has signed off on a review, whether a related review was written, and the status of a particular submission in the review process.
- **Technology:** DFS is in alignment with the rest of the Center's and Agency's technology investments, including its technical infrastructure and core applications. DFS supports the Agency's focus on moving toward a paperless environment.

## **Appendix B**

### **DESCRIPTION OF CURRENT MAJOR CBER ERSR PROJECTS**

1. Electronic Document Room (EDR)  
*(To be reviewed by the TRB in the 1<sup>st</sup> quarter of FY 1999)*
2. Regulatory Management System (RMS)  
*(Credentialed by the TRB)*

## **1. Electronic Document Room (EDR) (To be reviewed by the TRB in the 1<sup>st</sup> quarter of FY 1999)**

### **Business Need**

CBER must provide a capability to accommodate receipt and archive of electronic submissions in order to comply with the FDA Modernization Act (FDAMA). Ultimately, CBER's EDR will support receipt and archive of Product License Applications (PLAs), Biologics License Applications (BLAs), Investigational New Drugs (INDs), Pre-market Approvals (PMAs), Pre-Market Notifications (510(k)s), New Drug Applications (NDAs) and Abbreviated New Drug Applications (ANDAs).

### **IT Solution**

Currently, no definitive IT solution exists for CBER's Electronic Document Room (EDR). CBER has funded a requirements study to determine the specific requirements and high-level design needed for an Electronic submission system, including the feasibility of an Electronic Document Room which will be designed to accommodate PLAs, BLAs, INDs, PMAs, 510(k)s, NDAs and ANDAs.

CBER established a storage system within the central Document Control Center in the early 1990s to receive various electronic submissions and in FY 1997 began the receipt, archive, and storage of electronic Case Report Forms (CRFs) and Case Report Tabulations (CRTs) for Product License Applications (PLAs). These CRFs and CRTs are being currently received as text images in PDF format for review and storage.

Submissions come in to CBER on one of several physical media types:

- Microsoft MS-DOS formatted 3 1/2" diskettes
- ISO 9660 CD-ROMS

Equipment located in CBER's Woodmont Office Center (WOCI) LAN Room handles data submitted on 3 1/2" PC formatted diskettes or on ISO standard CD-ROMs. The equipment currently includes an Alpha NT 4.0 server with a CD-ROM drive running the Microsoft Internet Information Server (IIS) with Microsoft Front page Extensions with connections to a DLT tape back-up unit and a CD-ROM Tower.

WOCI is connected to the CBER VAX cluster in the Parklawn Building through a T1 communications line. Dark fiber is planned for FY 1999. The shared drives which hold the electronic CRFs and CRTs are located on a server drive in the Woodmont Office Center building that is part of the CBER wide area network.

Below is a listing of the desktop and network components of the interim system:

#### Desktop:

Pentium desktop computers with Windows 95, Pathworks, Documentum, TCP/IP, Microsoft Networking, Microsoft Office 95.

#### Network:

Digital Alpha server running Microsoft Windows NT, and Intel processor servers running Microsoft Windows NT

### **Benefits**

Beneficiaries of the EDR project will be reviewers in CBER who will have electronic access to submissions. Regulated industry will benefit from an easier and faster submission process. EDR will provide capability and capacity to receive and archive electronic submissions in accordance with the ERSR program goals. Specific costs and benefits will be delineated in the requirements analysis to be delivered in late September 1998.

## **2. Regulatory Management System (RMS) (Credentialed by the TRB)**

### **Business Need**

The Regulatory Management System (RMS) initiative fully supports the Center for Biologics Evaluation and Research's (CBER's) information technology strategic plan. Specifically, it supports the following goals:

- A managed and integrated regulatory process from discovery through postmarketing
- Interactive information systems that are integral to all CBER activities.

The RMS initiative also supports the transition to an electronic regulatory environment, in compliance with the Reinventing Government (ReGO) Initiatives and the Paperwork Reduction Act of 1995 as well as the FDA Modernization Act (FDAMA) and Prescription Drug User Fee Act II (PDUFA) goals and CBER non-PDUFA milestones.

### **IT Solution**

The RMS initiative supports these goals and objectives by providing:

- A data structure supporting the integration of data from discovery through postmarketing
- Migration of existing data from legacy systems to the new data structure
- Application software for data tracking and retrieval in support of CBER business functions from discovery through postmarketing, including strategic information needs identified by CBER's Information and Data Committee and Managed Review Committee "to-be" processes
- Application software to track and report on PDUFA and non-PDUFA milestones and other target dates
- Application software to generate, store, and route electronic review-related documents and comments
- Enhanced tracking of industry submissions, including automated routing for review
- Enhanced submission review of reference materials.

The RMS initiative has a positive impact on the supported business processes. This initiative will increase business process efficiency and improve quality through a variety of means. It will provide a more complete data set that enables rapid retrieval of business-critical data. It will implement Agency and Center data and process standards that improve data/document quality and consistency, as well as technical (hardware and software) standards that provide the most user-friendly and supportable interface possible. The RMS initiative will provide a single user interface and seamless integration across applications to further ensure efficient use and will enable rapid access to business-critical documents through an integrated interface to industry and FDA documents. The initiative also will enable access to integrated data and electronic documents generated during product and facility reviews, as well as the collection of statistics on milestones and workload for greater management and accountability.

Commercial-off-the-shelf (COTS) alternatives evaluated to provide capabilities similar to RMS are documented in a Document Management/Workflow study conducted in CBER in 1995. Documentum, which is widely used in the pharmaceutical industry, was chosen based on user needs and technical specifications.

The RMS initiative is an information management system that includes an Oracle database and Documentum dochbase. The program includes data migration protocols, utilities, and client/server software applications. The primary investment in RMS thus far has consisted of analyses of regulatory review functions most appropriate for RMS support and implementation of RMS release 1.2 in the second quarter of FY 1998. An integrated database design and BLA subsystem design were also completed. RMS 1.2 couples the existing BIMS IND legacy data base with a pilot Documentum application on approximately 50 desktops. Extensive functionality is available for recording, importing and subrouting Clinical Trials, access to clinical trial outlines and data, searching and displaying amendment types and viewing telecons.

Whereas RMS 1.2 is focused on the review of INDs and the corresponding data base, RMS 2.0, scheduled for October, 1998, offers an integrated database for all legacy data as well as the new Biologics License Application (BLA) and the re-engineered business process. The RMS 2.0 database will also support the replacement of legacy

systems such as CCS and DLS within a new Document Accountability and Tracking System (DATS). When implemented in 10/98, RMS 2.0 will also replace the establishment licensing, product licensing and lot release modules of the current Biologics Regulatory Management System (BRMS).

The implementation plans to support these functions include piloting electronic document management, developing an integrated database and migrating legacy data, designing an application architecture, developing a prototype system, and fielding the first component of a production system to an initial group of users.

The scope of RMS includes all industry submissions from discovery through postmarketing and associated data and document tracking, routing, and retrieval.

The RMS technical approach emphasizes project planning and management; a phased development approach based on strategic priorities, rapid application development, stakeholder/customer involvement and buy-in throughout the development process; and the use of Agency and Center Information Technology (IT) standards.

The RMS initiative depends on FDA Information Systems Architecture (ISA) standards and other directives implemented through CBER's Infrastructure Improvement Project and the CBER standard desktop rollout. Similarly, the following are dependent upon the completion of the RMS initiative:

- Achievement of PDUFA goals;
- Implementation of a single, harmonized license application form;
- Issuance of a single license for all biological products;
- The Electronic Freedom of Information Act (EFOIA);
- M2 Electronic Gateway; and
- Progress towards the implementation of the Paper Reduction Act.

Some factors are critical to ensuring the successful deployment of the RMS. These include funding/contract vehicles, continued management support in terms of establishing priorities, defining CBER submission review policy, and providing staff resources.

### **Benefits**

The RMS initiative provides strategic, operational, management information, and technology benefits. The strategic value is difficult to quantify but substantial. RMS is the main technology vehicle to meet PDUFA mandates and to provide a seamless information system to support the regulatory review process. The RMS architecture can support application requirements that change over time and emphasizes modular development and phased implementation.

The RMS integrated databases, coupled with seamless and uniform RMS application software, allow for efficient data entry and data query and enhance the overall quality and consistency of data throughout the regulatory life cycle. When fully implemented, RMS will provide CBER managers with vital information on numerous core activities. RMS is strongly aligned with the FDA's systems strategy and technology base. Moreover, RMS directly supports CBER's strategy of migrating to a single, integrated database as the foundation for future software applications.

The major stakeholders, beneficiaries, and customers of the RMS initiative include industry sponsors and manufacturers, CBER management at Center and Office levels, CBER review and administrative staff at the Division and Branch levels, Document Control Center (DCC) staff, and FOI staff. Secondary beneficiaries of this initiative will be Office of the Commissioner (OC) and ORA personnel as well as CDRH and CDER for those premarket applications undergoing joint review.

**APPENDIX C**

**DESCRIPTIONS OF CURRENT MAJOR  
AGENCY/CROSS-CUTTING  
ERSR PROJECTS**

1. Agency Technical Monitoring and Support  
*(TRB Review not applicable)*

2.0 EDI Gateway  
*(Release 1.0 and Release 2.0 – Requirements Analysis  
credentialed by the TRB)*

3.0 ORA Support  
*(TRB Review not applicable)*

4. ISA and Central Infrastructure Support  
*(TRB Review not applicable)*

## **1. Agency Technical Monitoring and Support (TRB Review not applicable)**

### **Business Need**

The FDA Modernization Act (FDAMA) of 1997 requires the Agency to improve its efficiency through the application of information technology. Specifically the Act directs FDA to:

- Develop and update its IT infrastructure to allow, by FY2002, the paperless receipt and processing of electronic submissions
- Establish and maintain an information system to track the status and progress of each application or submission (including petitions, notifications, or other similar forms of requests) submitted to the Agency for action
- Meet new BLA/NDA review performance goals, add new classification codes, and identify new regulatory procedures that will necessitate changes to existing information systems.

One important provision of the Act is the reauthorization of the Prescription Drug Users Fee Act of 1992 (PDUFA II). PDUFA II provides users fees to be collected from the drug and biologics industry. These fees are in turn targeted to improve FDA review of pre-approval drug and biologic applications, establishment licensing, and other services. In order to ensure that user fee resources are properly managed, the Deputy Commissioner for Management and Systems (OMS) directed OCIO facilitate the development of an Agency PDUFA II Information Management Five-Year Plan. This plan must contain the IT requirements of all key Agency stakeholders, CBER, CDER, ORA, and OIRM and be consistent with each Center/Office's Five Year plan.

### **IT Solution**

In order to ensure FDA is meeting the IT requirements of FDAMA, an annual review of the ERSR project will be conducted. The consultants will compare programmatic planning documents and other related material (from CBER, CDER, ORA, and OIRM) with the ERSR Business Cases to identify any inconsistencies, synergies and make efficiency recommendations to senior management. In addition to planned reviews, oversight will include coordination and support of data management. This data management can include consultant support for Agency-level data modeling and data dictionary development.

There is no technical solution associated with this effort.

### **Benefits**

The Agency as a whole will benefit from this oversight by gaining an assurance that PDUFA IT Plans are founded on IT industry best practices. This assurance should result in sound budgetary decisions, lower project costs, and improved information re-use.

Information gathered during this independent review can be used in development of the IT investment portfolio, for out-year budget formulation, and for miscellaneous data calls from the Department.

External stakeholders who share a vested interest in the consistent, proper spending of PDUFA dollars include:

- Industry sponsors and manufacturers – reduced paper costs and manpower to compile paper submissions; better access to status information through the use of secure e-mail; ultimately faster turnaround on reviews
- Public – a more efficient review that will expedite marketplace availability of new drugs and biologics

## **2. EDI Gateway (Release 1.0 and Release 2.0 – Requirements Analysis credentialed by the TRB)**

### **Business Need**

The recent passage of the FDA Modernization Act of 1997 coupled with the renewal of Prescription Drug User Fee Act (PDUFA II) require that the Agency improve its review efficiency and productivity. Specifically, they require the Agency to transition its review environment into a “paperless” environment by completing three high level integrated steps:

1. Providing industry guidance and standards for electronic filing of submissions;
2. Providing standard capability for receiving electronic submissions from industry; and
3. Reinventing internal processes and systems that accommodate electronic reviews.

### **IT Solution**

The Electronic Data Interchange (EDI) Gateway represents an Agency solution for satisfying Step Two. The purpose of the Gateway is to place a centralized, Agency-wide Gateway into day-to-day operations for receiving regulatory submissions securely. The main functions of the Gateway are to receive submissions, decrypt those that are encrypted, authenticate that the submission is genuine, acknowledge to the sender that the submission was received, maintain an audit log of gateway actions, and make the submission available to the proper Center for regulatory processing.

This strategic investment has been designed in a scalable manner to facilitate the adaptation for all potential electronic submission types of the Agency. This adaptation will take place over time as resources become available and technology solutions advance. The initial phase, Release 1.0, of the system was designed to support drug adverse event reports for CDER. This phase was designed and built based on requirements and validation from an Agency-wide expert working group consisting of representatives from CDER, CBER, CDRH, CVM, and OC. The initial release has passed acceptance testing and awaits two critical external milestones: 1) Full production implementation of AERS and 2) Regulated Industry’s ability to submit ICH standard drug adverse events.

Release 2.0 of the Gateway will be designed to support pre-approval submissions identified under the renewal Prescription Drug User Fee Act (PDUFA II). Initially, the Agency will coordinate Gateway resources to support ERSR and coordinate all development in concert with the rollout of electronic submission guidance documents. This schedule will be coordinated with CDER and CBER. The estimated milestone schedule and costs are highly dependent on the outcome of the Release 2.0 requirements analysis.

Lastly, the Gateway is intended to serve as a central utility function for the entire Agency. Its development has helped to foster technical information sharing within the Agency and improved the FDA’s IT leadership reputation with Regulated Industry.

### **Benefits**

From a strategic standpoint, the Gateway represents a technology resource that will be refined to support the needs of the PDUFA program and then leveraged to other components of the Agency. For example, the lessons learned and technology solutions from the implementation of a paperless environment in CBER and CDER can be applied to other non-PDUFA Centers and result in common or shared technology solutions that benefit the Agency as a whole.

EDI may vastly reduce the paperwork associated with processing reports for both the Agency and regulated industry. EDI also has the potential to decrease reporting costs to the FDA and drug companies. Processing electronic transactions is expected to result in significant cost and resource reductions for both the Agency and industry.

### **3. ORA Support (TRB Review not applicable)**

#### **Business Need**

ORA's current practice for Field Office communication with CDER can involve large volumes of paper at times. Generally, every district office receives a copy of the Chemical Manufacturing Controls (CMC) section (Field Copy) of a marketing submission directly from the manufacturer. Labs receive methods validation documentation directly from CDER. Investigators review this paper in order to perform pre-approval inspections and post-approval Good Management Practices (GMP) inspections. In addition, investigators must access information from Drug Master Files stored at CDER about active pharmaceutical ingredients and ancillary facilities that are used in support of approval of NDAs and ANDAs. Also the Biomedical Research Monitoring (BIMO) investigators need access to information in NDAs concerning animal studies and human clinical trials, and in ANDAs concerning bioequivalence studies. The ORA users include (but are not limited to) the pre-approval managers, the lab chemists, the Compliance Officers, investigators, and the CSO. The number of users varies from one in a resident post to twenty in a district office. Documents are usually reviewed by the offices before an inspection.

Because ORA's business requirements will impact the design considerations of the projects within the ERSR Program, CDER and CBER will incorporate ORA's needs into their system development life cycle. At least each regional office, district office and some large resident posts could need direct electronic access to the electronic documents maintained by CDER and CBER to be able to browse and search for the applicable documents. For resident posts not directly on the network and for users on inspection trips, remote access capability needs to be provided. Moreover, tracking the status and progress of field assignments needs to be maintained.

#### **IT Solution**

An analysis of the changes required to ORA's computing infrastructure is planned. ORA envisions that they will need the capability to 1) provide each district office, each laboratory, some large resident posts on the network, and each regional office direct electronic access to the electronic documents maintained by CDER and 2) provide the ability to browse and search for the documents pre-authorized by CDER and download what they need when they need it. ORA does not require detailed access to CBER's BLA applications in the same context as in audits of CDER NDAs in accordance with CDER guidelines. One possibility is to provide a seamless dial-up capability to access the information they need and to have added electronic storage capability. Several Agency infrastructure changes now underway could address this such as FACTS, the new Agency security perimeter, etc. Other technology may be required consistent with the final design of ERSR.

#### **Benefits**

CBER, CDER, and ORA will benefit from incorporating ORA's needs into CBER and CDER's system development life cycle. ORA field offices' access to electronic documents will facilitate review of information in preparation for on-site inspections and investigations and will relieve some of the burden on the Centers of providing information in paper format.

#### **4. ISA and Central Infrastructure Support (TRB Review not applicable)**

##### **Business Need**

The current FDA IT environment consists of numerous layered and often incompatible product suites. Significant time and energy are expended in moving information throughout the Agency, to the industry it regulates, and to the general population that it serves. FDA has business needs that are not being consistently met by its current IT environment. This demands an IT infrastructure that:

- Improves communication;
- Enables collaboration;
- Increases productivity; and
- Creates a more manageable and cost effective environment.

PDUFA related activities are dependent upon successful implementation of the ISA. OIRM will coordinate ISA activities in conjunction with the implementation of PDUFA projects to ensure that IT standards are fully supportive of PDUFA activities.

##### **IT Solution**

The Information Systems Architecture initiative, coordinated by OIRM, will standardize the information systems architecture of the entire Agency beginning with the e-mail, the network operating system, and the desktop operating system. Components of the Baseline Infrastructure include:

- Office Automation Suite (Microsoft Office Pro 97);
- Electronic Messaging (Microsoft Exchange);
- Network Operating System (Microsoft NT); and
- Desktop Operating System (Windows 95).

Technical contacts have been established for each Center/Office, and detailed implementation plans tailored to each organization are being developed with Center/Office participation. OIRM will coordinate ISA activities for PDUFA Centers by providing technical support through the Network Control Center and other components of OIRM.

##### **Benefits**

Adopting a standardized IT infrastructure will substantially reduce the total life-cycle costs for PDUFA Centers and the Agency as a whole. A standardized IT infrastructure will improve the process of moving information throughout the Agency, to the industry it regulates and to the general population it serves while decreasing operations and maintenance costs, and decreasing training time and costs by providing users with applications with a common interface.

The ability to effectively deploy several key PDUFA systems (e.g., DFS and RMS) requires the IT infrastructure provided in Phase I of the ISA. Implementation of the Baseline Infrastructure will provide the Agency with the infrastructure necessary to comply with mandates and regulatory policies that indirectly support the PDUFA Program.

**Appendix D**  
**ERSR Program Costs**

### Budgeted Costs (in millions)

This section provides a breakdown of the costs (in millions) associated with the ERSR program. Additional non-IT related overhead costs associated with PDUFA activities in the Office of Management and Systems that will be identified and published in a separate plan.

#### Costs by Functional Area

The following three tables present ERSR program costs by ERSR functional area. These costs are presented by Center, by major component project, by life-cycle phase (where breakdown was available).

#### Electronic Submissions

Major Area		FY1998	FY1999	FY2000	FY2001	FY2002	TOTAL
<b>CDER</b>							
Electronic Document Room (EDR)	Development	1,198	1,135	540	550	560	3,983
	Hardware	1,287	1,287	1,326	0	0	3,900
	Software	30	0	0	0	0	30
	<b>Total</b>	<b>2,515</b>	<b>2,422</b>	<b>1,866</b>	<b>550</b>	<b>560</b>	<b>7,913</b>
Standards		150	190	190	190	190	910
Scientific Databases		514	735	790	515	385	2,939
O&M		1,800	1,550	1,525	1,525	1,525	7,925
<b>CDER Total</b>		<b>4,979</b>	<b>4,897</b>	<b>4,371</b>	<b>2,780</b>	<b>2,660</b>	<b>19,687</b>
<b>CBER</b>							
Electronic Document Room (EDR)	Analysis	700	0	0	0	0	700
	Development	447	197	97	47	47	835
	Development & Maintenance	0	500	200	200	200	1,100
	Integration with RMS	0	1,100	1,100	1,600	1,600	5,400
	<b>Total</b>	<b>1,147</b>	<b>1,797</b>	<b>1,397</b>	<b>1,847</b>	<b>1,847</b>	<b>8,035</b>
Standards		256	256	256	256	256	1,280
O&M		50	100	100	0	0	250
<b>CBER Total</b>		<b>1,453</b>	<b>2,153</b>	<b>1,753</b>	<b>2,103</b>	<b>2,103</b>	<b>9,565</b>
<b>ORA</b>							
Electronic Submissions Activities		165	120	88	96	96	565
O&M		0	73	225	405	455	1,158
<b>ORA Total</b>		<b>165</b>	<b>193</b>	<b>313</b>	<b>501</b>	<b>551</b>	<b>1,723</b>
<b>OIRM</b>							
EDI Gateway	Requirements Analysis	150	0	100	0	100	350
	Development	0	500	0	100	0	600
	Project Management	60	120	81	85	89	435
	Hardware Support	15	17	20	22	25	99
	Software Support	60	60	15	18	20	173
	Operations & Maintenance	43	43	0	0	0	86
	<b>Total</b>	<b>328</b>	<b>740</b>	<b>70</b>	<b>72</b>	<b>80</b>	<b>1,290</b>
<b>OIRM Total</b>		<b>328</b>	<b>740</b>	<b>70</b>	<b>72</b>	<b>80</b>	<b>1,290</b>
<b>Total Electronic Submissions</b>		<b>6,925</b>	<b>7,983</b>	<b>6,507</b>	<b>5,456</b>	<b>5,394</b>	<b>32,265</b>

**Information/Document Managing and Tracking**

Major Area		FY1998	FY1999	FY2000	FY2001	FY2002	TOTAL
<b>CBER</b>							
Regulatory Management System (RMS)	Development	3,450	1,750	1,100	600	500	7400
	O&M	158	109	17	17	17	318
	<b>Total</b>	<b>3,608</b>	<b>1,859</b>	<b>1,117</b>	<b>617</b>	<b>517</b>	<b>7718</b>
O&M		495	350	325	200	200	1570
Other		125	150	175	100	100	650
<b>CBER Total</b>		<b>4,228</b>	<b>2,359</b>	<b>1,617</b>	<b>917</b>	<b>817</b>	<b>9938</b>
<b>CDER</b>							
COMIS Redesign	Development	872	1,922	1,300	502	502	5098
	O&M	350	350	350	400	400	1850
	<b>Total</b>	<b>1,222</b>	<b>2,272</b>	<b>1,650</b>	<b>902</b>	<b>902</b>	<b>6948</b>
O&M		250	350	300	250	250	1400
Other		300	225	123	24	25	697
<b>CDER Total</b>		<b>1,772</b>	<b>2,847</b>	<b>2,073</b>	<b>1,176</b>	<b>1,177</b>	<b>9,045</b>
<b>ORA</b>							
EDMS Software		0	11	11	11	21	54
<b>ORA Total</b>		<b>0</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>21</b>	<b>54</b>
<b>OIRM</b>							
Agency Technical Monitoring and Support		110	270	280	280	280	1220
<b>OIRM Total</b>		<b>110</b>	<b>270</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>1,220</b>
<b>Total Information/Document Managing and Tracking</b>		<b>6,170</b>	<b>5,487</b>	<b>3,981</b>	<b>2,384</b>	<b>2,295</b>	<b>20,257</b>

**Other Electronic Initiatives**

Major Area		FY1998	FY1999	FY2000	FY2001	FY2002	TOTAL
<b>CBER</b>							
Technical Infrastructure		1525	2112	1723	1210	1023	7593
	Technical Support	390	400	400	400	400	1990
	Training	129	134	100	134	134	631
<b>CBER Total</b>		<b>2044</b>	<b>2646</b>	<b>2223</b>	<b>1744</b>	<b>1557</b>	<b>10214</b>
<b>CDER</b>							
Division Files System (DFS)	Analysis	100	200	120	120	120	660
	Development	1,654	1,404	1,404	904	904	6270
	O&M	0	250	350	350	350	1300
	<b>Total</b>	<b>1,754</b>	<b>1,854</b>	<b>1,874</b>	<b>1,374</b>	<b>1,374</b>	<b>8230</b>
Technical Infrastructure		2,349	1,926	1,889	1,489	1,525	9,178
Technical Support		445	520	535	540	545	2,585
Training		450	450	450	100	100	1,550
<b>CDER Total</b>		<b>4,998</b>	<b>4,750</b>	<b>4,748</b>	<b>3,503</b>	<b>3,544</b>	<b>21,543</b>
<b>ORA</b>							
Technical Infrastructure		360	269	257	257	395	1,538
Training		0	4	4	4	4	16
<b>ORA Total</b>		<b>360</b>	<b>273</b>	<b>261</b>	<b>261</b>	<b>399</b>	<b>1,554</b>
<b>OIRM</b>							
ISA and Central Infrastructure Support		0	437	314	0	0	751
<b>OIRM Total</b>		<b>0</b>	<b>437</b>	<b>314</b>	<b>0</b>	<b>0</b>	<b>751</b>
<b>Total Other Electronic Initiatives</b>		<b>7,402</b>	<b>8,106</b>	<b>7,546</b>	<b>5,508</b>	<b>5,500</b>	<b>34,062</b>

**Cost Summary by Center**

The following three tables present a summary of the ERSR program costs by ERSR functional area, by Center/Office. These tables are followed by a table displaying the grand totals for the ERSR Program for each Center/Office.

*Electronic Submissions Summary*

Electronic Submissions		FY 1998	FY 1999	FY 2000	FY 2001	FY2002	Total
CBER	Proposed	1,453	2,153	1,753	2,103	2,103	9,565.0
	Reserve	0	0	0	0	0	0.0
CDER	Proposed	4,979	4,897	4,371	2,780	2,660	19,687.0
	Reserve	0	0	0	0	0	0.0
ORA	Proposed	165	193	313	501	551	1,723.0
	Reserve	0	0	0	0	0	0.0
OIRM	Proposed	328	740	70	72	80	1,290.0
	Reserve	0	0	390	740	390	1,520.0
<b>Totals</b>	Proposed	<b>6,925</b>	<b>7,983</b>	<b>6,507</b>	<b>5,456</b>	<b>5,394</b>	<b>32,265.0</b>
	Reserve	<b>0</b>	<b>0</b>	<b>390</b>	<b>740</b>	<b>390</b>	<b>1,520.0</b>

*Information/Document Managing and Tracking Summary*

Information/Document Managing and Tracking		FY 1998	FY 1999	FY 2000	FY 2001	FY2002	Total
CBER	Proposed	4,228	2,359	1,617	917	817	9,938.0
	Reserve	150	700	1,100	1,100	1,200	4,250.0
CDER	Proposed	1,772	2,847	2,073	1,176	1,177	9,045.0
	Reserve	0	1,000	1,500	250	250	3,000.0
ORA	Proposed	0	11	11	11	21	54.0
	Reserve	0	0	0	0	0	0.0
OIRM	Proposed	110	270	280	280	280	1,220.0
	Reserve	0	0	0	0	0	0.0
<b>Totals</b>	Proposed	<b>6,110</b>	<b>5,487</b>	<b>3,981</b>	<b>2,384</b>	<b>2,295</b>	<b>20,257.0</b>
	Reserve	<b>150</b>	<b>1,700</b>	<b>2,600</b>	<b>1,350</b>	<b>1,450</b>	<b>7,250.0</b>

*Other Electronic Initiatives Summary*

Other Electronic Initiatives		FY 1998	FY 1999	FY 2000	FY 2001	FY2002	Total
CBER	Proposed	2044	2646	2223	1744	1557	10,214.0
	Reserve	0	0	0	0	0	0.0
CDER	Proposed	4,998	4,750	4,748	3,503	3,544	21,543.0
	Reserve	939	1,620	1,169	1,385	1,375	6,488.0
ORA	Proposed	360	273	261	261	399	1,554.0
	Reserve	0	0	0	0	0	0.0
OIRM	Proposed	0	437	314	0	0	751.0
	Reserve	0	0	0	0	0	0.0
<b>Totals</b>	Proposed	<b>7,402</b>	<b>8,106</b>	<b>7,546</b>	<b>5,508</b>	<b>5,500</b>	<b>34,062.0</b>
	Reserve	<b>939</b>	<b>1,620</b>	<b>1,169</b>	<b>1,385</b>	<b>1,375</b>	<b>6,488.0</b>

**Total Summary By Center/Office**

NOTE: Funds have been included in CBER and CDER budgets and are earmarked for incorporating ORA requirements in their respective Centers. These funds are also considered to be in "reserve," and ORA must concur with the use of these funds before they are released.

<b>Grand Totals</b>		<b>FY 1998</b>	<b>FY 1999</b>	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY2002</b>	<b>Total</b>
<b>CBER</b>	Proposed	7,725	7,158	5,593	4,764	4,477	29,717.0
	CBER funded ORA requirements*	75	125	100	75	75	450.0
	Reserve	150	700	1,100	1,100	1,200	4,250.0
<b>CDER</b>	Proposed	11,749	12,494	11,192	7,459	7,381	50,275.0
	CDER funded ORA requirements*	0	600	150	75	75	900.0
	Reserve	939	2,620	2,669	1,635	1,625	9,488.0
<b>ORA</b>	Proposed	525	477	585	773	971	3,331.0
	Reserve	0	0	0	0	0	0.0
<b>OIRM</b>	Proposed	438	1,447	664	352	360	3,261.0
	Reserve	0	0	390	740	390	1,520.0
<b>Totals</b>	Proposed	<b>20,437</b>	<b>21,576</b>	<b>18,034</b>	<b>13,348</b>	<b>13,189</b>	<b>86,584.0</b>
	Reserve**	<b>1,164</b>	<b>4,045</b>	<b>4,409</b>	<b>3,625</b>	<b>3,365</b>	<b>16,608.0</b>

\*Funds were included in CBER and CDER's plans to cover costs associated with defining requirements and implementing technology for ORA's role in the ERSR Program.

\*\*includes funded ORA requirements

**Appendix E**  
**Acronyms**

## Acronyms

AERS	Adverse Event Reporting System
AMF	Administrative Management of Files
ANDA	Abbreviated New Drug Applications
BA/BE	Bioavailability/Bioequivalency
BER	Blood Establishment Registration System
BIMO	Biomedical Research Monitoring
BLA	Biologic License Applications
BRMS	Biologics Regulatory Management System
CBER	Center for Biologics Evaluation and Research
CDER	Center for Drug Evaluation and Research
CDR	Central Document Room
CIO	Chief Information Officer
CMC	Chemistry, Manufacturing and Controls
COMIS	Corporate Oracle Management Information System
COTS	Commercial Off-the-Shelf
CRF	Case Report Form
CRT	Case Report Tabulations
CTD	Common Technical Documents
CVM	Center for Veterinary Medicine
DATS	Document Accountability and Tracking System
DCC	Document Control Center
DFS	Division File System
DIA	Drug Information Association
DMF	Drug Master File
DSS	Decision Support System
EDI	Electronic Data Interchange
EDMS	Electronic Document Management System
EDR	Electronic Document Room
EES	Establishment Evaluation System
EFOIA	Electronic Freedom of Information Act
ERS	Electronic Regulatory Submission
ERSR	Electronic Regulatory Submission and Review
EVA	Entry Validation Application
EWG	Expert Working Group
FACTS	Field Accomplishments and Compliance Tracking System
FDA	Food and Drug Administration
FDAMA	FDA Modernization Act
FOI	Freedom of Information
FTE	Full-time Equivalent
GPRA	Government Performance and Results Act
ICH	International Conference on Harmonization
IIS	Internet Information Server
IND	Investigational New Drug

IRM	Information Resources Management
ISA	Information Systems Architecture
IT	Information Technology
ITBP	Information Technology Business Planning
ITCC	IT Coordinating Committee
LERN	Library Electronic Reference Network
LRS	Lot Release System
M2	ICH M2 Expert Working Group (EWG) focusing on Electronic Standards for Transmission of Regulatory Information
M4	ICH M4 EWG focuses on Common Technical Documents (CTD) for the technical content of sections of the NDA
MIS	Management Information System
NDA	New Drug Application
NOS	Network Operating System
NPR	National Performance Review
OC	Office of the Commissioner
OHRMS	Office of Human Resources and Management Services
OIRM	Office of Information Resources Management
OMS	Office of Management and Systems
ORA	Office of Regulatory Affairs
PDF	Portable Data Format
PDUFA	Prescription Drug User Fee Act
PhRMA	Pharmaceutical Research and Manufacturers of America
PLA	Product License Applications
RAC	Regulatory Affairs Committee
RMS	Regulatory Management System
TBD	To Be Determined
TCP/IP	Transmission Control Protocol/Internet Protocol
TRB	Technical Review Board