ATTACHMENT 1

TWRS PRIVATIZATION
ALTERNATE PATH

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TWRS PRIVATIZATION ALTERNATE PATH

1.0 INTRODUCTION

1.1 Purpose

The Defense Nuclear Facility Safety Board (DNFSB) Recommendation 92-4 Implementation Plan, Rev. 2, Commitment 5.2.1.3 requires that the DOE submit a letter report defining:

- Potential alternate path categories;
- Criteria used for determining that privatization failed;
- Possible criteria to be used for selecting an alternate path if privatization fails; and
- The process that is being used to maintain technical and programmatic capabilities through Phase I Part A.

The purpose of this report is to fulfill that commitment.

1.2 Background

On July 24, 1996, DOE and Washington State Department of Ecology approved Change Packages M-50-95-01 and M-60-95-03 which identified changes to the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement or TPA) Milestone Series M-50-00 and M-60-00. These changes to the TPA allowed RL to proceed with privatization of the pretreatment and immobilization functions of the Tank Waste Remediation System (TWRS) Program.

Under the privatization approach, DOE will purchase waste treatment services from a contractor-owned, contractor-operated (COCO) facility under a fixed-price type of contract. The selected contractors will invest private funds to design, permit, construct, operate, and deactivate facilities used to treat Hanford's tank waste and return treated products to the DOE.

The privatization strategy is to be accomplished in two phases. The first phase will demonstrate the technical and business viability of using private facilities to treat Hanford waste. During Phase I, contractors will treat and immobilize 6 to 13

percent of tank waste. Phase II will be the full-scale production phase, in which facilities would be configured so all of the remaining waste can be processed on a schedule that will accommodate removing the waste from single-shelled tanks (SSTs) by the year 2018.

Contracts were awarded on September 25, 1996, to BNFL Inc. and Lockheed Martin Advanced Environmental Systems (LMAES) for Phase I of TWRS Privatization. Phase I is divided into Part A and Part B. Part A is a 20-month development period to establish the technical, operational, regulatory, business, and financial elements required by privatized facilities that will provide tank waste treatment services on a fixed-unit price basis. Part B is a demonstration to provide tank waste treatment services and deactivation at fixed-unit prices. The demonstration period will range between 10 and 14 years. Wastes will be processed during a five- to nine-year period of Part B. Part B will conclude with completion of deactivation (one additional year).

2.0 CRITERIA USED FOR DETERMINING THAT PRIVATIZATION HAS FAILED

Included in the TPA Change Package M-60-95-03 is Milestone M-60-10 which specifies that DOE will "Select two (2) Contractor-Owned, Contractor-Operated (COCO) contractors and issue DOE signed authorization to proceed with Part B work for Low-Activity Waste (LAW) pretreatment and immobilization." DOE-RL considers that TWRS privatization has failed if Milestone M-60-10 is not successfully completed.

3.0 POTENTIAL ALTERNATE PATH CATEGORIES

A significant feature of the TPA Change Package M-60-95-03 is the conditionally enforceable alternate path milestones (M-61) for LAW pretreatment and immobilization that provide for an alternate path to the primary path of privatization. The TPA contingent requirements for the alternate path can no longer be required after DOE selects the contractors who will build and operate the Phase I demonstration-scale facilities if M-60-10 is met. Likewise, if DOE elects to abandon the primary path and instead follow the alternate path milestones, the primary path milestones will automatically be deleted from the TPA and become unenforceable under the provisions of the TPA or any other legal mechanisms.

TPA Milestone M-60-09, identified in TPA Change Package M-60-05-03, specifies that, "DOE will take delivery of and transmit to the Department of Ecology, a report prepared by an independent contractor, that identifies reasonable and practical contracting mechanisms (if any) that would facilitate acceleration of the start of hot operations of a LAW pretreatment and immobilization facility under the alternate path to Privatization." The document, *Report on Alternate Path Procurement Strategies if TWRS Privatization Effort is Unsuccessful*, (Attachment 2) was submitted to the Department of Ecology on

October 25, 1996, in completion of TPA Milestone M-60-09.

The report identified six possible alternative path procurement strategies.

1. One Phase IA contractor is authorized to proceed under the terms of the existing contract.

2. If the Phase IA contractors are technically qualified but the financial risks are too great, the DOE may request cost proposals from the existing contractors for operation of COCO facilities with the Government sharing in the cost of process development, paying for initiation of services or providing loan guarantees.

3. If the Phase IA contractors are technically qualified for Phase IB, but the financial risk is too great for the contractors and/or the Government, DOE might conduct competition between the existing contractors for a government-owned contractor-operated (GOCO) facility.

4. If there is no qualified contractor following Phase IA, reactivate the Initial Pretreatment Module (IPM) and the Low-Level Waste Vitrification Plant (LLWVP) contracts.

5. If no technically qualified contractor exists following Phase IA, conduct competition for COCO facility offering Government payments for process development, loan guarantees or for initiation of services.

6. If no technically qualified contractor exists following Phase IA, conduct a competition for a traditional GOCO facility.

4.0 POSSIBLE CRITERIA TO BE USED FOR SELECTING AN ALTERNATE PATH IF PRIVATIZATION FAILS

Attachment 2 also furnishes the following set of criteria that could be used to evaluate potential alternative path procurement strategies (including the alternatives that are identified in Attachment 2 as well as any additional alternatives that may be identified in the future):

- Prefer a contractor-owned facility;
- Meeting the alternative path schedule established by the TPA;
- Ability to accelerate the alternative path schedule;
- Represents the lowest cost to the Government;

- Represents the lowest risk for failure;
- Provides the strongest motivation to the contractor; and
- Limits near-term Government expenditures.

These criteria are in addition to the program criteria for ensuring the waste is retrieved, treated, immobilized and disposed of in a safe, environmentally-sound, and cost-effective manner.

5.0 THE PROCESS THAT IS BEING USED TO MAINTAIN TECHNICAL AND PROGRAMMATIC CAPABILITIES THROUGH PHASE I PART A

In 1995, in the anticipation of the new privatization acquisition strategy, DOE requested that Westinghouse Hanford Company (WHC) address the issue of core competency. Core competency is defined as the technical and programmatic expertise required by the TWRS Waste Disposal Program to resume a GOCO disposal strategy should the Alternative Acquisition Strategy (privatization) prove unsuccessful. In response to the DOE-RL request, WHC prepared a list (Attachment 3), of core competencies specific to the TWRS Waste Disposal Program. The following table lists each core competency and what organization is maintaining the competency during Phase I. Attachment 3 describes each core competency and why it must be maintained.

All the competencies are being maintained in the Hanford community by privatization contractors, Pacific Northwest National Laboratory (PNNL), and the Project Hanford Management Contract (PHMC) contractor and subcontractors. In addition, there are other DOE sites that maintain comparable competencies that could also be utilized.

TABLE 5-1. Core Competency Maintenance During Phase I

Core Competencies Category	Maintenance Organization(s)
Colloid Chemistry	Privatization Contractors, PNNL
Dissolution Thermodynamics	Privatization Contractors, PHMC
Supernatant Pretreatment Process Chemistry	Privatization Contractors
Sludge Pretreatment Chemistry	PHMC
Solids/Mobilization Separations	Privatization Contractors, PHMC
Glass Chemistry	Privatization Contractors, PNNL
Glass Process Chemistry	Privatization Contractors, PNNL
Process/Equipment Engineering	Privatization Contractors
Materials Science	Privatization Contractors
Physical/Analytical Chemistry	PHMC Contractors, PNNL, Privatization Contractors
Statistics	Privatization Contractors, PNNL
Geochemistry	PHMC Contractors
Flowsheet Engineering	PHMC Contractors
Source Term Modeling	PHMC Contractors
Geohydrology	PHMC Contractors

6.0 REFERENCES

Letter, J. O. Honeyman (WHC) to W. J. Taylor (RL), "Core Competencies," 9555776, dated October 25, 1995 (attached).

Letter, G. H. Sanders (DOE-RL) to Mike Wilson (State of Washington Department of Ecology), "Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-60-09," 96-WDD-178, dated October 25, 1996 (attached).

REPORT ON ALTERNATE PATH PROCUREMENT STRATEGIES IF TWRS PRIVATIZATION EFFORT IS UNSUCCESSFUL

PREPARED UNDER CONTRACT TO

PACIFIC NORTHWEST NATIONAL LABORATORY

BY

GARY C. MCKINNEY

KENNETH W. BRACKEN

NADINE M. HIGHLAND

EDWARD C. SOLOMON

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EXECUTIVE SUMMARY

This report sets forth alternative acquisition strategies to facilitate the "hot start" of a demonstration scale low activity waste pretreatment and immobilization facility should the current privatization effort be unsuccessful at the completion of Phase IA. Background information for the report was obtained from the Department of Energy, the Pacific Northwest National Laboratory, and the Washington State Department of Ecology.

Several forms of contracting and contract types were considered to determine their suitability and to evaluate the risk to the Government. Funding alternatives were also evaluated, particularly related to the risk of obtaining additional funds and the time required to obtain funding approval.

The above considerations together with desirable features, i.e., measures of merit developed by the authors, were factored into six (6) alternatives. Milestone schedules for four (4) of the six (6) alternatives are provided in this report. The only alternatives that will meet the Tri-Party Agreement (TPA) alternate path milestone of December 2002 require Phase IA contractor(s) to continue into Phase IB. The best alternative would be the continuation to Phase IB of a single successful technical and financially qualified existing Phase IA contractor. The next best alternative for Phase IB would be if one or both of the Phase IA contractors were technically acceptable but either the contractor(s) and/or the Government perceived the financial risk as too great to continue without some up front Government cost participation. This alternative would have the Government offering to either share in the cost of process development, partially pay for an initiation of services, or provide a loan guarantee. The facility would remain contractor-owned-contractor-operated. The resulting contract would provide for liquidated damages to the Government for failure to meet schedule requirements and negative incentives for failure to perform in accordance with the contract terms. It is not uncommon for Government agencies and industry to share in the cost of process development or to pay up-front for initiation of services. The results have been an increased ability of the contractor to obtain financing and continuation of the privatization concept. The Government's unit price payments at the time of service delivery would be lowered accordingly. The alternate path milestone would be accelerated by being able to continue with the existing contractor(s).

The remainder of the alternatives resulted in increased risk of failure to the Government from a funding standpoint and significant risks of delays in the established milestones. The only mitigation to an excessive schedule delay for any of the alternatives would be for the Government to being preparing a flexible contractor-owned-contractor-operated/government-owned-contractor-operated procurement package to be ready for release at the end of Phase IA. The attached figure "Summary of Alternatives" depicts the alternatives studied and their strengths and weaknesses.

Summary of Alternatives

Alternatives / Measures of Merit		Prefer Contractor Owned Facility	Meets Alternative Schedule	Accelerates Alternative Schedule	Lowest Cost to Gov't.	Lowest Risk for Failure (Fin/Cont)	Strongest Motivation to Contractor	Limits near Term Gov't Expenditures	Comments
Alt. 1	One Phase 1A Qualified Contractor	●	●	●	●	◉	●	●	Accelerates alternate path schedule Contractor accepts financial risk
Alt. 2	Phase 1A Tech. Qualified Contractors Financial Risk Too Great - Gov't Cost Share	●	●	●	●	◉	●	●	Cost competition between two contractors Best alternative if no contractor willing to continue Pay-back/incentive features
Alt. 3	Phase 1A Tech. Qualified Contractors (GOCO)	○	●	●	○	●	▒	○	Convert contracts to GOCO–competition if both involved–may select one Incentive contracts
Alt. 4	Reactivate IPM & LWVP Contracts (GOCO)	○	○	○	○	◉	▒	○	Improbable to meet alternative schedule Risk that technical capabilities no longer exist
Alt. 5	New COCO Competition Gov't Cost Share	◉	○	○	●	●	●	●	Test the market–firms may exist that were not willing to participate under privatization
Alt. 6	New GOCO Competition	○	○	○	○	●	▒	○	Least desirable alternative

Legend:

● = Exceed measures of merit

◉ = Meets measures of merit

▒ = Possible to meet measures of merit with changes

○ = Cannot meet measures of merit

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this report is to provide the basis for development of a viable DOE acquisition strategy for the alternative pathway of acquiring a demonstration scale Low Activity Waste (LAW) pretreatment and immobilization operation. This pathway is identified as Milestone M-60-09 in the Hanford Federal Facility Agreement and Consent Order, otherwise known as the Tri-Party Agreement (TPA). This milestone specified that DOE must "....take delivery of and transmit to the Department of Ecology, a report prepared by an independent contractor, that identifies reasonable and practical contracting mechanisms (if any) that would facilitate acceleration of the start of hot operations of a LAW pretreatment and immobilization facility under the alternate path to Privatization." This report's overall purpose is to facilitate the development of a viable DOE acquisition strategy for the alternate pathway.

1.2 SCOPE

1.2.1 REQUIREMENT

The report is to identify and evaluate:

(1) Potential Contracting Mechanisms

A minimum of five contracting mechanisms must be evaluated and ranked by whether they are reasonable and practical. The contracting mechanisms presented must meet the law, regulations and good acquisition practice. The contracting evaluation topics are to include (but not limited to) the following:

A. Use of the existing Initial Pretreatment Module (IPM) and Low Level Waste Vitrification Plant (LLWVP) procurements as contracting mechanisms.

B. Analyze the benefits and risks of the following contract forms:
   1. Turnkey
   2. Design, build and operate
   3. Other contracting options as they relate to the Tank Waste Remediation System (TWRS) Project.

C. Compare risks for various relationships with the vendor i.e., government owned and government operated versus government owned and contractor operated versus contractor owned and contractor operated. Develop and discuss risk mitigation measures.

(2) How to obtain adequate federal funding in the time required.

The focus of this effort is to identify funding mechanisms available to finance the alternative path. For each, identify and evaluate the steps needed to acquire sufficient funds and then rank and discuss the funding paths based on the associated actions necessary for implementation. The following specific federal funding evaluation topics are to be included:

A. Evaluate how expense versus capital money affects funding with respect to schedule and possibility of success.

B. Evaluate funding set asides for government funded capital projects as well as expense fund reprogramming.

C. Prepare an evaluation of DOE funding scenarios for future years and determine funding availability and associated risks relative to the TWRS project.

D. Describe and evaluate mechanisms to use or convert the existing TWRS Privatization set asides to fund the alternate acquisition strategy.

(3) Acquisition strategies based on the identified contracting mechanisms and federal funding requirements.

For all alternative acquisition strategies, provide a discussion on the relative merits of each and identify those strategies that:

-Option 1--best facilitates meeting the TPA alternate path milestones;
-Option 2--is the lowest risk option with respect to failures in contracting or funding, and
-Option 3--is the lowest risk option with respect to failures in contracting or funding and meets the TPA alternate path milestones.

Develop and document alternative acquisition strategies for the three above options.

The following specific alternate acquisition topics are to be discussed:

A. Recommend and discuss which is the preferred alternate acquisition strategy. If the lowest risk option is different from the one which

would facilitate the earliest possible start of hot operations, provide a discussion on why this is so.

B. For each alternative, discuss contract type selection; use of phases, options, or other special contracting methods, any special deviations required and why; whether full and open competition would be sought or would other than full and open competition procedures be used; and general source selection approach.

C. Discuss why the particular acquisition strategy chosen is the best selection of the option addressed.

D. Develop a reasonable concept of risk sharing between potential contractors and DOE.

E. Define and discuss project risks and risk assignments of each option.

F. Provide an integrated critical path schedule for the acquisition strategies identified as meeting options 1, 2 and 3. These schedules shall identify when each action or activity must be initiated to meet the TPA alternate path milestones.

G. Discuss impacts of the federal financing process on each option, including such items as funding set asides for government funded capital projects as well as fund reprogramming to support the preferred alternate acquisition strategy.

H. Evaluate approaches in optimizing competition for design, construction, and operation of the TWRS Project.

1.2.2 ASSUMPTIONS

In the preparation of this report, the following assumptions were used:

A. The TWRS program logic and schedules support technical achievement of the TPA milestones.

B. Program funding forecasts contained in FY1997-FY2006 Multi Year Program Plan Funding Guidelines are the latest publicly available information.

C. A Phase IA contract was awarded September 1996.

1.2.3 DEFINITIONS

A key point to this report is the definition of "reasonable" and of "practical". Both are used in the TPA Milestone M-60-09 to qualify the type of contracting mechanism identified that would facilitate acceleration of the start of hot operations of a LAW pretreatment and immobilization facility under the alternate path of privatization. Reasonable and practical will be used in the following context in this report:

REASONABLE: 1) Governed by or in accordance with reason or sound thinking.
2) Within the bounds of common sense.

PRACTICAL: 1) Capable of being used or put into effect: useful.
2) Having or displaying good judgement: sensible.

1.2.4 DELIVERABLES

The statement of work required the following major deliverables:

A. Report findings that encompass the requirements identified in Section 1.2.1 of this report. Four copies of the final report are to be submitted to DOE and the Washington Department of Ecology (Ecology).

B. Submit a final presentation reporting findings suitable for public meetings to DOE and Ecology.

1.3 BACKGROUND

1.3.1 CURRENT PROGRAM STATUS

The DOE is in the process of contracting with private companies for a demonstration scale LAW pretreatment and immobilization operation for the cleanup of a portion of the highly radioactive tank waste contained in large underground storage tanks at the Hanford Site. Privatization is currently structured in two phases. Phase 1, a demonstration scale operation, is intended to confirm that the vendor's technology can process the variety of wastes in the tanks. This phase is divided into two parts, A and B. Phase 2 is planned to provide for the larger full-scale production operation to complete the remediation effort.

The selected vendors in Phase 1 Part A will develop a conceptual design and initiate permitting activities for the facilities. After an evaluation by DOE of the Part A deliverables from each vendor, DOE will select a minimum of two qualified vendors to design, construct and operate two privatized demonstration facilities.

These facilities will treat and immobilize approximately 3% of the tank waste (double-shell slurry feed wastes and supernates from selected double-shell tanks). DOE will provide an existing double-shell tank to each vendor for use as a waste feed staging tank. Waste feed with the same characteristics will be transferred into each vendor's feed staging tank for processing through their respective facilities. DOE will purchase the immobilized waste in approved containers at a predetermined price.

The schedule in the TPA for the Phase 1 Part A and Part B work is as follows:

Phase I Part A

Award two or more design only Privatization Contracts for LAW pretreatment and immobilization. (These contracts were be awarded in September 1996).
January 97

Phase I Part B

Select two Contractor-Owned-Contractor-Operated (COCO) Contractors and issue DOE signed authorizations to proceed with Part B work for LAW pretreatment and immobilization. **July 98**

Start construction for two Phase I LAW pretreatment and immobilization facilities.

T.B.D.

Start hot operations of two COCO Phase I LAW pretreatment and immobilization facilities. **December 02**

The estimated funding required for TWRS privatization Phase I is $2127million. Of that, approximately $54million is expected to be needed for Phase IA. Currently, $68million is identified as available with an additional $185million of budget authority requested in FY1997.

1.3.2 INITIAL PRETREATMENT MODULE (IPM)--SCOPE AND STATUS

The waste stream, destined for LAW immobilization, will have to have radionuclides removed to meet the 10 CFR 61.55 Class A waste classification. This process has been given the title of pretreatment. The IPM was an ongoing effort prior to privatization to provide a pretreatment facility. A contract was issued by the U.S. Department of Energy's Richland Operations Office (RL) in May of 1993 to Ebasco/BNFL (now Raytheon/BNFL) to perform conceptual design of the IPM. The contract was assigned to the Westinghouse Hanford Company in June 1993. The contract contains options for Preliminary Design (Title 1), Detailed Design (Title

2), and Engineering and Inspections Services during construction (Title 3).
A stop work order was issued in July 1995, to Raytheon/BNFL because of DOE's decision to privatize the LAW pretreatment and immobilization operations. The stop work order remains in effect. Direction to Raytheon/BNFL canceling the stop work order and requesting remobilization to finish the project would have to be accomplished to restart this project. In addition, the conceptual design would have to be modified to include strontium, technetium and TRU (transuranic) removal to comply with current pretreatment scope in the privatization effort. Requests for proposals for construction and operation of the facility would need to be issued. (Operations could be assigned to the Management and Integration Contractor).

In addition to the Raytheon/BNFL effort, the development work by Pacific Northwest National Laboratory on the pretreatment modules was stopped. This work was important since it provided the design parameters for the pretreatment module referenced in the Raytheon/BNFL conceptual design report. This work would have to be restarted and the original work scope completed.

1.3.3 LOW LEVEL WASTE VITRIFICATION PLANT PROCUREMENT

Currently this project would be called a Low Activity Waste Vitrification Plant (LAWVP) rather than the Low Level Waste Vitrification Plant (LLWVP). This procurement, for a 200 ton per day immobilization facility was initiated in the first quarter of calendar year 1994. This was for the services of an Architect Engineer/Construction Manager who would be responsible for conceptual design and advanced conceptual design with options for preliminary and detailed design, engineering services during construction, construction management, startup, and cold testing assistance. In February 1995, the evaluation and final source selection of the qualified contractor was suspended because of DOE's decision to privatize the pretreatment and immobilization operations. The suspension has been continually extended under the direction of the DOE-RL TWRS program.

This facility at 200 tons per day is not a demonstration scale plant as envisioned in the current privatization effort. The immobilization plant under privatization is sized at 20 tons per each facility. At this stage of the procurement, the facility could be readily down-sized to 20 tons per day to match the daily throughput of the IPM. Requests for proposals for facility construction and facility operation would need to be issued. (The operating portion can be assigned to the Management and Integration Contractor).

2.0 REPORT EVALUATION PROCESS

To obtain background information and to prepare for this report, the authors met together and separately with representatives of DOE-RL (TWRS program staff, the Hanford TPA

Administrator, and administrative staff), Ecology (TWRS Project Manager and staff experts on pretreatment and immobilization) and members of PNNL associated with supporting the privatization effort. In addition, contacts were made with DOE-HQ staff to gather current status of funding and procurement alternatives and initiatives.

3.0 CONTRACTING MECHANISMS

Following are the different types of contracts that are available for consideration and the characteristics and associated risks of each.

3.1 CONTRACT TYPES

3.1.1 Firm Fixed Price

3.1.1.1 Characteristics

With a firm fixed price contract, the price is agreed to before the definitive contract is awarded. The price remains firm for the term of the contract, unless revised pursuant to the changes clause in the contract. The contractor accepts full cost responsibility when agreeing to this type of contract. The final profit from the contract is directly related to the cost of doing the work and to how effectively the contractor controls costs and manages the total contract effort. This type of contract is appropriate for a contractor-owned facility. It would only be appropriate for a Government owned facility, if the Government could develop requirements, standards and quantities so as to provide for a contract free from constant changes due to or lack of specifics.

3.1.1.2 Risks

Some advantages to the Government of this type of contract are that it: (1) requires limited Government involvement, (2) transfers the highest risk and highest reward possible to the Contractor, and (3) results in the lowest cost risk to the Government. Some disadvantages to the Government are that it: (1) requires definitive specifications, (2) works best with previously demonstrated performance, and (3) works best with low technical and cost uncertainty.

3.1.2 Fixed Price Incentive

3.1.2.1 Characteristics

A fixed price incentive type of contract can be appropriate if the

Government can negotiate at the start, a firm target cost, target profit, and profit adjustment formula that results in a fair and reasonable incentive and a ceiling that provides for the contractor to assume an appropriate share of the risk. Technical and cost uncertainties have to be reasonably identifiable. If the costs are uncertain in the beginning, successive targets can be negotiated which are based on cost experience during performance. The contract will state the time that new targets would be fixed. When the work is complete, the Government and contractor negotiate the final cost, and the final price is established by applying the formula. If the final negotiated cost exceeds the price ceiling, the contractor absorbs the difference as a loss.

As in a firm fixed price contract, this type is appropriate for a contractor-owned facility, but it may not be appropriate for a Government owned facility. It would only be appropriate for a government owned facility, if the Government could develop requirements, standards and quantities so as to provide for a contract free from constant changes due to or lack of specifics.

3.1.2.2 Risks

Some advantages to the Government with this type of contract are (1) it can provide for improved performance with some performance uncertainties, (2) technical and cost uncertainties are reasonably identifiable, (3) the contractor has to have adequate cost or price information available to establish targets, (4) it requires the contractor to have an accounting system capable of tracking costs to permit negotiation of the final incentives, and (5) the Government's interests can be protected and enhanced in developing the incentives. Some disadvantages are that it (1) is generally used for supplies and services, (2) requires definitive specifications, (3) is appropriate when there is low technical and cost uncertainty, and (4) may be difficult to use for a government owned contractor operated type contract, because of the inability to specifically define requirements..

3.1.3 Cost Plus Incentive Fee

3.1.3.1 Characteristics

A cost plus incentive fee contract can be appropriate for advanced engineering or systems development and first production, when the uncertainties of performance may preclude the use of a fixed price type of contract, yet may not be so great that a cost plus award fee or cost plus fixed fee contract is justified. A cost plus incentive fee contract includes an incentive fee sharing formula based on the estimated cost of the work to be performed. This type of contract requires a target cost, a target fee,

minimum and maximum fees and a fee adjustment formula. The formula should provide an incentive that will be effective over the full range of potential variations from the target cost. If a high maximum fee is negotiated, a low minimum or zero minimum fee should be the offset. This contract is appropriate for either a Government or a contractor owned facility.

3.1.3.2 Risks

Some advantages to the Government for this type of contract are that (1) the incentives have to be desirable, practical, and measurable, (2) the technical and cost uncertainties are too risky for a fixed price type of contract, and (3) the incentives can be focused on the key risk areas. Some disadvantages to the Government are that (1) it requires substantial Government oversight, (2) the contractor's risk is limited to a loss of fee, and (3) it may be impossible to negotiate a satisfactory target cost and fee adjustment formula.

3.1.4 Cost Plus Award Fee

3.1.4.1 Characteristics

A cost plus award fee contract is suitable when the Government is unable to predetermine cost, technical performance and schedule targets. The likelihood of meeting the Government's objectives will be helped by a contract that motivates the contractor toward exceptional performance and provides the Government with the flexibility to evaluate both actual performance and the conditions under which it was achieved. The additional oversight and management effort incurred by the Government are justified by the potential benefits in contract performance, both in cost and schedule savings.

Goals and objectives can be mutually agreed to that provide motivation in whatever areas are important for the project, such as timeliness, exceeding schedule requirements, and cost reductions. This type of contract is appropriate for either a Government or contractor owned facility.

3.1.4.2 Risks

Some advantages to the Government for this contract type are that (1) it provides for improved contractor performance, (2) it can be used where performance cannot be objectively measured, (3) it allows for subjectively evaluated performance, and (4) goals can be focused on key risk areas.

Disadvantages to the Government are that it (1) requires substantial Government resources for developing and administering the award fee plan, and for evaluating and monitoring performance, (2) requires substantial Government technical oversight, and (3) limits contractor risk to the loss of fee.

3.1.5 Cost Plus Fixed Fee

3.1.5.1 Characteristics

A cost plus fixed fee contract is mainly used for research or exploratory development when the level of contractor effort required is unknown. Generally, dollars involved are significant, specifications cannot be defined precisely and the uncertainties of performance are so great that a firm price or an incentive arrangement cannot be set up at any time during the life of the contract. The Government agrees to reimburse the contractor for all allowable and allocable costs incurred in performance of the contract. Additionally, the Government agrees to pay the contractor a fixed amount above the cost as fee (profit) for doing the work. The fee dollars change only when the scope of work required by the contract changes. This type of contract is at the opposite end of the spectrum from the firm fixed price contract where price is fixed and a dollar of cost incurred by the contractor means a dollar less profit.

3.1.5.2 Risks

An advantage to the Government for this type of contract is that it can be used when there is a high degree of uncertainty regarding technical and cost areas. Some disadvantages to the Government are that it (1) results in only a level-of-effort from the contractor, (2) provides little incentive for the contractor to exceed minimum requirements, (3) results in no risk to the contractor, and (3) can only be terminated for convenience to the Government because it only requires the contractor to provide its best efforts to accomplish the work.

3.1.6 Summary

The contract types were listed in order of increased Government risk. The firm fixed price contract has the lowest risk to the Government and the cost plus fixed fee has the highest risk. The amount of risk accepted by the Government will be impacted by whether the facility is Government-owned or contractor-owned. It may not be feasible to have a fixed price type contract for operating and maintaining a Government owned facility. Every dollar spent maintaining the facility reduces the

profit to the contractor. In the case of pretreatment and immobilization, the technical and financial risks of processing the waste may be quantified. This would permit the use of an incentive type contract. It would not be necessary to use a cost plus fixed fee contract. Conversely, the risks associated with a firm fixed price contract may be too great for the contractor to be willing to assume.

3.2 CONTRACT FORMS

The following are different contract forms that are possible alternatives. Discussed are the characteristics of each and the associated risks.

3.2.1 Turnkey

3.2.1.1 Characteristics

The turnkey contract assigns complete responsibility to a single, or group of contractors, for design, construction, and startup operations. The completed plant is turned over to the Government ready for production operations. Also, since the contractor is not responsible for operating the facility, the motivation to minimize the potential for future operating problems is lacking.

3.2.1.1 Risks

Advantages to the Government are that it requires less Government oversight and the contractor assumes responsibility and determines priorities. A possible disadvantage is that the best contractor may not perform specific portions of the turnkey effort.

3.2.2 Performance Based Contracting

3.2.2.1 Characteristics

The contract requirements for performance based contracting are specified in results oriented work statements. The statement of work describes the effort in terms of objectives. The Government has to be able to objectively measure the contractor's performance against accepted standards to determine if, in fact, the contractor's efforts have met the contract requirements. Positive and negative performance incentives based on the standards are part of the administration of this form of contract.

This form of contract permits the Government to specify and determine priorities by the performance based task. The contractor is aware of what the Government needs and how the performance is being evaluated. Conversely, the Government is required to develop the measurable tasks and the standards that will be used to measure the performance. Significant Government resources are required for oversight and administration.

3.2.3 Design, Build, and Operate

3.2.3.1 Characteristics

The design, build, and operate form is similar to a turnkey form, but also includes plant operation. The Government selects a single firm or group of firms to be responsible for the entire range of functions. The Government's responsibility is limited to oversight activities to insure that the Government receives what the contract requires.

3.2.3.2 Risks

Advantages to the Government are that a single source is responsible for all elements of the project. Government responsibility is limited to oversight operations. Disadvantages to the Government include the total scope of the work. There is not an opportunity to replace the responsible contractor without severely impacting the project.

3.2.4 Management and Integration

3.2.4.1 Characteristics

The management and integration contract form is widely used by the Department for government owned contractor operated facilities and sites. The scope of contract is broad. The contractor can be assigned responsibility for new projects and programs during the contract term. The contractor can either conduct the operations with plant forces or by competitive contracting.

3.2.4.2 Risks

Advantages of this contract form are that the selected contractor is the best of interested and qualified firms. The scope allows assignment of new work to the contractor. A single contractor is responsible.

3.2.5 Summary

These contact forms differ mainly in the fact that turnkey and design, build and operate are completion type contracts and performance based and management and integration are term-type contracts for generally a five year period.

A completion type contract for the design and construction of the demonstration facility seems more appropriate.

3.3 Risk Relationships

The Statement of Work requires a comparison of Government risks associated with a government-owned-government-operated facility; a government-owned-contractor-operated-facility; and a contractor-owned-contractor-operated facility. The Government risks and responsibilities decrease with movement toward a contractor-owned-contractor-operated facility. A government-owned-government-operated facility does not seem feasible, because of the lack of in-house Government expertise in the actual operation of facilities. Either a government-owned-contractor-operated or a contractor-owned-contractor-operated facility is a possible alternative.

4.0 FEDERAL FUNDING

4.1 SOURCE OF FUNDS

If the primary path of privatization is not available for LAW pretreatment and immobilization construction, then funding becomes a key issue in pursuing the Tri-Party Agreement Alternate Path. Where the primary path would have vendors providing up front financing for construction of privatized demonstration facilities, an alternate path other than privatization would require a source of federal government funding. The following is a discussion of possible federal funding sources, the activities necessary to accomplish the funding path and the risk or difficulty involved in successfully obtaining the funds. The funding sources discussed are ranked in descending order as to those which are most reasonable and practical. A discussion of the actual mechanisms for obtaining funding and the activities required to do so follows in Section 4.2.

4.1.1 TWRS Privatization Funds (Set Aside)

Budget Authority (B.A.) represents the authority provided by law to enter into financial obligations that will result in immediate or future outlays involving federal government funds. This authority is provided to DOE by Congress in the form of appropriations. Budget Outlay (B.O.) represents the issuance of checks, disbursement of cash or electronic transfer of funds made to liquidate a federal

obligation. It should be noted that the Office of Management and Budget (OMB) monitors rather than controls B.O. Control is applied through B.A. limitations with the understanding of agencies' expenditure projections.

In order to provide the appropriate B.A. to cover any potential termination liability up to the point of operation of the privatized demonstration facilities called for under Phase I of TWRS privatization, DOE has established a budget plan in the amount of $2127million through the year 2002. Also, included within these amounts is $68million which represents not only B.A. but also B.O. It is estimated that a maximum of $54million will be needed in order to fund Phase IA of TWRS privatization.

Congress has appropriated $170million in the FY1997 budget for privatization. While this funding is popularly referred to as "set aside" funding, this is only true in the sense that it is set aside separately in the appropriation account. Subsequent to FY1997, the expectation is that additional funding (B.A.) for TWRS privatization would be obtained using the privatization concept of the Asset Acquisition process (see 4.1.3). It is the intent of DOE and OMB that for any TWRS privatization B.A. provided by Congress, expenditures will not occur for many years.

One alternative to the current privatization path involving two vendors would be to pursue a privatized approach involving only one of the two vendors. This is considered an "alternate path" since the language in the TPA concerning privatization refers only to an approach involving two vendors. If this were the case then presumably the planned TWRS privatization funds would be retained and could be applied without Congressional approval. Notifications would need to be made and changes made to existing work plans but unless this sparked some OMB or Congressional action, there should be no delay in the funding process.

The FY1997 budget appropriation account for TWRS privatization has been set aside separately. In order to use this B.A. during a current budget year for an alternate path other than the privatization path, essentially a reprogramming effort would be required. (Note: The fact that these are operating expense funds rather than capital funds is not a driving factor here. To utilize this B.A. source during a current budget year for anything other than privatization would require a Congressional reprogramming since it is "set aside" separately in the appropriation account and specifically for privatization.) Another approach would be to request B.A. during the normal budget process citing the reduction of the privatization B.A. as an offset. Both of these approaches would require approval from the defense authorization committees - House National Security Committee and the Senate Armed Services Committee - and both the House and Senate Energy and Water Development Committees.

In addition, if B.O. were also to be obtained to cover the TWRS alternate path in order to make expenditures, DOE would first need to convince OMB of the desirability of this action. OMB would undoubtedly have difficulty with adding this amount to the total DOE expected expenditures. Typically within the federal government the B.O. ceiling within the budget is reached before the B.A. cap. In fact, although in recent years OMB has had available B.A. to apply as in the case of privatization, there is no guarantee that this condition will continue to exist during future budget formulations.

Undoubtedly, OMB could request that DOE look within its total budget outlays to see where delays in expenditures might be developing or might be possible in order to substitute the TWRS B.O. While a possible source of B.O. is within the Department's budget, the likelihood of finding B.O. in significant amounts over the time period necessary is slim. Although historically utilized as a source of funds, the uncosted, uncommitted obligation balances within the Department have been worked down to the point that little flexibility exists without severe impacts to other DOE programs.

Another difficulty foreseen in obtaining funding for an alternate path is that there are indications that OMB and Congress view cost plus contracting as inappropriate for TWRS based on the lack of success in the recent past and therefore, would not be supportive of providing funding for this particular approach in the future. It is possible that some other contracting arrangement would be seen as more acceptable.

It should also be noted that any request of Congress for discretionary funding during the construction and operation of the LAW pretreatment and immobilization facility will be in an extremely competitive environment as Federal agencies attempt to cover programmatic needs in an era that will see a 20% reduction in the total discretionary portion of the federal budget. Congressional priorities will dictate the "winners" and the "losers".

4.1.2 Other Program Funding Sources

There are numerous other potential program funding sources in addition to the privatization set aside B.A. However, the amount of funding necessary for the TWRS alternate path effort could be significant and, therefore, the impacts to the other sources could be great. Within the DOE budget both the local as well as the national Environmental Management (EM) budget could be a source of funding in addition to other DOE programs outside of EM. Of course, it is always possible to attempt to obtain an increase to the overall DOE budget through OMB and Congress.

Within the EM budget, the Richland Operations Office(RL) would be required to

first look to possible sources within its own funding. The most accessible from a process standpoint would be within the same Congressional control point as TWRS privatization funding, that is Waste Management (EM-30) funding.

Use of this funding, although targeted for programmatic efforts other than TWRS privatization and therefore undoubtedly having severe impacts if cut, would require the fewest number of DOE organizational approvals. The total projected RL FY1997 EM-30 funding for all activities other than TWRS privatization is $476million.

The next most accessible funding source from a process standpoint would be EM-30 funds other than those at RL. Obviously, this would involve impacts to other sites and the attendant politics resulting from these impacts. The total EM-30 budget, other than TWRS privatization for FY1997 is currently projected at $1,735million which includes RL's $476million.

Accessing EM funds other than EM-30 would also be a potential possibility. However, the difficulty in reaching agreement and the impacts and political ramifications resulting from moving these funds to cover TWRS efforts obviously could be greater. The total EM budget for FY1997 is currently projected at $5,878million.

Likewise, the difficulties involved in moving funds from programs other than EM into the EM budget would be even greater and would involve increasingly higher levels of DOE management as well as a broader involvement from OMB and Congressional committees. The total DOE budget for FY1997 is currently projected at $15,774Million.

In order to move funds between EM congressional control points i.e., to EM-30 from any other EM program, or from other DOE programs into EM-30 for use during a fiscal year requires a reprogramming effort. Reprogramming requires a request to and approval of the appropriate Congressional committees before the funds may be utilized for another purpose than originally intended and appropriated by Congress. If the funds were needed for a future fiscal year, then rather than a reprogramming a change could be made in the normal budget submission either for the year for which the budget is submitted or for the next fiscal year which has yet to be appropriated by Congress.

The attendant difficulties in obtaining an overall increase in the DOE budget for any reason including to cover the TWRS alternate path are well recognized. In an era of increasing budget pressure resulting from efforts to reduce the federal deficit, it becomes increasingly improbable that such growth would be supported by OMB or Congress.

In addition, it should be noted that EM has previously rejected an approach involving government up front funding of TWRS LAW pretreatment and immobilization construction because of a strong feeling that such an approach would take away the contractor motivation to perform. That is why privatization has been seen as such an effective mechanism to achieve the TWRS objectives, because contractors are seen as much more motivated with their own monies on the line, with the result of enhanced performance.

4.1.3 Asset Acquisition

The Asset Acquisition process is a relatively new OMB concept. The FY1997 budget was the first year it was applied with two portions (OMB Circular A-11, Part 3 reflects changes due to the Government Performance Review Act). One is basically an approach to privatization such as was taken with TWRS (which is planned to be used for additional TWRS privatization B.A. after FY1997) which provides B.A. in order to cover any possible termination liability for a privatized construction project. The other part of the Asset Acquisition process is to fully fund federal construction projects up front, rather than the incremental funding approach utilized previously, in order to allow for better management of projects. OMB intends to pursue this as part of the FY1998 budget process. Under both scenarios Congress would appropriate the necessary B.A. up front. This B.A. is considered to be "off budget" in that while obligational authority is provided to cover potential future "mortgages", the actual resulting expenditures are spread over a number of years, and in many cases, many years down the road. Although an attempt was made in the FY1997 budget as part of the Asset Acquisition process, DOE has not as yet been successful, as part of this process, in receiving OMB approval of up front B.A. for a government construction project. One obvious difficulty, even though such B.A. is considered "off budget", and therefore more likely to receive OMB and Congressional approval, is that the funding provided is B.A. only and the B.O. requirements must be addressed in order to actually begin government outlays. If the growth in B.O. requirements become an issue at a future point, then even though the principle is to appropriate funds for the entire life of the project up front, obviously it may still be delayed or canceled by Congressional action at any point.

4.1.4 Source of Funds Summary

If one vendor is selected to continue along the privatization path, then this alternative should be able to utilize the existing B.A. that was established for TWRS privatization. This then appears to be the least difficult alternative from a funding standpoint.

While the TWRS privatization B.A. is attractive as a source of funds for the TWRS alternate path should privatization not succeed, it must be kept in mind that these

funds primarily represent B.A. only ,with the exception of the $68million set aside from FY1995 and 1996 B.A. and B.O. Ultimately, even under privatization, B.O. would be required as the government actually purchases the vendor services (FY2002). However, under the alternate path if there is no privatization, this point is reached sooner and additional B.O. would be necessary to begin detailed design of demonstration facilities or for up front cost sharing/service subscription (see 4.2) rather than later once operations begin.

Also, under the privatization scenario, the government "payback" of the construction cost would be spread over a longer period of time as services are obtained, rather than just over the construction period itself. The ability to obtain OMB and Congressional support for privatization was due in large part to the fact that only additional B.A. was required until the plants in question actually produced product The funding for Phase IA which consists of B.A. and B.O. has already been set aside by DOE-RL. Therefore, the task of obtaining B.O. for utilization of this additional B.A. becomes the critical path if near term expenditures are projected. It is not possible at this time to assess the cost of a possible alternate path. Therefore, no attempt was made to determine the adequacy of the "TWRS" privatization B.A. to cover an alternate path.

While it would seem that use of the TWRS privatization B.A., with the obtainment of B.O., as necessary, would be the most likely path to pursue, if for some reason this were not possible, then other funding sources would have to be addressed. Obviously, the greater the difficulty and number of approvals needed to achieve a transfer of funds, the higher the risk of failure. The strategic planning approach being taken as part of the FY1998 EM budget process to request approval of a Project Hanford might facilitate movement of funds from RL operating sources, if approved. An alternate route to take may be requesting B.A. through the Asset Acquisition process. Over the next few years, it will become much clearer whether this is a viable mechanism for DOE. However, it is not obvious that this approach would significantly change the fact of an increasingly competitive environment for federal funds or the fact that OMB has severe doubts about the ability of the TWRS project to succeed with up front federal funding of construction (see 4.1.1 above). The political environment at the time of the budget request will be the overriding factor in determining success of any of these alternatives.

4.2 AVAILABLE FUNDING MECHANISMS

If the current approach to privatization of the LAW pretreatment and immobilization facility construction is not possible, then as well as identification of a funding source, it will also be necessary to select a mechanism through which to actually apply the funding to the alternate path. The following discussion of mechanisms will cover the activities needed to establish the mechanisms as well as a discussion of schedule and risk or difficulty involved.

While other mechanisms may exist, such as the establishment of a quasi-governmental corporation, they tend to be less straight forward and more exotic than those discussed below. This fact would undoubtedly increase the time required to establish the mechanism and increase the difficulty in doing so. Therefore, there has been no discussion provided concerning these other mechanisms. The mechanisms discussed are ranked in descending order as to those which are most reasonable and practical.

4.2.1 Cost Sharing/Service Subscription Initiation

The cost sharing and the service subscription initiation approach are combined in this section for discussion because the mechanisms are very similar. The distinction is in the basis for government expenditures. With the cost sharing approach the government is buying up front "limited rights to process data" in order to assure there will be a capability in the future. In the case of service subscription initiation, the Government is making a partial up front payment for services. In each case the Government is expending funds (B.O.) up front.

4.2.1.1 Steps to Accomplish

This mechanism would require an estimate of how much the Government is willing to provide to a vendor(s) in the way of up front payment for services. The B.A./B.O. would be identified in the budget as operating expense and if the source of funds were other than the EM-30 operating expense budget, either a new budget submission for future years or a reprogramming effort for the current year would be necessary to utilize the funds.

4.2.1.2 Evaluation

One of these two approaches would be utilized only in the event that a technically qualified vendor(s) were unable/unwilling to assume the total up front financing involved in establishing a LAW pretreatment and immobilization capability. The success of this approach is dependent on the ability to negotiate an amount which would enable vendors to obtain financing but would not be so onerous as to prevent DOE from obtaining the up front B.A. and B.O. However, it would be necessary, in order to protect the government, that payback provision be included in case of vendor failure to provide the required capability in an acceptable time frame. The assumption is that this is a much smaller amount than would be necessary if the government were financing a government-owned-contractor-operated construction project. With the cost sharing or service subscription initiation approach the project would remain a contractor-owned-contractor-operated effort. The cost sharing approach or the service

subscription initiation would only be utilized in the event vendors were unable to proceed to Phase 1B of TWRS privatization due to financing risk. While not as attractive to the government as the current privatization approach, it may be a necessary compromise in order to proceed. This approach maintains a contractor-owned-contractor-operated effort rather than the involvement of the government in a government-owned-contractor-operated project. It also involves much smaller up front government expenditures.

4.2.2 Loan Guarantee

A loan guarantee mechanism has been used in the past by DOE when vendors would be at great financial risk in proposing on DOE projects where the outcomes were highly speculative. The loan guarantee by DOE allowed vendors to obtain financing through private means which otherwise would not be available. This also had the side benefit of increasing competition. However, the Budget Enforcement Act of 1990 requires that loan guarantees be entered into the budget (scored). In other words, B.A. would be required up front to cover possible loan defaults. This is undoubtedly due in some measure to the earlier failure of programs such as the DOE's Alcohol Fuels Program.

4.2.2.1 Steps to Accomplish

This approach would require OMB and Congressional approval.

4.2.2.2 Evaluation

If a technically qualified vendor(s) exists at the end of Phase IA of TWRS privatization but they are unable to obtain financing without assistance, then a government loan guarantee is an option. However, DOE has not had a great deal of success with these in the past. Also, if financing is unavailable to vendors then DOE would have to ascertain that this was due to the "riskiness" of the venture and not a reflection on the companies involved. The loan guarantee approach might also require that the entire B.A. amount be set aside at once, whereas the TWRS privatized B.A. was spread between FY1997 and FY2002.

However, EM has previously rejected a loan guarantee approach for TWRS based on the opinion that when government funding is involved, even just as a loan guarantee, the contractors lack sufficient motivation to perform as needed.

4.2.3 Line Item Project

Line item projects are the normal way in which construction projects estimated to cost in excess of $2million are funded within DOE. There have been some instances of construction which are operating expense funded such as for qualifying research and development projects and for entire program areas such as Environmental Restoration. It would appear that the TWRS construction might meet the requirements to qualify for an operating expense funded project since it is a proof-of-concept, demonstration project.

Construction budget line items, whether capital or operating expense funded, as the title suggests, are those construction projects which are called out specifically in the Congressional budget. Not only are they separately budgeted but must be tightly controlled, accounted for, and reported against throughout the life of the project. The level of visibility, as required by Congress, is high.

The statement of work for this effort requested an evaluation of the existing IPM and LLWVP line item project procurements as contracting mechanisms for a possible alternative path to privatization. It should be noted that while the contracts have been extended, the budget line item for the IPM has been closed with DOE-HQ, and no funds remain under this project. Also, because of the lack of an LLWVP project baseline, a budget line item was never established for it. Consequently, for each of these activities, a budget line item would have to be established.

4.2.3.1 Steps to Accomplish

In order to establish the TWRS LAW pretreatment and immobilization construction as a budget line item, an extensive process must be accomplished at various levels and across numerous organizations within DOE. This report will not attempt to lay out the detailed path which must be followed but rather will discuss the major approval points both within DOE and with higher authority.

In addition, it should be noted that the process within DOE as well as OMB is in a state of flux. What is described here is the general process that has been followed to date. It is possible that streamlining of the DOE process may occur for the FY1999 budget process. While it is very possible that DOE will find ways to streamline the internal process, OMB, because of their new approach of full funding of fixed asset acquisition in the first year, is requiring a Departmental Plan and more definitive information than in the past.

Whether operating expense or capital funded, the process for pursuing a

major DOE line item has been the same. As required by Congress, for a line item to be accepted for federal funding, there must first exist a validated conceptual design report or its equivalent if the Departmental process is changed, in order to establish a project baseline.

This helps to avoid committing resources before projects are adequately defined. The conceptual design report will identify a total estimated cost and a proposed schedule through project closeout and other project information. Once the report is validated and has received approval from DOE-HQ, the Project Data Sheet then is included as part of the Operations Office budget submission to DOE-HQ. If the line item is accepted through the internal DOE process, it will then receive OMB review as part of the normal federal budget formulation process. OMB review typically results in alterations to the Departmental budget request which then becomes part of the larger Presidential budget submission to Congress. Congressional review again typically results in alterations before a final budget is enacted.

From a timing standpoint, federal budgets are submitted by the Department at the end of one fiscal year for the second following fiscal year's budget. In other words from the time that an Operations Office begins preparation of a budget request until the budget year arrives, at least two years will have elapsed. In the case of line item projects, however, typically the initial engineering reports, which lead to a functional design report which in turn lead to a conceptual design report, begin many months prior to the Operations Office budget request.

4.2.3.2 Evaluation

The time line for receiving funding for a typical line item project from the beginning engineering studies through appropriation of monies historically is at least three years. In this case, if privatization were not successful and the alternate path of government construction were to be followed, the preparation and validation of the conceptual design report, or an equivalent baseline, would still be necessary. This would, in all likelihood, become the critical path in obtaining line item funding.

Since the line item project process is the normal one followed by DOE in pursuing government construction, it is the one with which DOE employees, OMB and Congress are the most familiar. This factor not only will increase the probability of success but should also facilitate minimizing the lead time necessary to achieve funding. However, even with an expedited process, such as proposed by the DOE Albuquerque Operations Office to combine Title I design with conceptual design funding, or obtaining waivers of

existing requirements within DOE, funds could not be provided prior to FY1999 (October 1998). Obviously, this could negatively impact the TWRS schedules which would permit project start (detailed design, start of Phase IB) potentially as early as June 1998 if Phase IA contracts are awarded in September 1996. The earliest budget year for which line item funds could be requested is for the FY1999 budget. Since it is not credible to have a conceptual design report prepared in time for the Operations Office submission of the FY1999 budget in the spring of 1997, this would have to be done as a budget amendment for FY1999 in 1998 during the Congressional Review process for the FY2000 budget. In order to prepare a conceptual design report and validate the project in time for Congressional review in FY1998, an extremely expedited internal DOE process would be required. Budget amendments for this major a project are not very probable unless there has been prebriefing of both OMB and the appropriate Congressional committees so that the introduction of a major construction project such as TWRS LAW pretreatment and immobilization does not come as a surprise. If it were not possible to prepare an adequate baseline for Congressional review during FY1998, then the project could be submitted with the FY2000 budget. This, however, would not provide funding until October 1999. A procurement process to attain a construction contractor and/or the resulting construction process added to this delay would not result in meeting the December 2003 alternate path extended schedule.

It should be noted that no mention was made here of a budget supplement, which is the mechanism whereby Congress would increase an agency's budget during the current year. It is unlikely that either OMB or Congress would view the construction of a LAW pretreatment and immobilization facility as such an emergency as to support a budget supplement for additional B.A. for DOE during a current budget year.

The additional B.A. required in excess of the already established TWRS privatization B.A. at this point in time would be significant. OMB is requiring that all future line item projects have the entire B.A. established up front.

4.2.4 No Color Funds

The use of "no color" funds would mean that TWRS was funded similarly to the ER program. Basically, whether funds are for operations or construction, in the ER program the funding is managed at the bottom line for a specific DOE site with the resulting ability to move funds around. Construction projects which are operating expense funded such as in the ER program are identified in the

budget request by an overall Project Data Sheet and changes are reported annually. The approval of "no color" funding for the ER program was based on the recognition by Congress that many cleanup issues would surface as the program matured and that in order to be responsive, DOE would require a great deal of funding flexibility. Obviously, a two year budget cycle would not support the necessary flexibility and so an approach allowing "bottom line" Congressional control with no distinction between operating expense and capital funding was created.

It was also assumed that no tangible assets would be left after cleanup, so Congress felt that operating expense funding was appropriate for the entire effort. It should be noted, also, that the ER program is subject to the OMB Circular A-11 requirements for up front planning of fixed asset acquisition and performance measures. This will undoubtedly reduce the level of flexibility experienced by the ER program to date.

4.2.4.1 Steps to Accomplish

In order to use "no color" funding for TWRS, OMB agreement and Congressional approval would be required. This would need to be accomplished no later than the Congressional Review period as a budget amendment to the DOE previous year's budget submission to be effective for the immediate upcoming budget year. Current year changes could be made through a reprogramming process.

4.2.4.2 Evaluation

Flexibility would be somewhat increased within the TWRS program if a "no color" funding approach were allowed by Congress. This flexibility would arise primarily at the front end in a continuation of project work beyond the conceptual design before approval exists from Congress for the project. Typically, there is a project delay of many months following conceptual design while DOE awaits Congressional appropriation of construction funds before beginning detailed design. It also appears that due to the OMB planning and performance measurement requirements, ER flexibility may be reduced in the future.

The logic that was applied to support the "no color" funding approach for the ER program, however, is not present to the same degree with the TWRS program. It is not obvious that the TWRS program should experience a continuing series of new issues which would make budget planning difficult. Also, it is not expected that the assets

created will be "consumed" in the process as was assumed with the ER program. Therefore, it would seem unlikely that Congress would allow a funding flexibility for the TWRS program such as enjoyed by the ER program.

However, if DOE is successful in obtaining Congressional approval on the 10 year plan approach for Project Hanford which is currently in the works as part of the FY1998 budget process, potentially there would be less difficulty in obtaining a source of other Hanford funds from which to request movement into the construction project.

The identification of funding as operating expense versus capital should affect neither the length of time required to obtain funding nor the probability of success.

4.2.5 Funding Mechanism Summary

The cost sharing or the service subscription initiation approach would be preferable as a mechanism for continuing privatization should no qualified vendors propose at the end of Phase IA, due to financing concerns. This basically maintains a contractor-owned-contractor-operated approach, and even though up front B.A. is required, B.O. requirements could be minimized.

The loan guarantee approach, while having the potential to reduce vendor motivation, would be preferable to pursuing a totally government funded project which would require significant amounts of B.O. in the near term.

Any approach requiring significant up front expenditures (B.O.) by the government obviously does not achieve the current objective of motivating the private sector to perform in a manner that is "better, faster, cheaper" than the Government processes. However, a requirement that all of the B.A. be provided up front would also create a significant issue with OMB and Congress.

If Government funding of the project were required, the most straight forward approach would be to use the "normal" line item project approach in establishing funding for a government-managed construction project. However, it appears that this project could be funded with operating expense dollars since it is a proof of concept demonstration project. While it appears that there is no government funded project mechanism which would allow maintenance of the projected 2002 schedule for operation of the LAW plants, much schedule recovery could be achieved if a conceptual design review or equivalent baseline could be prepared for submission of a budget amendment in 1988 and DOE supports this effort with an expedited line item project approval process. This

should allow achievement of the 2003 alternate path extended schedule from a funding perspective.

The "no color" funds mechanism is an exception to the normal process within the DOE funding arena. There does not appear to be any real advantage to pursuing this approach.

4.3 FUNDING SUMMARY

If the alternate path involving one privatization vendor is selected, then the funding source would in all likelihood be the existing TWRS privatization B.A. and no new funding mechanism is needed.

If this alternative is not selected and up front government funding is necessary, then the existing TWRS privatization B.A. is still the most likely source of funds. However, a new funding mechanism will be necessary to convert this B.A. from privatization funding. A cost sharing or service subscription initiation approach appears to be a compromise approach should technically qualified vendors experience financing difficulty. This approach has the benefit of maintaining privatization while minimizing the up front Government expenditures (B.O.) necessary.

If this approach is not effective in addressing whatever financing issues exist at the end of Phase IA, the most straight forward approach and, probably the quickest would be to pursue a Government loan guarantee. However, unless a mechanism can be found to phase the Government funding guarantee, obtaining all of the B.A. necessary up front could well be a major issue.

For an expedited line item budget request, the critical path will most likely be whether an adequate baseline can be prepared for submission to Congress in 1998. As stated above, difficulty is anticipated in any attempt to get OMB agreement to and Congressional approval of B.A. and B.O. for a government-managed TWRS LAW pretreatment and immobilization project (especially if a cost plus contracting mechanism were utilized - too similar to the old TWRS approach).

The funding mechanism used is probably a lessor factor in achieving success. The main factor, whether operating expense or capital funds are pursued, will be the confidence OMB and Congress have in the contracting approach DOE is proposing to follow.

5.0 ACQUISITION STRATEGY

5.1 INTRODUCTION

The following acquisition alternatives and options were developed using reasonable and

practical strategies and that have been used by both Government Agencies and the private sector.

The considerations and measures of merit used in developing the alternatives and options were (1) that it was preferable to be a contractor-owned facility, (2) that if possible, it met or accelerated the established alternative scheduled milestones, (3) that it resulted in the lowest cost to the Government, (4) that it resulted in the lowest risk for failure, (5) that it had the strongest motivation for success, and (6) that it limited near term Government expenditures.

There are other alternatives, but they do not meet the milestones and would result in greater risk to the Government.

5.2 ALTERNATIVE STRATEGIES

Following are different strategies including the preferred contract type and a discussion of schedule, risk sharing, and competition.

5.2.1 Alternative No. 1

One Phase IA contractor technically qualified for and accepts Phase IB in accordance with the existing contract terms.

5.2.1.1 Contract Type

The contract type would remain unchanged from initially solicited. The facility would be contractor-owned-contractor-operated.

5.2.1.2 Phases, Options, Schedules

The Phases would remain unchanged. There would be no need to add options. Hot start up would occur during December 2002; twelve (12) months ahead of the alternate path milestone, December 2003.

5.2.1.3 Deviations, Competition

No deviation from any requirement would be necessary. Additional competition would not be required, as the work scope included the future effort.

5.2.1.4 Reasonable Concept of Risk Sharing

The contractor has determined, by the willingness to proceed, that the

assumed risk is reasonable. There would be no need to restructure the contract in an effort to reduce the risk.

5.2.1.5 Funding

This alternative does not require up front Government financing other than the planned budget authority to cover any termination liability. There is no delay created in order to obtain the necessary Government funding. This has the greatest life cycle cost to the Government.

5.2.2 Alternative No. 2

Phase IA contractor(s) are technically qualified for Phase IB, but the financial risk is too great for the contractor(s) and/or the Government. The Government requests cost proposals with the Government sharing in the cost of process development, paying for initiation of services or providing loan guarantees. The preparation of a request for proposal would have to be accomplished during Phase IA to minimize any schedule delay. The OMB and Congressional committees would have to be briefed on this approach during Phase IA as well as developing a path forward to provide loan guarantees.

5.2.2.1 Contract Type

The technical requirements of the contract can remain essentially as initially contemplated for Phase IB and for the production efforts. A method would be for the Government to share in a limited basis of the cost of the process development. If this method is used, the Government would have limited rights to the process data. Another method of reducing the risk would be for the Government to offer to pay up front for the initiation of services at the start of production. This approach has been used, for example, by the National Aeronautics and Space Administration for satellite services when substantialinvestment up front is required of the contractor over a long term period. The contractor would retain ownership of the facility in both these examples. The negotiated unit price for the product would be lower to reflect the Government's participation.

5.2.2.2 Phases, Options, Schedules

No additional phase nor option would be necessary for this alternative. Negotiations would be completed prior to commencing Phase IB. Pricing for the production efforts would be established. Hot start up would occur in June 2003; six (6) months ahead of the alternate path milestone of December 2003.

5.2.2.3 Deviations, Competition

This alternative would require no deviation. There would be no requirement to seek additional competition. The Government would merely request cost proposals from the existing contractors on the basis determined by the Government.

5.2.2.4 Reasonable Concept of Risk Sharing

The contract would provide for liquidated damages, should the contractor fail to meet the performance schedule, and negative performance incentives for failure of the contractor to perform in accordance with the contract terms.

5.2.2.5 Funding

The cost sharing approach or the initiation of services would require a limited amount of operating expense funding to be provided up front by the Government. This funding would either have to be carved out of the existing Departmental budget or provided as additional budget authority with the associated budget outlay during the next budget year (FY1999) starting in October 1998. Assuming this funding can be made available, the timing for this action should not delay award of contracts for Phase IB beyond October 1998, which would still allow completion prior to the December 2003 milestone.

The receipt of Government funding for this alternative is not on the critical path. The same applies to a loan guarantee, since only budget authority is required and Congress is already allocating budget authority to cover the termination liability. However, for a loan guarantee the budget authority May all be required up front rather than spread over time as with the termination liability.

5.2.3 Alternative No. 3

Phase IA contractors are technically qualified for Phase 1B, but the financial risk is too great for the contractors and/or the Government. Government conducts competition between the existing contractors for a government-owned-contractor-operated facility. The request for proposal would have to be accomplished during Phase IA to minimize any schedule delay. The OMB and Congressional committees would have to be briefed on this approach.

5.2.3.1 Contract Type

This alternative would require the Government to convert to a government-owned-contractor-operated facility. A contract type, such as either a cost plus incentive fee, where the contractors can be incentivized to improve performance and the Government can take advantage of these improvements, or a cost plus award fee performance contract would be appropriate where the goals and objectives can be focused on the critical areas to be performed. A performance based statement of work can be developed that focuses on specific work elements and permits Government evaluation of the contractor's performance. Negative and positive incentives can be established for this type of contract.

5.2.3.2 Phases, Options, Schedules

No additional phase nor option would be necessary for this alternative. Hot startup would occur in October 2003.

5.2.3.3 Deviations, Competition

There is no formal deviation involved, and competition is maintained.

5.2.3.4 Reasonable Concept of Risk Sharing

It is unlikely that a fixed price contract could be satisfactorily structured for operation of a government-owned facility.

Cost type contracts could be developed that would provide performance incentives and loss of or lower fee for poor performance.

5.2.3.5 Funding

Any alternative involving a government-owned-contractor-operated-construction project would require line item funding to be provided by the Government. In order not to impact completion of Phase IB by the December 2003 milestone, the line item would have to be approved by Congress as a budget amendment to the FY1999 budget in 1998. The critical path for receiving line item approval in this time frame will undoubtedly be the conceptual design report, i.e., the project baseline.

5.2.4 Alternative No. 4

Phase IA contractors are either not technically qualified or unwilling to accept

financial risk. Reactivate the IPM and LLWVP procurements for design if there is no qualified contractor following Phase IA. Reviews of the contractors' capabilities and organization would have to be conducted to assure that they are still satisfactory to do the efforts. Current privatization criteria concerning strontium, technetium, and TRU removal and throughput requirements from pretreatment to immobilization would have to be factored into the design requirements. Updated proposals would have to be requested from the vendors to reflect the current requirements. The OMB and Congressional Committees would have to be briefed on this approach.

5.2.4.1 Contract Type

The existing IPM contract is cost plus fixed fee, and the intended contract for the LLWVP is also cost plus fixed fee. These could be converted to an incentive type of contract, if the contractors agree. The most likely type of conversion would be to an incentive form of a cost type contract. The construction contractor would be competitively selected for a firm fixed price contract. The plant operations could either competitively selected or assigned to the existing management and integration contractor.

5.2.4.2 Phases, Options, Schedules

The IPM contract contains options for preliminary and detailed design, engineering services during construction, and engineering and inspection services during construction. The LLWVP contract contains options for advanced conceptual, preliminary and detailed design, construction management services, engineering and inspection services during construction, and startup and cold testing assistance. There would be no need to alter these options. Hot start up would not occur until April 2004, four months after the alternate path milestone of December 2003. The additional time is necessary to conduct the competition process for facility construction and to request funding through the federal budget process.

5.2.4.3 Deviations, Competition

No deviation would be required. Competition for these contracts was conducted. Competitions for the constructor and possibly for plant operations would be conducted.

5.2.4.4 Reasonable Concept of Risk Sharing

This alternative will result in a government-owned facility. As noted earlier, it may be unlikely that a fixed price type contract could be satisfactorily structured for the operation and maintenance of a government facility.

Either a cost plus incentive fee or a cost plus award fee contract would be appropriate for the operation of the facility.

5.2.4.5 Funding

Any alternative involving a government-owned-contractor-operated construction project would require line item funding to be provided by the Government. The critical path for receiving line item approval in this time frame will undoubtedly be the conceptual design report, i.e., the project baseline. The line item would have to be approved by Congress as a budget amendment to the FY2000 budget in 1999.

5.2.5 Alternative No. 5

If no technically qualified contractor exists following Phase IA, conduct competition for contractor-owned-contractor-operated facility offering Government payments for process development, loan guarantees or for initiation of services. (There may be existing technically qualified firms that were unable or unwilling to accept the financial risk under the privatization attempt). The preparation of a request for proposal would have to be accomplished during Phase IA to minimize any schedule delay.

5.2.5.1 Contract Type

This will be a contractor-owned-contractor-operated facility under this alternative. An appropriate contract type would be a fixed price (unit price for processing) or a fixed price incentive (unit price for processing).

5.2.5.2 Phases, Options, Schedules

The phases and options existing under the current privatization efforts would be appropriate for this alternative.

5.2.5.3 Deviations, Competition

No deviation is involved. Competition may be achieved with the Government offering to share in the risk. There may be qualified firms that were unwilling to become involved in a totally privatized operation.

5.2.5.4 Reasonable Concept of Risk Sharing

As a part of the Government sharing the risk, any resulting contract should include provision for liquidated damages for failure to meet the schedule for

achieving hot operation. The contract for operating the facility should include negative performance incentives for failure to perform in accordance with the requirements.

5.2.5.5 Funding

The cost sharing or the service subscription initiation approach would require a limited amount of operating expense funding to be provided up front by the Government. This funding would either have to be carved out of the existing Departmental budget or provided as additional budget authority with the associated budget obligation during the next budget year (FY1999) starting in October 1998. This would still allow completion before the 2003 milestone. This alternative would not be impacted by the receipt of Government funding being on the critical path. The same applies to a loan guarantee, since only budget authority is required and Congress is already allocating budget authority to cover the termination liability. However, for a loan guarantee, the budget authority would all be required up from rather than spread over time as with the termination liability.

5.2.6 Alternative No. 6

If no technically qualified contractor exists following Phase IA, conduct a competition for a traditional government-owned-contractor-operated facility. The preparation of a request for proposal would have to be accomplished during Phase IA to minimize any schedule delay.

5.2.6.1 Contract Type

The resulting contract would be structured as a performance based cost plus award fee contract. Positive and negative incentives would be included for performance.

5.2.6.2 Phases, Options, Schedules

The contract would be for a fixed term and would fall under the extend-compete policy of the DOE.

5.2.6.3 Deviations, Competition

No deviation is required. Competition for the government-owned-contractor-operated facility is conducted. The contractor would conduct competition as necessary for any contracted work not conducted by contractor work force.

5.2.6.4 Reasonable Concept of Risk Sharing

A performance based contract would provide a limited basis for risk sharing with the contractor limited to loss of or reduced fee for poor performance.

5.2.6.5 Funding

Any alternative involving a government-owned-contractor-operated construction project would require line item funding to be provided by the Government. In order not to impact completion of Phase IB by the 2003 milestone, the line item would have to be approved by Congress as a budget amendment to the FY1999 budget in 1998. The critical path for receiving line item approval in this time frame will undoubtedly the conceptual design report, i.e., the project baseline.

5.3 OPTIONS/SUMMARY

5.3.1 Option No. 1 - Best Meets Alternate Path Milestones

One Phase IA contractor technically qualified for and accepts Phase IB in accordance with the existing contract terms (Alternative No. 1). This option may even permit the primary path milestone date of December 2002 hot startup of the demonstration scale low activity waste pretreatment and immobilization operation to be met.

However, if no Phase IA technically qualified contractor is willing to continue into Phase IB, because the financial risk is too great, Alternative No. 2 becomes the best alternative. The Government requests cost proposals from the technically qualified contractors with the Government cost sharing in the process development, paying for initiation of services or by loan guarantees. If the contractors are not willing to take any risk, Alternative No. 3 becomes the preferred choice, which is to convert the existing privatization contracts of the technically qualified contractors to a government-owned-contractor-operated contract. The acceptance of an incentive type contract should be a requirement for this conversion. The Government could select only one contractor for Phase IB in this situation.

5.3.2 Option No. 2 - Lowest Contracting and Financing Risk

The ranking of alternatives in Option No. 1 remains unchanged. Should there be no technically qualified Phase IA contractor, Alternative No. 4 is chosen which is the reactivation of the IPM and LLWVP contracts, providing they are a viable contracting mechanism.

5.3.3 Option No. 3 - Meets Alternate Path Milestones/Lowest Contracting and Financing Risk

The ranking of alternatives in Option No. 1 and Option No. 2 remain unchanged.

5.3.4 Summary

Attachment No. 1 provides a summary of the alternatives and their ranking. Alternative No. 1, (One Phase 1A contractor technically qualified for and accepts Phase IB in accordance with the existing contract terms) is obviously the best choice. Failing to have that situation, Alternative No.2 (Phase IA contractors are technically qualified for Phase IB, but the financial risk is too great for the contractors and/or the Government) becomes the best alternative. The Government requests cost proposals with the Government either partially sharing in the cost of process development, paying for initiation of services, or providing loan guarantees is the next best alternative. Alternative No. 3, assumes technically qualified contractors at the end of Phase 1A, but too great a financial risk to continue, so the Government converts the contracts to a government-owned-contractor-operated type. A competition can be held if both Phase IA contractors are participating.

An existing Phase IA contractor must be willing to proceed to Phase IB in some form for the Government to have a chance of maintaining the schedule.

If during Phase IA it becomes apparent from the Integrated Project Teams that the process is failing, the steps to obtain alternate funding and contractors should be initiated to minimize schedule delays. Parallel development of a request for proposal for either a government-owned-or contractor-owned facility should commence. An expedited or streamlined acquisition strategy is required, so that a request for proposal can be released at the end of Phase IA and contractor selection completed in the shortest possible period of time. Contingency planning to have Government funding available for the limited cost sharing or for loan guarantees should begin.

6.0 PREFERRED ALTERNATIVE STRATEGY

Attachment No. 1 to this report is a Summary of Alternatives, and Attachment No. 2 is a milestone schedule of events for Alternative No.1 through Alternative No. 4.The preferred alternative strategy is Alternative No. 1. Failing to have that situation, the preferred alternative strategy is Alternative No. 2, if the contractors are willing to share some financial risk. Alternative No. 3 is chosen if the contractors are unwilling to share any financial risk. If there is no technically qualified Phase IA contractor, Alternative No. 4, which is the reactivation of the IPM and LLWVP contracts, becomes the preferred alternative. It is noted that this alternative does not meet the alternate path milestone. Alternatives 5 and 6 are not discussed in this section, because they are least desirable and do not meet the alternate path milestone.

Summary of Alternatives

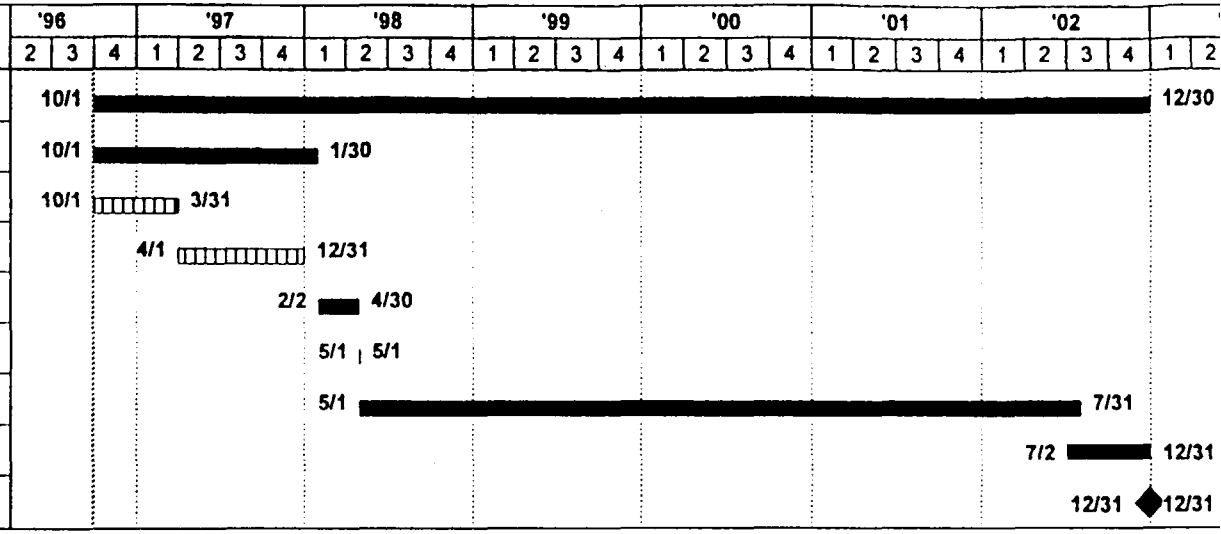
Alternatives / Measures of Merit	Prefer Contractor Owned Facility	Meets Alternative Schedule	Accelerates Alternative Schedule	Lowest Cost to Gov't.	Lowest Risk for Failure (Fin/Cont)	Strongest Motivation to Contractor	Limits near Term Gov't Expenditures	Comments
Alt. 1 One Phase 1A Qualified Contractor	●	●	●	●	●	●	●	Accelerates alternate path schedule Contractor accepts financial risk
Alt. 2 Phase 1A Tech. Qualified Contractors Financial Risk Too Great - Gov't Cost Share	●	●	●	●	●	●	●	Cost competition between two contractors Best alternative if no contractor willing to continue Pay-back/incentive features
Alt. 3 Phase 1A Tech. Qualified Contractors (GOCO)	○	●	●	○	●	◌	○	Convert contracts to GOCO--competition if both involved--may select one Incentive contracts
Alt. 4 Reactivate IPM & LWVP Contracts (GOCO)	○	○	○	○	●	◌	○	Improbable to meet alternative schedule Risk that technical capabilities no longer exist
Alt. 5 New COCO Competition Gov't Cost Share	●	○	○	●	●	●	●	Test the market--firms may exist that were not willing to participate under privatization
Alt. 6 New GOCO Competition	○	○	○	○	●	◌	○	Least desirable alternative

Legend:
- ● = Exceed measures of merit
- ● = Meets measures of merit
- ◌ = Possible to meet measures of merit with changes
- ○ = Cannot meet measures of merit

Attachment No. 1

ALTERNATIVE NO. 1 - ONE PHASE 1A COCO CONTRACTOR QUALIFIED FOR PHASE 1B
Acquisition Strategy Schedule

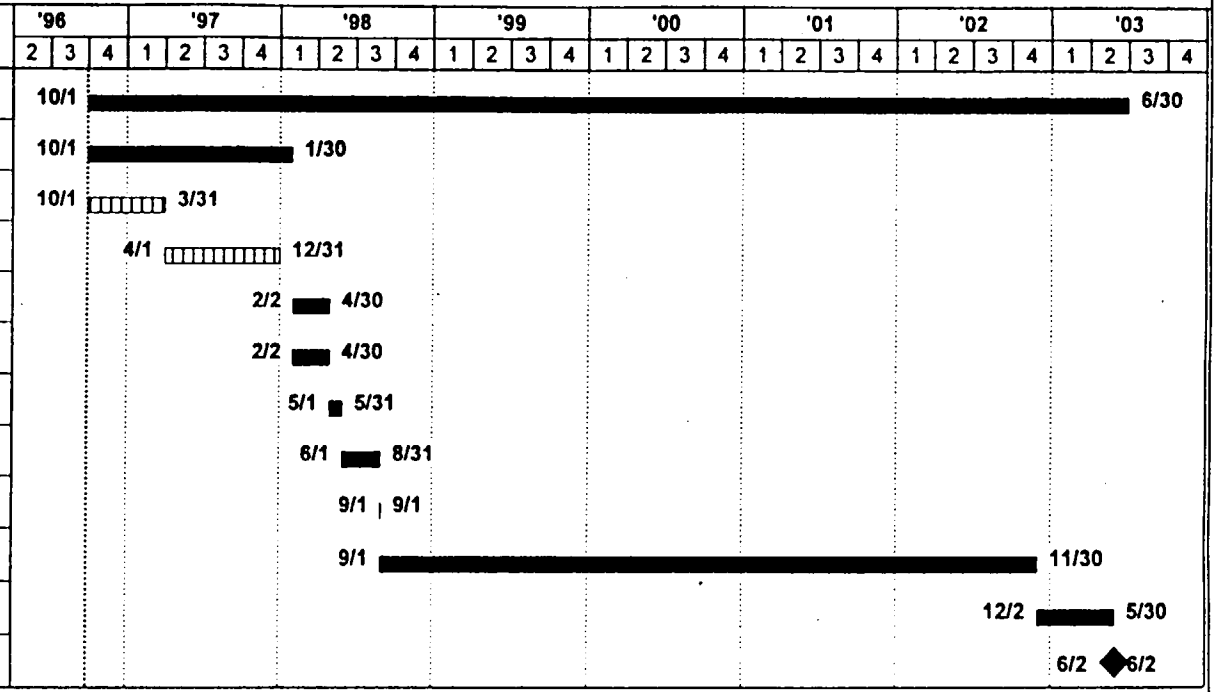
ID	Task Name	Start	Finish
1	**Alternative #1**	10/1/96	12/30/02
2	Phase I Part A Contract	10/1/96	1/30/98
3	**Prepare Alternate Procurement Strategy	10/1/96	3/31/97
4	** HQ/Admin. Congress. Approv. to Alt. Procur	4/1/97	12/31/97
5	Evaluate Phase 1A Deliverables	2/2/98	4/30/98
6	Phase IB Contract Issued	5/1/98	5/1/98
7	Permitting, Design, Const. & Startup	5/1/98	7/31/02
8	Prep. for Hot Start Up	7/2/02	12/31/02
9	Hot Start Up	12/31/02	12/31/02



** Footnote: Alternate Procurement Strategy

ALTERNATIVE NO. 2 - PHASE 1A CONTRACTOR(S) TECHNICALLY QUALIFIED - RISK TOO GREAT FINANCIALLY
REQUEST NEW COST PROPOSAL GOV'T COST SHARING
Acquisition Strategy Schedule

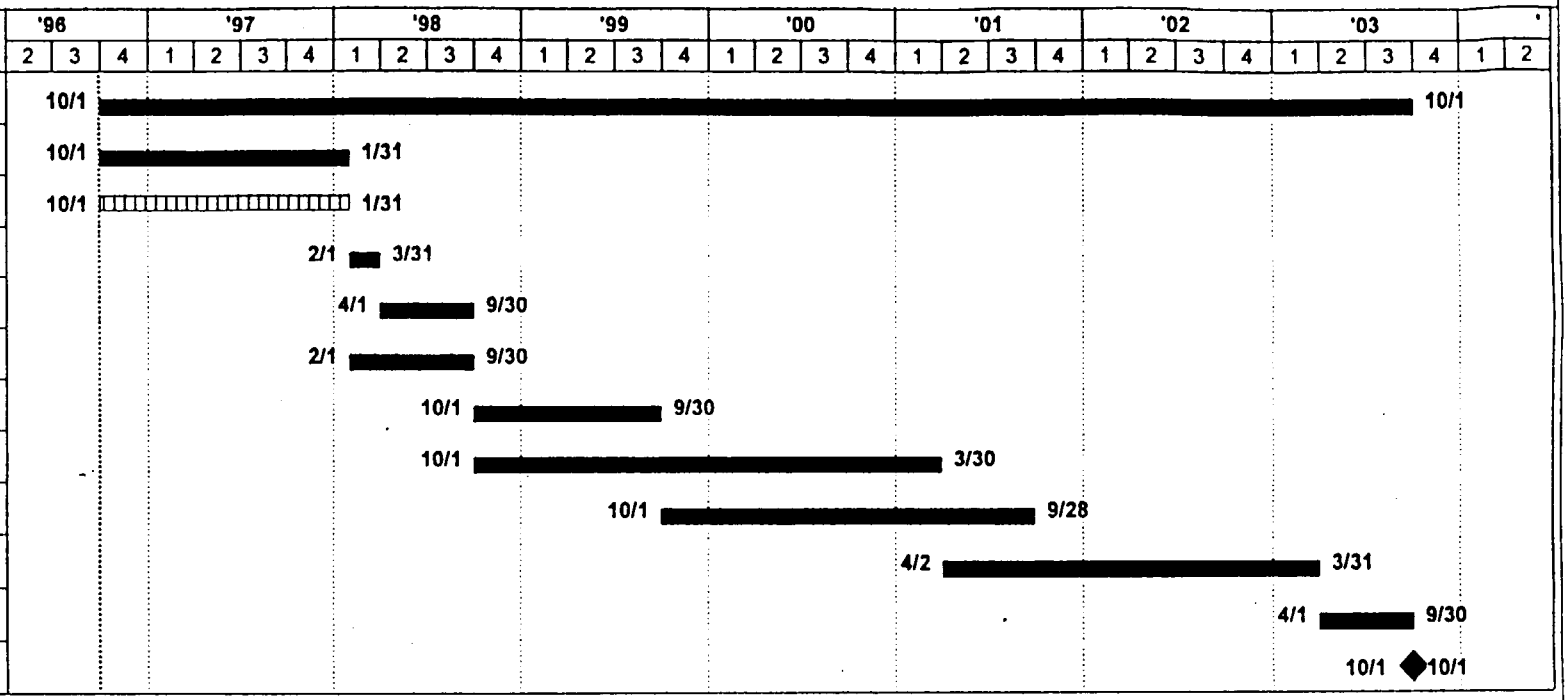
ID	Task Name	Start	Finish
1	ALTERNATIVE #2	10/1/96	6/30/03
2	Phase IA Contract	10/1/96	1/30/98
3	** Prepare Alternate Procurement Strategy	10/1/96	3/31/97
4	**HQ/Admin./Cong. Apprvl. to Alt. Proc. Strat.	4/1/97	12/31/97
5	Evaluate Phase 1A Deliverables	2/2/98	4/30/98
6	Request New Cost Proposal from Contractors	2/2/98	4/30/98
7	Evaluate New Cost Proposal from Contractor	5/1/98	5/31/98
8	Negotiate Contract with Contractor	6/1/98	8/31/98
9	Award Contract Phase IB	9/1/98	9/1/98
10	Permitting, Design, Const. & Start Up	9/1/98	11/30/02
11	Preparation for Hot Start Up	12/2/02	5/30/03
12	Hot Start Up	6/2/03	6/2/03



** Footnote: Alternate Procurement Strategy

ALTERNATIVE NO. 3 - CONDUCT COMPETITION BETWEEN TWO EXISTING PHASE 1A CONTRACTORS - GOCO
Acquisition Strategy Schedule

ID	Task Name	Start	Finish
1	ALTERNATIVE #3	10/1/96	10/1/03
2	Phase IA Contract	10/1/96	1/31/98
3	** Draft RFP Proprosal	10/1/96	1/31/98
4	Vendor Comments	2/1/98	3/31/98
5	Final RFP Award	4/1/98	9/30/98
6	Budget Amendment	2/1/98	9/30/98
7	Design	10/1/98	9/30/99
8	PSAR	10/1/98	3/30/01
9	Permitting	10/1/99	9/28/01
10	Construction	4/2/01	3/31/03
11	Start Up/FSAR	4/1/03	9/30/03
12	Hot Start Up	10/1/03	10/1/03



**Footnote: Alternate Procurement Strategy

ALTERNATIVE NO.4 - REACTIVATION OF THE IPM AND LLWVP PROCUREMENTS
Acquisition Strategy Schedule

ID	Task Name	Start	Finish
1	**Alternative #4**	**10/1/96**	**4/1/04**
2	Issue Contract for Phase IA	10/1/96	1/31/98
3	Phase IA cont. deliv.-No accept. offers	1/30/98	1/30/98
4	Reaction to IPM/LLWVP	2/2/98	4/30/98
5			
6	**IPM**	**5/1/98**	**4/1/04**
7	CDR	5/1/98	11/30/98
8	Budget Amendment	12/1/98	9/30/99
9	Design	10/1/99	9/30/00
10	PSAR	9/1/98	2/28/01
11	Permitting	10/2/00	9/30/02
12	RFP Process for Construction	10/2/00	9/28/01
13	Construction	10/1/01	9/30/03
14	Start Up/FSAR	10/1/03	3/31/04
15	Hot Operations	4/1/04	4/1/04
16			
17	**LLWVP**	**2/2/98**	**4/1/04**
18	Req. Update from Vendor	2/2/98	4/30/98
19	Award Design Contract	5/1/98	6/30/98
20	CDR	7/1/98	3/31/99
21	Budget Amendment	4/1/99	9/30/99
22	Design	10/1/99	9/30/00
23	PSAR	1/1/99	6/29/01
24	Permitting	10/2/00	9/30/02
25	RFP Process for Construction	10/2/00	9/28/01
26	Construction	10/1/01	9/30/03
27	Start Up/FSAR	10/1/03	3/31/04
28	Hot Operations	4/1/04	4/1/04