**The Under Secretary of Energy**
Washington, DC 20585

March 31, 1997

The Honorable John T. Conway
Chairman, Defense Nuclear Facilities Safety Board
525 Indiana Avenue, NW, Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

Enclosed is our quarterly report on actions being taken to respond to Recommendation 94-3 and the seismic safety of the plutonium storage building (Building 371) at Rocky Flats. This report is provided as committed in the Integrated Program Plan (IPP) for Recommendation 94-3.

This quarterly report indicates the completion of one deliverable (deliverable 3-1, seismic qualification of passive confinement boundary and fire hazard analysis) as provided in the IPP. Please note that it also addresses changes to scheduled completion of two other deliverables related to Building 371 (deliverable 3-3, conformance with an updated Authorization Basis and deliverable 3-4, schedule for implementation of upgrades identified by the Authorization Basis).

We have implemented the suggestion from your September 20, 1996, letter that the Department of Energy "provide leadership for completion of the program plan." Our responsive involvement identified that the schedules for the IPP commitments were optimistic and the planning inadequate. Ongoing Department participation in the contractor planning and management is expected to improve our ability to meet program milestones.

Consistent with the Record of Decision for the Programmatic Environmental Impact Statement on Fissile Material Storage and Disposition, we expect to ship plutonium at the site to other DOE facilities. Until this alternative becomes firm, we will continue preliminary work related to construction of a new Interim Storage Vault at Rocky Flats, including the development of a conceptual design for this facility. Our implementation of Recommendation 94-1 will concurrently reduce the hazards posed by that material.

Our quarterly status report will inform you of our efforts to integrate facility, site and Department plans and to schedule facility upgrades in support of those plans.

Sincerely,

Thomas P. Grumbly

Enclosure

# ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 94-3

# QUARTERLY REPORT

First Quarter of FY97

01-23-97

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# EXECUTIVE SUMMARY

## Purpose

The Recommendation 94-3 Integrated Program Plan (IPP) requires that the DOE provide the Defense Nuclear Facility Safety Board (DNFSB) with a quarterly status report to provide the formal transmittal of the status of the IPP deliverables to the DNFSB, and to status the Rocky Flats Environmental Technology Site's (Site's) progress on IPP activities. Specifically, the IPP states that:

> "The Department will provide a quarterly status report for the 94-3 IPP beginning in January 1997. The quarterly status report will provide the formal transmittal of the IPP deliverables to the DNFSB and status the Site's progress on IPP activities, such as Building 371 upgrades and Authorization Basis (AB), 94-1 coordination, and Interim Storage Vault (ISV) pre-decisional studies (or acquisition if the decision is made to proceed); in addition, any changes in contingencies will be discussed."

This is the first required report. The report is presented in the same order and format as the IPP in order to facilitate comparison of progress reported and milestone status with the requirements of the IPP. In addition, an executive summary is provided which contains a brief synopsis of the report's contents.

## Accomplishments

Progress has been made in the development of the AB for Building 371. However, lessons learned have provided valuable insights into how the AB and its implementation can be improved. The schedule slipped in FY96, and was rebaselined in November 1996. The project is on schedule for an authorization agreement to be signed on April 23, 1997. The Priority Safety Upgrades for Building 371 are on schedule, with the Column Line "T" joint repairs and Heating, Ventilation, and Air Conditioning (HVAC) bypass valve supports completed.

The Plutonium (Pu) consolidation efforts are ongoing, with additional vault space complete for occupancy. Inventoried Pu has been relocated from Building 779. Brushing activities as required by Health and Safety Practices Manual (HSP) 31.11 were completed, and backlog Pu oxide was stabilized.

Residue stabilization activities, to include plans for the treatment and safe storage of highly dispersible residues are on schedule, and tests of the pipe component have been completed. Changes being analyzed for residue treatment to meet safeguards termination limits should additionally limit the need to take special precautions with highly dispersible residues.

Preliminary conceptual designs for the Pu ISV were completed, as well as the design criteria. The Integrating Management Contractor has awarded a subcontract for the conceptual design, and progress is underway to complete the siting and design activities on schedule.

Ongoing Activities/Schedule

With the exception of the delays in the development and implementation of the AB, activities to implement the requirements of the recommendation are underway and on schedule. An integrated approach to the interface between recommendations 94-1 and 94-3 is being taken.

The near-term safety upgrades for Building 371 are underway and on schedule, with all conceptual work to be completed during January 1997. The upgrades are scheduled for completion through out 1997, with all of the priority upgrades to be complete as committed by December 1997.

Activities to complete the conceptual design and geotechnical work, the National Environmental Policy Act (NEPA) Record of Decision (ROD) for the storage and disposition of fissile material and the Preliminary Safety and Security Analysis for the ISV are ongoing. The NEPA preliminary draft Environmental Impact Statement (EIS) for the interim storage vault is under review at Headquarters DOE (HQ/DOE) and the status will be updated in the next quarterly report.

Organization

The Integrating Management Contractor has designated a single manager for DNFSB Recommendation 94-3 activities within their organizational structure. The manager who is responsible for integration and coordination of all activities related to DNFSB 94-3, is Mr. Ron Williams, who is responsible to Mr. Vic Mani, Kaiser-Hill Vice President for Engineering Integration, and Technical Services. Mr. Williams also is serving in the role of Project Engineering Manager, responsible for Building 371 Upgrades and the ISV, and for coordination with the Building 371 AB Team, which will complete the AB and coordinate implementation to include specification of further required upgrades to Building 371.

Within Mr. Mani's organization, Mr. Joe Majestic is heading up the Building 371 AB Team. He is managing the efforts of a team composed of Kaiser-Hill Safe Sites of Colorado, and Mel Chew and Associates to deliver the AB, its implementation plan, on a revised schedule.

Risk reduction activities continue to fall under the auspices of Mr. Gary Voorheis, Kaiser-Hill Vice President for Nuclear Operations, and to their subcontractor, Safe Sites of Colorado.

This does not represent a change from the organizational structure included in the IPP for DNFSB 94-3, but rather assignment of responsibilities within the previously specified organizational structure.

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# 1.0 BUILDING 371

## 1.1 Accomplishments

### 1.1.1 Building 371 Authorization Basis (AB)

The Rocky Flats Environmental Technology Site (Site) has made progress toward the achievement of milestone 3-3, "Establish and document operation of Building 371 in conformance with an updated AB by December 1996." However, the milestone was not completed as scheduled. The submittal of the Basis for Interim Operation (BIO) from the Kaiser-Hill Company (K-H) to the Rocky Flats Field Office (RFFO) has been rescheduled for completion on or before January 30, 1997, and significant progress has been made toward achievement of that milestone. The implementation plan for the completed BIO has been rescheduled to be completed on or before April 23, 1997, to include a schedule for complete implementation of the requirements to be dictated by the BIO.

### 1.1.2 Building 371 Priority Safety Upgrades

All priority safety upgrade activities identified in Table 3-1 of the IPP are on schedule or completed.

The Building 371 Fire Hazards Analysis, was completed on schedule, and a procedure governing Building 371 Monthly Combustible Loading Surveillance has been completed. Several additional upgrades have been identified based upon the AB work performed to date, an implementation plan to complete these upgrades being developed as part of the activities supporting the BIO implementation. Engineering evaluation of two non-safety upgrades identified as necessary to satisfactory operations is ongoing. The column line "T" joint repair was completed on schedule, and a determination was made that the HVAC bypass valve supports in Building 371 are sufficient to withstand the new building Evaluation Basis Earthquake (EBE).

## 1.2 Status

### 1.2.1 Building 371 Authorization Basis (AB)

The 94-3 IPP commitment was originally based on a partially complete BIO document under development by the K-H. At the time, the estimated completion status of the BIO was thought to be at 80% based upon the K-H's understanding of the requirements for an acceptable BIO document, given the expected life and mission of the Building 371 facility. The plan, at that time, was to complete the BIO document, building on the Site's experience with a BIO for Building 886, while incorporating improvements including those necessary to address the detailed commitments made for the new AB. There were several subsequent and simultaneous events which precluded maintenance of the IPP schedule:

Incorporation of Lessons Learned in Development of the Basis for Operations in Building 771

The identification and confirmation processed for the Building 771 Basis for Operations (BFO) led to the emergence a new Administrative Control Requirement (ACR) template for ABs at the Site. Despite the many differences between the necessary and sufficient BFO development process and the DOE-STD-3011-driven BIO development process, the new template had significant applicability to ongoing development of the BIO for Building 371, thus, presenting an opportunity to make significant improvements in the Building 371 BIO document. It also presented an opportunity to maintain consistency across the two documents where applicable and appropriate.

Many of the experiences gained through development of the BFO in Building 771 emerged at an early enough date to have been incorporated into the Building 371 BIO, but others only became known at a later date, precluding their incorporation into the Building 371 BIO document. This necessitated stepping back from the BIO development, and initiating incorporation of the factors learned, including: the specification of attributes supporting administrative control requirements, which are an important link to the standards basis; the methods adopted to ensure safety without unduly penalizing building availability for risk-reduction work; the summary of risk perspectives from the analyses; and the pre-approval of existing procedures where applicable as one means of implementing the new format administrative controls.

Inadequate Integration of the Developing BIO with System Evaluation Reports

The completeness, and integration of the BIO and the System Evaluation Reports (SERs) were not of sufficient quality so as to provide a substantial next step toward Integrated Safety Management in the building.

Other Very-High Priority Activities Impacted Progress

Preparation for the Operational Readiness Review for tank draining and the Caustic Waste Treatment processes in Building 371 significantly diverted resources needed for development of the BIO, Draining the Category B tanks is an essential risk reduction activity, and preparation for the readiness review served as a driver for improvement of building management and operations. The Operational Readiness Review activities have now been completed, confirming significant progress toward

Integrated Safety Management in the building. However, because of the constraints required to deploy highly experienced and trained professional resources for both the BIO and the readiness review, the development of the BIO suffered. Additional resources were deployed through engagement of a subcontractor in August 1996, but the effort did not prove sufficient to ensure a quality product delivered with implementation of the results by December 1996.

As of January 1997, the completion and approval of the BIO is on schedule as rebaselined, and the delays should not impact other 94-1 or 94-3 activities. A new AB project manager has been assigned, who quickly and effectively has developed the organization and project management structure to complete the BIO on the new and aggressive schedule. The schedule for BIO development was rebaselined in extensive detail, to include an evaluation of the resource requirements and organizational responsibilities. A highly experienced and qualified subcontractor, M. H. Chew & Associates, Inc., has been subcontracted to provide extensive resources and experience to the timely development of a revised draft BIO and multiple System Evaluation Reports. In addition, significant progress has been made on the development of the BIO Implementation plan.

The BIO and the corresponding System Evaluation Reports will be delivered by the Integrating Management Contractor for Rocky Flats Field Office review by January 30, 1997. Subsequent to their review, a Cross-Table Review of the documents will take place, with completion scheduled for March 17, 1997. The Contractor draft of the BIO implementation plan is scheduled for completion by April 17, 1997, at which time it will be comprehensively reviewed and approved. The final implementation plan will be promulgated by April 25, 1997.

1.2.2 Building 371 Priority Safety Upgrades

The design and construction activities necessary to effect the strengthening of the Building 371 column line "T" joint were initiated and completed during FY96, with the construction activities completed in mid September 1996.

An evaluation of the strength of the HVAC bypass supports in Building 371 provided documentation that the supports are sufficient to withstand the EBE. The calculations and conclusions were reviewed by Savannah River Site (SRS) seismic experts.

The priority safety upgrades were initiated in late FY96, and activities were immediately started to evaluate the requirements and to begin preliminary design. Starting in FY97, the K-H has coordinated each upgrade requirement specification, and initiated design/build subcontracts with a subcontractor. By the end of January 1997, engineering analysis will be complete on all priority safety upgrades specified in Table 3-1 of the IPP, and design engineering is

underway. In addition, two non-safety upgrades, the Building 371 cooling tower replacement and the material transport dumbwaiter system are in the design stage.

One of the priority safety upgrades has been completed, the implementation of Building 371 stacker/retriever load limits. The combustible loading program is in progress to include implementation of monthly combustible surveillance's. A definition of "high-risk" residue in Building 371 room 3189 has been obtained so that plans can be made to relocate the drums.

1.3 Deliverables

IPP Milestone 3-1 (a) Report completion of modifications in FY96 of the column line "T" construction joint to increase the seismic capability of Building 371.

**The milestone was completed on schedule.**

IPP Milestone 3-1 (b) Report completion of the modification in FY96 of the HVAC bypass valve supports to complete qualification of the passive confinement boundary for the new Building 371 EBE.

The valve supports were determined to be adequate to complete qualification of the passive confinement boundary for the EBE during September 1996, eliminating the need for this upgrade.

IPP Milestone 3-1 (c) Report completion of a final fire hazard analysis in FY96.

**The Fire Hazards Analysis was complete in FY96.**

IPP Milestone 3-2 Report completion of priority safety upgrades specified in Table 3-1 by the end of 1997.

All of the priority safety upgrades specified in Table 3-1 are on or ahead of schedule for completion by the end of 1997.

IPP Milestone 3-3 Establish and document operation of Building 371 in conformance with an updated AB by December 1996.

As explained in the preceding paragraphs, this milestone was missed; however, recovery efforts have been made to ensure that the newly established schedule for development of the BIO and the Building 371/374 Authorization Agreement to include the detailed implementation plan and schedule for implementation will be in place by April 25, 1997. The change in schedule should not impact other activities.

IPP Milestone 3-4 Issue schedule (implementation plan) for further Building 371 upgrades identified during the initial AB development by November 1996.

> This milestone is in part, driven by completion of the implementation plan for the AB. Some further upgrades have been identified based upon the work performed to date, and these upgrades and their status are currently being included in the IP for the BIO. Any other upgrades identified in the development of the AB or its implementation plan will be included within the implementation plan for the AB, to be in place by April 25, 1997.

IPP Milestone 3-5 Report completion of other Building upgrades on the following Schedule:

> At this time, a schedule has not been developed for these upgrades, based upon the current plan for continuing the ISV until an alternative offsite shipment is finalized.

IPP Milestone 3-6 Reassess the need to complete the other upgrades and inform the Board by September 1998 (Milestone 3-6).

> The reassessment will be an ongoing effort as decisions on the disposition of Pu and oxides are reached. The need for these upgrades is dependent upon assurance of alternative offsite shipment or continuing ISV construction activities through to September 1998. If either of these conditions is met, the upgrades will not be required.

## 1.4 Schedule of Activities

### 1.4.1 Building 371 Authorization Basis

The detailed schedule of activities for completion of the AB is included as Appendix A. The schedule for implementation activities will be provided in the next report, and will be a component of the AB implementation plan.

### 1.4.2 Building 371 Priority Safety Upgrades

Appendix B is the operational schedule for completion of the Table 3-1 priority safety upgrades. A schedule for upgrades to be identified in the AB development process will be a portion of the AB Implementation Plan.

## 2.0 INTEGRATED Pu CONSOLIDATION AND MANAGEMENT

This section corresponds with section 4 of the IPP, and follows the sequence of the Programmatic Elements in that section. From the IPP.. "The insights gained on the overall Site risk from residues and the effects of the decision to proceed with the priority Building 371 upgrades and a new ISV are to be integrated with the actions committed to the Board under Recommendation 94-1 to ensure an integrated Site plan for safe Pu management and storage. Systems engineering principles will be used to develop a strategic plan for residue storage and shipment that incorporates timely consideration of contingencies, such as possible delays in Waste Isolation Pilot Plant (WIPP) opening."

### 2.1 Accomplishments

#### 2.1.1 Pu Consolidation

Significant progress has been achieved in the area of Pu Consolidation and management, and the integration of 94-1 and 94-3 activities using a systems engineering approach is ongoing. Since an integrated framework for reporting of Pu consolidation and management is currently in place as a component of the Site Integrated Stabilization Management Plan (SISMP), a detailed status of the integrated Pu consolidation and management activities will not be reiterated in this document.

Achievement of the SISMP stated schedule for consolidation is in part dependent upon completion of the appropriate identified and to-be-identified upgrades for Building 371, completion of the Building 371 AB, and continued execution of the plans for the Interim Storage Vault (ISV) or confirmation of an approved alternative. The status of these activities is included under separate headings in this report.

The capability to maintain the 94-1 consolidation effort is also dependent upon preparation activities within Building 371 which are not directly tied to either DNFSB recommendation, such as the construction of additional vault space in room 3337 of Building 371 to accommodate the additional storage requirements, and revision of the current storage limits of the building from the 11 metric ton limit to a 17.3 metric ton limit (pending the completion of the new Building 371 AB). Construction of the vault in room 3337 will be complete in January, 1997, and plans are to initiate loading of the vault area by February 1997.

The Unresolved Safety Question Determination (USQD) which is intended to document the capability to safely store up to 17.3 metric tons within Building 371 is completed and undergoing the review and signature process. It will be provided to RFFO for review and approval during January 1997. With the approval of the higher storage limits for Building 371, 12.3 metric tons of Pu and 5 metric tons of enriched uranium will be authorized for storage in the

building. Approval will allow for continued upload of the recently completed vault in room 3337.

During FY96, the entire Pu inventory was removed from Building 779, and with the completion of the vault area in room 3337 of Building 371, as well as approval of the higher storage limits, additional inventory from other facilities will be removed and consolidation continued into Building 371.

2.1.2 Highly Dispersible Residues

Activities to stabilize all residues, including highly dispersible residues, are ongoing, and are addressed in detail in the SISMP. These activities will lead to stabilization of the highly dispersible residues and storage in a stabilized form. The 94-3 requirements as expressed in the IPP are to develop a strategy for interim storage of post stabilization residues pending their shipment offsite. This interim strategy will identify the safe interim storage methodology which will alleviate the risks identified which are inherent to highly dispersible residue forms. The strategy would then be implemented under the auspices of 94-1 and the Residue Stabilization Program. Accomplishments to date include the continuing progress toward achievement of the 94-1 stabilization goals which will result in packaged stabilized waste from residues to be placed in interim storage or be shipped offsite.

The Integrating Management Contractor has established an action group to identify the alternatives for interim storage of all residues which is evaluating the required risk reduction for highly dispersible residues. The alternatives under evaluation for risk reduction are packaging in containers which provide the necessary safety, immobilization, and/or storage in Building 371 or a storage location that achieves similar risk reduction. Any of these alternatives, or a combination of these alternatives will be recommended, with the recommendation to be supplied by the Integrating Management Contractor by the end of February 1997. The recommendations which they provide will be used to formulate the final strategy for interim storage of highly dispersible residues, which will be subsequently incorporated into existing Site programs.

The packaging alternative involves the use of an internal pipe component which will be installed in each residue storage drum, and within which the individual storage containers will be contained. Testing of the pipe component and the pipe overpack was successfully completed in September 1996, by the SNL. The tests that were performed were a dynamic crush test, a bare pipe drop test, and engulfing pool fire test. The purpose of the tests was to establish Department of Transportation container Type B equivalency. This would allow the Site to take credit for the pipe component/pipe overpack container as a Type B container for purposes of the safety of highly dispersible residues, and to exclude the contents from material at risk categorization per DOE-STD-1027.

## 2.2 Status

### 2.2.1 Pu Consolidation

The activities within Building 371 are closely tied to Recommendation 94-1, in that the Pu stabilization activities scheduled for Building 707 and the completion of the Pu Stabilization System to be installed in Module J of Building 707 will drive the storage schedule in Building 371. The Pu stabilization activities which were planned for Building 371 (Process for Stabilization and Safe Storage (PASS) have been delayed, with restart planned for FY98. Analysis is continuing to determine whether the requirements of 94-1 can be met with a single system, and alternatives are being developed to accommodate the delays in the PASS project, to include analysis of scheduling, sequencing, and production rates under both one and two system scenarios.

Progress on the Pu Stabilization Project to be installed in Building 707 is ongoing. Stripout of Module J of Building 707 is scheduled for completion in March 1997, and components will be obtained for initial offsite construction during March. Physical installation of the system in Building 707 is scheduled for June 1997.

### 2.2.2 Highly Dispersible Residues

The Residue Storage and Transportation alternatives evaluation is assessing the use of new and/or existing facility storage capability to recommend a strategy for pre-stabilization residue storage, transportation, and staging and post-stabilization waste transportation, certification and storage prior to offsite shipment. These alternatives will also provide for storage contingencies should the WIPP not be available as predicted. The evaluation is considering storage alternatives using existing or new facilities and various packaging configurations to relieve the present and future onsite storage limitations. The analysis is integrating currently ongoing efforts to develop a Transuranic (TRU) and Transuranic Mixed (TRM) waste work off plan with Pu consolidation, stabilization, and offsite transportation planning, and is considering the impacts and constraints of the following:

<u>Residue Rebaselining Due to Safeguards Termination Limits</u>

Evaluation of the requirements to treat residues to meet the Safeguards Termination Limits (STL) is being performed using a systems engineering approach, and considers immobilization alternatives which will resolve the risk for highly dispersible residues. The Integrating Management Contractor has recommended vitrification for ash, sand/slag/crucible, graphite, sludges, and filter media groups which make up 98% of the bulk of residues classified as highly dispersible. Their recommendations are under evaluation by RFFO, with the evaluation to be completed by February 1997.

Assuming that the recommendation is acceptable, the plans for treatment to STL standards must be integrated with current plans, and a rebaseline of the residue plans accomplished. Immobilization of highly dispersible residues will eliminate dispersibility, which will minimize storage problems. Once a decision is reached, the current 94-1 plans must be revised to accommodate the additional treatment, and these plans, including the plans for highly dispersible residues, will be incorporated into the existing plans.

The storage and transportation evaluation is using the expected result of rebaselining activities to develop time-phased waste volume projections, and the review, evaluation, and integration of time-phased transportation needs and staging requirements for residue feed staging and interim storage of the salt residues with other waste management and Pu management needs.

Scheduling

Schedules for the removal of Pu, residue, and waste inventories from buildings which will be deactivated are being analyzed. This includes the consolidation of material inventories, closure of regulated storage areas, and transfer of regulated storage capacity to the appropriate facilities.

Material at Risk (MAR)

Recent Building 707 MAR calculations and the impacts of these calculations on building usage, residue feed material staging, in process inventory, and waste drum staging are being considered.

Criticality Safety Operation Limits (CSOL)

CSOLs for newly generated drums containing residues that would not meet STL and/or WIPP Waste Acceptance Criteria, such as salt residue in interim storage between oxidation and treatment for the STL, are being taken into consideration in the development of recommendations for an appropriate safe storage configuration. Newly generated 55-gallon drums will be limited to 200 grams. However, a CSOL for the pipe component/pipe overpack container has been requested, that may provide greater flexibility.

Drum Storage Criteria

Drum Storage Criteria are under development which will specify authorized storage locations and configurations for TRU, TRUM, Low Level (LL), and Low Level Mixed (LLM) waste with respect to facility

authorization bases and nuclear safety. The requirements for safe storage of highly dispersible residues is being included in this evaluation.

As a portion of the drum storage criteria under development by the Integrating Management Contractor, the authorization for use of the pipe component/pipe overpack container will be recommended for approval. The drum storage criteria is expected to be submitted in time for approval to meet the commitment date of April 15, 1997.

2.3 Deliverables

IPP Milestone 4-1 Evaluate and select material management alternatives for "high-dispersibility" residues by February 28, 1997.

This deliverable, as explained above, is on schedule.

IPP Milestone 4-2 Incorporate selected residue alternatives into existing Site programs by April 15, 1997.

Incorporation of the alternative selected into the existing Site programs will be accomplished. However, the existing programs are subject to revision dependent upon the decisions regarding STL. In any case, the decision as to treatment to meet STL requirements will impact the final decisions regarding highly dispersible residues. The timing of RFFO acceptance of the rebaselining recommendation may delay incorporation of the alternatives beyond April 1997.

IPP Milestone 4-3 Establish and document interim storage for the Site's Pu inventory, including residues, by the end of FY02 in a configuration that reduces Site risk due to Pu (metal, oxides and residues) to a level that is a small fraction of the risk from current Pu holdup.

This milestone is on schedule.

2.4 Schedule of Activities

A revision of the schedule for Pu stabilization and consolidation initially included in the IPP is included as Appendix C. More detailed information is available in the 94-1 SISMP. The current schedule of events and milestones for residue stabilization is included in the SISMP.

3.0 INTERIM STORAGE MISSION

The IPP requires the completion of upgrades to Building 371 to increase safety margin, accommodate oxide relocation and provide for adequate safeguards and security by September of 1999, 2001, and 2002 respectively. These requirements are to assure the availability of an adequate facility for the safe secure storage of the Site Pu by May of 2002. However, safety margin upgrades may be postponed by one year (to September

2060) provided the following are completed by September 1997,: 1) design activity in FY97 confirms the safety and cost suitability of an Interim Storage Vault (ISV) when evaluated by the Department; 2) a NEPA Record of Decision has been issued which allows the ISV construction to proceed; and 3) allocated funding for safe storage of Special Nuclear Material (SNM) including the ISV has been received.

The Site has chosen to proceed with the ISV because it will provide a safer more secure facility for a lower life-cycle cost.

### 3.1 Accomplishments

The following have been accomplished toward the ISV since the IPP was issued July 11, 1996:

A preliminary conceptual design, design criteria, and a scope of work were developed in anticipation of starting the conceptual portion of the ISV. This initial effort provided the springboard to initiate subcontracting action on the part of the Integrating Management Contractor early in FY97. First priority tasks to be performed include the preliminary and subsequent geotechnical evaluation necessary to siting and the NEPA ROD, Preliminary Vulnerability Assessment for Security, Preliminary Safety Analysis work, and development of a conceptual design of sufficient detail to solicit architectural and engineering firm bids for the Title I and subsequent design and construction activity.

A contract for conceptual design, site selection, conceptual level safety analysis and the initiation of the geotechnical investigation was awarded to Rocky Flats Engineers and Constructors (RFEC). RFEC is a limited liability company established by Stone and Webster Engineering Company and several team corporations to provide engineering, design and construction services to the Integrating Management Contractor.

The Integrating Management Contractor has tasked Wackenhut Services Inc. (WSI) and funds have been transferred to the SNL to perform work on the conceptual level vulnerability analysis. They have provided preliminary security features design to the Integrating Management Contractor.

The preliminary Draft Environmental Impact Statement (DEIS) has been sent to HQ/DOE for review and comment and comments have been received and are being resolved.

### 3.2 Status

The schedule incorporated into the IPP was developed under the expectation that the formal conceptual design of the ISV would commence in the first quarter of FY97. The work was initiated as scheduled, and a Conceptual Design Report for the ISV suitable for solicitation of an Architecture-Engineering firm is expected to be completed by the Integrating Management Contractor no later than August 1997.

The Department has taken the position that the best solution for the interim storage of Site Pu is to ship the material offsite to DOE facilities, which are expected to remain active. As stated in the IPP, removal of the oxide inventory from the Site and a firm commitment to ship the metal by 2002 would obviate the Site interim storage mission entirely. However, until the shipment/storage offsite alternative becomes firm, progress on the ISV will be maintained. DOE/RFFO has established specific criteria which will be used to evaluate the viability of offsite shipment as the solution to the interim storage mission. It is the RFFO position that until all of the following conditions are met, the offsite shipment alternative cannot be considered entirely viable, and work toward construction of the ISV must continue.

- The Material Disposition and Storage Programmatic Environmental Impact Statement (MDSPEIS) recommends offsite shipment
- NEPA actions are completed by SRS and Pantex which allow receipt of the Site Pu
- Transportation of Site Pu through the intervening states is determined to be viable
- Site pits begin to be shipped to Pantex
- Offsite vault capacity by 2001 is assured by an approved SRS project.

Until these criteria can be met work on the ISV will continue. The current schedule plans for the ISV to be available to commence loading Pu by August 2001.

The MDSPEIS recommends that the Site Pu be shipped to Pantex and to SRS. It specifies that the Site pits go to Pantex, and Pu metal and oxide go to SRS. Secretary O'Leary is expected to sign the MDSPEIS Record of Decision (ROD) before she leaves office in late January 97. If this ROD is signed, then the first of the offsite shipment criteria will be met.

Headquarters DOE is in the process of reviewing the Preliminary Draft Environmental Impact Statement (DEIS) in light of the material dispositions proposed in the MDSPEIS. The dates for release of the DEIS to the public and the subsequent Record of Decision (ROD) will be available for the next quarterly report.

There have been preliminary indications that the 3013 can configuration may not support heat dissipation requirements. This is under analysis by the Los Alamos National Laboratory (LANL). If the preliminary indications prove valid, the alternatives are to modify what is thought to be a conservative standard, or to revise the can configuration.

## 3.3 Deliverables

Specific deliverables specified by the IPP and the status of each, as related to the ISV are presented below.

IPP Milestone 5-1 Complete NEPA evaluation of alternatives for interim storage by May 1997.

The dates for release of the DEIS to the public and the subsequent ROD will be available for the next quarterly report. This milestone is at risk.

IPP Milestone 5-2 Provide ISV design documents, including design criteria, as they are developed and no later than prior to the start of detailed design, including: functional design requirements; and pre-decisional design reports and drawings. Provide detailed design plans, calculations, drawings and specifications when developed if a decision is made to proceed.

The ISV Conceptual Design Report (CDR) will be provided to the Defense Nuclear Facility Safety Board (DNFSB) when it has been reviewed and found acceptable by the DOE. The CDR is scheduled to be provided to RFFO by August 1997.

## 3.4 Schedule of Activities

The schedule of activities for ISV development is included as Appendix D.

APPENDICES

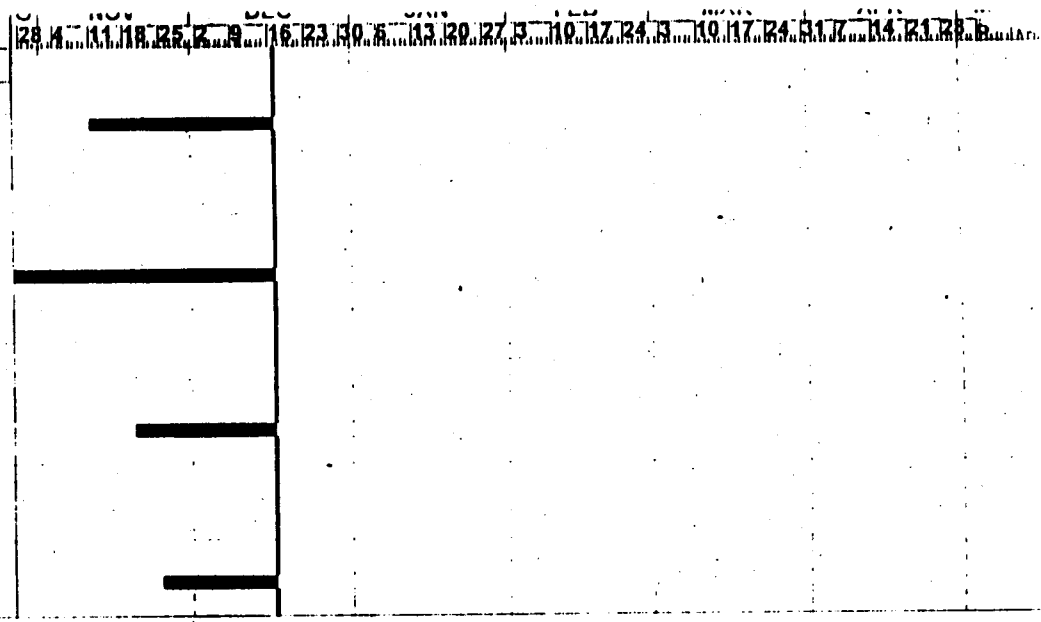
A. Schedule for Completion of Building 371 Authorization Basis

B. Schedule for Completion of IPP Building 371 Priority Upgrades

C. Summary Schedule of Pu Consolidation Activities

D. Schedule for Interim Storage Vault

| ID | Description | Dur | Dur | | |
|---|---|---|---|---|---|
| | **BUILDING 371** | | | | |
| | + Basis for Interim Operation | 115 | 91 | 11NOV96A | 24APR97 |
| | + Fire Hazards Analysis | 11 | 11 | 19DEC96 | 07JAN97 |
| | + System Evaluation Reports - SSOC | 91 | 35 | 26SEP96A | 05FEB97 |
| | + DOE Review/Approval/Final Release BIO,TSRs,SERs | 38 | 38 | 31JAN97 | 25MAR97 |
| | + System Evaluation Reports - CAI | 44 | 27 | 20NOV96A | 24JAN97 |
| | + Authorization Agreement | 22 | 22 | 27MAR97 | 25APR97 |
| | + Implementation Plan | 93 | 81 | 25NOV96A | 23APR97 |




| | |
|---|---|
| Project Start | 30SEP96 |
| Project Finish | 25APR97 |
| Data Date | 17DEC96 |
| Plot Date | 31DEC96 |
| © Prir | tems, Inc. |

Early Bar
Progress Bar
Critical Activity

AB00 B371

Sheet 1 of 1

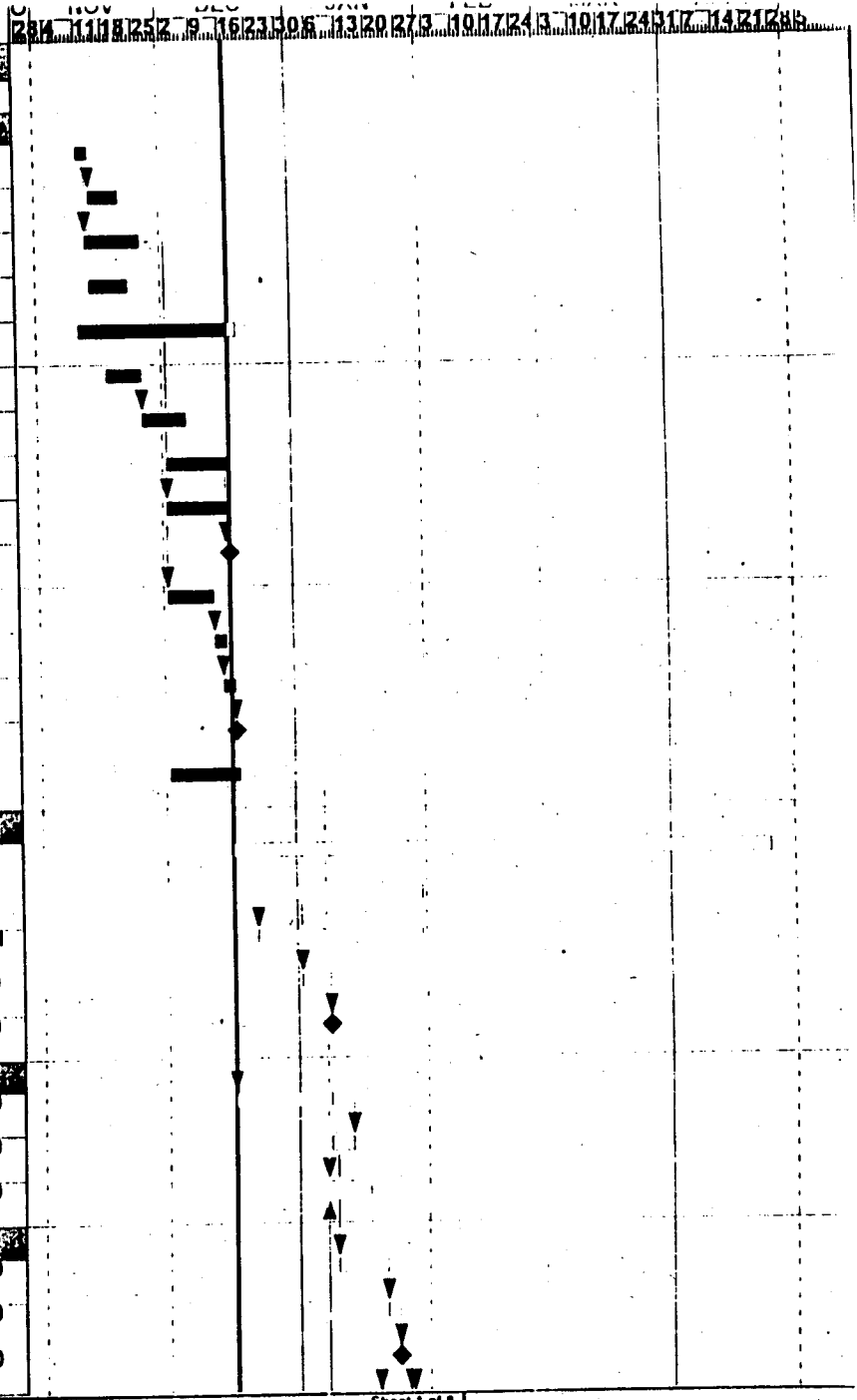
**Kaiser-Hill**
**Building 371 BIO Completion**
**Management Summary**

APPENDIX A

# BUILDING 371

## Basis for Interim Operation

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| **Bldg 371 BIO Draft H** | | | | | | | |
| A2371B0005 | 1A - Present Story Board Format | Busche | 3 | 0 | 11NOV96A | 13NOV96A | |
| A2371B0007 | 1B - Deliver Story Board Hardcopy Presentation | Busche | 4 | 0 | 14NOV96A | 20NOV96A | |
| A2371B0010 | 1C - Revise Main Body Of BIO Per Story Board | Busche | 8 | 0 | 13NOV96A | 25NOV96A | |
| A2371B0015 | 1D - Letter Rpt On Review Draft F Comment | Busche | 6 | 0 | 14NOV96A | 22NOV96A | |
| A2371B0020 | 1E - Letter Report on USQ | Busche | 14 | 2 | 11NOV96A | 18DEC96 | 81 |
| A2371B0105 | 4B-Prep White Paper Impact BIO,TSR,SER | Busche | 6 | 0 | 18NOV96A | 25NOV96A | |
| A2371B0110 | 4BB- K-H/SSOC Concurrence | Truax | 6 | 0 | 26NOV96A | 06DEC96A | |
| A2371B0160 | Draft H LCO/SRs & Bases | Busche | 3 | 0 | 02DEC96A | 16DEC96A | |
| A2371B0162 | Draft H ACRs & Bases | Busche | 3 | 0 | 02DEC96A | 16DEC96A | |
| A2371B0164 | Draft H TSRs | Busche | 0 | 0 | | 16DEC96A | |
| A2371B0180 | BIO Text Flow Improvement - Story Board | Busche | 4 | 0 | 02DEC96A | 12DEC96A | |
| A2371B0189 | FinalizeTech Editing | Busche | 2 | 0 | 13DEC96A | 15DEC96A | |
| A2371B0195 | Print, Repro, Distrib Draft H - Historical Costs | Busche | 1 | 0 | 15DEC96A | 17DEC96A | |
| A2371BM005 | Draft Rev H Complete & Distributed To SSOC | Busche | 0 | 0 | | 17DEC96A | |
| A2371B0200 | Update Calcs & BIO Notebook For Draft G | Busche | 12 | 0 | 02DEC96A | 18DEC96A | |
| **Management and Administration** | | | | | | | |
| A2371T0000 | Project Management | Majestic | 82 | 82 | 17DEC96 | 24APR97 | 1 |
| A2371T0005 | Manage CAI And Matrixed K-H Personnel | Busche | 27 | 27 | 23DEC96* | 30JAN97 | 0 |
| A2371T0010 | Scheduling and Communication | Busche | 27 | 27 | 23DEC96 | 30JAN97 | 61 |
| A2371T0015 | Facilitate/Coordinate Crosstable Review | Busche | 5 | 5 | 02JAN97 | 08JAN97 | 0 |
| A2371T0020 | Issue Crosstable Schedule & Issues List | Busche | 0 | 0 | | 08JAN97* | 0 |
| **Review of Draft H by SSOC/CAI** | | | | | | | |
| A2371B0220 | SSOC Review Draft H | Seratin | 14 | 14 | 17DEC96 | 08JAN97 | 0 |
| A2371B0230 | SSOC Consolidate Comments | Seratin | 3 | 3 | 09JAN97 | 13JAN97 | 0 |
| A2371B0240 | SSOC/CAI Crosstable Draft H & Comment | Busche | 8 | 8 | 08JAN97* | 17JAN97 | 0 |
| **Finalize BIO/TSR Package** | | | | | | | |
| A2371B0250 | Incorporate Comments Into BIO, TSRs | Busche | 8 | 8 | 10JAN97 | 21JAN97 | 0 |
| A2371B0255 | K-H Classification Review | Busche | 3 | 3 | 22JAN97 | 24JAN97 | 0 |
| A2371B0258 | SSOC/CAI Deliver Rev H To K-H | Busche | 0 | 0 | | 24JAN97* | 0 |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

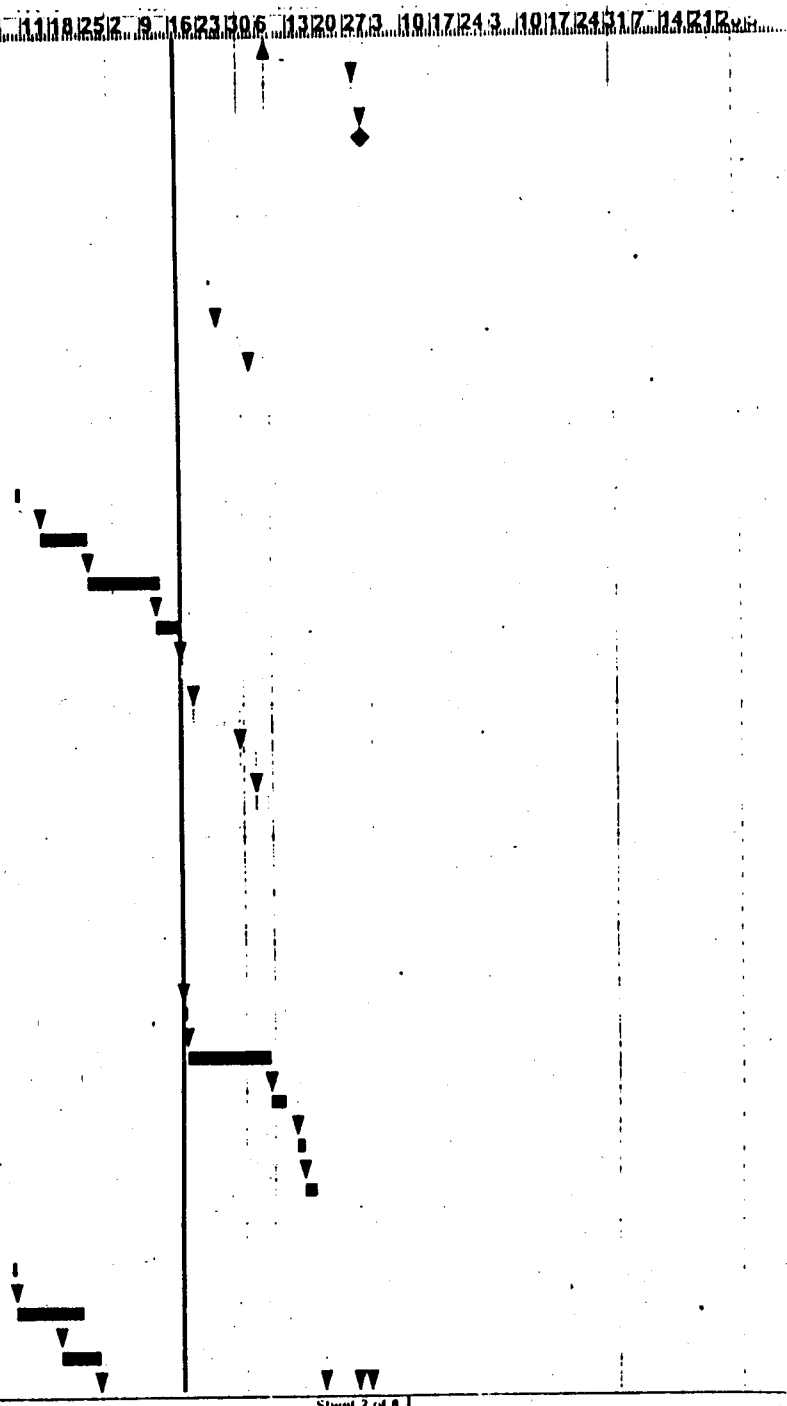
Early Bar
Progress Bar
Critical Activity



AB00:B371

**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371B0260 | SSOC/K-H Final Review & Signatures | Majestic | 2 | 2 | 27JAN97 | 28JAN97 | 0 |
| A2371B0265 | Duplicate/Publish | Busche | 2 | 2 | 29JAN97 | 30JAN97 | 0 |
| A2371M0007 | K-H Issue BIO Package To DOE | Majestic | 0 | 0 | | 30JAN97* | 0 |
| A2371B0253 | Integration Review | Busche | 16 | 16 | 30DEC96* | 21JAN97 | 68 |
| **Fire Hazards Analysis** | | | | | | | |
| A2371F0003 | Obtain And Validate FHA | Serafin | 4 | 4 | 19DEC96* | 24DEC96 | 0 |
| A2371F0010 | Issue Final FHA Evaluation & Acceptance | Zurey | 4 | 4 | 26DEC96 | 02JAN97 | 0 |
| A2371F0015 | Evaluate FHA Vs BIO | Busche | 3 | 3 | 03JAN97 | 07JAN97 | 0 |
| **System Evaluation Reports - SSOC** | | | | | | | |
| HVAC SER | | | | | | | |
| A2371S0005 | Update System Description & LCO Table HVAC | Busche | 1 | 0 | 08NOV96A | 08NOV96A | |
| A2371S0010 | Building Review HVAC SER | Serafin | 4 | 0 | 14NOV96A | 24NOV96A | |
| A2371S0015 | Resolve Comments HVAC SER | Busche | 3 | 0 | 25NOV96A | 11DEC96A | |
| A2371S0020 | HVAC SER Draft B | Busche | 5 | 0 | 11DEC96A | 16DEC96A | |
| A2371S0025 | Building Review HVAC SER | Serafin | 3 | 3 | 17DEC96 | 19DEC96 | 0 |
| A2371S0030 | Resolve Comments HVAC SER | Busche | 5 | 5 | 20DEC96 | 30DEC96 | 0 |
| A2371S0035 | HVAC SER Final Draft | Busche | 3 | 3 | 31DEC96 | 03JAN97 | 0 |
| A2371S0040 | Building Management Review HVAC SER | Serafin | 3 | 3 | 04JAN97 | 06JAN97 | 1 |
| Fire Suppression SER | | | | | | | |
| A2371S0105 | Update Sys Descrip & LCO Table Fire Supp | Busche | 2 | 0 | 26SEP96A | 30SEP96A | |
| A2371S0110 | Building Review Fire Suppression SER | Serafin | 1 | 0 | 01OCT96A | 16OCT96A | |
| A2371S0115 | Resolve Comments Fire Suppression SER | Busche | 1 | 0 | 17OCT96A | 17OCT96A | |
| A2371S0120 | Fire Suppression SER Draft B | Busche | 1 | 1 | 17DEC96 | 17DEC96 | -7 |
| A2371S0125 | Building Review Fire Suppression SER | Serafin | 11 | 11 | 18DEC96 | 06JAN97 | -7 |
| A2371S0130 | Resolve Comments Fire Suppression SER | Busche | 3 | 3 | 07JAN97 | 09JAN97 | -7 |
| A2371S0135 | Fire Suppression SER Final Draft | Busche | 2 | 2 | 13JAN97 | 14JAN97 | -7 |
| A2371S0140 | Building Management Review Fire Suppression | Serafin | 3 | 3 | 15JAN97 | 17JAN97 | -7 |
| Fire Detection SER | | | | | | | |
| A2371S0205 | Update Sys Descrip & LCO Table Fire Detect | Busche | 1 | 0 | 06NOV96A | 06NOV96A | |
| A2371S0210 | Building Review Fire Detection SER | Serafin | 10 | 0 | 07NOV96A | 22NOV96A | |
| A2371S0215 | Resolve Comments Fire Detection SER | Busche | 3 | 0 | 18NOV96A | 26NOV96A | |



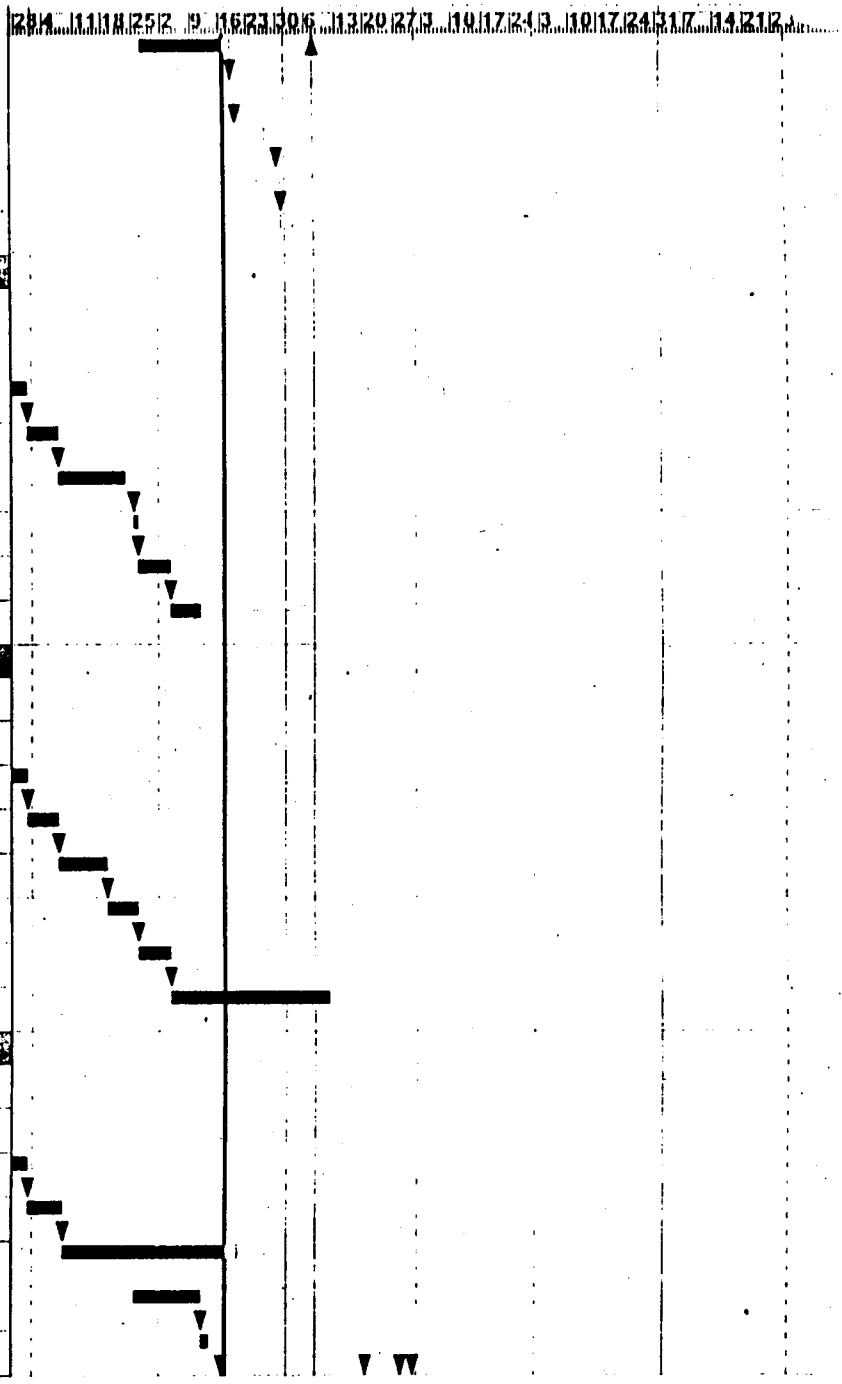

Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

Early Bar
Progress Bar
Critical Activity

A800 B371

**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S0220 | Fire Detection SER Draft B | Busche | 3 | 2 | 27NOV96A | 18DEC96 | 3 |
| A2371S0225 | Building Review Fire Detection SER | Serafin | 1 | 1 | 19DEC96 | 19DEC96 | 3 |
| A2371S0230 | Resolve Comments Fire Detection SER | Busche | 4 | 4 | 20DEC96 | 26DEC96 | 3 |
| A2371S0235 | Fire Detection SER Final Draft | Busche | 1 | 1 | 30DEC96 | 30DEC96 | 3 |
| A2371S0240 | Building Mgmt Review Fire Detection SER | Serafin | 2 | 2 | 31DEC96 | 02JAN97 | 3 |
| Criticality Alarm System SER | | | | | | | |
| A2371S0305 | Update Sys Descrip & LCO Table Criticality | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0310 | Building Review Criticality SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0315 | Resolve Comments Criticality SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0320 | Criticality SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0325 | Building Review Criticality SER | Serafin | 8 | 0 | 07NOV96A | 22NOV96A | |
| A2371S0330 | Resolve Comments Criticality SER | Busche | 5 | 0 | 25NOV96A | 25NOV96A | |
| A2371S0335 | Criticality SER Final Draft | Busche | 3 | 0 | 26NOV96A | 03DEC96A | |
| A2371S0340 | Building Mgmt Review Criticality SER | Serafin | 5 | 0 | 04DEC96A | 10DEC96A | |
| LSDW SER | | | | | | | |
| A2371S0405 | Update Sys Descrip & LCO Table LSDW SER | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0410 | Building Review LSDW SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0415 | Resolve Comments LSDW SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0420 | LSDW SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0425 | Building Review LSDW SER | Serafin | 8 | 0 | 07NOV96A | 18NOV96A | |
| A2371S0430 | Resolve Comments LSDW SER | Busche | 5 | 0 | 19NOV96A | 25NOV96A | |
| A2371S0435 | LSDW SER Final Draft | Busche | 3 | 0 | 26NOV96A | 03DEC96A | |
| A2371S0440 | Building Management Review LSDW SER | Serafin | 5 | 0 | 04DEC96A | 10JAN97A | |
| Building Structure SER | | | | | | | |
| A2371S0505 | Update Sys Descrip & LCO Table Bldg Struct | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0510 | Building Review Building Structure SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0515 | Resolve Comments Building Structure SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0520 | Building Structure SER Draft B | Busche | 7 | 0 | 31OCT96A | 07NOV96A | |
| A2371S0525 | Building Review Bldg Structure SER | Serafin | 6 | 3 | 08NOV96A | 19DEC96 | 80 |
| A2371S0530 | Resolve Comments Building Structure SER | Busche | 4 | 0 | 25NOV96A | 10DEC96A | |
| A2371S0535 | Building Structure SER Final Draft | Busche | 2 | 0 | 11DEC96A | 12DEC96A | |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

Early Bar
Progress Bar
Critical Activity

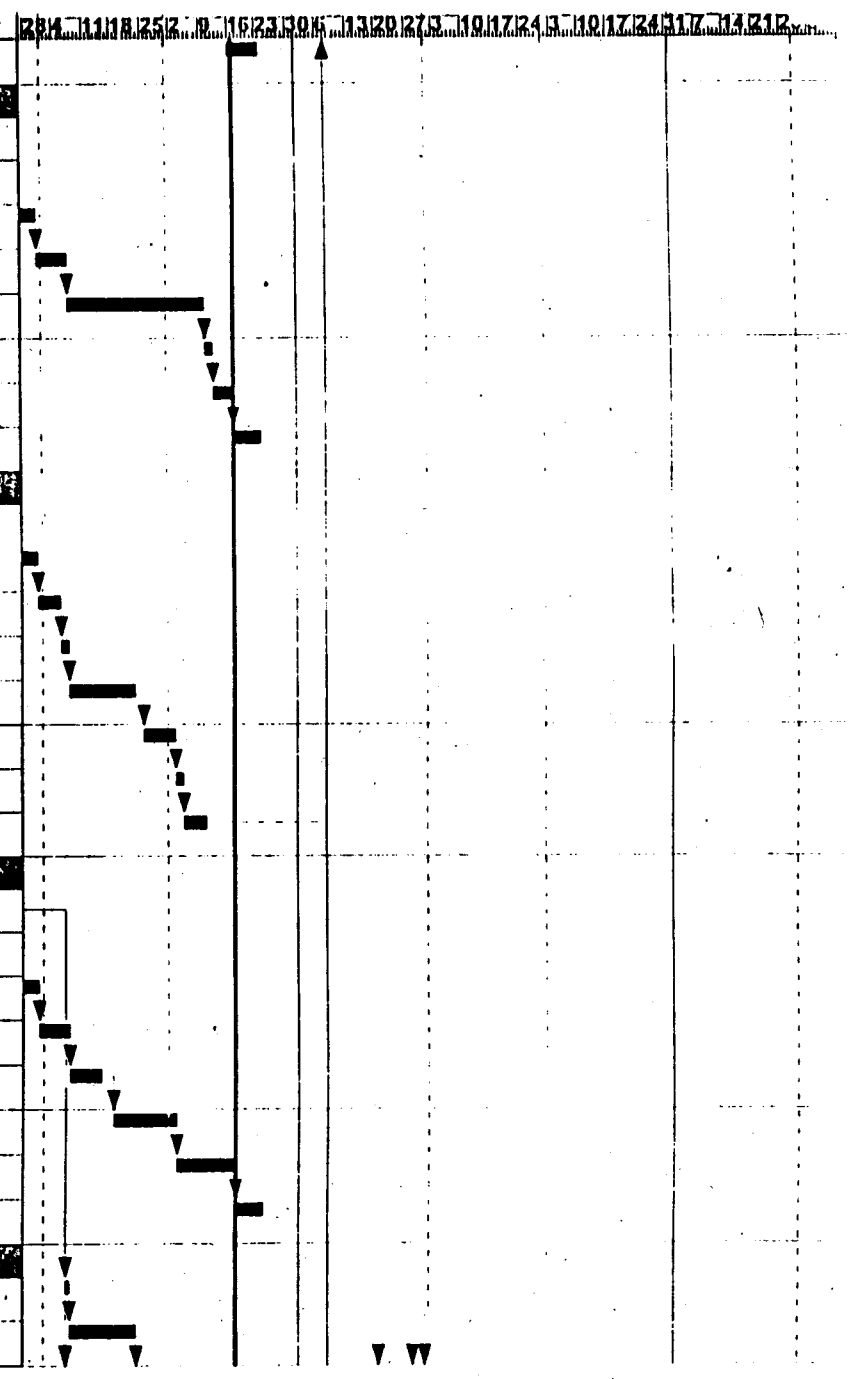


AB00:B371

Sheet 3 of 8

**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S0540 | Building Mgmt Review Bldg Structure SER | Serafin | 3 | 0 | 16DEC96A | 23DEC96A | |
| HP Vacuum SER | | | | | | | |
| A2371S0605 | Update Sys Descrip & LCO Table HP VAC SER | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0610 | Building Review HP VAC SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0615 | Resolve Comments HP VAC SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0620 | HP VAC SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0625 | Building Review HP VAC SER | Serafin | 11 | 0 | 07NOV96A | 09DEC96A | |
| A2371S0630 | Resolve Comments HP VAC SER | Busche | 2 | 0 | 10DEC96A | 11DEC96A | |
| A2371S0635 | HP VAC SER Final Draft | Busche | 2 | 0 | 12DEC96A | 16DEC96A | |
| A2371S0640 | Building Mgmt Review HP VAC SER | Serafin | 3 | 0 | 17DEC96A | 23DEC96A | |
| Electrical Power Distribution SER | | | | | | | |
| A2371S0705 | Update Sys Descrip & LCO Table Elec Pwr Dist | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0710 | Building Review Elec Power Dist SER | Serafin | 1 | 0 | 01OCT96A | 30OCT96A | |
| A2371S0715 | Resolve Comments Elec Power Dist SER | Busche | 1 | 0 | 31OCT96A | 04NOV96A | |
| A2371S0720 | Electrical Power Distribution SER Draft B | Busche | 1 | 0 | 05NOV96A | 06NOV96A | |
| A2371S0725 | Building Review Elec Power Dist SER | Serafin | 11 | 0 | 07NOV96A | 22NOV96A | |
| A2371S0730 | Resolve Comments Elec Power Dist SER | Busche | 2 | 0 | 25NOV96A | 02DEC96A | |
| A2371S0735 | Electrical Power Distribution SER Final Draft | Busche | 2 | 0 | 03DEC96A | 04DEC96A | |
| A2371S0740 | Building Mgmt Review Elec Power Dist SER | Serafin | 3 | 0 | 05DEC96A | 09DEC96A | |
| Air Monitoring SER | | | | | | | |
| A2371S0905 | Update Sys Descrip & LCO Table Air Monitor | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0910 | Building Review Air Monitoring SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0915 | Resolve Comments Air Monitoring SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0920 | Air Monitoring SER Draft B | Busche | 7 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0925 | Building Review Air Monitoring SER | Serafin | 5 | 0 | 07NOV96A | 14NOV96A | |
| A2371S0930 | Resolve Comments Air Monitoring SER | Busche | 3 | 0 | 18NOV96A | 02DEC96A | |
| A2371S0935 | Air Monitoring SER Final Draft | Busche | 4 | 0 | 03DEC96A | 16DEC96A | |
| A2371S0940 | Building Mgmt Review Air Monitoring SER | Serafin | 3 | 0 | 17DEC96A | 23DEC96A | |
| Water System SER | | | | | | | |
| A2371S1005 | Update Sys Descrip & LCO Table Water Sys | Busche | 1 | 0 | 06NOV96A | 06NOV96A | |
| A2371S1010 | Building Review Water System SER | Serafin | 5 | 0 | 07NOV96A | 22NOV96A | |




| | |
|---|---|
| Project Start | 30SEP96 |
| Project Finish | 25APR97 |
| Data Date | 17DEC96 |
| Plot Date | 31DEC96 |

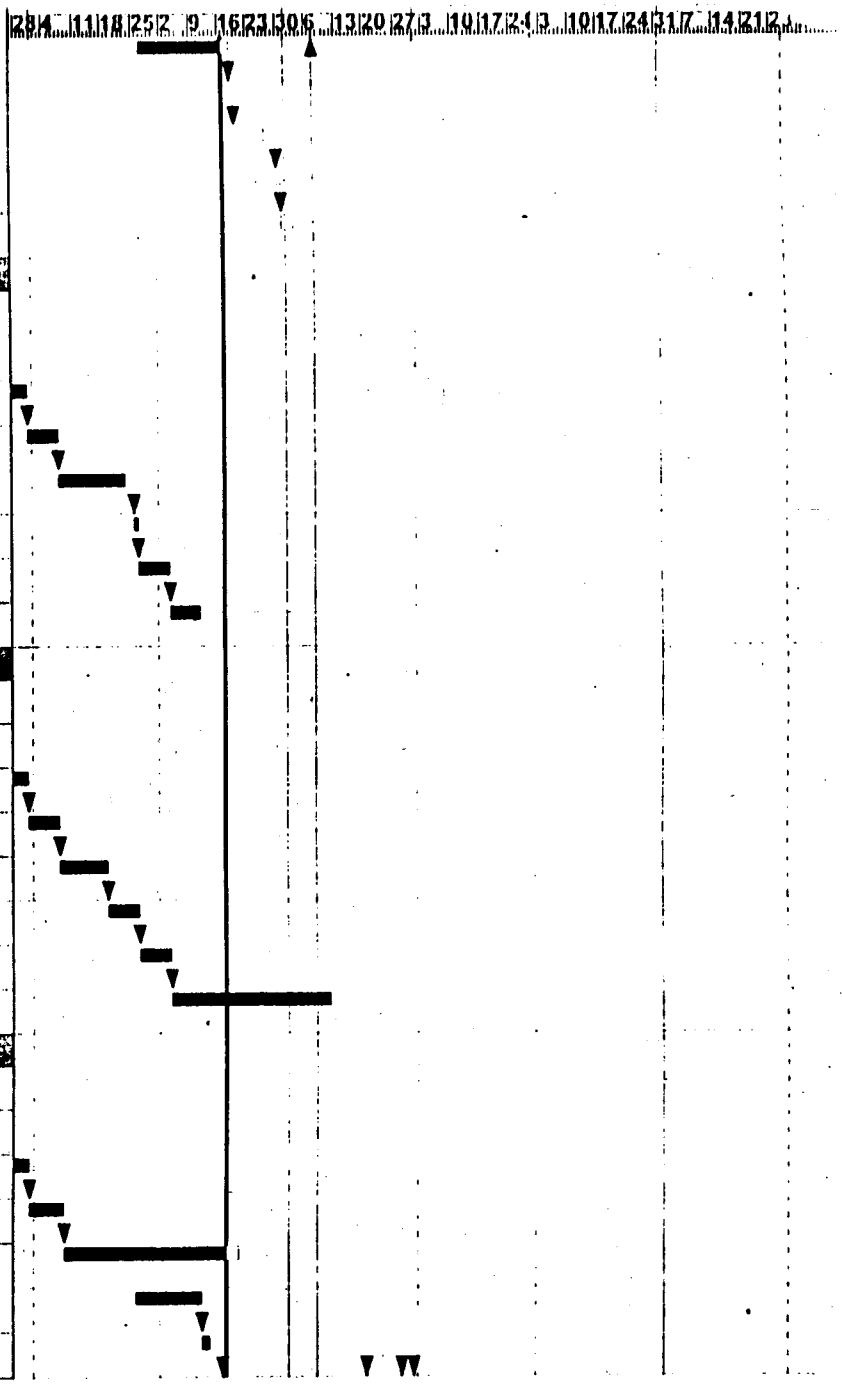
Early Bar
Progress Bar
Critical Activity



AB00:B371

**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S0220 | Fire Detection SER Draft B | Busche | 3 | 2 | 27NOV96A | 18DEC96 | 3 |
| A2371S0225 | Building Review Fire Detection SER | Serafin | 1 | 1 | 19DEC96 | 19DEC96 | 3 |
| A2371S0230 | Resolve Comments Fire Detection SER | Busche | 4 | 4 | 20DEC96 | 26DEC96 | 3 |
| A2371S0235 | Fire Detection SER Final Draft | Busche | 1 | 1 | 30DEC96 | 30DEC96 | 3 |
| A2371S0240 | Building Mgmt Review Fire Detection SER | Serafin | 2 | 2 | 31DEC96 | 02JAN97 | 3 |
| Criticality Alarm System SER | | | | | | | |
| A2371S0305 | Update Sys Descrip & LCO Table Criticality | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0310 | Building Review Criticality SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0315 | Resolve Comments Criticality SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0320 | Criticality SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0325 | Building Review Criticality SER | Serafin | 8 | 0 | 07NOV96A | 22NOV96A | |
| A2371S0330 | Resolve Comments Criticality SER | Busche | 5 | 0 | 25NOV96A | 25NOV96A | |
| A2371S0335 | Criticality SER Final Draft | Busche | 3 | 0 | 26NOV96A | 03DEC96A | |
| A2371S0340 | Building Mgmt Review Criticality SER | Serafin | 5 | 0 | 04DEC96A | 10DEC96A | |
| LSDW SER | | | | | | | |
| A2371S0405 | Update Sys Descrip & LCO Table LSDW SER | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0410 | Building Review LSDW SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0415 | Resolve Comments LSDW SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0420 | LSDW SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0425 | Building Review LSDW SER | Serafin | 8 | 0 | 07NOV96A | 18NOV96A | |
| A2371S0430 | Resolve Comments LSDW SER | Busche | 5 | 0 | 19NOV96A | 25NOV96A | |
| A2371S0435 | LSDW SER Final Draft | Busche | 3 | 0 | 26NOV96A | 03DEC96A | |
| A2371S0440 | Building Management Review LSDW SER | Serafin | 5 | 0 | 04DEC96A | 10JAN97A | |
| Building Structure SER | | | | | | | |
| A2371S0505 | Update Sys Descrip & LCO Table Bldg Struct | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0510 | Building Review Building Structure SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0515 | Resolve Comments Building Structure SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0520 | Building Structure SER Draft B | Busche | 7 | 0 | 31OCT96A | 07NOV96A | |
| A2371S0525 | Building Review Bldg Structure SER | Serafin | 6 | 3 | 08NOV96A | 19DEC96 | 80 |
| A2371S0530 | Resolve Comments Building Structure SER | Busche | 4 | 0 | 25NOV96A | 10DEC96A | |
| A2371S0535 | Building Structure SER Final Draft | Busche | 2 | 0 | 11DEC96A | 12DEC96A | |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

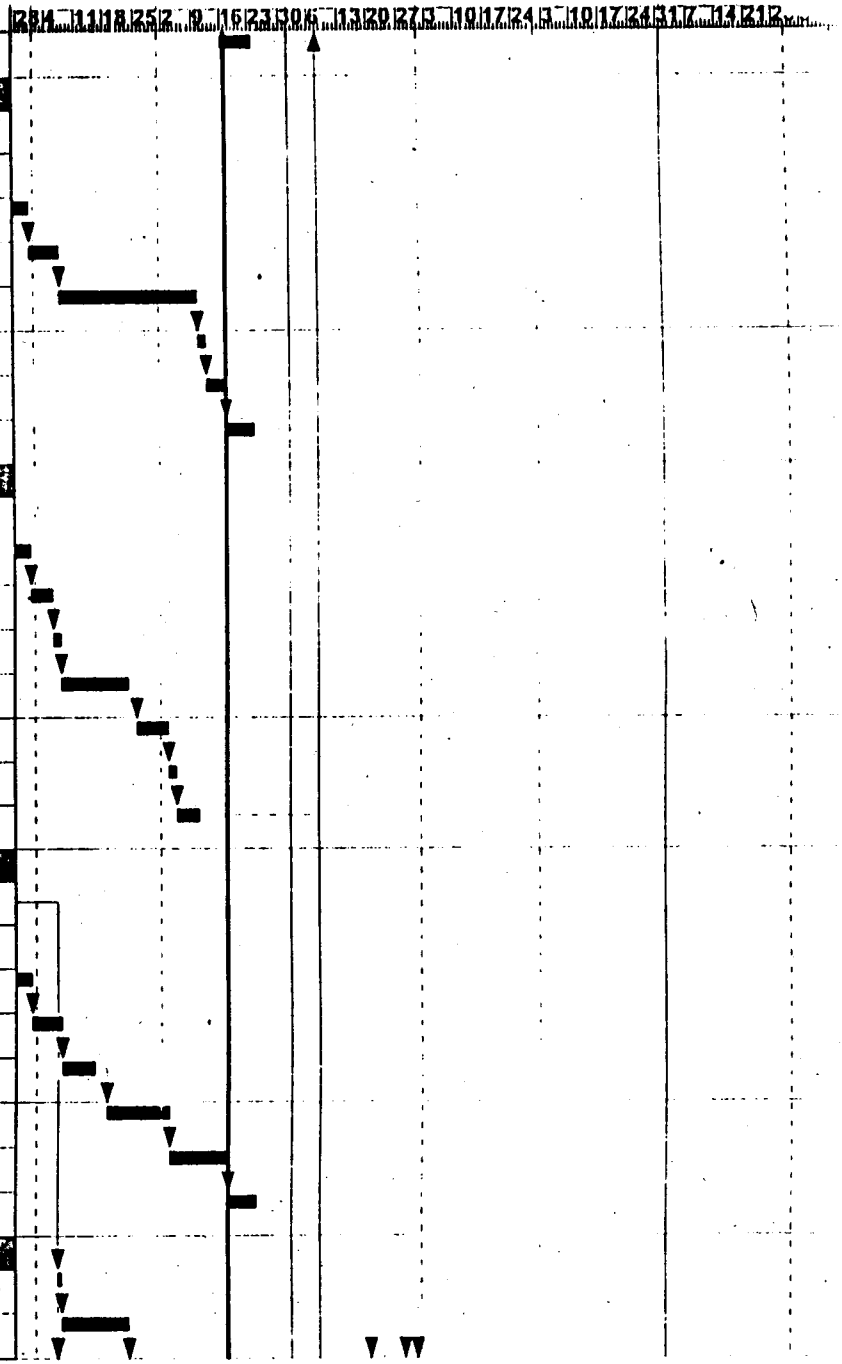
Early Bar
Progress Bar
Critical Activity



AB00:B371

Kaiser-Hill
Building 371 BIO Completion
Detail Schedule

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S0540 | Building Mgmt Review Bldg Structure SER | Serafin | 3 | 0 | 16DEC96A | 23DEC96A | |
| HP Vacuum SER | | | | | | | |
| A2371S0605 | Update Sys Descrip & LCO Table HP VAC SER | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0610 | Building Review HP VAC SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0615 | Resolve Comments HP VAC SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0620 | HP VAC SER Draft B | Busche | 1 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0625 | Building Review HP VAC SER | Serafin | 11 | 0 | 07NOV96A | 09DEC96A | |
| A2371S0630 | Resolve Comments HP VAC SER | Busche | 2 | 0 | 10DEC96A | 11DEC96A | |
| A2371S0635 | HP VAC SER Final Draft | Busche | 2 | 0 | 12DEC96A | 16DEC96A | |
| A2371S0640 | Building Mgmt Review HP VAC SER | Serafin | 3 | 0 | 17DEC96A | 23DEC96A | |
| Electrical Power Distribution SER | | | | | | | |
| A2371S0705 | Update Sys Descrip & LCO Table Elec Pwr Dist | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0710 | Building Review Elec Power Dist SER | Serafin | 1 | 0 | 01OCT96A | 30OCT96A | |
| A2371S0715 | Resolve Comments Elec Power Dist SER | Busche | 1 | 0 | 31OCT96A | 04NOV96A | |
| A2371S0720 | Electrical Power Distribution SER Draft B | Busche | 1 | 0 | 05NOV96A | 06NOV96A | |
| A2371S0725 | Building Review Elec Power Dist SER | Serafin | 11 | 0 | 07NOV96A | 22NOV96A | |
| A2371S0730 | Resolve Comments Elec Power Dist SER | Busche | 2 | 0 | 25NOV96A | 02DEC96A | |
| A2371S0735 | Electrical Power Distribution SER Final Draft | Busche | 2 | 0 | 03DEC96A | 04DEC96A | |
| A2371S0740 | Building Mgmt Review Elec Power Dist SER | Serafin | 3 | 0 | 05DEC96A | 09DEC96A | |
| Air Monitoring SER | | | | | | | |
| A2371S0905 | Update Sys Descrip & LCO Table Air Monitor | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S0910 | Building Review Air Monitoring SER | Serafin | 1 | 0 | 01OCT96A | 10OCT96A | |
| A2371S0915 | Resolve Comments Air Monitoring SER | Busche | 1 | 0 | 11OCT96A | 30OCT96A | |
| A2371S0920 | Air Monitoring SER Draft B | Busche | 7 | 0 | 31OCT96A | 06NOV96A | |
| A2371S0925 | Building Review Air Monitoring SER | Serafin | 5 | 0 | 07NOV96A | 14NOV96A | |
| A2371S0930 | Resolve Comments Air Monitoring SER | Busche | 3 | 0 | 18NOV96A | 02DEC96A | |
| A2371S0935 | Air Monitoring SER Final Draft | Busche | 4 | 0 | 03DEC96A | 16DEC96A | |
| A2371S0940 | Building Mgmt Review Air Monitoring SER | Serafin | 3 | 0 | 17DEC96A | 23DEC96A | |
| Water System SER | | | | | | | |
| A2371S1005 | Update Sys Descrip & LCO Table Water Sys | Busche | 1 | 0 | 06NOV96A | 06NOV96A | |
| A2371S1010 | Building Review Water System SER | Serafin | 5 | 0 | 07NOV96A | 22NOV96A | |




| | | | |
|---|---|---|---|
| Project Start | 30SEP96 | Early Bar | |
| Project Finish | 25APR97 | Progress Bar | |
| Data Date | 17DEC96 | Critical Activity | |
| Plot Date | 31DEC96 | | |

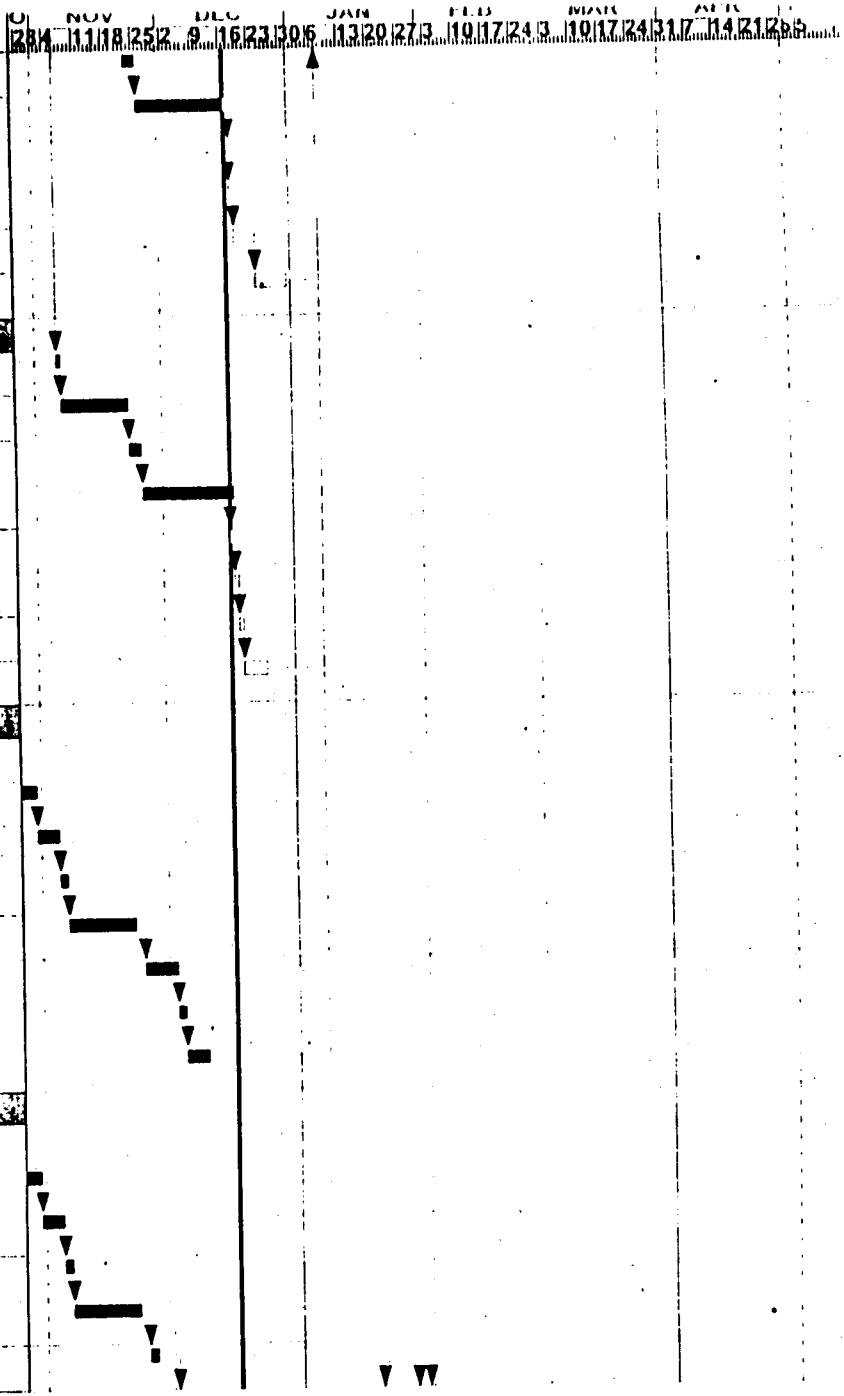


AB00:B371



**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S1015 | Resolve Comments Water System SER | Busche | 4 | 0 | 23NOV96A | 25NOV96A | |
| A2371S1020 | Water Sys SER Draft B | Busche | 2 | 1 | 26NOV96A | 17DEC96 | 5 |
| A2371S1025 | Building Review Water System SER | Serafin | 1 | 1 | 18DEC96 | 18DEC96 | 5 |
| A2371S1030 | Resolve Comments Water System SER | Busche | 1 | 1 | 18DEC96 | 18DEC96 | 5 |
| A2371S1035 | Water System SER Final Draft | Busche | 3 | 3 | 19DEC96 | 23DEC96 | 5 |
| A2371S1040 | Building Mgmt Review Water System SER | Serafin | 3 | 3 | 24DEC96 | 30DEC96 | 5 |
| Miscellaneous Systems SER | | | | | | | |
| A2371S1105 | Update Sys Descrip & LCO Table Misc Sys | Busche | 1 | 0 | 06NOV96A | 06NOV96A | |
| A2371S1110 | Building Review Miscellaneous Systems SER | Serafin | 5 | 0 | 07NOV96A | 22NOV96A | |
| A2371S1115 | Resolve Comments Miscellaneous Systems | Busche | 4 | 0 | 23NOV96A | 25NOV96A | |
| A2371S1120 | Miscellaneous Systems SER Draft B | Busche | 6 | 0 | 26NOV96A | 17DEC96A | |
| A2371S1125 | Building Review Miscellaneous Systems SER | Serafin | 1 | 1 | 17DEC96 | 17DEC96 | 7 |
| A2371S1130 | Resolve Comments Miscellaneous Systems | Busche | 1 | 1 | 18DEC96 | 18DEC96 | 7 |
| A2371S1135 | Miscellaneous Systems SER Final Draft | Busche | 1 | 1 | 19DEC96 | 19DEC96 | 7 |
| A2371S1140 | Building Mgmt Review Miscellaneous Systems | Serafin | 3 | 3 | 20DEC96 | 24DEC96 | 7 |
| UPS SER | | | | | | | |
| A2371S1205 | Update Sys Descrip & LCO Table UPS SER | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S1210 | Building Review UPS SER | Serafin | 1 | 0 | 01OCT96A | 30OCT96A | |
| A2371S1215 | Resolve Comments UPS SER | Busche | 1 | 0 | 31OCT96A | 04NOV96A | |
| A2371S1220 | UPS SER Draft B | Busche | 1 | 0 | 05NOV96A | 06NOV96A | |
| A2371S1225 | Building Review UPS SER | Serafin | 11 | 0 | 07NOV96A | 22NOV96A | |
| A2371S1230 | Resolve Comments UPS SER | Busche | 5 | 0 | 25NOV96A | 02DEC96A | |
| A2371S1235 | UPS SER Final Draft | Busche | 2 | 0 | 03DEC96A | 04DEC96A | |
| A2371S1240 | Building Management Review UPS SER | Serafin | 3 | 0 | 05DEC96A | 09DEC96A | |
| Standby Power SER | | | | | | | |
| A2371S1305 | Update Sys Descrip & LCO Table Stdby Power | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S1310 | Building Review Standby Power SER | Serafin | 1 | 0 | 01OCT96A | 30OCT96A | |
| A2371S1315 | Resolve Comments Standby Power SER | Busche | 1 | 0 | 31OCT96A | 04NOV96A | |
| A2371S1320 | Standby Power SER Draft B | Busche | 1 | 0 | 05NOV96A | 06NOV96A | |
| A2371S1325 | Building Review Standby Power SER | Serafin | 11 | 0 | 07NOV96A | 22NOV96A | |
| A2371S1330 | Resolve Comments Standby Power SER | Busche | 2 | 0 | 25NOV96A | 26NOV96A | |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

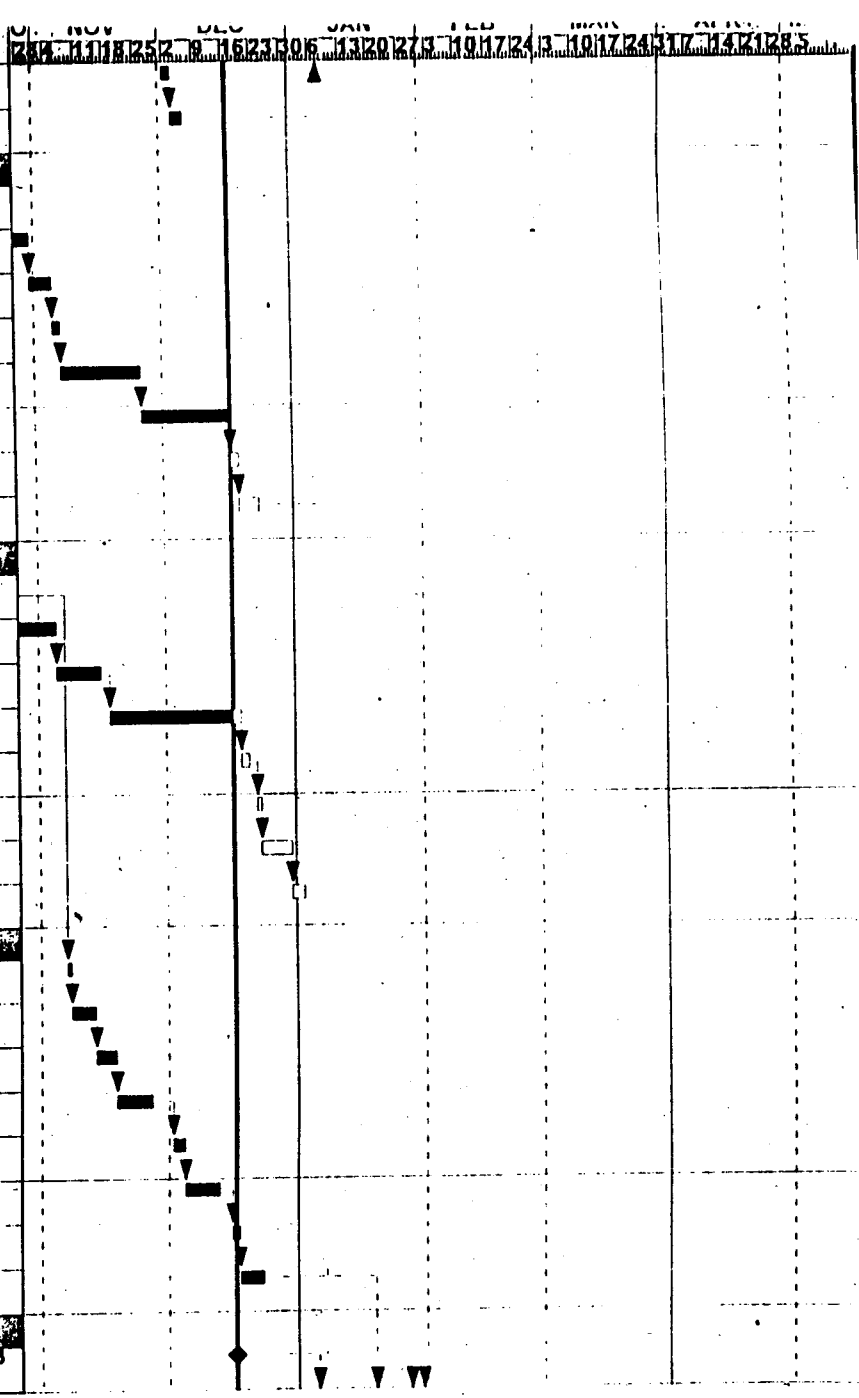
Early Bar
Progress Bar
Critical Activity



AB00:B371

Kaiser-Hill
Building 371 BIO Completion
Detail Schedule

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S1335 | Standby Power SER Final Draft | Busche | 1 | 0 | 02DEC96A | 03DEC96A | |
| A2371S1340 | Building Mgmt Review Standby Power SER | Serafin | 3 | 0 | 04DEC96A | 06DEC96A | |
| Glovebox/Hoods SER | | | | | | | |
| A2371S1405 | Update Sys Descrip & LCO Table | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S1410 | Building Review Glovebox/Hoods SER | Serafin | 1 | 0 | 01OCT96A | 30OCT96A | |
| A2371S1415 | Resolve Comments Glovebox/Hoods SER | Busche | 1 | 0 | 31OCT96A | 04NOV96A | |
| A2371S1420 | Glovebox/Hoods SER Draft B | Busche | 1 | 0 | 05NOV96A | 06NOV96A | |
| A2371S1425 | Building Review Glovebox/Hoods SER | Serafin | 11 | 0 | 07NOV96A | 25NOV96A | |
| A2371S1430 | Resolve Comments Glovebox/HoodsSER | Busche | 2 | 0 | 26NOV96A | 16DEC96A | |
| A2371S1435 | Glovebox/Hoods SER Final Draft | Busche | 2 | 2 | 17DEC96 | 18DEC96 | 8 |
| A2371S1440 | Building Mgmt Review Glovebox/Hoods SER | Serafin | 3 | 3 | 19DEC96 | 23DEC96 | 8 |
| Compressed Gas SER | | | | | | | |
| A2371S1505 | Update Sys Descrip & LCO Table Comp Gas | Busche | 1 | 0 | 30SEP96A | 30SEP96A | |
| A2371S1510 | Building Review Compressed Gas System SER | Serafin | 1 | 0 | 01OCT96A | 04NOV96A | |
| A2371S1515 | Resolve Comments Compressed Gas System | Busche | 7 | 0 | 05NOV96A | 15NOV96A | |
| A2371S1520 | Compressed Gas System SER Draft B | Busche | 10 | 2 | 18NOV96A | 18DEC96 | 3 |
| A2371S1525 | Building Review Compressed Gas System SER | Serafin | 2 | 2 | 19DEC96 | 20DEC96 | 3 |
| A2371S1530 | Resolve Comments Compressed Gas System | Busche | 1 | 1 | 23DEC96 | 23DEC96 | 3 |
| A2371S1535 | Compressed Gas System SER Final Draft | Busche | 3 | 3 | 24DEC96 | 30DEC96 | 3 |
| A2371S1540 | Building Mgmt Review Compressed Gas System | Serafin | 2 | 2 | 31DEC96 | 02JAN97 | 3 |
| Building Drains SER | | | | | | | |
| A2371S1605 | Update Sys Descrip & LCO Table Bldg Drains | Busche | 1 | 0 | 07NOV96A | 07NOV96A | |
| A2371S1610 | Building Review Building Drains SER | Serafin | 6 | 0 | 08NOV96A | 13NOV96A | |
| A2371S1615 | Resolve Comments Building Drains SER | Busche | 2 | 0 | 14NOV96A | 18NOV96A | |
| A2371S1620 | Building Drains SER Draft B | Busche | 13 | 0 | 19NOV96A | 26NOV96A | |
| A2371S1625 | Building Review Building Drains SER | Serafin | 2 | 0 | 02DEC96A | 04DEC96A | |
| A2371S1630 | Resolve Comments Building Drains SER | Busche | 6 | 0 | 05DEC96A | 12DEC96A | |
| A2371S1635 | Building Drains SER Final Draft | Busche | 2 | 0 | 16DEC96A | 17DEC96A | |
| A2371S1640 | Building Mgmt Review Building Drains SER | Serafin | 4 | 0 | 18DEC96A | 23DEC96A | |
| SER Approval Process | | | | | | | |
| A2371S795A | Technical Concurrence Obtained on SERs | Serafin | 0 | 0 | | 16DEC96 | 13 |



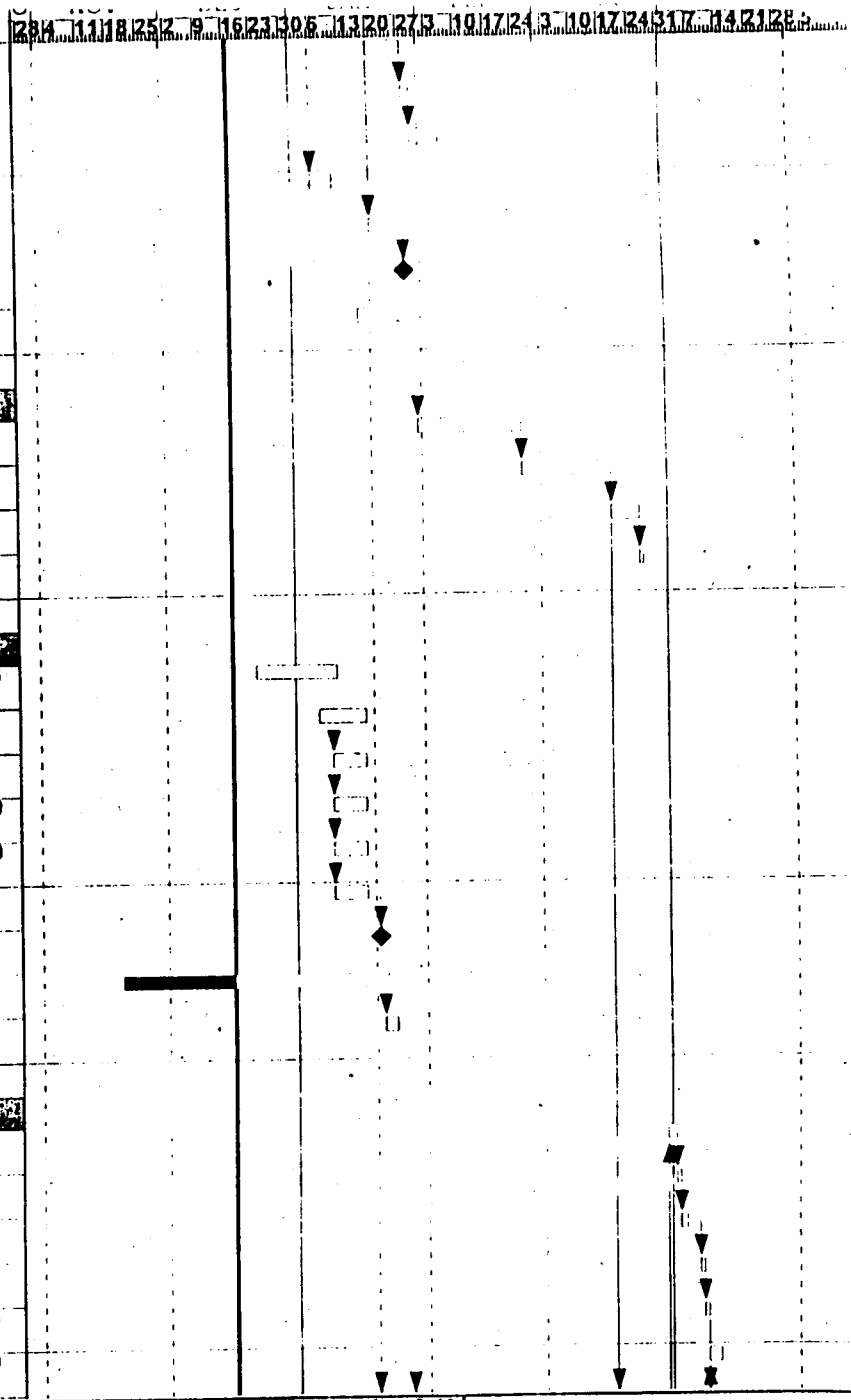

| | |
|---|---|
| Project Start | 30SEP96 |
| Project Finish | 25APR97 |
| Data Date | 17DEC96 |
| Plot Date | 31DEC96 |

Early Bar
Progress Bar
Critical Activity

AB00:B371

Kaiser-Hill
Building 371 BIO Completion
Detail Schedule

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371S800A | Incorp Crosstable Comments On All 16 SERs | Busche | 5 | 5 | 20JAN97 | 27JAN97 | 52 |
| A2371S0810 | Obtain SER Signatures | Team | 2 | 2 | 28JAN97 | 29JAN97 | 55 |
| A2371S0815 | Duplicate SERs | Busche | 5 | 5 | 30JAN97 | 05FEB97 | 51 |
| A2371S796A | Review SER Sections 1,2,3,4,6 & 7 | Zurey | 5 | 5 | 06JAN97* | 10JAN97 | 73 |
| A2371S802A | Review SER Sections 5 & 8 | Zurey | 5 | 5 | 20JAN97 | 27JAN97 | 58 |
| A2371S804A | Final SER Sign-Off | | 0 | 0 | | 27JAN97 | 58 |
| A2371S806A | Independent Verification | Zurey | 5 | 5 | 17JAN97* | 23JAN97 | 59 |
| **DOE Review/Approval/Final Release BIO,TSRs,SERs** | | | | | | | |
| A2371D0005 | Internal DOE Review | Bostic | 15 | 15 | 31JAN97 | 24FEB97 | 0 |
| A2371D0010 | DOE Crosstable Review | Serafin | 15 | 15 | 25FEB97 | 17MAR97 | 0 |
| A2371D0015 | Incorporate Crosstable Review Comments | Busche | 5 | 5 | 18MAR97 | 24MAR97 | 23 |
| A2371D0020 | K-H Transmittal Of Document To DOE | Majestic | 1 | 1 | 25MAR97 | 25MAR97 | 23 |
| **System Evaluation Reports - CAI** | | | | | | | |
| A2371S1650 | Implement SER Preparation Procedure (Steps | Busche | 12 | 12 | 23DEC96* | 10JAN97 | 73 |
| A2371S1655 | Facilitate SER Crosstables | Busche | 9 | 9 | 07JAN97* | 17JAN97 | 0 |
| A2371S1660 | Provide Technical Support For SER | Busche | 6 | 6 | 10JAN97 | 17JAN97 | 0 |
| A2371S1665 | Incorporate Comments | Busche | 6 | 6 | 10JAN97 | 17JAN97 | 70 |
| A2371S1670 | Technical Publications | Busche | 6 | 6 | 10JAN97 | 17JAN97 | 70 |
| A2371S1675 | Drafting | Busche | 6 | 6 | 10JAN97 | 17JAN97 | 0 |
| A2371S1680 | Issue Document To K-H For Review/Approval | Busche | 0 | 0 | | 20JAN97* | 0 |
| A2371S1685 | Approval Of SERs | Busche | 40 | 25 | 20NOV96A | 22JAN97 | 0 |
| A2371S1690 | UCNI Review/Publications | Busche | 3 | 3 | 22JAN97 | 24JAN97* | 0 |
| **Authorization Agreement** | | | | | | | |
| A2371A0005 | Review W/CAI, SSOC | Swenson | 2 | 2 | 31MAR97 | 01APR97 | 6 |
| A2371A0010 | Generate Comments | Busche/Ser | 1 | 1 | 02APR97 | 02APR97 | 6 |
| A2371A0015 | Final Review w/Stakeholders | Swenson/R | 1 | 1 | 03APR97 | 03APR97 | 6 |
| A2371A0020 | Generate Final AA | Swenson | 1 | 1 | 07APR97 | 07APR97 | 6 |
| A2371A0025 | SSOC/K-H Formal Review/Concurrence AA | Swenson | 1 | 1 | 08APR97 | 08APR97 | 6 |
| A2371H0020 | Prepare Executive Concurrence & Cover Letter | Swenson | 3 | 3 | 09APR97 | 11APR97 | 9 |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96

Early Bar
Progress Bar
Critical Activity



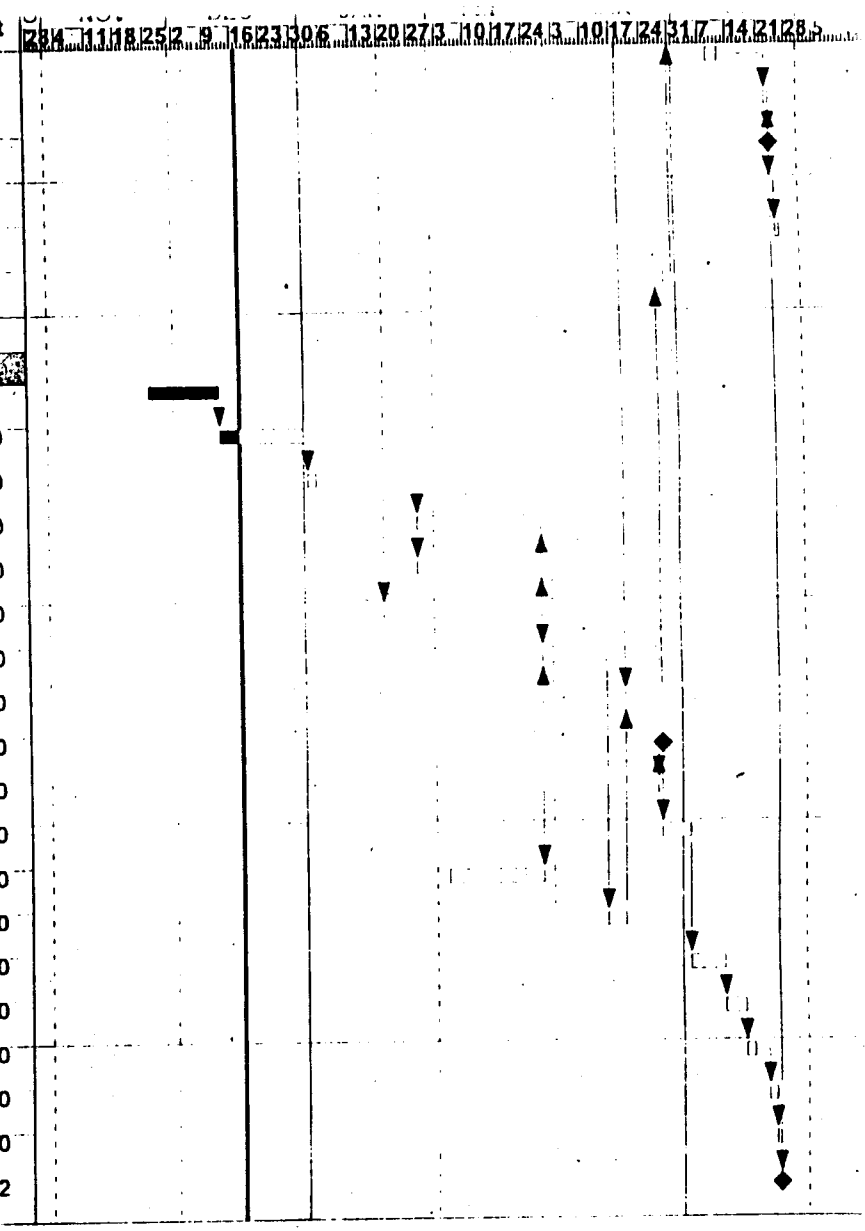
AB00.B371

Kaiser-Hill
Building 371 BIO Completion
Detail Schedule

| ID | Description | | Dur | Dur | Start | Finish | Flt |
|---|---|---|---|---|---|---|---|
| A2371A0030 | Walkthrough For Concurrence | Swenson | 3 | 3 | 09APR97 | 11APR97 | 6 |
| A2371A0035 | Deliver AA/Cover Letter/Concurrence to Card | Swenson | 1 | 1 | 23APR97 | 23APR97 | 0 |
| A2371AM001 | AA Signed | Morgan | 0 | 0 | | 23APR97 | 0 |
| A2371A0050 | Contract Rolldown to Subcontractors | Sandlin | 1 | 1 | 24APR97 | 24APR97 | 0 |
| A2371A0055 | Incorp Formal AA into K-H/DOE Contract | Sandlin | 1 | 1 | 25APR97 | 25APR97 | 0 |
| A2371A0000 | Develop Draft AA | Swenson | 2 | 2 | 27MAR97 | 28MAR97 | 7 |

## Implementation Plan

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A2371P0015 | Identify IP Strategy | Serafin | 5 | 0 | 25NOV96A | 11DEC96A | |
| A2371P0020 | Identify IP Format (LL 771) | Serafin | 9 | 9 | 12DEC96A | 31DEC96 | 9 |
| A2371P0025 | Identify IP Elements | Serafin | 2 | 2 | 02JAN97 | 03JAN97 | 9 |
| A2371P0030 | Identify Hardware | Serafin | 20 | 20 | 28JAN97 | 26FEB97 | 0 |
| A2371P0035 | Identify Admin Changes | Serafin | 20 | 20 | 28JAN97 | 26FEB97 | 0 |
| A2371P0040 | Identify Deltas Between Bldg Config/IP | Serafin | 25 | 25 | 20JAN97 | 26FEB97 | 0 |
| A2371P0045 | Id Bridging Compensatory Meas From Delta | Serafin | 10 | 10 | 27FEB97 | 13MAR97 | 0 |
| A2371P0050 | Draft Implementation Plan | Serafin | 5 | 5 | 18MAR97 | 25MAR97 | 0 |
| A2371MP010 | Draft Implementation Plan to K-H | Serafin | 0 | 0 | | 26MAR97 | 0 |
| A2371P0055 | Distribute IP To K-H/DOE For Review | Serafin | 1 | 1 | 26MAR97 | 26MAR97 | 0 |
| A2371P0057 | K-H/SSOC Crosstable Implementation Plan | Serafin | 5 | 5 | 27MAR97 | 02APR97 | 0 |
| A2371P0060 | Estimate Resources by Task | Serafin | 15 | 15 | 04FEB97 | 26FEB97 | 0 |
| A2371P0065 | Budget/Schedule Evaluation | Serafin | 2 | 2 | 14MAR97 | 17MAR97 | 0 |
| A2371P0080 | Incorporate Crosstable Comments | Serafin | 5 | 5 | 03APR97 | 10APR97 | 0 |
| A2371P0085 | Revise/Finalize Implementation Plan | Serafin | 3 | 3 | 11APR97 | 15APR97 | 0 |
| A2371P0095 | SSOC Submit Implementation Plan To K-H | Serafin | 2 | 2 | 16APR97 | 17APR97 | 0 |
| A2371P0100 | K-H Review/Accept Implementation Plan | Majestic | 2 | 2 | 21APR97 | 22APR97 | 0 |
| A2371P0105 | DOE Accept Implementation Plan | Bostic | 1 | 1 | 23APR97 | 23APR97 | 0 |
| A2371MP015 | DOE Acceptance Of Implementation Plan | Bostic | 0 | 0 | | 23APR97 | 2 |




Project Start 30SEP96
Project Finish 25APR97
Data Date 17DEC96
Plot Date 31DEC96
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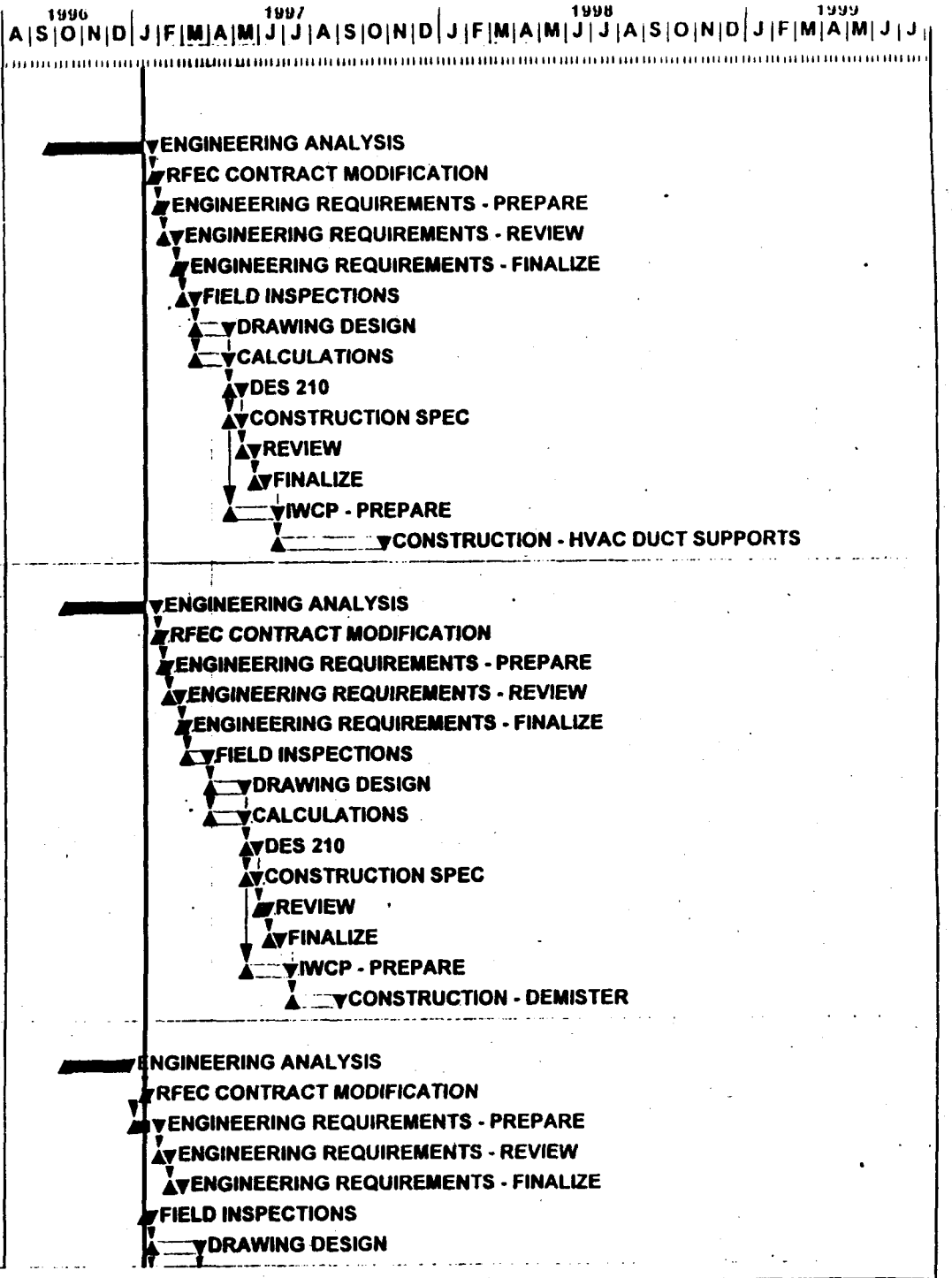
Early Bar
Progress Bar
Critical Activity

AB00:B371

Sheet 8 of 8

**Kaiser-Hill**
**Building 371 BIO Completion**
**Detail Schedule**

| Activity ID | Activity Description | Orig Dur | Early Start | Early Finish |
|---|---|---|---|---|
| **TASK 63 - BLDG 371 UPGRADES** | | | | |
| **HVAC DUCT SUPPORTS** | | | | |
| 1998 | ENGINEERING ANALYSIS | 55 | 23SEP96A | 22JAN97 |
| 1999 | RFEC CONTRACT MODIFICATION | 5 | 23JAN97 | 29JAN97 |
| 2000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 30JAN97* | 05FEB97 |
| 2002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 06FEB97 | 19FEB97 |
| 2004 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 20FEB97 | 26FEB97 |
| 2006 | FIELD INSPECTIONS | 10 | 27FEB97 | 12MAR97 |
| 2008 | DRAWING DESIGN | 30 | 13MAR97 | 23APR97 |
| 2010 | CALCULATIONS | 30 | 13MAR97 | 23APR97 |
| 2012 | DES 210 | 10 | 24APR97 | 07MAY97 |
| 2014 | CONSTRUCTION SPEC | 10 | 24APR97 | 07MAY97 |
| 2016 | REVIEW | 10 | 08MAY97 | 21MAY97 |
| 2018 | FINALIZE | 10 | 22MAY97 | 04JUN97 |
| 2020 | IWCP - PREPARE | 40 | 24APR97 | 18JUN97 |
| 2022 | CONSTRUCTION - HVAC DUCT SUPPORTS | 89 | 19JUN97 | 21OCT97 |
| **DEMISTER MODIFICATIONS** | | | | |
| 4998 | ENGINEERING ANALYSIS | 55 | 10OCT96A | 24JAN97 |
| 4999 | RFEC CONTRACT MODIFICATION | 5 | 27JAN97 | 31JAN97 |
| 5000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 03FEB97 | 07FEB97 |
| 5002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 10FEB97 | 21FEB97 |
| 5004 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 24FEB97 | 28FEB97 |
| 5006 | FIELD INSPECTIONS | 20 | 03MAR97 | 28MAR97 |
| 5008 | DRAWING DESIGN | 30 | 31MAR97 | 09MAY97 |
| 5010 | CALCULATIONS | 30 | 31MAR97 | 09MAY97 |
| 5012 | DES 210 | 10 | 12MAY97 | 23MAY97 |
| 5014 | CONSTRUCTION SPEC | 10 | 12MAY97 | 23MAY97 |
| 5016 | REVIEW | 10 | 26MAY97 | 06JUN97 |
| 5018 | FINALIZE | 10 | 09JUN97 | 20JUN97 |
| 5020 | IWCP - PREPARE | 40 | 12MAY97 | 04JUL97 |
| 5022 | CONSTRUCTION - DEMISTER | 40 | 07JUL97 | 29AUG97 |
| **SUBTASK 5 FIRE DOOR REPLACMENT** | | | | |
| 9000 | ENGINEERING ANALYSIS | 55 | 10OCT96A | 24DEC96A |
| 9002 | RFEC CONTRACT MODIFICATION | 5 | 13JAN97 | 17JAN97 |
| 9004 | ENGINEERING REQUIREMENTS - PREPARE | 20* | 01JAN97A | 28JAN97 |
| 9006 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 29JAN97 | 11FEB97 |
| 9008 | ENGINEERING REQUIREMENTS - FINALIZE | 10 | 12FEB97 | 25FEB97 |
| 9010 | FIELD INSPECTIONS | 6* | 13JAN97 | 20JAN97 |
| 9012 | DRAWING DESIGN | 42 | 21JAN97* | 19MAR97 |




| | |
|---|---|
| Project Start | 07MAY96 |
| Project Finish | 31DEC98 |
| Data Date | 13JAN97 |
| Plot Date | 14JAN97 |



Early Bar
Progress Bar
Critical Activity

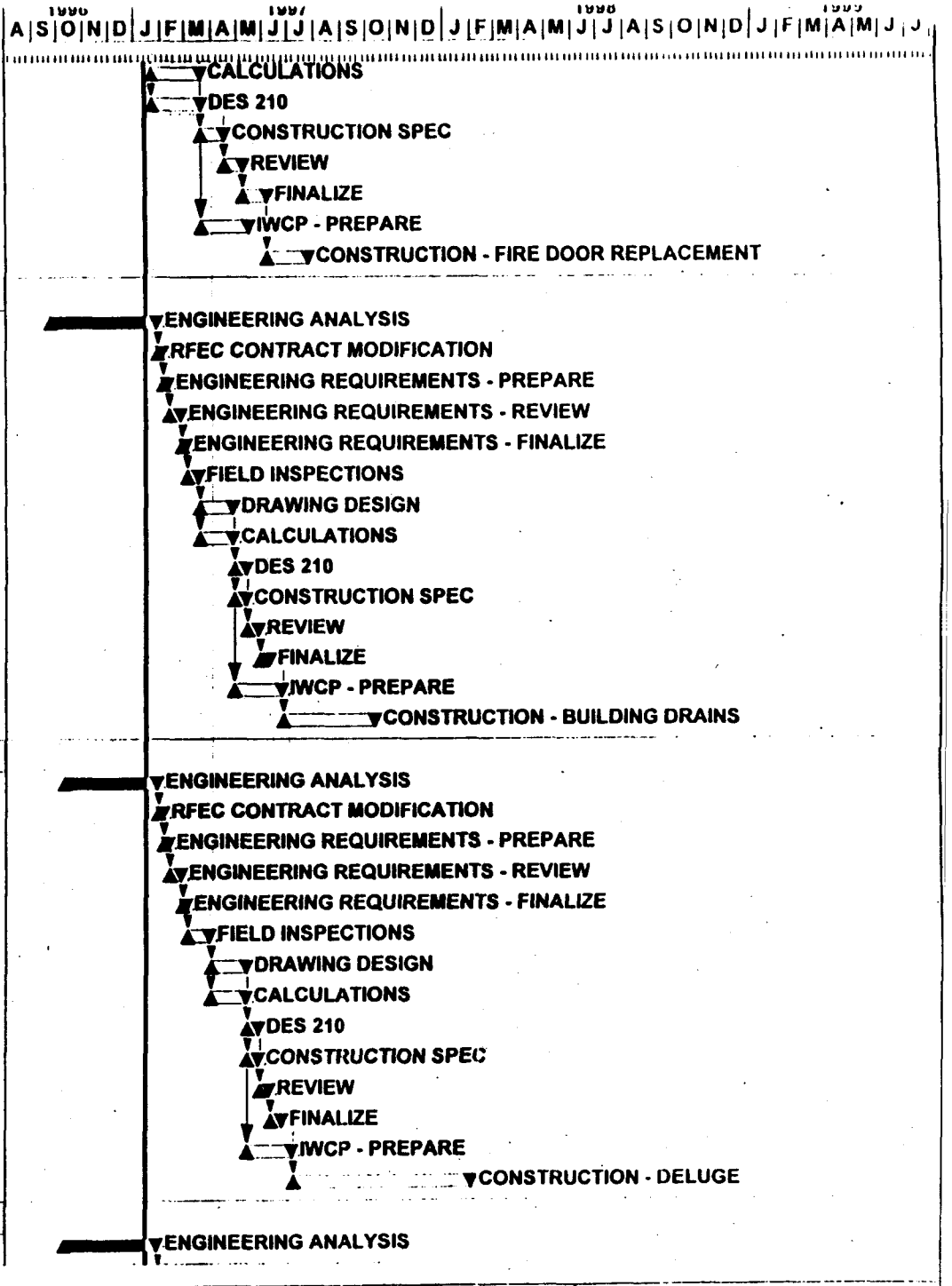
371U

BUILDING 371 UPGRADES
RFEC
Proposal Schedule



Appendix B

| Activity ID | Activity Description | Orig Dur | Early Start | Early Finish |
|---|---|---|---|---|
| 9014 | CALCULATIONS | 42 | 21JAN97 | 19MAR97 |
| 9016 | DES 210 | 42 | 21JAN97 | 19MAR97 |
| 9018 | CONSTRUCTION SPEC | 20 | 20MAR97 | 16APR97 |
| 9020 | REVIEW | 15 | 17APR97 | 07MAY97 |
| 9022 | FINALIZE | 20 | 08MAY97 | 04JUN97 |
| 9024 | IWCP - PREPARE | 40 | 20MAR97 | 14MAY97 |
| 9026 | CONSTRUCTION - FIRE DOOR REPLACEMENT | 34 | 05JUN97 | 22JUL97 |
| ***BUILDING SUBSURFACE DRAINS*** | | | | |
| 5998 | ENGINEERING ANALYSIS | 55 | 23SEP96A | 24JAN97 |
| 5999 | RFEC CONTRACT MODIFICATION | 5 | 27JAN97 | 31JAN97 |
| 6000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 03FEB97 | 07FEB97 |
| 6002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 10FEB97 | 21FEB97 |
| 6004 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 24FEB97 | 28FEB97 |
| 6006 | FIELD INSPECTIONS | 10 | 03MAR97 | 14MAR97 |
| 6008 | DRAWING DESIGN | 30 | 17MAR97 | 25APR97 |
| 6010 | CALCULATIONS | 30 | 17MAR97 | 25APR97 |
| 6012 | DES 210 | 10 | 28APR97 | 09MAY97 |
| 6014 | CONSTRUCTION SPEC | 10 | 28APR97 | 09MAY97 |
| 6016 | REVIEW | 10 | 12MAY97 | 23MAY97 |
| 6018 | FINALIZE | 10 | 26MAY97 | 06JUN97 |
| 6020 | IWCP - PREPARE | 40 | 28APR97 | 20JUN97 |
| 6022 | CONSTRUCTION - BUILDING DRAINS | 80 | 23JUN97 | 10OCT97 |
| ***DELUGE MODIFICATIONS*** | | | | |
| 7000 | ENGINEERING ANALYSIS | 55 | 10OCT96A | 24JAN97 |
| 7002 | RFEC CONTRACT MODIFICATION | 5 | 27JAN97 | 31JAN97 |
| 7004 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 03FEB97 | 07FEB97 |
| 7006 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 10FEB97 | 21FEB97 |
| 7008 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 24FEB97 | 28FEB97 |
| 7010 | FIELD INSPECTIONS | 20 | 03MAR97 | 28MAR97 |
| 7012 | DRAWING DESIGN | 30 | 31MAR97 | 09MAY97 |
| 7014 | CALCULATIONS | 30 | 31MAR97 | 09MAY97 |
| 7016 | DES 210 | 10 | 12MAY97 | 23MAY97 |
| 7018 | CONSTRUCTION SPEC | 10 | 12MAY97 | 23MAY97 |
| 7020 | REVIEW | 10 | 26MAY97 | 06JUN97 |
| 7022 | FINALIZE | 10 | 09JUN97 | 20JUN97 |
| 7024 | IWCP - PREPARE | 40 | 12MAY97 | 04JUL97 |
| 7028 | CONSTRUCTION - DELUGE | 150 | 07JUL97 | 30JAN98 |
| ***HVAC ISOLATION VALVE MODIFICATIONS*** | | | | |
| 8000 | ENGINEERING ANALYSIS | 55 | 10OCT96A | 24JAN97 |




Project Start 07MAY96
Project Finish 31DEC98
Data Date 13JAN97
Plot Date 14JAN97



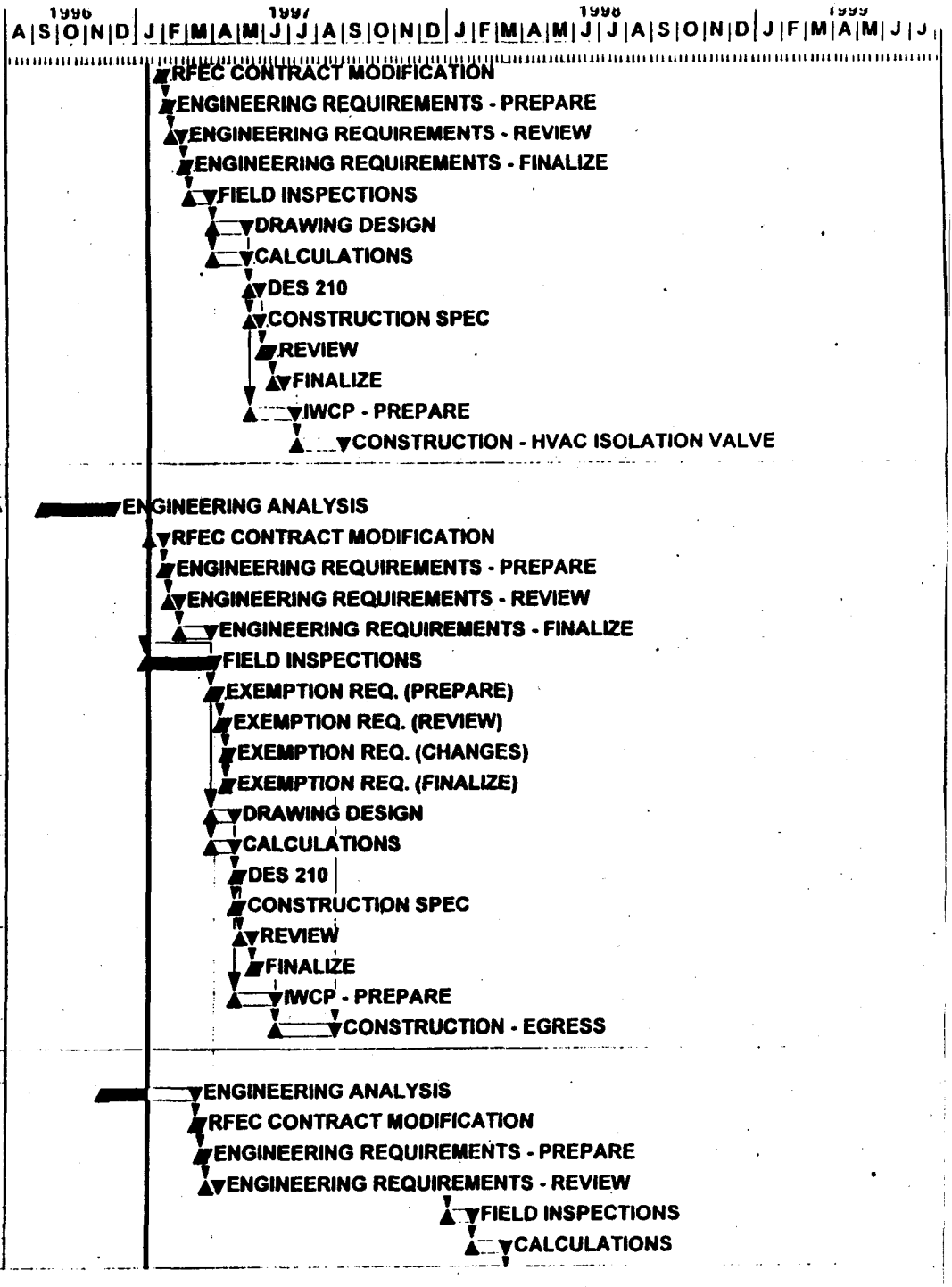
Early Bar
Progress Bar
Critical Activity

371U

Sheet 2 of 5

**BUILDING 371 UPGRADES**
**RFEC**
**osal Schedule**

| Activity ID | Activity Description | Orig Dur | Early Start | Early Finish |
|---|---|---|---|---|
| 8002 | RFEC CONTRACT MODIFICATION | 5 | 27JAN97 | 31JAN97 |
| 8004 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 03FEB97 | 07FEB97 |
| 8006 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 10FEB97 | 21FEB97 |
| 8008 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 24FEB97 | 28FEB97 |
| 8010 | FIELD INSPECTIONS | 20 | 03MAR97 | 28MAR97 |
| 8012 | DRAWING DESIGN | 30 | 31MAR97 | 09MAY97 |
| 8014 | CALCULATIONS | 30 | 31MAR97 | 09MAY97 |
| 8016 | DES 210 | 10 | 12MAY97 | 23MAY97 |
| 8018 | CONSTRUCTION SPEC | 10 | 12MAY97 | 23MAY97 |
| 8020 | REVIEW | 10 | 26MAY97 | 06JUN97 |
| 8022 | FINALIZE | 10 | 09JUN97 | 20JUN97 |
| 8024 | IWCP - PREPARE | 40 | 12MAY97 | 04JUL97 |
| 8026 | CONSTRUCTION - HVAC ISOLATION VALVE | 40 | 07JUL97 | 29AUG97 |
| ***SUBTASK 9 EGRESS ROUTE UPGRADE*** | | | | |
| 3998 | ENGINEERING ANALYSIS | 55 | 09SEP96A | 02DEC96A |
| 3999 | RFEC CONTRACT MODIFICATION | 12 | 13JAN97 | 28JAN97 |
| 4000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 29JAN97 | 04FEB97 |
| 4002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 05FEB97 | 18FEB97 |
| 4004 | ENGINEERING REQUIREMENTS - FINALIZE | 27 | 19FEB97 | 27MAR97 |
| 4006 | FIELD INSPECTIONS | 5* | 09JAN97A | 01APR97 |
| 4008 | EXEMPTION REQ. (PREPARE) | 6 | 28MAR97 | 04APR97 |
| 4010 | EXEMPTION REQ. (REVIEW) | 6 | 07APR97 | 14APR97 |
| 4012 | EXEMPTION REQ. (CHANGES) | 4 | 15APR97 | 18APR97 |
| 4014 | EXEMPTION REQ. (FINALIZE) | 4 | 15APR97 | 18APR97 |
| 4018 | DRAWING DESIGN | 20 | 28MAR97 | 24APR97 |
| 4020 | CALCULATIONS | 20 | 28MAR97 | 24APR97 |
| 4022 | DES 210 | 5 | 25APR97 | 01MAY97 |
| 4024 | CONSTRUCTION SPEC | 5 | 25APR97 | 01MAY97 |
| 4026 | REVIEW | 10 | 02MAY97 | 15MAY97 |
| 4028 | FINALIZE | 5 | 16MAY97 | 22MAY97 |
| 4030 | IWCP - PREPARE | 35 | 25APR97 | 12JUN97 |
| 4032 | CONSTRUCTION - EGRESS | 51 | 13JUN97 | 22AUG97 |
| ***COOLING TOWER*** | | | | |
| 10000 | ENGINEERING ANALYSIS | 55 | 21NOV96A | 10MAR97 |
| 10002 | RFEC CONTRACT MODIFICATION | 5 | 11MAR97 | 17MAR97 |
| 10004 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 18MAR97 | 24MAR97 |
| 10006 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 25MAR97 | 07APR97 |
| 10008 | FIELD INSPECTIONS | 20 | 02JAN98* | 29JAN98 |
| 10010 | CALCULATIONS | 30 | 30JAN98 | 12MAR98 |




Project Start 07MAY96
Project Finish 31DEC98
Data Date 13JAN97
Plot Date 14JAN97



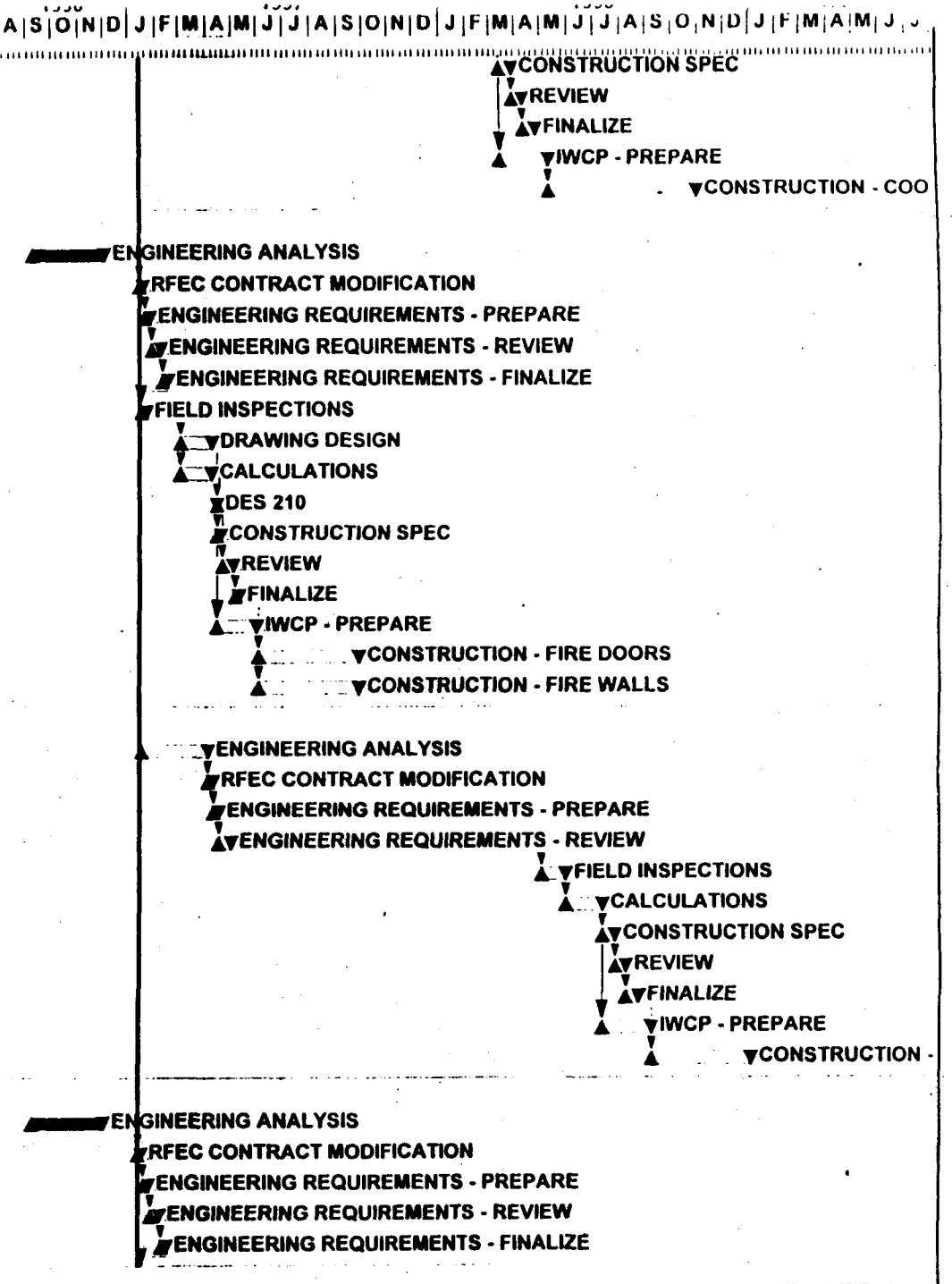
Early Bar
Progress Bar
Critical Activity

371U

Sheet 3 of 5

BUILDING 371 UPGRADES
RFEC
osal Schedule

| ID | Activity Description | Orig Dur | Early Start | Early Finish |
|---|---|---|---|---|
| 10012 | CONSTRUCTION SPEC | 10 | 13MAR98 | 26MAR98 |
| 10014 | REVIEW | 10 | 27MAR98 | 09APR98 |
| 10016 | FINALIZE | 10 | 10APR98 | 23APR98 |
| 10018 | IWCP - PREPARE | 40 | 13MAR98 | 07MAY98 |
| 10020 | CONSTRUCTION - COOLING TOWER | 126 | 08MAY98 | 30OCT98 |
| | ***SUBTASK 11 BASEMENT LEVEL FIRE WALL UPGRADES*** | | | |
| 2998 | ENGINEERING ANALYSIS | 55 | 09SEP96A | 02DEC96A |
| 2999 | RFEC CONTRACT MODIFICATION | 5 | 13JAN97 | 17JAN97 |
| 3000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 20JAN97 | 24JAN97 |
| 3002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 27JAN97 | 07FEB97 |
| 3004 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 10FEB97 | 14FEB97 |
| 3006 | FIELD INSPECTIONS | 4 | 15JAN97 | 20JAN97 |
| 3008 | DRAWING DESIGN | 27 | 03MAR97 | 08APR97 |
| 3010 | CALCULATIONS | 27 | 03MAR97 | 08APR97 |
| 3012 | DES 210 | 0 | 14APR97 | 08APR97 |
| 3014 | CONSTRUCTION SPEC | 5 | 14APR97 | 18APR97 |
| 3016 | REVIEW | 10 | 21APR97 | 02MAY97 |
| 3018 | FINALIZE | 5 | 05MAY97 | 09MAY97 |
| 3020 | IWCP - PREPARE | 35 | 14APR97 | 30MAY97 |
| 3022 | CONSTRUCTION - FIRE DOORS | 85 | 02JUN97 | 26SEP97 |
| 3024 | CONSTRUCTION - FIRE WALLS | 85 | 02JUN97 | 26SEP97 |
| | ***MATERIAL DUMB WAITER*** | | | |
| 11000 | ENGINEERING ANALYSIS | 55 | 16JAN97* | 02APR97 |
| 11002 | RFEC CONTRACT MODIFICATION | 5 | 03APR97 | 09APR97 |
| 11004 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 10APR97 | 16APR97 |
| 11006 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 17APR97 | 30APR97 |
| 11008 | FIELD INSPECTIONS | 20 | 01MAY98* | 28MAY98 |
| 11010 | CALCULATIONS | 30 | 29MAY98 | 09JUL98 |
| 11012 | CONSTRUCTION SPEC | 10 | 10JUL98 | 23JUL98 |
| 11014 | REVIEW | 10 | 24JUL98 | 06AUG98 |
| 11016 | FINALIZE | 10 | 07AUG98 | 20AUG98 |
| 11018 | IWCP - PREPARE | 40 | 10JUL98 | 03SEP98 |
| 11020 | CONSTRUCTION - DUMB WAITER | 85 | 04SEP98 | 31DEC98 |
| | ***SUBTASK 12 ATTIC PIPING SESIMIC SUPPORTS*** | | | |
| 998 | ENGINEERING ANALYSIS | 55 | 09SEP96A | 02DEC96A |
| 999 | RFEC CONTRACT MODIFICATION | 5 | 13JAN97 | 17JAN97 |
| 1000 | ENGINEERING REQUIREMENTS - PREPARE | 5 | 20JAN97 | 24JAN97 |
| 1002 | ENGINEERING REQUIREMENTS - REVIEW | 10 | 27JAN97 | 07FEB97 |
| 1004 | ENGINEERING REQUIREMENTS - FINALIZE | 5 | 10FEB97 | 14FEB97 |




Project Start 07MAY96
Project Finish 31DEC98
Data Date 13JAN97
Plot Date 14JAN97

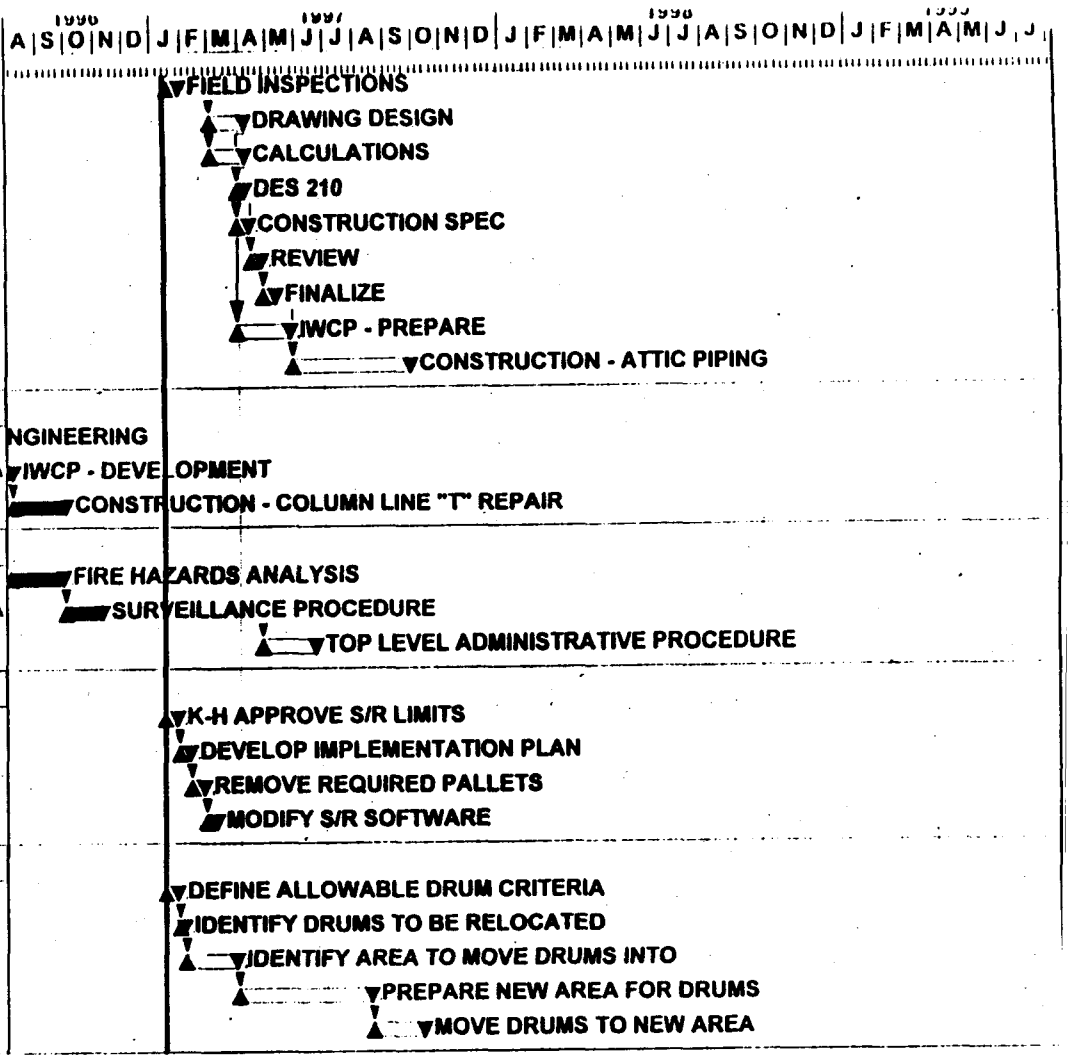


Early Bar
Progress Bar
Critical Activity

371U

**BUILDING 371 UPGRADES**
**RFEC**
**F... ...sal Schedule**

| Activity ID | Activity Description | Orig Dur | Early Start | Early Finish |
|---|---|---|---|---|
| 1006 | FIELD INSPECTIONS | 8 | 17JAN97 | 28JAN97 |
| 1008 | DRAWING DESIGN | 27 | 03MAR97 | 08APR97 |
| 1010 | CALCULATIONS | 27 | 03MAR97 | 08APR97 |
| 1012 | DES 210 | 7 | 31MAR97 | 08APR97 |
| 1014 | CONSTRUCTION SPEC | 10 | 31MAR97 | 11APR97 |
| 1016 | REVIEW | 10 | 14APR97 | 25APR97 |
| 1018 | FINALIZE | 10 | 28APR97 | 09MAY97 |
| 1020 | IWCP - PREPARE | 40 | 31MAR97 | 23MAY97 |
| 1022 | CONSTRUCTION - ATTIC PIPING | 90 | 26MAY97 | 26SEP97 |
| ***COLUMN LINE "T" REPAIR*** | | | | |
| 12000 | ENGINEERING | 35 | 07MAY96A | 24JUN96A |
| 12018 | IWCP - DEVELOPMENT | 30 | 25JUN96A | 05AUG96A |
| 12020 | CONSTRUCTION - COLUMN LINE "T" REPAIR | 40 | 06AUG96A | 30SEP96A |
| ***COMBUSTIBLE LOADING PROGRAM*** | | | | |
| 13000 | FIRE HAZARDS ANALYSIS | 40 | 05AUG96A | 27SEP96A |
| 13002 | SURVEILLANCE PROCEDURE | 30 | 30SEP96A | 07NOV96A |
| 13004 | TOP LEVEL ADMINISTRATIVE PROCEDURE | 40 | 25APR97 | 19JUN97 |
| ***STACKER/RETRIEVER LOAD LIMITS*** | | | | |
| 14000 | K-H APPROVE S/R LIMITS | 10 | 13JAN97 | 24JAN97 |
| 14002 | DEVELOP IMPLEMENTATION PLAN | 10 | 27JAN97 | 07FEB97 |
| 14004 | REMOVE REQUIRED PALLETS | 10 | 10FEB97 | 21FEB97 |
| 14006 | MODIFY S/R SOFTWARE | 10 | 24FEB97 | 07MAR97 |
| ***RELOCATE RM 3189 DRUMS*** | | | | |
| 15000 | DEFINE ALLOWABLE DRUM CRITERIA | 10 | 13JAN97 | 24JAN97 |
| 15002 | IDENTIFY DRUMS TO BE RELOCATED | 5 | 27JAN97 | 31JAN97 |
| 15004 | IDENTIFY AREA TO MOVE DRUMS INTO | 40 | 03FEB97 | 28MAR97 |
| 15006 | PREPARE NEW AREA FOR DRUMS | 100 | 31MAR97 | 15AUG97 |
| 15008 | MOVE DRUMS TO NEW AREA | 40 | 18AUG97 | 10OCT97 |




| | |
|---|---|
| Project Start | 07MAY96 |
| Project Finish | 31DEC98 |
| Data Date | 13JAN97 |
| Plot Date | 14JAN97 |

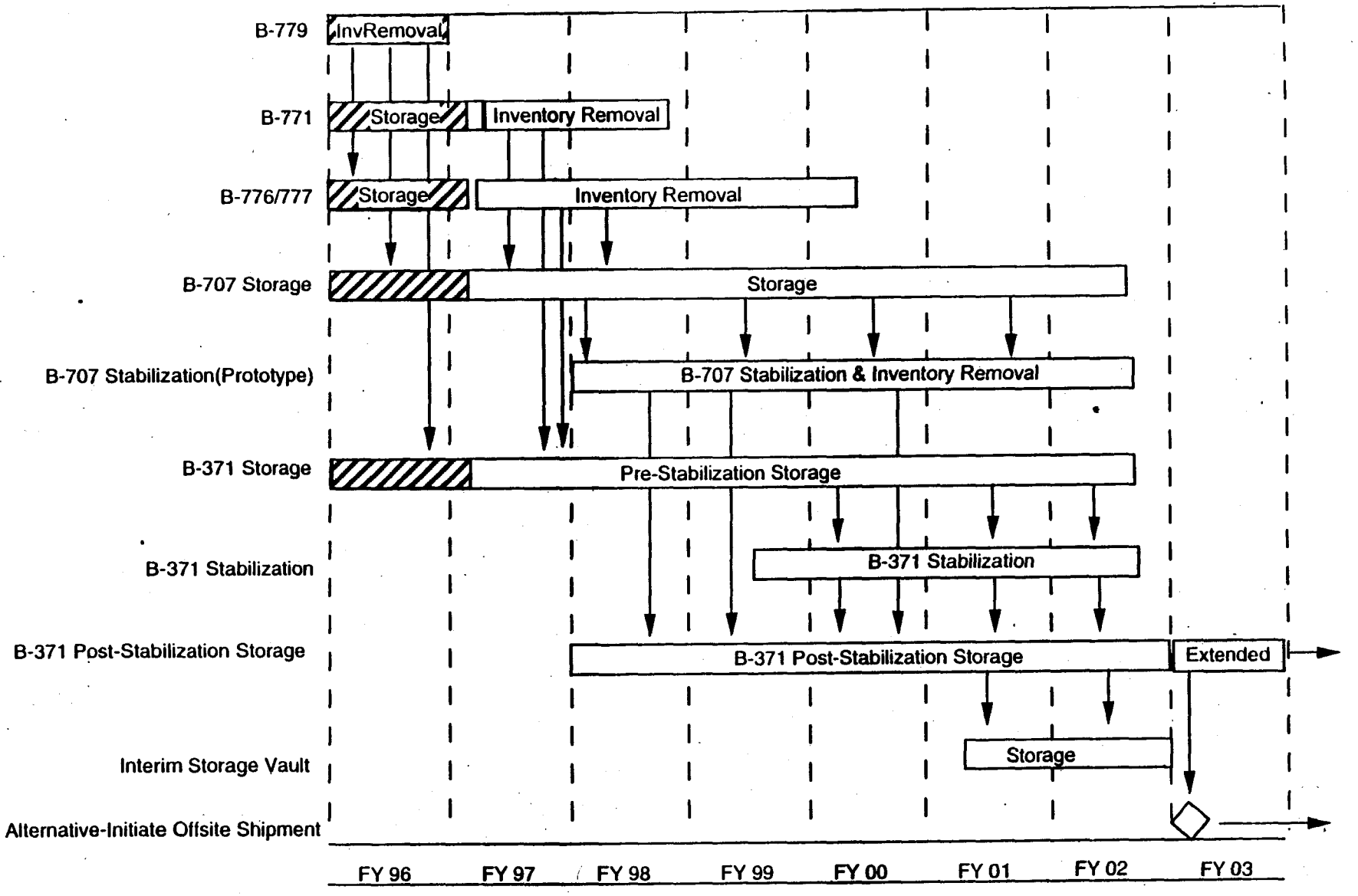


Early Bar
Progress Bar
Critical Activity

371U

BUILDING 371 UPGRADES
RFEC
...osal Schedule

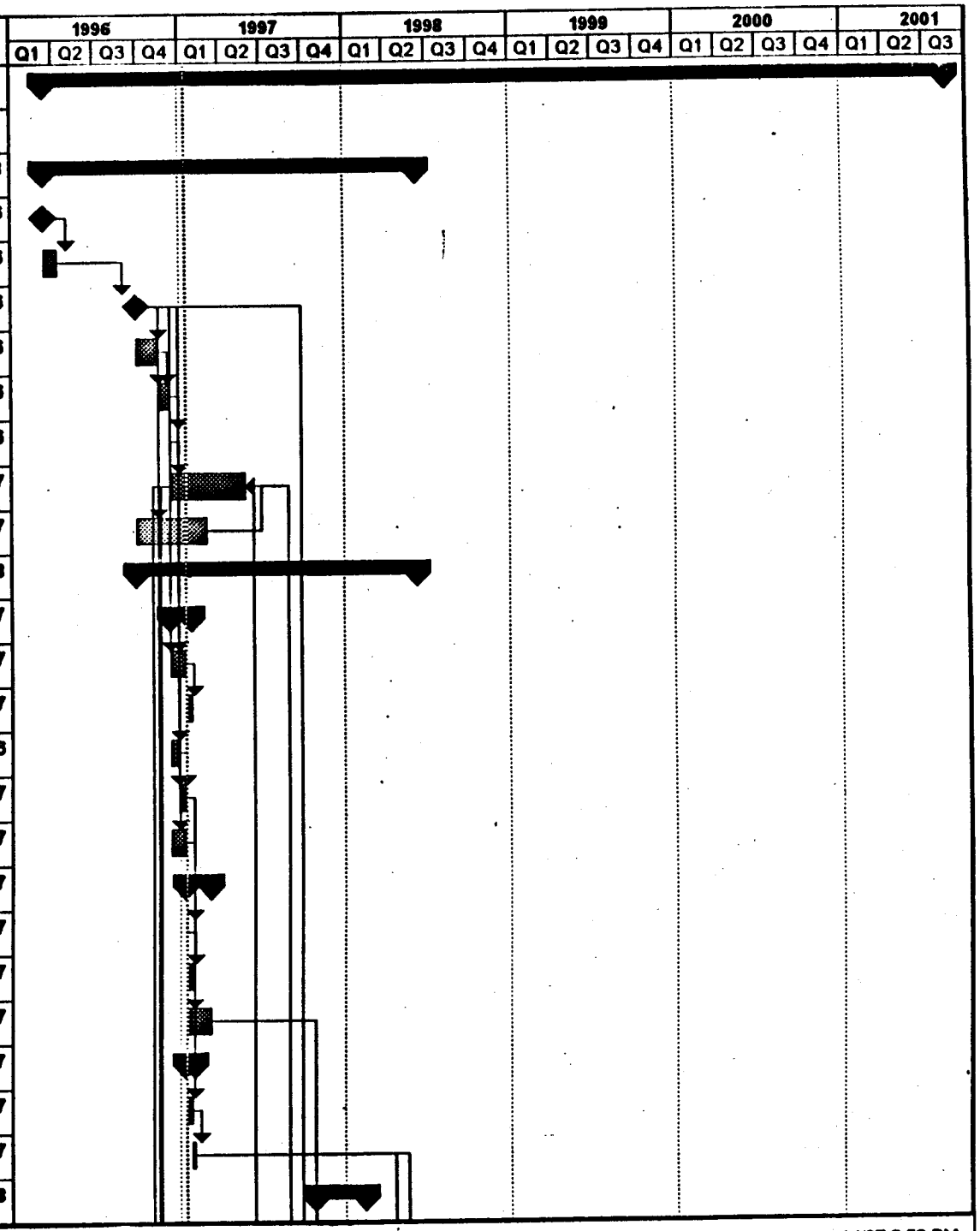
# SUMMARY SCHEDULE-Pu STABILIZATION & STORAGE




APPENDIX C

# SCHEDULE FOR INTERIM STORAGE VAULT

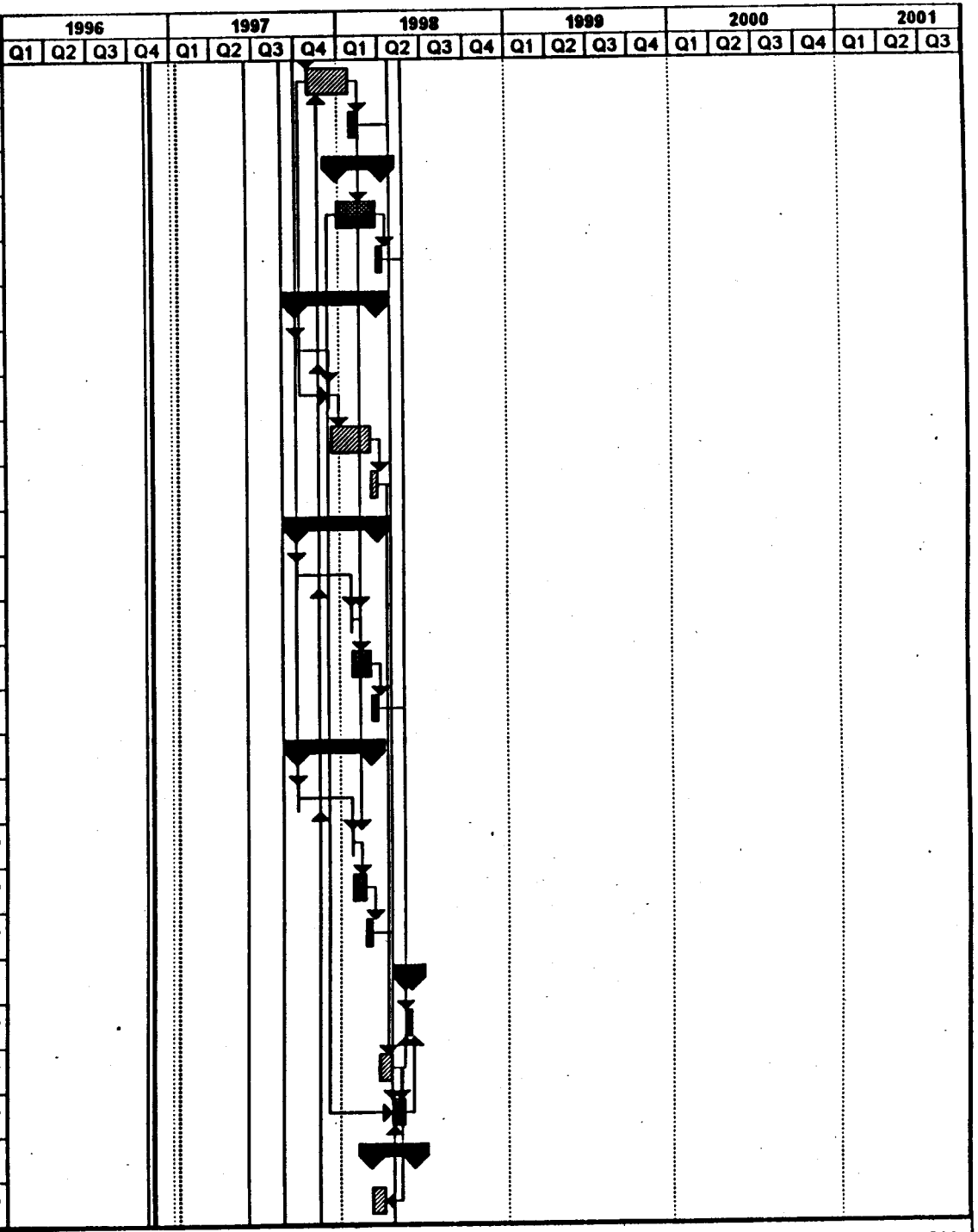
| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | ISV Expense Support | 1386d | 3/16/96 | 8/22/01 |
| 2 | | | | |
| 3 | Advanced Conc Des Mgt | 672d | 3/16/96 | 6/18/98 |
| 4 | Decision | 0d | 3/15/96 | 3/15/96 |
| 5 | KD-0 | 20d | 3/15/96 | 4/11/96 |
| 6 | FY 97 Funding | 0d | 10/1/96 | 10/1/96 |
| 7 | Design Criteria/SOW | 35d | 10/1/96 | 11/18/96 |
| 8 | A/E ACDR Contract | 15d | 11/19/96 | 12/11/96 |
| 9 | Award ACDR Contract | 1d | 12/12/96 | 12/12/96 |
| 10 | ACDR | 115d | 12/13/96 | 5/27/97 |
| 11 | Project Management Plan | 106d | 10/1/96 | 3/3/97 |
| 12 | Geotech Investigation | 430d | 10/1/96 | 6/18/98 |
| 13 | Preparatory | 30d | 12/13/96 | 1/27/97 |
| 14 | Geotech QA Plan | 20d | 12/13/96 | 1/13/97 |
| 15 | Geotech QA Plan R | 10d | 1/14/97 | 1/27/97 |
| 16 | Geotech Data Revie | 10d | 12/13/96 | 12/27/96 |
| 17 | Site List | 10d | 12/30/96 | 1/13/97 |
| 18 | Form Advisory Boar | 20d | 12/13/96 | 1/13/97 |
| 19 | Advisory Board | 40d | 1/14/97 | 3/10/97 |
| 20 | Advisory Board Mee | 2d | 1/14/97 | 1/15/97 |
| 21 | Site Priority List | 10d | 1/16/97 | 1/29/97 |
| 22 | Geotech Invstg Plan | 40d | 1/14/97 | 3/10/97 |
| 23 | Ground Water Samplin | 16d | 1/14/97 | 2/3/97 |
| 24 | Sampling | 10d | 1/14/97 | 1/27/97 |
| 25 | Report | 5d | 1/28/97 | 2/3/97 |
| 26 | Borehole Drilling | 76d | 10/29/97 | 2/16/98 |



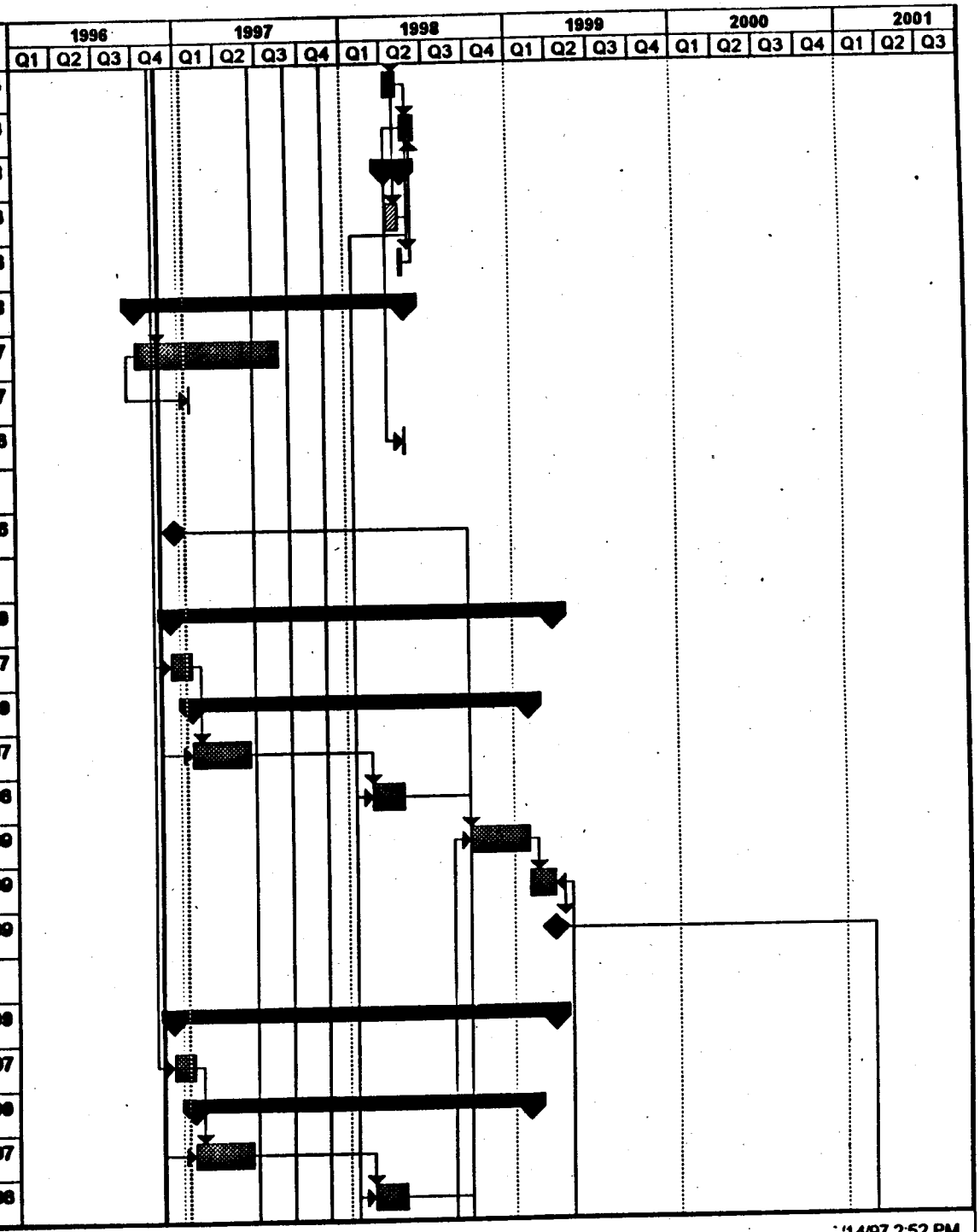



APPENDIX B

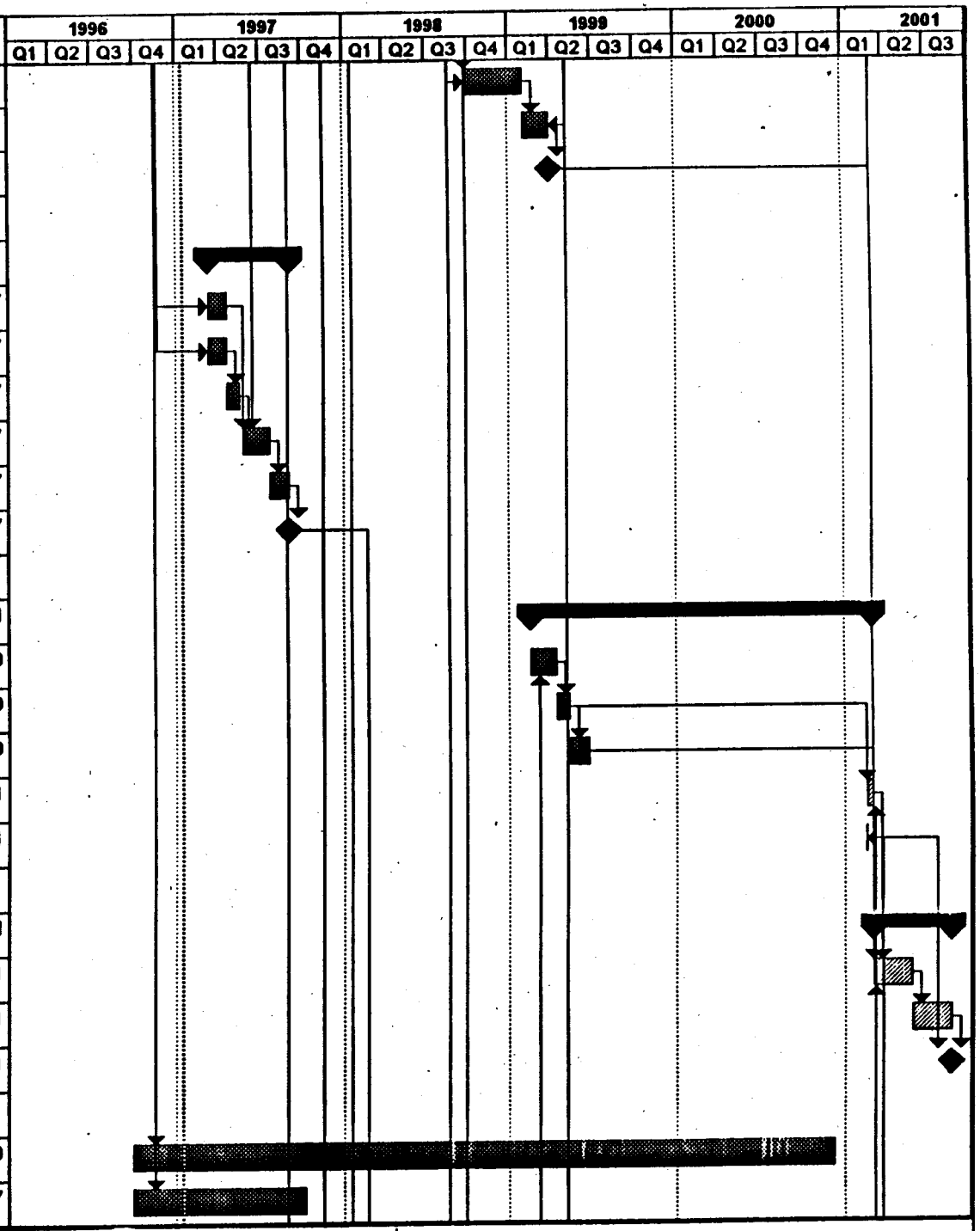
| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 27 | Drill & Case Holes | 60d | 10/29/97 | 1/26/98 |
| 28 | Report Core Loggin | 15d | 1/27/98 | 2/16/98 |
| 29 | Geophysical Testing | 78d | 12/29/97 | 4/6/98 |
| 30 | Testing | 60d | 12/29/97 | 3/23/98 |
| 31 | Report Hole Loggin | 10d | 3/24/98 | 4/6/98 |
| 32 | Shear Wave Velocity T | 121d | 10/1/97 | 3/24/98 |
| 33 | Contract | 1d | 10/1/97 | 10/1/97 |
| 34 | Issue Contract | 1d | 12/12/97 | 12/12/97 |
| 35 | Testing | 60d | 12/15/97 | 3/10/98 |
| 36 | Report Shear Wave | 10d | 3/11/98 | 3/24/98 |
| 37 | Laboratory Sample Tes | 121d | 10/1/97 | 3/24/98 |
| 38 | Contract | 1d | 10/1/97 | 10/1/97 |
| 39 | Issue Contract | 1d | 1/27/98 | 1/27/98 |
| 40 | Testing | 30d | 1/28/98 | 3/10/98 |
| 41 | Report Lab Data | 10d | 3/11/98 | 3/24/98 |
| 42 | Foundation Testing | 111d | 10/1/97 | 3/10/98 |
| 43 | Contract | 1d | 10/1/97 | 10/1/97 |
| 44 | Issue Contract | 1d | 1/27/98 | 1/27/98 |
| 45 | Testing | 20d | 1/28/98 | 2/24/98 |
| 46 | Report Foundation | 10d | 2/25/98 | 3/10/98 |
| 47 | Validation of Site | 10d | 5/20/98 | 6/3/98 |
| 48 | Validate Site | 10d | 5/20/98 | 6/3/98 |
| 49 | Seismic Hazard Review | 20d | 3/25/98 | 4/21/98 |
| 50 | Inferred Fault Study | 20d | 4/22/98 | 5/19/98 |
| 51 | Site Investigation Repo | 65d | 3/11/98 | 6/10/98 |
| 52 | Report | 20d | 3/11/98 | 4/7/98 |



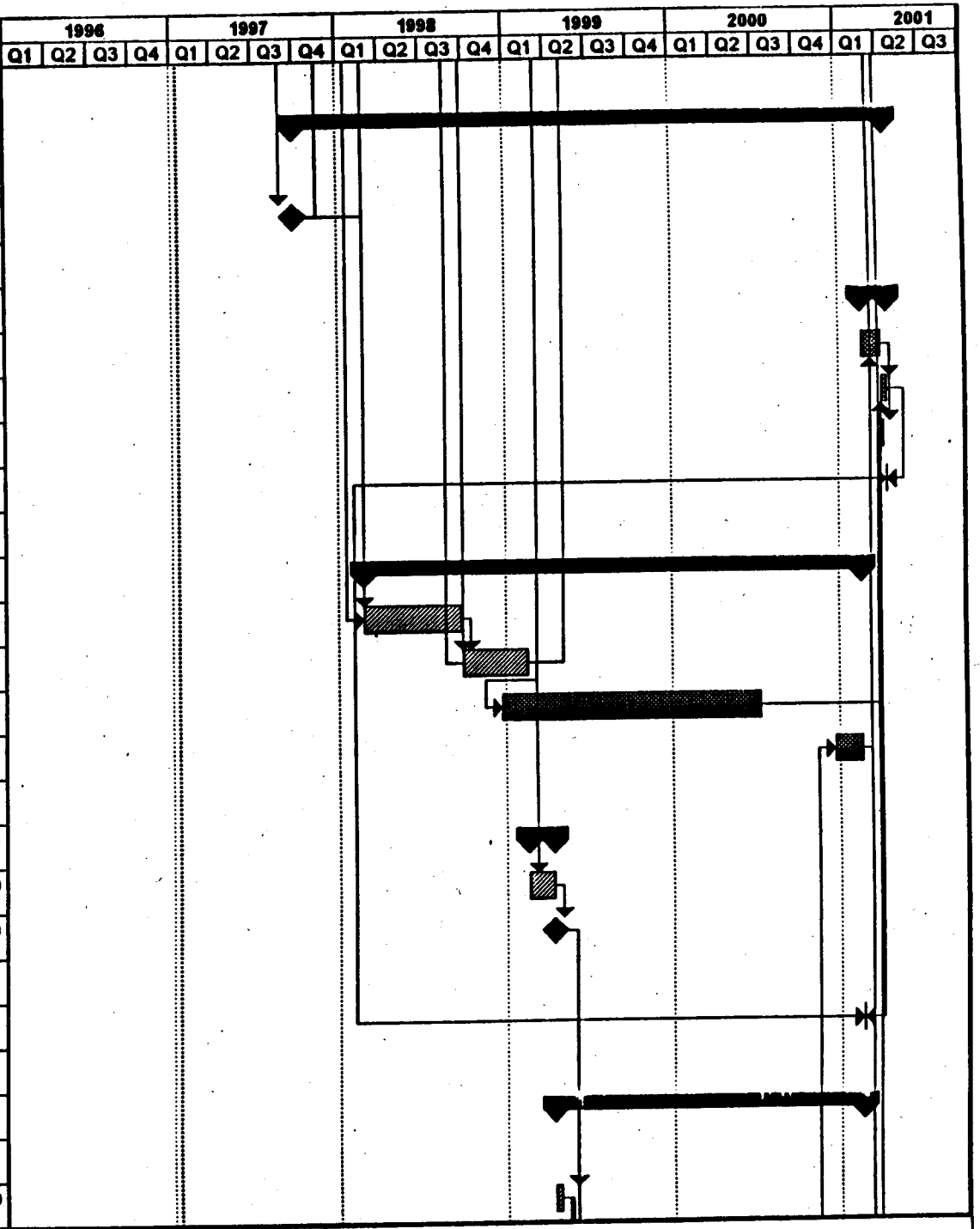
| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 53 | Review | 20d | 4/8/96 | 5/5/96 |
| 54 | Peer Review | 20d | 5/13/96 | 6/10/96 |
| 55 | Design Criteria | 25d | 4/8/96 | 6/12/96 |
| 56 | Design Criteria | 20d | 4/8/96 | 5/5/96 |
| 57 | DNFSB Meet | 5d | 5/6/96 | 5/12/96 |
| 58 | Geotech Admin | 412d | 10/1/96 | 6/14/98 |
| 59 | Admin | 220d | 10/1/96 | 8/12/97 |
| 60 | DNFSB Meet | 1d | 1/27/97 | 1/27/97 |
| 61 | DNFSB Meet | 2d | 5/13/96 | 5/14/96 |
| 62 | | | | |
| 63 | NEPA ROD | 0d | 12/24/96 | 12/24/96 |
| 64 | | | | |
| 65 | PSAR | 584d | 12/13/96 | 4/1/99 |
| 66 | Hazards Classification | 30d | 12/13/96 | 1/27/97 |
| 67 | PSAR | 514d | 1/28/97 | 2/4/99 |
| 68 | PSAR @ Conceptual | 90d | 1/28/97 | 6/3/97 |
| 69 | PSAR @ Title I | 50d | 2/25/98 | 5/5/98 |
| 70 | PSAR @ Title II | 90d | 9/28/98 | 2/4/99 |
| 71 | DOE Review | 40d | 2/5/99 | 4/1/99 |
| 72 | PSAR Approval | 0d | 4/1/99 | 4/1/99 |
| 73 | | | | |
| 74 | Vulnerability Assessment (VA) | 584d | 12/13/96 | 4/1/99 |
| 75 | Threat Classification | 30d | 12/13/96 | 1/27/97 |
| 76 | VA | 514d | 1/28/97 | 2/4/99 |
| 77 | VA @ Conceptual | 90d | 1/28/97 | 6/3/97 |
| 78 | VA @ Title I | 50d | 2/25/96 | 5/5/96 |



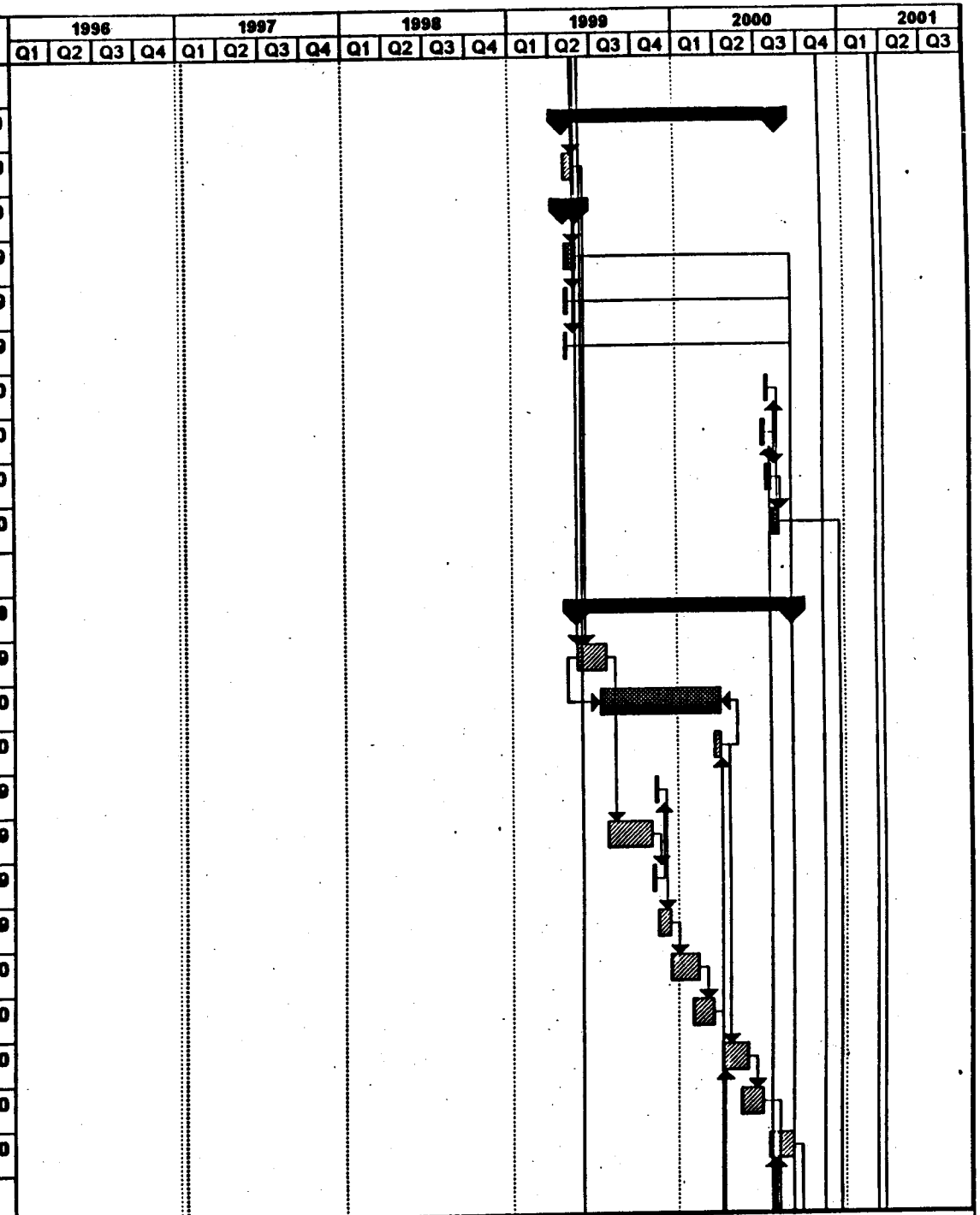
| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 79 | VA@ Title II | 90d | 9/28/98 | 2/4/99 |
| 80 | DOE Review | 40d | 2/5/99 | 4/1/99 |
| 81 | VA Approval | 0d | 4/1/99 | 4/1/99 |
| 82 | | | | |
| 83 | Design Management | 124d | 3/12/97 | 9/4/97 |
| 84 | Design Criteria | 30d | 3/12/97 | 4/22/97 |
| 85 | Solicit A/E Contractor | 30d | 3/12/97 | 4/22/97 |
| 86 | A/E Short List | 20d | 4/23/97 | 5/20/97 |
| 87 | A/E RFP | 40d | 5/28/97 | 7/23/97 |
| 88 | Evaluate A/E Proposals | 30d | 7/24/97 | 9/4/97 |
| 89 | A/E Contract Award | 0d | 9/4/97 | 9/4/97 |
| 90 | | | | |
| 91 | Procedures, Tng. & Start-up | 519d | 2/19/99 | 3/5/01 |
| 92 | Technical Procedures | 40d | 2/19/99 | 4/15/99 |
| 93 | Training Procedures | 20d | 4/16/99 | 5/13/99 |
| 94 | Operator Training | 30d | 5/14/99 | 6/25/99 |
| 95 | Loading Dry Run | 10d | 2/20/01 | 3/5/01 |
| 96 | Initial Spares and Supplies | 1d | 2/19/01 | 2/19/01 |
| 97 | | | | |
| 98 | Operational Readiness Review | 120d | 3/6/01 | 8/22/01 |
| 99 | ORR, RFFO/Corporate | 60d | 3/6/01 | 5/29/01 |
| 100 | ORR, HQ/DNFSB | 60d | 5/30/01 | 8/22/01 |
| 101 | Approval to Load Vault | 0d | 8/22/01 | 8/22/01 |
| 102 | | | | |
| 103 | Program Management | 1065d | 10/1/96 | 12/8/00 |
| 104 | Project Management | 260d | 10/1/96 | 10/8/97 |



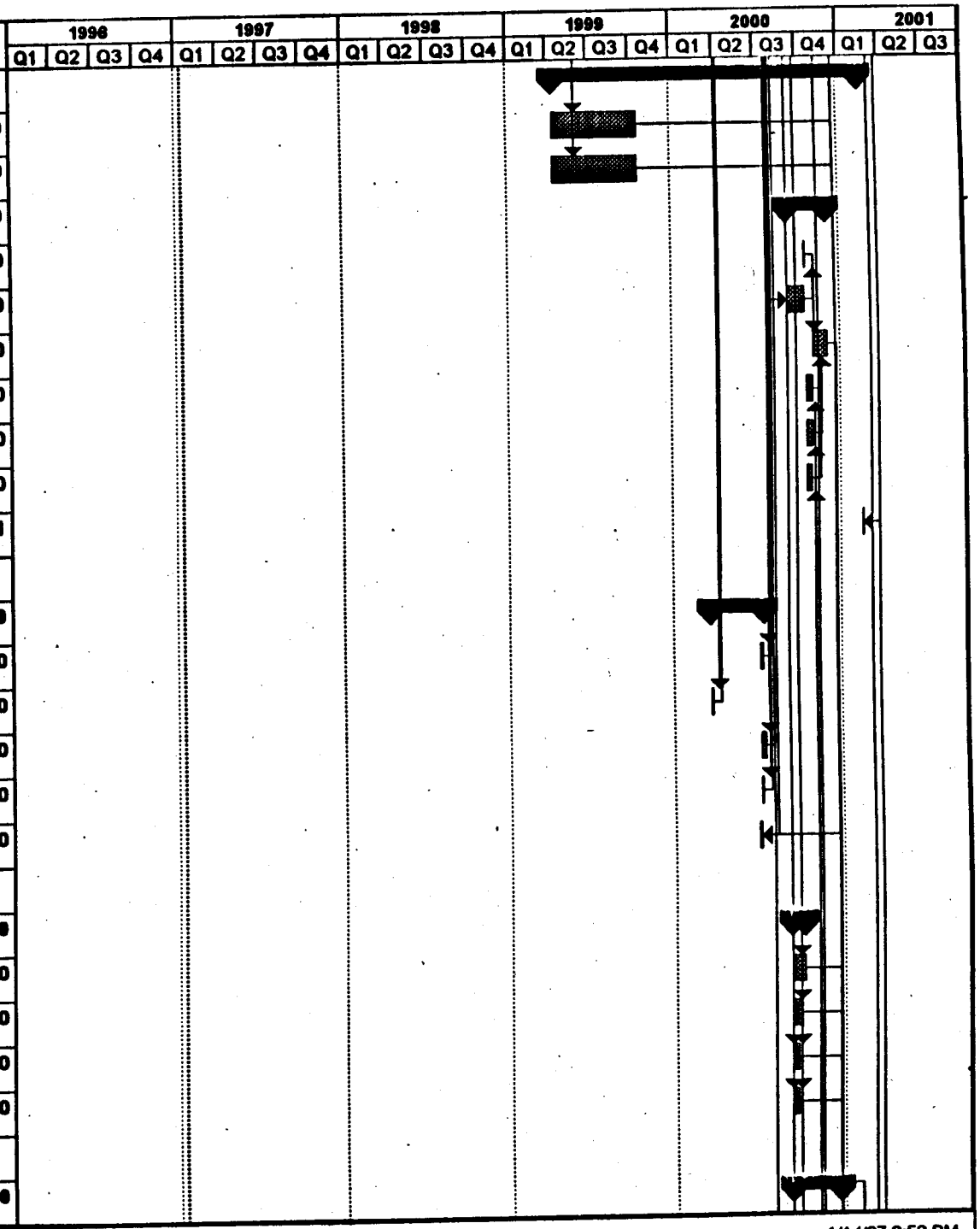
| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 105 | | | | |
| 106 | ISV Capital Activities | 900d | 10/1/97 | 4/16/01 |
| 107 | | | | |
| 108 | FY 96 Funding | 0d | 10/1/97 | 10/1/97 |
| 109 | | | | |
| 110 | Proj Mgt Support | 40d | 2/26/01 | 4/16/01 |
| 111 | Prepare Proj Close Out | 30d | 2/20/01 | 4/2/01 |
| 112 | Account close Out | 10d | 4/3/01 | 4/16/01 |
| 113 | Consolidate Files | 5d | 4/3/01 | 4/9/01 |
| 114 | Project Management | 1d | 4/16/01 | 4/16/01 |
| 115 | | | | |
| 116 | Engineering | 759d | 2/25/98 | 2/19/01 |
| 117 | Title I | 150d | 2/25/98 | 9/25/98 |
| 118 | Title II | 100d | 9/28/98 | 2/18/99 |
| 119 | Title III | 394d | 12/23/98 | 7/11/00 |
| 120 | Final Safety Analysis Report. | 40d | 12/22/00 | 2/19/01 |
| 121 | | | | |
| 122 | Procurement | 40d | 2/19/99 | 4/15/99 |
| 123 | Negotiate Construction Contra | 40d | 2/19/99 | 4/15/99 |
| 124 | Award Fixed Price Contract | 0d | 4/15/99 | 4/15/99 |
| 125 | | | | |
| 126 | Construction Management | 1d | 2/19/01 | 2/19/01 |
| 127 | | | | |
| 128 | Construction | 469d | 4/16/99 | 2/19/01 |
| 129 | | | | |
| 130 | Contractor Mobilization | 10d | 4/16/99 | 4/29/99 |



| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 131 | | | | |
| 132 | Site Preparation | 327d | 4/30/99 | 8/11/00 |
| 133 | Removals | 16d | 4/30/99 | 5/21/99 |
| 134 | Utilities | 18d | 4/30/99 | 5/25/99 |
| 135 | Power | 18d | 4/30/99 | 5/25/99 |
| 136 | Water | 6d | 4/30/99 | 5/7/99 |
| 137 | Sewer | 3d | 4/30/99 | 5/4/99 |
| 138 | Roads | 4d | 7/14/00 | 7/19/00 |
| 139 | Security Berm | 7d | 7/5/00 | 7/13/00 |
| 140 | Fencing | 9d | 7/14/00 | 7/26/00 |
| 141 | Re-vegetation | 12d | 7/27/00 | 8/11/00 |
| 142 | | | | |
| 143 | Structure | 330d | 5/24/99 | 9/7/00 |
| 144 | Excavation | 44d | 5/24/99 | 7/26/99 |
| 145 | De-Water | 185d | 7/13/99 | 4/3/00 |
| 146 | Backfill | 11d | 3/20/00 | 4/3/00 |
| 147 | Select Fill | 4d | 11/11/99 | 11/16/99 |
| 148 | Drilled Piers | 70d | 7/27/99 | 11/2/99 |
| 149 | Foundation Drain | 6d | 11/3/99 | 11/10/99 |
| 150 | Foundation Slab etc. | 20d | 11/15/99 | 12/14/99 |
| 151 | Walls, below grade | 42d | 12/15/99 | 2/14/00 |
| 152 | Charge Deck | 34d | 2/1/00 | 3/17/00 |
| 153 | Walls, above grade | 41d | 4/4/00 | 5/31/00 |
| 154 | Roof Slab | 33d | 5/17/00 | 7/3/00 |
| 155 | Security Features | 39d | 7/17/00 | 9/7/00 |
| 156 | | | | |



| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 157 | Vault | 469d | 4/16/99 | 2/19/01 |
| 158 | Storage Tubes | 130d | 4/16/99 | 10/19/99 |
| 159 | Storage Racks | 130d | 4/16/99 | 10/19/99 |
| 160 | Instrumentation | 60d | 9/5/00 | 12/4/00 |
| 161 | Instruments | 1d | 10/17/00 | 10/17/00 |
| 162 | Wiring | 27d | 9/6/00 | 10/16/00 |
| 163 | DAS | 20d | 11/3/00 | 12/4/00 |
| 164 | IAEA | 10d | 10/20/00 | 11/2/00 |
| 165 | NDA | 10d | 10/20/00 | 11/2/00 |
| 166 | RTR (from 371) | 8d | 10/20/00 | 10/31/00 |
| 167 | Tube Handling System | 1d | 2/19/01 | 2/19/01 |
| 168 | | | | |
| 169 | Interior Finishes | 83d | 3/20/00 | 7/14/00 |
| 170 | Vault Doors | 4d | 7/5/00 | 7/10/00 |
| 171 | Lower Vault Access | 3d | 3/20/00 | 3/22/00 |
| 172 | Concrete Seal | 8d | 7/5/00 | 7/14/00 |
| 173 | Doors | 3d | 7/5/00 | 7/7/00 |
| 174 | Concrete Barrier Door | 2d | 6/30/00 | 7/3/00 |
| 175 | | | | |
| 176 | Mechanical | 20d | 9/8/00 | 10/5/00 |
| 177 | HVAC (vault) | 20d | 9/8/00 | 10/5/00 |
| 178 | HVAC (other) | 15d | 9/8/00 | 9/28/00 |
| 179 | Plumbing | 10d | 9/8/00 | 9/21/00 |
| 180 | Fire Suppression | 10d | 9/8/00 | 9/21/00 |
| 181 | | | | |
| 182 | Electrical | 73d | 9/8/00 | 12/21/00 |



| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 183 | Power | 30d | 9/8/00 | 10/19/00 |
| 184 | Lighting | 20d | 9/8/00 | 10/5/00 |
| 185 | Telephone | 5d | 9/8/00 | 9/14/00 |
| 186 | Alarms | 48d | 10/25/00 | 12/21/00 |
| 187 | Security | 40d | 10/25/00 | 12/21/00 |
| 188 | Criticality | 15d | 10/25/00 | 11/14/00 |
| 189 | Fire | 10d | 10/25/00 | 11/7/00 |
| 190 | SAMS | 10d | 10/25/00 | 11/7/00 |
| 191 | UPS | 3d | 10/20/00 | 10/24/00 |
| 192 | | | | |
| 193 | SO Testing | 40d | 12/22/00 | 2/19/01 |