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ROCKY FLATS SOLAR POND PROJECT

ANALYSIS OF COST AND SCHEDULE IMPACTS OF VARIOUS OPTIONS

FOR THE

REMEDIATION OF THE SOLAR PONDS

FINAL REPORT

Performed by ICF Kaiser Engineers

Under Contract to EG&G Rocky Flats

(Task No 234353GG/MTS No 225456RR)

Volume II of II

March 18, 1993

ICF KAISER ENGINEERS

APPENDIX C
INPUT DATA SHEETS

MAR 1993
RECEIVED
Pondcrete
Project

VERT INPUT FORM

Network: Option 2A, 2B, 2D

Activity Demobilize (Remix)

Probability of Completing This Activity 1.0

Completion Times.

Min	5.5
Max	6.5
Most Likely (Expected)	6.0

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [illegible] **Date.** 3/1/93

VERT INPUT FORM

Network. Option 2A, 2B, and 2D

Activity DOE Approval For HOT Test (Remix)

Probability of Completing This Activity 0.95

Completion Times

Min	0.5
Max	2.5
Most Likely (Expected)	1.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] **Date.** 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Construction

Probability of Completing This Activity 1.0

Completion Times	Min	8.0
	Max	12.0
	Most Likely (Expected)	10.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] Date 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Pump B South

Probability of Completing This Activity 1.0

Completion Times	Min	25
	Max	35
	Most Likely (Expected)	30

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] Date. 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Pump C

Probability of Completing This Activity 1.0

Completion Times

Min	2.5
Max	3.5
Most Likely (Expected)	3.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] Date 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Envir Assessment

Probability of Completing This Activity 1.0

Completion Times	Min	2.0
	Max	4.0
	Most Likely (Expected)	3.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [signature] Date 3/1/93

VERT INPUT FORM

Network. Option 213

Activity DOE Review of EA

Probability of Completing This Activity 1.0

Completion Times	Min	6.0
	Max	10.0
	Most Likely (Expected)	9.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [illegible] **Date** 3/1/93

VERT INPUT FORM

Network. Option 2B

Activity State Review of EA

Probability of Completing This Activity 1.0

Completion Times

Min	0 9
Max	3 0
Most Likely (Expected)	1.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [signature] Date. 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Title II

Probability of Completing This Activity 1.0

Completion Times	Min	2.0
	Max	3 5
	Most Likely (Expected)	2-5

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] Date. 3/1/93

VERT INPUT FORM

Network. option 2B

Activity Procurement

Probability of Completing This Activity 1.0

Completion Times		
	Min	4.0
	Max	5.5
	Most Likely (Expected)	5.17

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] Date 3/1/93

VERT INPUT FORM

Network. option 2A and 2D

Activity Store C Pond Waste

Probability of Completing This Activity 1.0

Completion Times		
	Min	3.0
	Max	5.0
	Most Likely (Expected)	4.0

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer [illegible] **Date.** 3/1/93

VERT INPUT FORM

Network: 4

Activity NEPA

Probability of Completing This Activity 90

Completion Times:

Min: 15

Max: 3

Most Likely: (Expected) 2 10/1/93 - 1/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date:** 3-2-93

#13

VERT INPUT FORM

Network: 4

Activity IRM / IRA

Probability of Completing This Activity 95

Completion Times:

Min: 5.5

Max: 6.5

Most Likely: (Expected) 6.0 " 10/1/93 — 4/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible signature] **Date.** 3-2-93

#176

VERT INPUT FORM

Network: OPTION J EIS

Activity Prepare N

Probability of Completing This Activity 85

Completion Times:

Min: 59

Max: 62

Most Likely: (Expected) 60 10/1/93 — 10/1/98

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

$1500

VERT INPUT FORM

Network: 4

Activity Design (Ponds)

Probability of Completing This Activity 95

Completion Times:

Min: 2.5

Max: 3.5

Most Likely: (Expected) 3.0 3.0 4/1/94 – 7/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: DR Tooth **Date:** 3-1-93

#294

VERT INPUT FORM

Network: 4

Activity Procure Liner

Probability of Completing This Activity 90

Completion Times:

Min: 1.5

Max: 2.5

Most Likely: (Expected) 2 7/1/94 — 9/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-1-93

B 17

VERT INPUT FORM

Network: 4

Activity Lines

Probability of Completing This Activity 95

Completion Times:

Min: 3.25

Max: 5.0

Most Likely: (Expected) 4.6 9/1/94 – 1/15/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-1-93

$4369
146
$4515

VERT INPUT FORM

Network: 4

Activity Test lines

Probability of Completing This Activity 85

Completion Times:

Min: .4

Max: .75

Most Likely (Expected): .5 1/15/95 - 2/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 2- - -2

O cont

VERT INPUT FORM

Network: 4

Activity Pump Pond 3

Probability of Completing This Activity 95

Completion Times:

Min: 2.75

Max: 3.25

Most Likely: (Expected) 3 4/1/95 – 7/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [signature] **Date:** 3-1-93

~~8~~ 770

VERT INPUT FORM

Network: 4

Activity Pump C Pond

Probability of Completing This Activity 95

Completion Times:

Min: 2.75

Max: 3.25

Most Likely: (Expected) 3 7/1/95 – 10/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible] **Date:** 3-1-93

8796

VERT INPUT FORM

Network: 4

Activity Readiness Assessment

Probability of Completing This Activity 95

Completion Times:

Min: 1.75

Max: 3.25

Most Likely: (Expected) 2 7/1/94 – 9/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-1-93

#99

VERT INPUT FORM

Network: 4

Activity Reline Pond A

Probability of Completing This Activity 95

Completion Times:

Min: 5.5

Max: 6.5

Most Likely: (Expected) 6 1/15/95 – 7/5/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: OK Took **Date:** 3-1-93

$2500

VERT INPUT FORM

Network: 4

Activity Demobilize Selected Equip.

Probability of Completing This Activity 95

Completion Times:

Min: 2.5

Max: 4.75

Most Likely (Expected): 4 10/1/93 - 2/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date:** 3-1-93

$300

VERT INPUT FORM

Network: 4

Activity Maintain Equip

Probability of Completing This Activity 98

Completion Times:

Min: 55

Max: 58

Most Likely (Expected) 56 2/1/94 — 10/1/98

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible] **Date:** 3-1-93

$5000

VERT INPUT FORM

Network: 4

Activity Relocate Equip

Probability of Completing This Activity 95

Completion Times:

Min. 1.75

Max: 3.5

Most Likely: (Expected) 3 10/1/98 – 1/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible] **Date.** 3-1-93

$300

VERT INPUT FORM

Network: 4

Activity Procure

Probability of Completing This Activity _____

Completion Times:

Min: _____

Max: _____

Most Likely: (Expected) 1.5 12/1/98 – 1/15/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CK Zook **Date.** 3-2-93

$1,905

VERT INPUT FORM

Network: 4

Activity ERECTION + TITLE III

Probability of Completing This Activity 95

Completion Times:

Min: 2.25

Max: 2.0

Most Likely: (Expected) 2.5 1/15/99 — 4/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

174
174
1368
$1716
+ 118
1834
122
$1956

VERT INPUT FORM

Network: 4

Activity Cold Test (C-Pond)

Probability of Completing This Activity 90

Completion Times:

Min: .9

Max: 1.5

Most Likely: (Expected) 1 4/1/99 – 5/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

1059
1430
2489

VERT INPUT FORM

Network: 4

Activity Cold Test Approved (C-Pond)

Probability of Completing This Activity 90

Completion Times:

Min: .9

Max: 1.5

Most Likely: (Expected) 1 5/1/99 – 6/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

853
1090
#1943

VERT INPUT FORM

Network: 4

Activity Hot Test

Probability of Completing This Activity 90

Completion Times:

Min: 45

Max: 1.0

Most Likely: (Expected) .5 6/1/99 — 6/15/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Pooh **Date:** 3-2-93

757
1022
1779

VERT INPUT FORM

Network: 4

Activity Hot Tes- Approval

Probability of Completing This Activity 90

Completion Times:

Min: .45

Max: 1.0

Most Likely: (Expected) .5 6/15/99 – 7/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: C R Took **Date:** 3-2-93

533
681
1214

VERT INPUT FORM

Network: 4

Activity Waste Treatment (C-Pond Sludge)

Probability of Completing This Activity 95

Completion Times:

Min: 1.70

Max: 1.80

Most Likely: (Expected) 1.75 7/1/99 — 8/20/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Took **Date:** 3-2-93

2412
1100
3512

VERT INPUT FORM

Network: 4

Activity Cold Test (B-Pond Waste)

Probability of Completing This Activity 80

Completion Times:

Min: .25

Max: .50

Most Likely: (Expected) .25 8/20/99 – 9/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Pook **Date:** 3-2-93

75
100
175

VERT INPUT FORM

Network: 4

Activity DOE APPROVAL FOR HOT TEST

Probability of Completing This Activity 90

Completion Times:

Min: .45

Max: 1

Most Likely: (Expected) .5 9/1/99 - 9/15/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

611
853
1464

VERT INPUT FORM

Network: 4

Activity Hot Test (BYOND SLUDGE) & DOE EVALUATION & APPROVAL

Probability of Completing This Activity 95

Completion Times:

Min: .4

Max: .6

Most Likely: (Expected) .5 9/15/99 – 10/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

Test { 573
757
$1330

0.25 Approv { 382
533
2245

VERT INPUT FORM

Network: 4

Activity B Pond Waste Processing

Probability of Completing This Activity 90

Completion Times:

Min: 1.75

Max: 2.5

Most Likely: (Expected) 2 10/1/99 — 12/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

2030
1250
3060

VERT INPUT FORM

Network: 4

Activity Demolition

Probability of Completing This Activity 90

Completion Times:

Min: 5.9

Max: 7

Most Likely: (Expected) 6 12/1/99 – 6/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

2889
6558
9447

VERT INPUT FORM

Network: 4

Activity Ops Readiness

Probability of Completing This Activity 95

Completion Times:

Min: 275

Max: 325

Most Likely: (Expected) 3 1/1/99 – 4/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Pool **Date.** 3-2-93

$246
250
567
212
111
$1386
584
$1970

VERT INPUT FORM

Network: 4

Activity Chlorination

Probability of Completing This Activity 96

Completion Times:

Min: 1.8

Max: 2.2

Most Likely: (Expected) 2 7/1/98 - 9/1/98

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

Ø 49

VERT INPUT FORM

Network: 4

Activity Ops R R. (B pond sludge)

Probability of Completing This Activity 95

Completion Times:

Min: 35

Max: 5

Most Likely: (Expected) 4 5/1/99 — 9/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Pook **Date:** 3-2-93

#246

VERT INPUT FORM

Network: 4

Activity Treatability (Remix)

Probability of Completing This Activity 95

Completion Times:

Min: 15

Max: 18

Most Likely: (Expected) 17 5/1/98 – 10/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

123
3243
336

VERT INPUT FORM

Network: 4

Activity Design Engineering

Probability of Completing This Activity 90

Completion Times:

Min: 5

Max: 7.5

Most Likely: (Expected) 7 10/1/99 — 8/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

1220
9848
11,068

VERT INPUT FORM

Network: 4

Activity Permits & Training

Probability of Completing This Activity 100

Completion Times:

Min: 42

Max: 49

Most Likely: (Expected) 45 5/1/00 – 9/20/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CK Zook **Date:** 3-2-93

#504

VERT INPUT FORM

Network: 4

Activity Erection (Remix)

Probability of Completing This Activity 895

Completion Times:

Min: 90

Max: 115

Most Likely: (Expected) 10.75 9/20/99 — 8/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

319
789
8431
$9539

VERT INPUT FORM

Network: 4

Activity Cold Test (Pond crete) + Substrate

Probability of Completing This Activity 95

Completion Times:

Min: .4

Max: .8

Most Likely: (Expected) 0.5 7/20/00 — 8/10/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: C R Zoobe **Date:** 3-2-93

#1059

VERT INPUT FORM

Network: 4

Activity Cold Test Approval

Probability of Completing This Activity 70

Completion Times:

Min: .5

Max: 1.0

Most Likely: (Expected) .75 8/10/89 - 9/1/89

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Booth **Date:** 3-2-93

1120

VERT INPUT FORM

Network: 4

Activity Pondcrete Slot Test & Approval

Probability of Completing This Activity 95

Completion Times:

Min: .8

Max: 1.5

Most Likely: (Expected) 1 10/1/00-11/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CK Zook **Date:** 3-2-93

$757
533
$1290

VERT INPUT FORM

Network: 1

Activity Pondrette Processing

Probability of Completing This Activity 96

Completion Times:

Min: 15

Max: 35

Most Likely: (Expected) 3 11/1/00 – 2/1/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

~~1472~~
1200
6000
$7200

VERT INPUT FORM

Network: _____

Activity Sand water Hot Test & Approval

Probability of Completing This Activity 90

Completion Times:

Min: 1.2

Max: 1.3

Most Likely: (Expected) 1.25 2/1/01 – 3/20/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

757
533
$1290

VERT INPUT FORM

Network: 4

Activity Saltcrete Processing

Probability of Completing This Activity 95

Completion Times:

Min: .9

Max: 15

Most Likely: (Expected) 1 3/10/01 - 4/10/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: JR Zook **Date:** 3-2-93

850
4000
$4850

VERT INPUT FORM

Network: 4

Activity Procurement

Probability of Completing This Activity 96

Completion Times:

Min: 10

Max: 12.5

Most Likely: (Expected) 12 3/1/99 – 3/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Brook **Date:** 3-2-93

#6875

VERT INPUT FORM

Network: 4

Activity Ops R & R + Procedures

Probability of Completing This Activity 90

Completion Times:

Min: 3.5

Max: 5

Most Likely: (Expected) 4 5/1/00 - 9/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Book **Date:** 3-2-93

246
367
~~613~~
111
724

VERT INPUT FORM

Network: _____

Activity HNUS Project Mgmt

Probability of Completing This Activity 97

Completion Times:

Min: 108

Max: 110

Most Likely: (Expected) 96 10/1/93 — 11/1/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

$14237

VERT INPUT FORM

Network: _____

Activity Tech Support + Program Mgmt

Probability of Completing This Activity 100

Completion Times:

Min: 76

Max: 96

Most Likely: (Expected) 96 10/1/93 - XX/1/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [signature] **Date:** 3-2-93

2184
17382
$19,566

VERT INPUT FORM

Network: 4

Activity Land Ops

Probability of Completing This Activity 90

Completion Times:

Min: 95

Max: 97

Most Likely: (Expected) 96 10/1/93 – 11/1/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

7 × 10,000 = 70000
6000
76,000

VERT INPUT FORM

Network: 4

Activity Demolition Remix

Probability of Completing This Activity 95

Completion Times:

Min: 6.5

Max: 75

Most Likely: (Expected) 7 4/10/01 – 11/1/01

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: C R Zook **Date:** 3-2-92

#2621

VERT INPUT FORM

Network: 4a

Activity NEPA

Probability of Completing This Activity 95

Completion Times.

Min: 1.75

Max. 3.5

Most Likely: (Expected) 3 10/1/98 — 1/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible signature] **Date.** 3-3-93

#13

VERT INPUT FORM

Network: _____

Activity IRM / IRA APPROVAL

Probability of Completing This Activity 90

Completion Times:

Min	5	
Max.	6.5	
Most Likely: (Expected)	6	10/1/93 – 4/1/94

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date.** 3-2-93

$176

VERT INPUT FORM

Network. 4A In-Situ Remediation

Activity HNUS DEMOBILIZATION

Probability of Completing This Activity 95

Completion Times

Min	15		$600
Max	2.5		
Most Likely (Expected)	2	10/1/93 – 12/1/93	

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer CR Zook **Date.** 3-1-93

Cost $600

VERT INPUT FORM

Network: 4a

Activity Title II

Probability of Completing This Activity 95

Completion Times:

Min: 2.8

Max: 3.7

Most Likely: (Expected) 3 4/1/94 — 7/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

#294

VERT INPUT FORM

Network: 4a

Activity Procurement

Probability of Completing This Activity 90

Completion Times:

Min: 1.75

Max: 2.5

Most Likely: (Expected) 2 7/1/94 – 9/1/94

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

#17

VERT INPUT FORM

Network: 4a

Activity Lmer Construction + Title III + Readiness Check

Probability of Completing This Activity 90

Completion Times:

Min: 5.2

Max: 5.7

Most Likely: (Expected) 5.3 7/1/94 — 2/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date:** 3-2-93

146
4369
4515

VERT INPUT FORM

Network: 4a

Activity Pump 207B to 207B Center

Probability of Completing This Activity 95

Completion Times:

Min: 2.75

Max: 3.5

Most Likely: (Expected) 3.0 4-1-95 — 7/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date:** 3-2-95

#770

VERT INPUT FORM

Network: 4a

Activity Pump C Pond to 207 B N

Probability of Completing This Activity 95

Completion Times:

Min: 2.75

Max: 3.25

Most Likely: (Expected) 3 7/1/95 — 10/1/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

$796

VERT INPUT FORM

Network: 4a

Activity Store 207B Sludge in 207B Cavity

Probability of Completing This Activity 95

Completion Times:

Min: 50

Max: 54

Most Likely: (Expected) 52 4-1-95 — 8/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

No cost

VERT INPUT FORM

Network: _____

Activity Store C Pond Sludge in 207B North

Probability of Completing This Activity 95

Completion Times:

Min: 41

Max: 44

Most Likely: (Expected) 42 10/1/95 — 4/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date.** 3-2-93

no cost

VERT INPUT FORM

Network. Aa

Activity a Pond Sludge drying

Probability of Completing This Activity 85

Completion Times

Min	3.5
Max	6
Most Likely (Expected)	4

4/1/99 — 8/1/99

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.** 3-1-93

$2100

VERT INPUT FORM

Network. 4a

Activity A/B Pond sludge drying

Probability of Completing This Activity 85

Completion Times. Min 3.5

Max 6

Most Likely (Expected) 4 8/1/99 – 12/1/99

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook **Date.** 3-1-03

$ 2930

VERT INPUT FORM

Network: 4a

Activity RERA LANDFILL CLOSURE

Probability of Completing This Activity 95

Completion Times:

Min: 9

Max: 14

Most Likely: (Expected) 10 12/1/99 — 10/1/2000

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible signature] **Date:** 3-2-93

0

VERT INPUT FORM

Network. 4a

Activity Process Equipment Rental

Probability of Completing This Activity 100

Completion Times

Min	float	
Max	float	
Most Likely (Expected)	58	4/1/95 — 2/1/2000

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook **Date.** 3-1-93

3271
3271
3271
3271
2181
1636
16901

VERT INPUT FORM

Network. 4a

Activity Prepare In situ EIS

Probability of Completing This Activity 75

Completion Times	Min	58	
	Max	65	
	Most Likely (Expected)	60	10/1/93 – 10/1/98

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CK Zook **Date.** 3-1-93

$1500

VERT INPUT FORM

Network. 4a

Activity Treatability

Probability of Completing This Activity 85

Completion Times

Min	8
Max	9
Most Likely (Expected)	8.5

8/1/96 — 4/15/97

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer. CR Jook **Date.** 3-1-93

125
3243

Cost $3366

VERT INPUT FORM

Network. 4a

Activity Design

Probability of Completing This Activity 90

Completion Times

Min 6.0

Max 7.0

Most Likely (Expected) 6.5 4-15-97 — 11/1/97

Note: Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook **Date.** 3-1-93

1220
+9848
11,068

VERT INPUT FORM

Network. 4a

Activity Permits

Probability of Completing This Activity 85

Completion Times.

Min	25
Max	2.8
Most Likely (Expected)	2.67

11/1/97 — 1/20/98

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [illegible] **Date.** 3-1-93

Zero Cost

VERT INPUT FORM

Network. 4a

Activity Tram Erection Personnel

Probability of Completing This Activity 100

Completion Times: Min: 2

Max 2

Most Likely (Expected) 2 1/20/98 — 3/20/98

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer. CR Zook **Date.** 3-1-93

Zero Cost

VERT INPUT FORM

Network. 4a

Activity Erection + Title III

Probability of Completing This Activity 85

Completion Times

Min	60
Max	9.0
Most Likely (Expected)	8.17 3/20/98 — 12/15/98

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.** 3-1-93

Cost

319
789
8431
9539

VERT INPUT FORM

Network. 4a

Activity Procurement

Probability of Completing This Activity 90

Completion Times	Min	11	
	Max	14	
	Most Likely (Expected)	12	9/1/97 - 9/1/98

Note. Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.**

Cost 9848

VERT INPUT FORM

Network. 4a

Activity Procedures & Documents

Probability of Completing This Activity 95

Completion Times	Min	4.5
	Max	5.5
	Most Likely (Expected)	5

Note Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [illegible] **Date.** 3-1-93

#367

VERT INPUT FORM

Network. 4a

Activity Cold Test

Probability of Completing This Activity 95

Completion Times

Min .9

Max 1.25

Most Likely (Expected) 1 12/15/99 — 1/15/99

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. C R Book Date. 3-1-95

Cost $1059

VERT INPUT FORM

Network. 4a

Activity DOE Approve

Probability of Completing This Activity 95

Completion Times. Min .75

Max 2

Most Likely (Expected) 1 1/15/99 - 2/15/99

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer CR Pooh Date. 3-1-93

#1120

VERT INPUT FORM

Network. 4a

Activity Hot test

Probability of Completing This Activity 85

Completion Times

Min	.4	
Max	.75	
Most Likely (Expected)	.5	2/15/99 – 3/1/99

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Tooh Date. 3-1-93

#757

VERT INPUT FORM

Network. 4a

Activity DOE Evaluation

Probability of Completing This Activity 90

Completion Times

Min	.3	
Max	.5	
Most Likely (Expected)	.3	3/1/99 - 3/10/99

Note. Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [illegible] Date. 8-1-93

#533

VERT INPUT FORM

Network. 4a

Activity Pondcrete Waste Processing

Probability of Completing This Activity 90

Completion Times	**Min**	4.2	
	Max	4.7	
	Most Likely (Expected)	4.3	3/10/99 — 7/20/99

Note Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. [illegible] **Date.** 3-1-93

5770
10082
$15,852

VERT INPUT FORM

Network: 4a

Activity Saltcrete Hot test

Probability of Completing This Activity 90

Completion Times

Min	1.0
Max	2.0
Most Likely (Expected)	1.3

7/20/99 – 10/1/99

Note. Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook **Date.** 3-1-93

#757

VERT INPUT FORM

Network. 4a

Activity Ship Pondcrete

Probability of Completing This Activity 90

Completion Times

Min	2.0	
Max	2.6	
Most Likely (Expected)	2.3	7/20/99 – 10/1/99

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook Date. 9-1-93

#7404

VERT INPUT FORM

Network. 4a

Activity Hot Test Approval

Probability of Completing This Activity 85

Completion Times

Min	.1
Max	.5
Most Likely (Expected)	.25

10/1/99 - 10/7/99

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook Date. 3-1-93

B533

VERT INPUT FORM

Network. 4a

Activity Salt crate processing

Probability of Completing This Activity 90

Completion Times.

Min	1
Max	2
Most Likely (Expected)	1.25

10/7/99 — 11/15/99

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.** 3-1-93

4074
6406
$10,480

VERT INPUT FORM

Network. 4a

Activity Demolisation

Probability of Completing This Activity 85

Completion Times	Min	2.3	
	Max	2.7	
	Most Likely. (Expected)	2.5	11/15/99 – 2/1/00

Note. Do not specify a probability for the Min, Max, or Expected completion times VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.** 3-1-93

#2621

VERT INPUT FORM

Network: 4a

Activity Ship Saltcrete

Probability of Completing This Activity 95

Completion Times:

Min: 2.3

Max: 3.0

Most Likely: (Expected) 2.5 11/15/99 — 3/1/00

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: [illegible] **Date:** 3-2-93

$4400

VERT INPUT FORM

Network: 4a

Activity Readiness Assessment

Probability of Completing This Activity 85

Completion Times:

Min: .25

Max: .4

Most Likely: (Expected) .30 2/1/95 – 2/10/95

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution.

Authorizer: CR Zook **Date:** 3-2-93

#99

VERT INPUT FORM

Network. 4a

Activity Tech Support + Program Management

Probability of Completing This Activity 100

Completion Times

Min		time length of project
Max		
Most Likely. (Expected)	76	10/1/93 – 2/1/00 6 years 4 mon

Note Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: [signature] **Date.** 3-1-93

1911
16191
$ 18,102

VERT INPUT FORM

Network. 4a

Activity Pad Ops

Probability of Completing This Activity time dependent

Completion Times

Min	_____	depends on Critical path
Max·	_____	
Most Likely· (Expected)	64	10/1/93 – 2/1/10

Note: Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer: CR Zook **Date.** 3-1-93

100
100
10 000
10 000
10 000
10 000
10000
8000
6000
64200

VERT INPUT FORM

Network. 4a

Activity Operations Readiness Review + Training

Probability of Completing This Activity 85

Completion Times

Min	2.5	
Max	3.0	
Most Likely (Expected)	2.75	9/20/98 — 12/15/98

Note. Do not specify a probability for the Min, Max, or Expected completion times. VERT automatically assumes a distribution around the expected using the Min, and Max as the tail of the distribution

Authorizer. CR Zook Date. 3-1-93

$504
246.00
111
$861

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title Option 1 (2A Liners)

Activity (NODE). Title III Design

Planned Schedule Start Date/End Date 3/1/94 – 9/1/94 Duration (Mo) 6 mo

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

98% probability of completion within the planned time duration

98% Probability of completion by the scheduled end date

95% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
6 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

7 Months @ 99 % Probability of completing within that time

Information provided by C R ZOOK (Name) Date 2-1-93

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. OPTION 1 (2A) (New Solar Pond Liners)

Activity (NODE). TITLE II DESIGN

Planned Schedule. Start Date/End Date 10/1/93 - 1/1/94 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start 10/1/93

End 2/1/94 Duration 3

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

90 % probability of completion within the planned time duration

90 % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 99 % Probability of completing within that time

Information provided by AR Zook (Name) Date 2-7-93

_____ (Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. OPTION 1 (2A Pond lines

Activity (NODE). PROCUREMENT

Planned Schedule. Start Date/End Date 1/1/94 - 3/1/94 Duration (Mo) 3

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

95 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

98 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

3 Months @ 99 % Probability of completing within that time

Information provided by CR Zook Date 2-7-93
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title OPTION 1 (2A) (New Solar Pond Liners)

Activity (NODE). TITLE II DESIGN

Planned Schedule Start Date/End Date 4/1/95 - 7/1/95 Duration (Mo) 3

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

90 % probability of completion within the planned time duration

90 % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 99 % Probability of completing within that time

Information provided by AR Zook Date 2-7-93
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title OPTION 1 (2A Pond lines

Activity (NODE) PROCUREMENT

Planned Schedule Start Date/End Date 1/1/94 - 3/1/94 Duration (Mo) 3

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

95 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

98 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

3 Months @ 99 % Probability of completing within that time

Information provided by CR Zook Date 2-7-93
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title Option 1 (2A liners)

Activity (NODE). LINER CONSTRUCTION

Planned Schedule Start Date/End Date 3/1/94 – 8/1/94 Duration (Mo) 5

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates,[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

_____% probability of completion within the planned time duration

_____% Probability of completion by the scheduled end date

_____% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
_____ Months _____ % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

_____ Months @ _____ % Probability of completing within that time

Information provided by _____ Date _____
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title Option 1 (2 Liners)

Activity (NODE). Title III Design

Planned Schedule Start Date/End Date 3/1/94 – 9/1/94 Duration (Mo) 6 mo

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

98% probability of completion within the planned time duration

98% Probability of completion by the scheduled end date

95% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
6 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

7 Months @ 99 % Probability of completing within that time

Information provided by C R Zook Date 2-1-93
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. OPTION 1 (2A)

Activity (NODE). C-POND PROCUREMENT

Planned Schedule Start Date/End Date 10/1/97 - 12/1/97 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

HNUS MAY NOT BE INV
EVEN SO WE ARE ASSUMI
that equip is available
4 years in the future.

Probability of Completion.

80 % probability of completion within the planned time duration

80 % Probability of completion by the scheduled end date

95 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 80 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

6 Months @ 98 % Probability of completing within that time

Information provided by _____ Date _____
(Name)

(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. OPTION 1

Activity (NODE). OPOND ERECTION

Planned Schedule Start Date/End Date 12/1/97 — 2/1/98 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

80% probability of completion within the planned time duration

90 % Probability of completion by the scheduled end date

80 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 80 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 95 % Probability of completing within that time

Information provided by Zook Date 2-8-93
(Name)

_____
(Signature)

The existing equip may need upgrade after sitting 4 years.

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. OPTION 1

Activity (NODE) DEMOBILIZATION – DUAL EQUIP FOR A/B

Planned Schedule Start Date/End Date 11/1/98 – 1/1/98 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start 11/1/98

End 2/1/98 Duration 3

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bands +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

_____% probability of completion within the planned time duration

_____% Probability of completion by the scheduled end date

_____% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1.5 Months 80 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 95 % Probability of completing within that time

Information provided by Zook Date 2-8-93
(Name)

_____
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title C-POND BASELINE

Activity (NODE). Tram Erection Personnel

Planned Schedule Start Date/End Date 1/15/94 – 3/1/94 Duration (Mo) 1 1/2

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on 1/15/94 Date

Budget/Estimates.[1] $ 360 (Approved or Estimated)

Bounds + 10 %, - 0 %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

98 % probability of completion within the planned time duration

98 % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

2 Months @ 100 % Probability of completing within that time

Information provided by CR Zook (Name) Date 2-6-93

CR Zook (Signature)

Based of cost estimate and my experience.

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title C-POND BASELINE

Activity (NODE). Procurement -

Planned Schedule Start Date/End Date 11/20/93 → 1/20/93 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $ 2078 + 63% (Approved or Estimated) does not reflect Project or escalate

Bounds + 10 %, - 0 %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

90 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

95 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1.5 Months 85 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

2.0 Months @ 100 % Probability of completing within that time

Information provided by _____ Date _____
(Name)

_____
(Signature)

Taken from schedule - and CZ experience

INPUT DATA FORM
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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title C-Pond Base Line

Activity (NODE). Erection (This is 75 to 80% complete at Start)

Planned Schedule Start Date/End Date 2/1/94 - 4/1/94 Duration (Mo) 2

Is this a reasonable schedule? yes If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, 75 % Completed

_____ Not started, Forecast to start on 2-1-94 Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

95 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

95 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

3 Months @ 98 % Probability of completing within that time

Information provided by CK Zook (Name) Date 2-6-93

_____ (Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title C Pond Baseline

Activity (NODE). Obtain Doe Waivers

Planned Schedule Start Date/End Date 1/15/94 - 4/1/94 Duration (Mo) 1

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

98 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

98 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

2 Months @ 95 % Probability of completing within that time

Information provided by CR Good Date 2-6-93
(Name)

_____
(Signature)

INPUT DATA FORM
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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title C-Pond

Activity (NODE). Demobilization Avail. equipment for A/B-

Planned Schedule Start Date/End Date 11/1/94 – 3/1/95 Duration (Mo) 3

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

100 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date
DEPENDENT ON C-POND TREATMENT SCHE

98 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 98 % Probability of completing within that time

Information provided by CR Zook Date 2-6-93
(Name)

_____
(Signature)

INPUT DATA FORM
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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. C-POND

Activity (NODE). COMPLETE DEMOBILIZATION

Planned Schedule Start Date/End Date 3/1/95-5/1/95 Duration (Mo) 2

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

95 % probability of completion within the planned time duration

90 % Probability of completion by the scheduled end date

93 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1.5 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 99 % Probability of completing within that time

Information provided by CR Zook Date 2-6-93
(Name)

_____
(Signature)

INPUT DATA FORM
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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title A/B Pond

Activity (NODE) Design / Engineering

Planned Schedule Start Date/End Date 10/1/94 – 3/1/94 Duration (Mo) 4

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

95% probability of completion within the planned time duration

95% Probability of completion by the scheduled end date

95% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3.5 Months 93 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

5 Months @ 98 % Probability of completing within that time

Information provided by CK Zook Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. A/B Process

Activity (NODE). Phase I Erection

Planned Schedule Start Date/End Date 5/1/94-8-1-94 Duration (Mo) 4

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

95 % probability of completion within the planned time duration

93 % Probability of completion by the scheduled end date

93 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3.5 Months 93 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

6 Months @ 99 % Probability of completing within that time

Information provided by CK Zook Date 2-6-93
(Name)

_____
(Signature)

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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title A/B Pond

Activity (NODE). Phase II Erection

Planned Schedule Start Date/End Date 3/1/95 — 4/1/95 Duration (Mo) 1

Is this a reasonable schedule? no If not, what is a reasonable schedule Start 1-1-95

End 4-1-95 Duration 3 month

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

90 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

97 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

4 Months @ 99 % Probability of completing within that time

Information provided by _____ Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. A/B Pond

Activity (NODE). EQUIP DEMOBILIZATION

Planned Schedule Start Date/End Date 11/1/95 – 5/1/96 Duration (Mo) 5

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

98 % probability of completion within the planned time duration

98 % Probability of completion by the scheduled end date

98 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
4 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

6 Months @ 99 % Probability of completing within that time.

Information provided by DR Zook Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE) TREATABILITY

Planned Schedule Start Date/End Date 3/1/96 – 11/1/98 Duration (Mo) 10

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

98 % probability of completion within the planned time duration

97 % Probability of completion by the scheduled end date

95 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
8 Months 95 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

12 Months @ 99 % Probability of completing within that time

Information provided by CR Good (Name) Date 2-6-93

_____ (Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE). DESIGN / ENGINEERING

Planned Schedule Start Date/End Date 11/1/96 — 6/1/97 Duration (Mo) 7

Is this a reasonable schedule? yes If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates [1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

95 % probability of completion within the planned time duration

95 % Probability of completion by the scheduled end date

93 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
6 Months 93 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

9 Months @ 98 % Probability of completing within that time

Information provided by CR ZOOK Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE). PERMITS

Planned Schedule Start Date/End Date 6/1/93 — 9/1/93 Duration (Mo) 3

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

* 93 % probability of completion within the planned time duration

* 93 % Probability of completion by the scheduled end date

* 97 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

* 2.5 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

* 6 Months @ 99 % Probability of completing within that time

Information provided by CR Zook (Name) Date 2-6-93

_____ (Signature)

This is a wild guess! I believe this can start earlier and/or could be later

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ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE) PROCUREMENT

Planned Schedule. Start Date/End Date 9/1/97 — 8/15/98 Duration (Mo) 11.5

Is this a reasonable schedule? If not, what is a reasonable schedule would start earlier with risk Start 4/1/97

End 8/15/98 Duration 15 mo

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

95% probability of completion within the planned time duration

95% Probability of completion by the scheduled end date

95% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
11 Months 92 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

18 Months @ 99 % Probability of completing within that time

Information provided by CR Zook (Name) Date 2-6-93

_____ (Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE). TRAIN ERECTION PERSONNEL

Planned Schedule. Start Date/End Date 2/15/98 — 3/20/98 Duration (Mo) 1

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

99 % probability of completion within the planned time duration

99 % Probability of completion by the scheduled end date

99 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
.5 Months 98 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

2 Months @ 100 % Probability of completing within that time

Information provided by CK Zook Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE) ERECTION

Planned Schedule Start Date/End Date 4/1/98 — 5/1/99 Duration (Mo) 12

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion

98% probability of completion within the planned time duration

96% Probability of completion by the scheduled end date

95% Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
10 Months 92 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

16 Months @ 99% Probability of completing within that time

Information provided by CK Zook Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX

Activity (NODE). DEMOBILIZATION

Planned Schedule Start Date/End Date 2/1/00 – 8/1/2000 Duration (Mo) 7

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

96 % probability of completion within the planned time duration

96 % Probability of completion by the scheduled end date

96 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
6 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

8 Months @ 98 % Probability of completing within that time

Information provided by CR ZOOK Date 2-6-93
(Name)

_____
(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Delisting Pondcrete

Activity (NODE).

Planned Schedule. Start Date/End Date 1/4/93 - 2/6/95 Duration (Mo) 25

Is this a reasonable schedule? If not, what is a reasonable schedule Start Yes

End _____ Duration _____

Current Status. _____ Started on 1/4/93 Date, — % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ 340 K (Approved or Estimated)

Bounds + 20K %, - 20K %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

75 % probability of completion within the planned time duration

75 % Probability of completion by the scheduled end date

75 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
25 Months 75 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

_____ Months @ _____ % Probability of completing within that time.

Information provided by [signature] (Name) Date 1/27/93

_____ (Signature)

Bob James - EG&G

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Closure -

Activity (NODE). Phase I RFI/RI Report

Planned Schedule. Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

85 % probability of completion within the planned time duration

80 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

TBD for all

Max and Mins

What is the estimated least time (duration) required to complete this activity as scheduled Months 90% % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

as scheduled + 6 months Months @ 95% % Probability of completing within that time

Information provided by Rand [illegible] (Name) Date 12/4/93

[illegible] (Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title Closure

Activity (NODE). Phase I Final IM/IRA Decision Doc

Planned Schedule Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

85 % probability of completion within the planned time duration

65 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity as scheduled Months 85% % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity as scheduled + 12 months Months @ 95% % Probability of completing within that time

Information provided by R. Ogg (Name) Date 2/4/93

(Signature)

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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Closure

Activity (NODE). Phase I Design Work Plan

Planned Schedule. Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

85 % probability of completion within the planned time duration

70 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

as scheduled Months 85 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

as scheduled + 6 months Months @ 90 % Probability of completing within that time

Information provided by R. Osg (Name) Date 2/4/93

(Signature)

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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Closure

Activity (NODE). Phase I Into II

Planned Schedule. Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

85 % probability of completion within the planned time duration.

70 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

As scheduled Months 85 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

as scheduled + 6 months Months @ 90 % Probability of completing within that time

Information provided by R. Ogg (Name) Date 2/4/93

(Signature)

INPUT DATA FORM
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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Closure

Activity (NODE). Phase I IM/IRA Construction

Planned Schedule. Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

65 % probability of completion within the planned time duration.

20 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity as scheduled Months 65 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

as scheduled +12 months Months @ 95 % Probability of completing within that time

Information provided by R Oss (Name) Date 2/4/93

(Signature)

INPUT DATA FORM
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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Closure

Activity (NODE). Phase I Procurement

Planned Schedule. Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

20 % probability of completion within the planned time duration.

5 % Probability of completion by the scheduled end date

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

as scheduled + 2 months Months 25 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

as scheduled + 12 months Months @ 60% % Probability of completing within that time.

Information provided by R. Ogg (Name) Date 2/4/93

(Signature)

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. 1, 2A, 2B, 2C, 3

Activity (NODE). RCRA Storage - Mod to Part B

Planned Schedule. Start Date/End Date see schedule Duration (Mo) 1.5 yrs

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date,_____% Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ 200K (Approved or Estimated)

Bounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

assume tech requirements are met

100 % probability of completion within the planned time duration.

100 % Probability of completion by the scheduled end date

100 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
1yr Months 50 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

1.5 yrs Months @ 100 % Probability of completing within that time

Information provided by B. Bruninga (Name) Date 2/5/93

(Signature)

(1) - pad/tent storage
(2A) - relining of ponds for storage
(2B,C) - modular tank storage
(3) - drum storage for dry sludge

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for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Option 4

Activity (NODE). RCRA Permitting - Landfill

Planned Schedule Start Date/End Date — Duration (Mo) 5 years

Is this a reasonable schedule? If not, what is a reasonable schedule Start _____

End — Duration _____

Current Status _____ Started on — Date, _____ % Completed

X Not started, Forecast to start on — Date

Budget/Estimates [1] $ — (Approved or Estimated)

Bounds + — %, - — %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

50 % probability of completion within the planned time duration

50 % Probability of completion by the scheduled end date

50 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3.5 yrs Months 25 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

8 years Months @ 90% % Probability of completing within that time

Information provided by B. Bruenger (Name) Date 2/5

(Signature)

per Telecon

INPUT DATA FORM
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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. Option 3

Activity (NODE). RCRA Dormant of Evaporator - F039

Planned Schedule. Start Date/End Date Initiate within next 6 months Duration (Mo) 9 months

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

X Not started, Forecast to start on 1-6 months Date

Budget/Estimates.[1] $ 100K (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

80 % probability of completion within the planned time duration.

100 % Probability of completion by the scheduled end date

100 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
7 Months 50 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

15 Months @ 100 % Probability of completing within that time.

Information provided by Bill Bruninga Date 8/5
(Name)

(Signature)

for Zelcan

INPUT TO DISPOSAL NODE

Option No 1, 2A, B, C, D, 3 Title Disposal Hanford 1997

Disposal Site Hanford

Probability of Beginning of Disposal by 997

Regardless of the disposal option, the probability of being able to begin disposal by 1997 is dependent on four variables

1 Probability of delisting of waste stream being approved 25% %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 90 %

3 Probability of Rocky Flats application being approved 90 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 50 %.
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be two data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by: MMO / mtg w/ P. Aguilar Date 2/6/93

May not want to go that fast route; cost constraints
Program highly likely to change to NTS. Changes will probably
take place; significance is not known

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No 1,2A,B,C,D,3 Title Disposal Hanford 1994

Disposal Site HMT021

Probability of Beginning of Disposal by 1994

Regardless of the disposal option, the probability of being able to begin disposal by 1994 is dependent on four variables

1 Probability of delisting of waste stream being approved 0 %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases. wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 25 %

3 Probability of Rocky Flats application being approved 50 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 80 %.
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be <u>two</u> data sheets per disposal option. One for the waste delisted case and one for the waste not delisted case

Prepared by: UAO/Mg w/ cp Aguilar Date 2/6/93

☆ Application Process → Generator Status; currently have a small generator status apply to ship.

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No 1, 2A, B, C, D, 3 Title NTS - Disposal 1997

Disposal Site NTS

Probability of Beginning of Disposal by 1997

Regardless of the disposal option, the probability of being able to begin disposal by 1997 is dependent on four variables·

1 Probability of delisting of waste stream being approved 12% %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases: wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 80 %

3 Probability of Rocky Flats application being approved 90 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 50 %.
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be <u>two</u> data sheets per disposal option· One for the waste delisted case and one for the waste not delisted case

Prepared by MAO/mt w/ P. Aguilar Date· 2/6/93

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No 1,2A,B,C,D,3 Title NTS Disposal 1994

Disposal Site NTS

Probability of Beginning of Disposal by 1994

Regardless of the disposal option, the probability of being able to begin disposal by 1994 is dependent on four variables

1 Probability of delisting of waste stream being approved 0 %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 70 %

3 Probability of Rocky Flats application being approved 10 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 90 %
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be <u>two</u> data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by MAC/mt w/ D. Aguilar Date 8/6/93

Delisting not expected to be comp until 2/95, therefore no chart for delisting.

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No In-Site Title In-Site - Full CERCLA Storage

Disposal Site _____

Probability of Beginning of Disposal by 94, 97

Regardless of the disposal option, the probability of being able to begin disposal by _____ is dependent on four variables

1 Probability of delisting of waste stream being approved _____ %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) _____ %

3 Probability of Rocky Flats application being approved _____ %

4 Probability of Waste Acceptance Criteria (WAC) not changing _____ %
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be <u>two</u> data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by MRD/mfw/D Aguilar Date 2/6/93

Rocky - not a disposal site, highly unlikely this will take place

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No. 1, 2A, B, C, 3 Title. Enviro Care -

Disposal Site Enviro Care

Probability of Beginning of Disposal by 1997

Regardless of the disposal option, the probability of being able to begin disposal by 1997 is dependent on four variables:

1 Probability of delisting of waste stream being approved 75 %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases: wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 90 %

3 Probability of Rocky Flats application being approved 90 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 50 %.
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be two data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by: MAO / Mtg w/ P. Aguilar Date: 2/6/93

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No 1,2A,B,C,D,B Title EnviroCare 1994/

Disposal Site Envirocare

Probability of Beginning of Disposal by 1994

Regardless of the disposal option, the probability of being able to begin disposal by 1994/ is dependent on four variables.

1 Probability of delisting of waste stream being approved 0% %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases: wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 20 %

3 Probabil of Rocky Flats application being approved 50 %.

4 Probability of Waste Acceptance Criteria (WAC) not changing 90 %
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be two data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by: MAO/Mtg w/ D. Aquilar Date: 2/6/93

Many issue to resolve with EnviroCare
Application process - form + documents, SAA plan.
Paperwork less than DOE System. Liability issues needs
to be addressed. Plutonium contam. waste - handling
is an issue. PU 239 approval needed by EnviroCare

POD/05397-002-00/02/02/93

Don't have necessary protect. clothes, no equipment
to detect alpha, lack of procedures, etc. Program
currently not adequate.

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. All but 6

Activity (NODE). Disposal Commercial Site

Planned Schedule Start Date/End Date 10/94 Duration (Mo) N/A

Is this a reasonable schedule? If not, what is a reasonable schedule Start 8/95 - 70%

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates [1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of ~~Completion~~ STARTING.

20 % probability of ~~completion within~~ STARTING BY the planned time ~~duration~~ (10/94)

70 % Probability of completion by the scheduled ~~end~~ REASONABLE date (8/95)

_____ % Probability of completion within budget/estimate

Max and Mins

What is the estimated ~~least time (duration) required to complete~~ EARLIEST START OF this activity

10/94 ~~Months~~ 20 % Probability of success

What is the "Worst Case Estimate" of ~~time (duration) required to complete~~ START DATE FOR this activity

10/96 ~~Months @~~ 90 % Probability of ~~completing~~ STARTING within that time

Information provided by Don Ferrier Date 2/16/93

(Name)

_____

(Signature)

INPUT TO DISPOSAL NODE

Option No ALL BUT ~~8~~ 4 Title DISPOSAL — NOT DELISTED

Disposal Site COMMERCIAL - ENVIRO CARE

Probability of Beginning of Disposal by 8/95

Regardless of the disposal option, the probability of being able to begin disposal by 8/95 is dependent on four variables

1 Probability of delisting of waste stream being approved 10 %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 90 %

3 Probability of Rocky Flats application being approved 90 %

4 Probability of Waste Acceptance Criteria (WAC) not changing 90 %
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be two data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by [signature] Date 2/16/93

POD/05397-002-00/02/02/93

INPUT TO DISPOSAL NODE

Option No All but Title Disposal - Delisted

Disposal Site Envirocare

Probability of Beginning of Disposal by 8/95

Regardless of the disposal option, the probability of being able to begin disposal by 8/95 is dependent on four variables

1 Probability of delisting of waste stream being approved 10 %
(Approval by the date wastes are ready to be shipped)

If the delisting petition is approved by the proposed date then the probability of the NTS disposal site being available goes to 1 0 The effect of delisting on the availability of other sites is case by case

Probability for variables 2, 3, and 4 are established for two cases wastes delisted, wastes not delisted

2 Probability of site being available (operating permits approved, capacity availability) 90 %

3 Probability of Rocky Flats application being approved 90 %

4 Probability of Waste Acceptance Criteria (WAC) not changing 50 %
(If the WAC changes then the probability of an available site is reduced)

Thus, for any chosen disposal date there will be two data sheets per disposal option One for the waste delisted case and one for the waste not delisted case

Prepared by [signature] Date 2/17/93

POD/05397-002-00/02/02/93

BASIS FOR ASSIGNED PROBABILITY
FOR RCRA STORAGE OF PRODUCT

Q What is the probability of having sufficient space/facilities available to store end product

1 For C-Pond by 06/94 95 %

2 For A/B Pond by 06/95 80 % 100% IF REPOSITORY OPENS
~~60%~~ IF NEW STORAGE NEEDED

3 For Remix by 06/96 80 %

Factors affecting probability

1 Space - does waste pile approval free-up more space ? Not A lot - maybe 1.
so therefore its boss for procedure ... → forestall an NOV

2 Availability of disposal - if wastes can't be shipped beginning in late '94 will there be storage space for A/B pond and/or remix?
NOT WITHOUT A NEW / RO / ZNT

3 Does change in disposal requirement impact storage needs (less/more volume of end product) ?

4 Will other ongoing plant operations use of space reserved for C-Pond ½ crates?

Q What is the cost of

1 Achieving RCRA compliance storage by 06/94?

- w/o waste pile approval $_____
- w/ wastepile approval $_____

2 Costs for providing full RCRA storage for C-Pond ~~to~~ + A/B Pond processed wastes

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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. C-POND BASELINE

Activity (NODE). SO TEST (INCLUDES APPROVALS)

Planned Schedule. Start Date/End Date 4/1/94 - 7/10/94 Duration (Mo) _____

Is this a reasonable schedule? YES If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

.50 % probability of completion within the planned time duration

.50 % Probability of completion by the scheduled end date

.85 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity
~~2~~ 6 Months @ 90 % Probability of completing within that time

Information provided by S. KEITH Date 1-27-93
(Name)
S Keith
(Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. A-B BASELINE

Activity (NODE). 50TEST (INCLUDES APPROVALS)

Planned Schedule. Start Date/End Date 4/1/95 - 7/15/95 Duration (Mo)_____

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date, 0 % Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

ounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

50 % probability of completion within the planned time duration

50 % Probability of completion by the scheduled end date

85 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
2 Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

6 Months @ 90 % Probability of completing within that time.

Information provided by: S KEITH (Name) Date 1-27-93

S Keith (Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. REMIX BASELINE

Activity (NODE). SO TEST (INCLUDES APPROVALS)

Planned Schedule. Start Date/End Date ~~11/93 11/95~~ Duration (Mo)_____

Is this a reasonable schedule? If not, what is a reasonable schedule Start_____

End_____ Duration _____

Current Status. _____Started on _____ Date, 0 % Completed

_____Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

ounds +_____%; - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

50 % probability of completion within the planned time duration

50 % Probability of completion by the scheduled end date

85 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3 Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity
7 Months @ 90 % Probability of completing within that time.

Information provided by S KEITH Date 1-27-93
(Name)

S Keith
(Signature)

C-POND
A-B POND
REMIX

BASIS FOR ASSIGNED PROBABILITY

START SO TEST THROUGH COMPLETE SO

Q What is the probability of completing SO testing in _____ days

Factors

- Operating procedures approved .95
- Operating personnel trained/available .9
- Security issues addressed/resolved .9
- SO test plan approval .95
- Spare parts availability .85
- Maintenance availability .8 (HALIBURTON NOT TASKED TO MAINTAIN, TRY TO GET IMMEDIATE MOD)
- RPT availability .8
- Permits (plant) .9
- Weather impacts (NONE) 8
- Plant emergency impacts .7
- H & S violations/shutdowns/accidents .75
- Labor related work stoppage .70
- Supplies .85
- Waste disposal (operative wastes) .9
- Utility interruptions .85
- HOT ~~START~~ TEST APPROVAL .5
- ~~TREATMENT~~ OPERATIONS APPROVAL .75 (DEFENSE BOARD MAY REVIEW)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. C-TRAIN BASELINE

Activity (NODE). TREATMENT

Planned Schedule. Start Date/End Date 7/10/94 – 10/20/94 Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start 1 MONTH EARLIER START FOR COLD WEATHER

End 1 MONTH EARLIER Duration OK

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated) PROPOSAL 10 7M – A/B/C PONDS

unds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

55% 50 % probability of completion within the planned time duration

PER SIEJE KEIPP 2/12/93 70 % Probability of completion by the scheduled end date

(60) % Probability of completion within budget/estimate BUDGET NOT KNOWN BY HNUS RK

BASED ON PROPOSAL

Max and Mins

What is the estimated least time (duration) required to complete this activity 2 Months 10 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

120 (55) ~~Months~~ DAYS (MO) @ 95 % Probability of completing within that time

Information provided by Ted Bittner (Name) Date 1-27-93

Ted Bittner (Signature)

BRAD ALLEN HNUS

C POND

BASIS FOR ASSIGNED PROBABILITY

START TREATMENT TO COMPLETE TREATMENT CHAIN

Q What is the probability of the Pond Sludge Processing being completed in four months?

Factors Affecting Probability of Success

70 • Weather delays (rain, late or early freezes, etc)

30 • Mechanical failures (availability of spare parts and maintenance staff)

40 • Work stoppers (strikes, H/S violations, job disputes)

— • Staff turnover

— • Sufficient labor force

— • Delays in delivery of additives or supplies

10 • Spills (process)

10 • Accidents

2 • Security

1 • Plant emergencies

0 • Loss of funds

30 • QA acceptance of product/PROCESS

70 16 • PRODUCTIVITY

340

67
+ 34
101 DAYS REQ'D

HAVE 90 DAYS

- NEED 67 WORKING DAYS = 14 WKS
- EXPECT 6 WIND DAYS (100%)
- " 1 COLD WEATHER DAY (50%)
- RAIN - NO DELAY

- MECHANICAL 8 DAYS FAIL / 7 DAYS RUST
- STOPPAGES 2 EVENTS / 2 DAYS EACH
- SPILLS 1 DAY ENTIRE SCHEDULE

PRODUCTIVITY 1 DAY / WK WILL NOT GET 3RD RUN } DOUBLE SHIFT
(9 DAYS AT 2/3 PRODUCTION) => 6 DAYS
1 DAY FOR ENTIRE PROCESS PERIOD WHERE 1 BATCH WON'T BE PROCESSED

17

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title A-B BASELINE

Activity (NODE). TREATMENT

Planned Schedule. Start Date/End Date 7/1/93 - 11/1/93 Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule Start 1 MONTH EARLIER START

End 1 MONTH EARLIER Duration _____

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $_____ (Approved or Estimated)

ounds +_____%, - _____%

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

FS 73 1st STEVE KC 2/22/93 ~~40~~ % probability of completion within the planned time duration

~~40~~ % Probability of completion by the scheduled end date

60 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity 2 Months 5 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity (58) Months @ 90 % Probability of completing within that time.

Information provided by TED BITTNER Date 2/1/93
(Name)

_____
(Signature)

PER TELECON T. BITTNER

A-B

BASIS FOR ASSIGNED PROBABILITY

START TREATMENT TO COMPLETE TREATMENT CHAIN

Q What is the probability of the Pond Sludge Processing being completed in four months?

Factors Affecting Probability of Success

- 40 • Weather delays (rain, late or early freezes, etc)
- 8 • Mechanical failures (availability of spare parts and maintenance staff)
- 4 • Work stoppers (strikes, H/S violations, job disputes)
- • Staff turnover
- • Sufficient labor force
- • Delays in delivery of additives or supplies
- 4 ~~10~~ • Spills (process)
- 1 • Accidents
- 2 • Security
- 1 • Plant emergencies
- • Loss of funds
- 3 • QA acceptance of product
- 2 • PRODUCTIVITY

~~125~~ 290 LOST DAYS
+87
116 —

116/20 = 5.8 MO

A-B CALC. NEEDS 87 DAYS

SINGLE SHIFT OP MOST OF THE WIND IS NOT AN ISSUE AS MUCH

INPUT DATA FORM
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VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title REMIX BASELINE

Activity (NODE). TREATMENT

Planned Schedule Start Date/End Date ~~7/01/99 10/20/99~~ Duration (Mo) _____

Is this a reasonable schedule? YES If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ _____ (Approved or Estimated)

Bounds + _____ %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion

85 % probability of completion within the planned time duration

85 % Probability of completion by the scheduled end date

— % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

5 Months ~~50~~ 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

9 Months @ 95 % Probability of completing within that time

Information provided by BRAD ALLEN (Name) Date _____

Brad Allen (Signature)

REMIK

BASIS FOR ASSIGNED PROBABILITY

START TREATMENT TO COMPLETE TREATMENT CHAIN

Q What is the probability of the Pond Sludge Processing being completed in four months?

Factors Affecting Probability of Success

.95 • Weather delays (rain, late or early freezes, etc)

.85 • Mechanical failures (availability of spare parts and maintenance staff)

.85 • Work stoppers (strikes, H/S violations, job disputes) (4 DAYS)

.95 • Staff turnover

.95 • Sufficient labor force

.95 • Delays in delivery of additives or supplies

.9 • Spills (process)

.9 • Accidents

.95 • Security

.95 • Plant emergencies

.95 • Loss of funds

.9 • QA acceptance of product

.9 • EG&G BACK END SUPPORT. ASSUME EG&G WILL MATCH OUTPUT

BASIS

15,000 HALF CRATES IN 6 MONTHS - CAPACITY

2 SHIFTS/DAY - 10 NR DAYS

10 HALF/HR 12 ACTUAL HRS/DAY 120 HALF CRATES/DAY

POND CRETE (78 D) - ESTAB WW

SALT CRETE (47 D - ESTAB WW

125

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SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. POND C- BASELINE

Activity (NODE). READINESS ASSESSMENT

Planned Schedule Start Date/End Date 2/1/94 - 6/16/94 Duration (Mo) 2.5

Is this a reasonable schedule? YES If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ 100K (Approved or Estimated)

bounds + 50 75 %, - 0 %

[1] The budget/estimate to meet the planned schedule

Probability of Completion:

85 [90 % probability of completion within the planned time duration

60 % Probability of completion by the scheduled end date

85 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3 Months 50 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity
7 Months @ 90 % Probability of completing within that time

Information provided by DONALD A. RINGLE (Name) Date 1/28/93

Donald A. Ringle (Signature)

Pond C Ansell

BASIS FOR ASSIGNED PROBABILITY
START READINESS ASSESSMENT THROUGH COMPLETE READINESS ASSESSMENT

Q What is the Probability of completing the readiness assessment in _____ days?

Factors

- Development and approval (DOE) of assessment criteria .95
- Development of readiness assessment methodology and documents .95
- Definition of level of readiness review (i e , DOE ORR team) —
- Selection of readiness assessment team .75
- Equipment ready .95
- Support ready (maintenance, engineering, etc) .80
- Personnel ready (staffed, trained, qualified) .95
- Procedures ready (operating, emergency, ARP's) .95
- Safety analysis documentation approved .50
- OSR's/TSR's in place N/A
- Code compliance verified .5
- Operating permits in place .95
- Quality assurance program in place .80
- Configuration control procedures in place .80

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. A-B BASELINE

Activity (NODE). READINESS ASSESSMENT

Planned Schedule. Start Date/End Date 1/20/93 - 6/20/93 Duration (Mo) _____

Is this a reasonable schedule? YES If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, 0 % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ 100 (Approved or Estimated)

unds + 50 %, - 0 %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

90 % probability of completion within the planned time duration

80 % Probability of completion by the scheduled end date

85 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3 Months 50 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

7 Months @ 90 % Probability of completing within that time

Information provided by: DONALD A. RINGLE (Name) Date 1/28/93

Donald A. Ringle (Signature)

FOND A-B

BASIS FOR ASSIGNED PROBABILITY
START READINESS ASSESSMENT THROUGH COMPLETE READINESS ASSESSMENT

Q What is the Probability of completing the readiness assessment in _____ days?

Factors

- Development and approval (DOE) of assessment criteria 95
- Development of readiness assessment methodology and documents 95
- Definition of level of readiness review (i e , DOE ORR team) —
- Selection of readiness assessment team ~~.75~~ 85
- Equipment ready 95
- Support ready (maintenance, engineering, etc) .8
- Personnel ready (staffed, trained, qualified) .95
- Procedures ready (operating, emergency, ARP's) .95
- Safety analysis documentation approved .65
- OSR's/TSR's in place —
- Code compliance verified .70
- Operating permits in place .95
- Quality assurance program in place .80
- Configuration control procedures in place .80

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title. REMIX BASELINE

Activity (NODE). READINESS ASSESS

Planned Schedule. Start Date/End Date 1/1/99 – 4/1/99 Duration (Mo) _____

Is this a reasonable schedule? YES If not, what is a reasonable schedule Start _____

End _____ Duration _____

Current Status. _____ Started on _____ Date, _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates.[1] $ 100 (Approved or Estimated)

Bounds + 25 %, - _____ %

[1] The budget/estimate to meet the planned schedule

Probability of Completion.

90 % probability of completion within the planned time duration

90 % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
3 Months 70 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity
7 Months @ 90 % Probability of completing within that time

Information provided by DONALD A. RINGLE (Name) Date 1/28/93

Donald A. Ringle (Signature)

REMIX BASELINE

BASIS FOR ASSIGNED PROBABILITY
START READINESS ASSESSMENT THROUGH COMPLETE READINESS ASSESSMENT

Q What is the Probability of completing the readiness assessment in _____ days?

Factors

- Development and approval (DOE) of assessment criteria .95
- Development of readiness assessment methodology and documents 95
- Definition of level of readiness review (i e , DOE ORR team) —
- Selection of readiness assessment team .95
- Equipment ready 95
- Support ready (maintenance, engineering, etc) 8
- Personnel ready (staffed, trained, qualified) 95
- Procedures ready (operating, emergency, ARP's) 95
- Safety analysis documentation approved .95
- OSR's/TSR's in place —
- Code compliance verified .8
- Operating permits in place .95
- Quality assurance program in place 95
- Configuration control procedures in place .95

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title: Baseline

Activity (NODE): Safety Analysis and NEPA Processes

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: 8+1 months 2 SARs, 1 EC & 1 CX needed

Current Status: _____ Started on _____ Date: _____ % Completed

✓ Not started, Forecast to start on 7 Date

Budget/Estimates:[1] $ 100,000 + 8,000 (Approved or Estimated)

Bounds + 10 %; - 10 %

[1] The budget/estimate to meet the planned schedule

probability of being granted a CX is ~90%

Probability of Completion:

90 % probability of completion within the planned time duration. assumes that these are the resources to prepare 2 SARs

_____ % Probability of completion by the scheduled end date simultaneously

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

7 Months 90 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

10 Months @ 90 % Probability of completing within that time.

Information provided by: Gerry Kelly (Name) Date: 2/5/93

Gerry Kelly (Signature)

Implement before & during title I design -- not during title II design

Implement in parallel with RCRA/CERCLA process.

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title: Options 2A & 2D

Activity (NODE): Safety Analyses and NEPA Processes

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: 8+/ months 2 SARs, 1 EC & 1 CX needed

Current Status: _____ Started on _____ Date: _____ % Completed

✓ Not started, Forecast to start on _____ Date

Budget/Estimates:[1] $ 100,000 + 8,000 (Approved or Estimated)

Bounds + 10 %; - 10 %

[1] The budget/estimate to meet the planned schedule

probability of being granted a CX is ~90%

Probability of Completion:

80 % probability of completion within the planned time duration: assuming that there are the resources to prepare 2 SARs simultaneously

_____ % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

7 Months 40 % Probability of success.

What is the "Worst Case Estimate" of time (duration) required to complete this activity

12 Months @ 90 % Probability of completing within that time.

Information provided by: Gerry Kelly (Name) Date: 7/5/93

G M Kelly (Signature)

Implement before & during Title I design -- not during Title II design

Implement in parallel with RCRA/CERCLA process

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title: Options 2B & 2C

Activity (NODE): Safety Analysis and NEPA Processes

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: 8+/ months 2 SARs, 1 EC & 1 CX needed

Current Status: _____ Started on _____ Date: _____ % Completed

✓ Not started, Forecast to start on _____ Date

Budget/Estimates:[1] $ 100,000 + 8,000 (Approved or Estimated)

Bounds + 10 %; - 10%

[1] The budget/estimate to meet the planned schedule

probability of being granted a CX is ~70%

Probability of Completion:

80 % probability of completion within the planned time duration.
assuming that there are the resources to prepare 2 SARs simultaneously

_____ % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity
7 Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

12 Months @ 90 % Probability of completing within that time.

Information provided by: Gerry Kelly (Name) Date: 2/5/93

G M Kelly (Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title: Option 3

Activity (NODE): Safety Analysis and NEPA Processes

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: 10 months 1 SAR, 1 EC & 1 CX

Current Status: _____ Started on _____ Date: _____ % Completed

✓ Not started, Forecast to start on _____ Date

Budget/Estimates:[1] $ 100,000 + 8,000 (Approved or Estimated)

Bounds + 10 %; - 10 %

[1] The budget/estimate to meet the planned schedule

probability of being granted a CX is ~70%

Probability of Completion:

80 % probability of completion within the planned time duration.

_____ % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Mins

What is the estimated least time (duration) required to complete this activity

7 Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

14 Months @ 90 % Probability of completing within that time.

Information provided by: Gerry Kelly (Name) Date: 7/5/93

GJKelly (Signature)

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Option Title: Options 4 & 5 -- ~~[illegible]~~ In-Site and on-site Disposal

Activity (NODE): Safety Analysis & NEPA Processes

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: ~5 yrs ESAR + 1 EIS

Current Status: _____ Started on _____ Date; _____ % Completed

✓ Not started, Forecast to start on _____ Date

Budget/Estimates:[1] $ ~~[illegible]~~ $1 million (~~$[illegible]~~ + ~~$[illegible]~~) (Approved or Estimated)

Bounds + ? %; - ? %

[1] The budget/estimate to meet the planned schedule

probability related to public acceptability may be ~40% !

Probability of Completion:

75 % probability of completion within the planned time duration.

_____ % Probability of completion by the scheduled end date

75 % Probability of completion within budget/estimate

Max and Min

What is the estimated least time (duration) required to complete this activity

3 yrs Months 40 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

6 yrs Months @ 90 % Probability of completing within that time

Information provided by: Gerry Kelly (Name) Date: 7/5/95

Gerry Kelly (Signature)

to conducted before Title II design -- approval needed ~~[illegible]~~ to conduct during Title I design

Very little known about the site, its occupation, and where it is in the permitting/NEPA process.
Can the site be approved based on technical & political criteria ??

INPUT DATA FORM
for
VERT BASED OPTIONS ANALYSIS
SOLAR POND REMEDIATION PROJECT
ROCKY FLATS PLANT

Envirocare Site

Option Title: Option 6 — Commercial, Off-Site Disposal at a

Activity (NODE): Safety Analyses & NEPA Process

Planned Schedule: Start Date/End Date _____ Duration (Mo) _____

Is this a reasonable schedule? If not, what is a reasonable schedule: Start _____

End _____ Duration: 8+/ months 2 SARs, 1 EC & 1 CX needed

Current Status: _____ Started on _____ Date; _____ % Completed

_____ Not started, Forecast to start on _____ Date

Budget/Estimates:[1] $ 100,000 + 8,000 (Approved or Estimated)

Bounds + 10 %; - 10 %

[1] The budget/estimate to meet the planned schedule

for transport to site, assuming site prepared an EIS that covered transport

Probability of Completion:

80 % probability of completion within the planned time duration

_____ % Probability of completion by the scheduled end date

90 % Probability of completion within budget/estimate

Max and Ming

What is the estimated least time (duration) required to complete this activity
7 Months 4 % Probability of success

What is the "Worst Case Estimate" of time (duration) required to complete this activity

12 Months @ 90 % Probability of completing within that time.

Information provided by: Gerry Kelly (Name) Date: 7/5/93

GJKelly (Signature)

When the EG&G work would be conducted, depends on where Envirocare is in the process. Their process could take up to 5 yrs if they are just starting. EG&G's work would be conducted within their timeframe.

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File RMIX0304 03-04-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 2

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION-------
0

MEAN PRINT ORDER---------- 1

INITIAL SEED---------- 169875

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS-------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING----
00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE---
00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	1 00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N03    1 0  LAG TIME 1
A01    DTIME 1       3     12 66     12 68     12 67
A01    RCOST 123SK        TA01     K       0

A02    N03    N04    1 0  PROCUREMENT
A02    DTIME 1       3      3 0      4 5      3 33
A02    RCOST 123SK 2064 56TA02     K       0

A03    N04    N12    1 0  LAG TIME 2
A03    DTIME 1       3      3 4      3 6      3 5
A03    RCOST 123SK        TA03     K       0

A04    N01    N05    1 0  LAG TIME 3
A04    DTIME 1       3     25 9     26 1     26 0
A04    RCOST 123SK        TA04     K       0

A05    N05    N14    1 0  READINESS REVIEW
A05    DTIME 1       3      2 0      4 0      2 5
A05    RCOST 123SK   98 4TA05     K       0

A06    N01    N06    1 0  NEPA
A06    DTIME 1       3        6        9        8
A06    RCOST 123SK        TA06     K       0

A07    N02    N12    1 0  INTEGRATE A/B POND EQUIPMENT
A07    DTIME 1       3     19 4     19 6     19 5
A07    RCOST 123SK 4358 97TA07     K    6640

A08    N02    N08    1 0  LAG TIME 4
A08    DTIME 1       3     13 71    13 73    13 72
A08    RCOST 123SK        TA08     K       0

A09    N08    N09    1 0  PROCEDURES & DOCUMENTS
A09    DTIME 1       3        5        8        6
A09    RCOST 123SK   61 17TA09     K       0

A10    N02    N10    1 0  LAG TIME 5
A10    DTIME 1       3     25 9     26 1     26 0
A10    RCOST 123SK        TA10     K       0

A11    N10    N15    999 TRAIN OPERATIONS PERSONNEL
A11    DTIME 1       3      2 0      4 0      2 5
A11    RCOST 123SK   201 6TA11     K       0
```

```
A12    N02    N06    1 0  TREATABILTY
A12    DTIME 1       3       6       9       8
A12    RCOST 123SK  402 75TA12    K      0

A13    N06    N07    1 0  DESIGNS
A13    DTIME 1       3       6       9       8
A13    RCOST 123SK 1626 17TA13    K      0

A14    N07    N12    1 0  TRAIN ERECTION PERSONNEL
A14    DTIME 1       3      3 0     6 0     4 5
A14    RCOST 123SK       TA14    K      0

A15    N09    N15    1 0  LAG TIME 6
A15    DTIME 1       3     8 82    8 84    8 83
A15    RCOST 123SK       TA15    K      0

A16    N12    N13    1 0  ERECTION
A16    DTIME 1       3       7      11       9
A16    RCOST 123SK 1880 99TA16    K      0

A17    N13    N14    1 0  COLD TEST
A17    DTIME 1       3      75     2 5     1 0
A17    RCOST 123SK 1903 21TA17    K      0

A18    N14    N15     95  DOE APPROVAL FOR HOT TEST
A18    DTIME 1       3      75     2 5     1 0
A18    RCOST 123SK 1964 21TA18    K      0

A19    N15    N16    1 0  HOT TEST
A19    DTIME 1       3       3     1 5       5
A19    RCOST 123SK 1602 21TA19    K      0

A20    N16    N17    1 0  DOE TEST EVALUATION APPROVAL
A20    DTIME 1       3       5     1 5      67
A20    RCOST 123SK 1639 73TA20    K      0

A21    N17    N18    1 0  TREAT PONDCRETE
A21    DTIME 1       3     3 5       5    3 85
A21    RCOST 123SK 4961 61TA21    K      0

A22    N18    N19    1 0  SALTCRETE HOT TEST
A22    DTIME 1       3      75     1 5     1 0
A22    RCOST 123SK 1601 21TA22    K      0

A23    N19    N20    1 0  DOE APPROVAL
A23    DTIME 1       3       4     1 5       5
```

```
A23     RCOST 123SK 1910 21TA23     K       0

A24     N20     N21     95  TREAT SALTCRETE
A24     DTIME 1         3       2 0       4 0       2 5
A24     RCOST 123SK 5036 21TA24     K       0

A25     N21     N22     1 0  DISPOSAL
A25     DTIME 1         3       6 0       8 0       7 2
A25     RCOST 123SK 1639 44TA25     K       0
A25     M     1       30

A26     N21     N23     1 0  DEMOBILIZE
A26     DTIME 1         3       6 0       8 5       6 5
A26     RCOST 123SK  403 23TA26     K       0
A26     M     1       70

A27     N15     N24     1 0  ESCAPE AT N15
A27     DTIME 1         3       09        11        10
A27     RCOST 123SK         TA27     K       0

A28     N21     N25     1 0  ESCAPE AT N21
A28     DTIME 1         3       09        11        10
A28     RCOST 123SK         TA28     K       0

A29     N11     N23     1 0  HNUS/PAD  OPS /TECH  SUPPORT/PROGRAM
MANAGEMENT
A29     DTIME 1         3       79 4      86 4      83 5
A29     RCOST 123SK 1280 25TA29     K       0

ENDARC

N01     1  2 5

N02     1  2 5

N03     2  2 5

N04     2  2 5

N05     2  2 5

N06     2  2 5

N07     2  2 5

N08     2  2 5
```

NETWORK TIME FOR NODE N22

```
                CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10
15   20   25
          46 0940  I----I----I----I----I----I----I----I----I----I----I  MIN                    46 0940
I----I----I----I----I----I----I MIN
                I                                        000              I
     000
          46 0940 I                                                  46 0940 I
                I                                        008              I
     008
          46 4691 I                                                  46 4691 I
                I                                        008              I
     000
          46 8443 I                                                  46 8443 I
                I*                                       024              I*
      016
          47 2194 I                                                  47 2194 I
                I**                                      043              I*
       020
          47 5946 I                                                  47 5946 I
                I****                                    087              I****
        043
          47 9697 I                                                  47 9697 I
                I********                                166              I*******
         079
          48 3448 I                                                  48 3448 I
                I************                             245              I*******
           079
          48 7200 I                                                  48 7200 I
                I*****************                       340              I*********
           095
          49 0951 I                                                  49 0951 I
                I**********************                                435
I*********                095
          49 4702 I                                                  49 4702 I
                I***************************                          542
I**********               107
          49 8454 I                                                  49 8454 I
                I******************************                       628
I********                 087
          50 2205 I                                                  50 2205 I
                I************************************                 711
I********                 083
          50 5957 I                                                  50 5957 I
```

```
                I***************************************          771
I*****                  059
        50 9708 I                                                50 9708 I
                I*****************************************        850
I*******                 079
        51 3459 I                                                51 3459 I
                I******************************************      893
 I****                  043
        51 7211 I                                                51 7211 I
                I******************************************      925
 I***                   032
        52 0962 I                                                52 0962 I
                I*********************************************   949
 I**                    024
        52 4713 I                                                52 4713 I
                I************************************************ 972
  I**                   024
        52 8465 I                                                52 8465 I
                I********************************************** 992
  I*                    020
        53 2216 I                                                53 2216 I
                I********************************************** 996
  I                     004
        53 5968 I                                                53 5968 I
                I********************************************** 996
  I                     000
        53 9719 I                                                53 9719 I
                I**********************************************1 000
  I                     004
        54 3470 I                                                54 3470 I
                I**********************************************1 000
  I                     000
        54 3470  I----I----I----I----I----I----I----I----I----I----I  MAX                    54 3470
I----I----I----I----I----I MAX

                NO OBS------------      253  STD ERROR-          1 4526
                COEF OF VARIATION-       03  MEAN------          49 8157
                KURTOSIS (BETA 2)-    2 79  MEDIAN----          49 6726
                PEARSONIAN SKEW---       14  MODE------          49 6109
```

PATH COST FOR NODE N22

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
      179625 4000  I----I----I----I----I----I----I----I----I----I----I  MIN              179625 4000
I----I----I----I----I----I MIN
                I                                   000                I
    000
      179625 4000 I                                                179625 4000 I
                I                                   004                I
    004
      180620 7000 I                                                180620 7000 I
                I*                                  012                I
    008
      181615 9000 I                                                181615 9000 I
                I*                                  020                I
    008
      182611 1000 I                                                182611 1000 I
                I**                                 036                I*
    016
      183606 3000 I                                                183606 3000 I
                I***                                051                I*
    016
      184601 5000 I                                                184601 5000 I
                I*****                              107                I*****
      055
      185596 8000 I                                                185596 8000 I
                I********                           154                I****
      047
      186592 0000 I                                                186592 0000 I
                I************                        237                I********
        083
      187587 2000 I                                                187587 2000 I
                I****************                   316                I*******
       079
      188582 4000 I                                                188582 4000 I
                I*********************                             423
I**********            107
      189577 6000 I                                                189577 6000 I
                I****************************                      553
I*************            130
      190572 8000 I                                                190572 8000 I
                I*********************************                656
I**********            103
      191568 1000 I                                                191568 1000 I
```

```
                I*************************************          751
I*********              095
      192563 3000 I                                          192563 3000 I
                I****************************************        826
I*******              075
      193558 5000 I                                          193558 5000 I
                I*****************************************       866
I***                 040
      194553 7000 I                                          194553 7000 I
                I******************************************      913
 I****               047
      195548 9000 I                                          195548 9000 I
                I*******************************************     953
  I***                040
      196544 2000 I                                          196544 2000 I
                I*******************************************     964
  I*                 012
      197539 4000 I                                          197539 4000 I
                I********************************************    980
  I*                 016
      198534 6000 I                                          198534 6000 I
                I********************************************    992
   I*                012
      199529 8000 I                                          199529 8000 I
                I********************************************    992
   I                 000
      200525 0000 I                                          200525 0000 I
                I*********************************************1 000
   I                 008
      201520 3000 I                                          201520 3000 I
                I*********************************************1 000
   I                 000
      201520 3000  I----I----I----I----I----I----I----I----I----I----I  MAX          201520 3000
I----I----I----I----I----I MAX

                NO OBS------------      253  STD ERROR-        3719 8000
                COEF OF VARIATION-       02  MEAN------       190248 0000
                KURTOSIS (BETA 2)-    3 13  MEDIAN----       190130 5000
                PEARSONIAN SKEW---       06  MODE------       190037 0000
```

NETWORK TIME FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          79 7424  I----I----I----I----I----I----I----I----I----I----I  MIN                    79 7424
I----I----I----I----I----I----I MIN
                I                                   000                I
    000
          79 7424 I                                                  79 7424 I
                I*                                  015                I*
     015
          80 0416 I                                                  80 0416 I
                I*                                  028                I*
     012
          80 3408 I                                                  80 3408 I
                I**                                 048                I*
      020
          80 6400 I                                                  80 6400 I
                I****                               084                I***
       037
          80 9393 I                                                  80.9393 I
                I******                             126                I****
        041
          81 2385 I                                                  81 2385 I
                I********                           163                I***
         037
          81 5377 I                                                  81 5377 I
                I**********                         201                I***
          038
          81 8369 I                                                  81 8369 I
                I*************                      264                I******
            063
          82 1362 I                                                  82.1362 I
                I****************                   321                I*****
           057
          82 4354 I                                                  82 4354 I
                I********************               402                I********
           081
          82 7346 I                                                  82 7346 I
                I***********************            465                I******
            063
          83 0338 I                                                  83 0338 I
                I***************************                         540
I*******                075
          83 3331 I                                                  83 3331 I
```

```
                I******************************                626
I********                086
        83 6323 I                                          83 6323 I
                I*********************************          707
I********                081
        83 9315 I                                          83 9315 I
                I************************************       768
I******                 061
        84 2307 I                                          84 2307 I
                I***************************************    817
I****                   049
        84 5300 I                                          84 5300 I
                I*****************************************  871
I*****                  054
        84 8292 I                                          84 8292 I
                I******************************************  910
 I***                   038
        85 1284 I                                          85 1284 I
                I*********************************************** 956
 I****                   046
        85 4276 I                                          85 4276 I
                I************************************************ 983
 I**                    028
        85 7269 I                                          85 7269 I
                I************************************************ 989
 I                      006
        86 0261 I                                          86 0261 I
                I*************************************************1 000
 I*                     011
        86 3253 I                                          86 3253 I
                I*************************************************1 000
 I                      000
        86 3253  I----I----I----I----I----I----I----I----I----I----I  MAX                    86 3253
I----I----I----I----I----I MAX

                NO OBS------------      652  STD ERROR-          1 4428
                COEF OF VARIATION-       02  MEAN------          83 0960
                KURTOSIS (BETA 2)-    2 36  MEDIAN----          83 1542
                PEARSONIAN SKEW---       31  MODE------          83 5425
```

PATH COST FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
 15   20   25
       278401 2000  I----I----I----I----I----I----I----I----I----I----I  MIN              278401 2000
I----I----I----I----I----I MIN
                I                                        000                I
     000
       278401 2000 I                                                   278401 2000 I
                I                                        005                I
     005
       279390 9000 I                                                   279390 9000 I
                I*                                       020                I*
      015
       280380 6000 I                                                   280380 6000 I
                I**                                       038               I*
      018
       281370 3000 I                                                   281370 3000 I
                I***                                      060               I**
      021
       282360 0000 I                                                   282360 0000 I
                I******                                    113               I*****
        054
       283349 7000 I                                                   283349 7000 I
                I*********                                 173               I*****
        060
       284339 3000 I                                                   284339 3000 I
                I*************                              258               I********
            084
       285329 0000 I                                                   285329 0000 I
                I******************                                     360
I**********              103
       286318 7000 I                                                   286318 7000 I
                I**********************                                443               I********
            083
       287308 4000 I                                                   287308 4000 I
                I***************************                             543
I*********              100
       288298 1000 I                                                   288298 1000 I
                I******************************                          612
I******                 069
       289287 8000 I                                                   289287 8000 I
                I***********************************                     696
I********               084
       290277 5000 I                                                   290277 5000 I
```

```
                I*************************************          765
I******                 069
     291267 2000 I                                          291267 2000 I
                I*****************************************       851
I********               086
     292256 8000 I                                          292256 8000 I
                I******************************************      891
 I***                   040
     293246 5000 I                                          293246 5000 I
                I*******************************************     923
 I***                   032
     294236 2000 I                                          294236 2000 I
                I********************************************    951
  I**                   028
     295225 9000 I                                          295225 9000 I
                I*********************************************   972
  I**                   021
     296215 6000 I                                          296215 6000 I
                I*********************************************   985
  I*                    012
     297205 3000 I                                          297205 3000 I
                I**********************************************  991
   I                    006
     298195 0000 I                                          298195 0000 I
                I**********************************************  995
   I                    005
     299184 7000 I                                          299184 7000 I
                I***********************************************1 000
   I                    005
     300174 6000 I                                          300174 6000 I
                I***********************************************1 000
   I                    000
     300174 6000  I----I----I----I----I----I----I----I----I----I----I  MAX          300174 6000
I----I----I----I----I----I MAX
```

NO OBS----------	652	STD ERROR-	4002 8580
COEF OF VARIATION-	01	MEAN------	288152 1000
KURTOSIS (BETA 2)-	2 73	MEDIAN----	287915 7000
PEARSONIAN SKEW---	59	MODE------	285804 1000

NETWORK TIME FOR NODE N24

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          29 9356  I----I----I----I----I----I----I----I----I----I----I  MIN                    29 9356
I----I----I----I----I----I----I MIN
                I                                   000                I
    000
          29 9356 I                                                  29 9356 I
                I*                                  019                I*
     019
          30 2001 I                                                  30 2001 I
                I*****                                093                I*******
          074
          30 4647 I                                                  30 4647 I
                I*****                                093                I
       000
          30 7292 I                                                  30 7292 I
                I*****                                093                I
       000
          30 9938 I                                                  30 9938 I
                I*******                              148                I*****
          056
          31 2583 I                                                  31 2583 I
                I***********                           222                I*******
            074
          31 5229 I                                                  31 5229 I
                I*****************                                   333
I***********              111
          31 7874 I                                                  31 7874 I
                I********************                  407                I*******
              074
          32 0520 I                                                  32 0520 I
                I************************                             500
I*********               093
          32 3165 I                                                  32 3165 I
                I*****************************                        574
I*******                 074
          32 5811 I                                                  32 5811 I
                I**********************************                   685
I***********              111
          32 8456 I                                                  32 8456 I
                I*************************************                741
I*****                   056
          33 1102 I                                                  33 1102 I
```

```
                I***************************************          796
I*****                  056
        33 3748 I                                                33 3748 I
                I*****************************************        870
I*******                 074
        33 6393 I                                                33 6393 I
                I*****************************************        889
I*                      019
        33 9039 I                                                33 9039 I
                I*****************************************        889
I                       000
        34 1684 I                                                34 1684 I
                I******************************************       907
 I*                     019
        34 4330 I                                                34 4330 I
                I******************************************       926
 I*                     019
        34 6975 I                                                34 6975 I
                I*******************************************      944
 I*                     019
        34 9621 I                                                34 9621 I
                I*******************************************      963
  I*                    019
        35 2266 I                                                35 2266 I
                I*******************************************      963
  I                     000
        35 4912 I                                                35 4912 I
                I*********************************************1 000
   I***                 037
        35 7557 I                                                35 7557 I
                I*********************************************1 000
   I                    000
        35 7557  I----I----I----I----I----I----I----I----I----I----I  MAX                    35 7557
I----I----I----I----I----I MAX
```

NO OBS---------- 54 STD ERROR- 1 3009
COEF OF VARIATION- 04 MEAN------ 32 4297
KURTOSIS (BETA 2)- 3 28 MEDIAN---- 32 2796
MULTIMODAL DISTRIBUTION

PATH COST FOR NODE N24

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
      133874 9000  I----I----I----I----I----I----I----I----I----I----I----I  MIN                133874 9000
I----I----I----I----I----I MIN
                I                                   000                I
    000
      133874 9000 I                                                  133874 9000 I
                I****                                 074                I*******
        074
      134327 0000 I                                                  134327 0000 I
                I****                                 074                I
      000
      134779 2000 I                                                  134779 2000 I
                I******                                111                I***
        037
      135231 4000 I                                                  135231 4000 I
                I******                                130                I*
       019
      135683 6000 I                                                  135683 6000 I
                I**********                            204                I*******
           074
      136135 7000 I                                                  136135 7000 I
                I***************                       296                I*********
          093
      136587 9000 I                                                  136587 9000 I
                I*******************                   370                I*******
           074
      137040 1000 I                                                  137040 1000 I
                I**********************                444                I*******
           074
      137492 3000 I                                                  137492 3000 I
                I*************************             500                I*****
                056
      137944 4000 I                                                  137944 4000 I
                I***************************           537                I***
                 037
      138396 6000 I                                                  138396 6000 I
                I*********************************                   667
I************            130
      138848 8000 I                                                  138848 8000 I
                I***********************************                704                I***
                  037
      139300 9000 I                                                  139300 9000 I
```

```
                I*************************************          759
I*****                  056
      139753 1000 I                                          139753 1000 I
                I****************************************        815
I*****                  056
      140205 3000 I                                          140205 3000 I
                I*****************************************       852
I***                    037
      140657 5000 I                                          140657 5000 I
                I******************************************      889
I***                    037
      141109 6000 I                                          141109 6000 I
                I*******************************************     907
 I*                     019
      141561 8000 I                                          141561 8000 I
                I********************************************    944
 I***                    037
      142014 0000 I                                          142014 0000 I
                I*********************************************   963
  I*                    019
      142466 1000 I                                          142466 1000 I
                I**********************************************  981
  I*                    019
      142918 3000 I                                          142918 3000 I
                I**********************************************  981
  I                     000
      143370 5000 I                                          143370 5000 I
                I***********************************************1 000
   I*                    019
      143822 5000 I                                          143822 5000 I
                I***********************************************1 000
   I                     000
      143822 5000  I----I----I----I----I----I----I----I----I----I----I  MAX          143822 5000
I----I----I----I----I----I MAX
```

NO OBS----------	54	STD ERROR-	2319 3770
COEF OF VARIATION-	02	MEAN------	138087 8000
KURTOSIS (BETA 2)-	2 58	MEDIAN----	137964 3000
PEARSONIAN SKEW---	23	MODE------	138622 7000

NETWORK TIME FOR NODE N25

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          40 3246  I----I----I----I----I----I----I----I----I----I----I  MIN                    40 3246
I----I----I----I----I----I----I MIN
                I                                   000              I
    000
          40 3246 I                                                40 3246 I
                I**                                 049                I****
      049
          40 5471 I                                                40 5471 I
                I**                                 049                I
     000
          40 7696 I                                                40 7696 I
                I*****                               098               I****
        049
          40 9921 I                                                40 9921 I
                I*******                             146               I****
        049
          41 2146 I                                                41 2146 I
                I**********                          195               I****
         049
          41 4371 I                                                41 4371 I
                I**********                          195               I
        000
          41 6596 I                                                41 6596 I
                I***************                      293               I*********
           098
          41 8821 I                                                41 8821 I
                I******************                     366               I*******
            073
          42 1046 I                                                42 1046 I
                I******************                     366               I
           000
          42 3271 I                                                42 3271 I
                I************************                           488
I************           122
          42 5496 I                                                42 5496 I
                I*************************                    512               I**
                024
          42 7721 I                                                42 7721 I
                I******************************                     610
I*********              098
          42 9946 I                                                42 9946 I
```

```
                I*********************************          659          I****
                049
        43 2172 I                                                43 2172 I
                I*********************************          707          I****
                049
        43 4397 I                                                43 4397 I
                I*************************************          780
I*******                073
        43 6622 I                                                43 6622 I
                I*******************************************     878
I*********              098
        43 8847 I                                                43 8847 I
                I*******************************************     902
 I**                    024
        44 1072 I                                                44 1072 I
                I*******************************************     902
 I                      000
        44 3297 I                                                44 3297 I
                I*******************************************     902
 I                      000
        44 5522 I                                                44 5522 I
                I*******************************************     927
 I**                    024
        44 7747 I                                                44 7747 I
                I*********************************************   951
  I**                   024
        44 9972 I                                                44 9972 I
                I*********************************************1 000
  I****                 049
        45 2197 I                                                45 2197 I
                I*********************************************1 000
  I                     000
        45 2197  I----I----I----I----I----I----I----I----I----I----I  MAX          45 2197
I----I----I----I----I----I MAX

                NO OBS------------      41  STD ERROR-          1 2487
                COEF OF VARIATION-      03  MEAN------          42 6869
                KURTOSIS (BETA 2)-    2 37  MEDIAN----          42 7718
                PEARSONIAN SKEW---      19  MODE------          42 4507
```

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
      172706 0000  I----I----I----I----I----I----I----I----I----I----I  MIN              172706 0000
I----I----I----I----I----I----I MIN
                I                                       000                I
    000
      172706 0000 I                                                   172706 0000 I
                I*                                      024                I**
     024
      173293 1000 I                                                   173293 1000 I
                I**                                     049                I**
     024
      173880 2000 I                                                   173880 2000 I
                I****                                   073                I**
      024
      174467 3000 I                                                   174467 3000 I
                I******                                  122                I****
       049
      175054 4000 I                                                   175054 4000 I
                I*********                                171                I****
        049
      175641 5000 I                                                   175641 5000 I
                I*********                                171                I
       000
      176228 5000 I                                                   176228 5000 I
                I***********                              220                I****
        049
      176815 6000 I                                                   176815 6000 I
                I********************                                 390
I*****************        171
      177402 7000 I                                                   177402 7000 I
                I***********************                          463              I*******
               073
      177989 8000 I                                                   177989 8000 I
                I***************************                          537
I*******                 073
      178576 9000 I                                                   178576 9000 I
                I******************************                       610
I*******                 073
      179164 0000 I                                                   179164 0000 I
                I*********************************                    683
I*******                 073
      179751 1000 I                                                   179751 1000 I
```

```
                I***************************************          780
I*********              098
      180338 2000 I                                          180338 2000 I
                I***************************************        805              I**
                  024
      180925 3000 I                                          180925 3000 I
                I*****************************************      854
I****                  049
      181512 4000 I                                          181512 4000 I
                I******************************************     878
I**                   024
      182099 5000 I                                          182099 5000 I
                I*********************************************   951
 I*******                 073
      182686 6000 I                                          182686 6000 I
                I*********************************************   951
 I                    000
      183273 7000 I                                          183273 7000 I
                I*********************************************   951
 I                    000
      183860 8000 I                                          183860 8000 I
                I*********************************************   976
 I**                   024
      184447 9000 I                                          184447 9000 I
                I*********************************************   976
 I                    000
      185035 0000 I                                          185035 0000 I
                I*************************************************1 000
  I**                   024
      185622 1000 I                                          185622 1000 I
                I*************************************************1 000
  I                    000
      185622 1000  I----I----I----I----I----I----I----I----I----I----I  MAX              185622 1000
I----I----I----I----I----I MAX
```

NO OBS---------- 41 STD ERROR- 2832 8090
COEF OF VARIATION- 02 MEAN------ 178501 3000
KURTOSIS (BETA 2)- 2 81 MEDIAN---- 178093 7000
PEARSONIAN SKEW--- 48 MODE------ 177141 8000

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          29 9356  I----I----I----I----I----I----I----I----I----I----I  MIN                    29 9356
I----I----I----I----I----I----I MIN
                I                                   000                I
    000
          29 9356 I                                                29 9356 I
                I**                                 030                I***
      030
          32 4987 I                                                32 4987 I
                I***                                052                I**
      022
          35 0619 I                                                35 0619 I
                I***                                054                I
     002
          37 6251 I                                                37 6251 I
                I***                                054                I
     000
          40 1882 I                                                40 1882 I
                I****                               074                I**
      020
          42 7514 I                                                42 7514 I
                I*****                              095                I**
       021
          45 3146 I                                                45 3146 I
                I******                             114                I*
       019
          47 8777 I                                                47 8777 I
                I*************                                     267
I***************          153
          50 4409 I                                                50 4409 I
                I*****************                        345              I*******
              078
          53 0041 I                                                53 0041 I
                I*****************                        348              I
            003
          55 5672 I                                                55 5672 I
                I*****************                        348              I
            000
          58 1304 I                                                58 1304 I
                I*****************                        348              I
            000
          60 6936 I                                                60 6936 I
```

```
                I*****************                    348                I
          000
        63 2567 I                                          63 2567 I
                I*****************                    348                I
          000
        65 8199 I                                          65 8199 I
                I*****************                    348                I
          000
        68 3831 I                                          68 3831 I
                I*****************                    348                I
          000
        70 9463 I                                          70 9463 I
                I*****************                    348                I
          000
        73 5094 I                                          73 5094 I
                I*****************                    348                I
          000
        76 0726 I                                          76 0726 I
                I*****************                    348                I
          000
        78 6358 I                                          78 6358 I
                I*********************                 426                I*******
            078
        81 1989 I                                          81 1989 I
                I****************************************      783
I************************* 357
        83 7621 I                                          83 7621 I
                I*************************************************1 000
  I********************     217
        86 3253 I                                          86.3253 I
                I*************************************************1 000
  I                    000
        86 3253  I----I----I----I----I----I----I----I----I----I----I  MAX                    86.3253
I----I----I----I----I----I----I MAX

                NO OBS-----------     1000  STD ERROR-          17 9996
                COEF OF VARIATION-      26  MEAN------          70 2833
                KURTOSIS (BETA 2)-    1 91  MEDIAN----          81 9889
                PEARSONIAN SKEW---      70  MODE------          82 9057
```

PATH COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
      133874 9000  I----I----I----I----I----I----I----I----I----I----I  MIN              133874 9000
I----I----I----I----I----I----I MIN
                I                                   000              I
    000
      133874 9000 I                                                133874 9000 I
                I**                                 049                I****
      049
      141434 0000 I                                                141434 0000 I
                I***                                054                I
      005
      148993 0000 I                                                148993 0000 I
                I***                                054                I
      000
      156552 1000 I                                                156552 1000 I
                I***                                054                I
      000
      164111 2000 I                                                164111 2000 I
                I***                                054                I
      000
      171670 3000 I                                                171670 3000 I
                I****                               079                I**
      025
      179229 3000 I                                                179229 3000 I
                I*******                             136                I*****
        057
      186788 4000 I                                                186788 4000 I
                I****************                                   313
I*****************        177
      194347 5000 I                                                194347 5000 I
                I*****************                      348              I***
          035
      201906 6000 I                                                201906 6000 I
                I*****************                      348              I
         000
      209465 7000 I                                                209465 7000 I
                I*****************                      348              I
         000
      217024 7000 I                                                217024 7000 I
                I*****************                      348              I
         000
      224583 8000 I                                                224583 8000 I
```

```
                I****************                    348              I
        000
    232142 9000 I                                        232142 9000 I
                I****************                    348              I
        000
    239702 0000 I                                        239702 0000 I
                I****************                    348              I
        000
    247261 0000 I                                        247261 0000 I
                I****************                    348              I
        000
    254820 1000 I                                        254820 1000 I
                I****************                    348              I
        000
    262379 2000 I                                        262379 2000 I
                I****************                    348              I
        000
    269938 3000 I                                        269938 3000 I
                I****************                    348              I
        000
    277497 3000 I                                        277497 3000 I
                I************************                502
I***************          154
    285056 4000 I                                        285056 4000 I
                I*********************************************     916
 I************************ 414
    292615 4000 I                                        292615 4000 I
                I*************************************************1 000
  I********              084
    300174 6000 I                                        300174 6000 I
                I*************************************************1 000
  I                   000
    300174 6000  I----I----I----I----I----I----I----I----I----I----I  MAX              300174 6000
I----I----I----I----I----I MAX
```

NO OBS---------- 1000 STD ERROR- 52487 1100
COEF OF VARIATION- 21 MEAN------ 250783 5000
KURTOSIS (BETA 2)- 1 94 MEDIAN---- 285039 4000
PEARSONIAN SKEW--- 72 MODE------ 288387 5000

OVERALL COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
      236399 3000  I----I----I----I----I----I----I----I----I----I----I  MIN              236399 3000
I----I----I----I----I----I MIN
                I                                        000              I
    000
      236399 3000 I                                                   236399 3000 I
                I                                        004              I
    004
      239664 5000 I                                                   239664 5000 I
                I*                                       019              I*
     015
      242929 7000 I                                                   242929 7000 I
                I**                                      039              I**
      020
      246194 9000 I                                                   246194 9000 I
                I**                                      050              I*
      011
      249460 2000 I                                                   249460 2000 I
                I***                                     053              I
      003
      252725 4000 I                                                   252725 4000 I
                I***                                     054              I
      001
      255990 6000 I                                                   255990 6000 I
                I***                                     054              I
      000
      259255 8000 I                                                   259255 8000 I
                I***                                     054              I
      000
      262521 0000 I                                                   262521 0000 I
                I***                                     054              I
      000
      265786 3000 I                                                   265786 3000 I
                I***                                     054              I
      000
      269051 5000 I                                                   269051 5000 I
                I***                                     054              I
      000
      272316 7000 I                                                   272316 7000 I
                I***                                     054              I
      000
      275581 9000 I                                                   275581 9000 I
```

```
                I***                                    056                I
     002
     278847 1000 I                                                    278847 1000 I
                I*****                                  095                I***
      039
     282112 3000 I                                                    282112 3000 I
                I*************                                         250
I***************          155
     285377 6000 I                                                    285377 6000 I
                I***********************                                466
I*********************     216
     288642 8000 I                                                    288642 8000 I
                I*********************************                      661
I*******************       195
     291908 0000 I                                                    291908 0000 I
                I***************************************                803
I**************          142
     295173 2000 I                                                    295173 2000 I
                I*********************************************        905
 I**********             102
     298438 4000 I                                                    298438 4000 I
                I************************************************   967
  I******                062
     301703 7000 I                                                    301703 7000 I
                I************************************************  989
  I**                   022
     304968 9000 I                                                    304968 9000 I
                I*************************************************1 000
   I*                   011
     308233 9000 I                                                    308233 9000 I
                I*************************************************1 000
   I                    000
     308233 9000  I----I----I----I----I----I----I----I----I----I----I  MAX              308233 9000
I----I----I----I----I----I----I MAX

                NO OBS-----------     1000  STD ERROR-        11795 1700
                COEF OF VARIATION-      04  MEAN------       287894 7000
                KURTOSIS (BETA 2)-   10 61  MEDIAN----       289296 4000
                PEARSONIAN SKEW---      01  MODE------       287806 6000


PATH PERFORMANCE FOR THE COMPOSITE TERMINAL NODE
NO OBS =            1000  AVE =              0000
MIN =             0000  MAX =             0000
```

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I----+----+----+----+----+----+----+----+----+----+I
N22     2530 I*************                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N23     6520 I*********************************                I
            I   +   +   +   +   +   +   +   +   +   +   +I
N24     0540 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N25     0410 I**                                    I
            I   +   +   +   +   +   +   +   +   +   +   +I
            I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9  10
```

NODES CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I----+----+----+----+----+----+----+----+----+----+I
N01       2030 I**********                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N02       1450 I*******                                     I
            I   +   +   +   +   +   +   +   +   +   +   +I
N03       0820 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
N04       0820 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
N05       0170 I*                                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N06       1820 I*********                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N07       1820 I*********                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N08       0260 I*                                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N09       0260 I*                                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N10       0290 I*                                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N12       2760 I**************                                I
            I   +   +   +   +   +   +   +   +   +   +   +I
N13       2760 I**************                                I
            I   +   +   +   +   +   +   +   +   +   +   +I
N14       2930 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N15       3480 I*****************                             I
            I   +   +   +   +   +   +   +   +   +   +   +I
N16       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N17       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N18       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N19       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N20       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N21       2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
N22       2530 I*************                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N23       6520 I*********************************                I
```

ARCS CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I----+----+----+----+----+----+----+----+----+----+I
A01     0820 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A02     0820 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A03     0820 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A04     0170 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A05     0170 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A06     1040 I*****                                       I
            I   +   +   +   +   +   +   +   +   +   +   +I
A07     0120 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A08     0260 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A09     0260 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A10     0290 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A11     0290 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A12     0780 I****                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A13     1820 I*********                                     I
            I   +   +   +   +   +   +   +   +   +   +   +I
A14     1820 I*********                                     I
            I   +   +   +   +   +   +   +   +   +   +   +I
A15     0260 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A16     2760 I**************                                I
            I   +   +   +   +   +   +   +   +   +   +   +I
A17     2760 I**************                                I
            I   +   +   +   +   +   +   +   +   +   +   +I
A18     2930 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
A19     2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
A20     2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
A21     2940 I***************                               I
            I   +   +   +   +   +   +   +   +   +   +   +I
A22     2940 I***************                               I
```

```
          I   +   +   +   +   +   +   +   +   +   +I
A23     2940 I***************                       I
          I   +   +   +   +   +   +   +   +   +   +I
A24     2940 I***************                       I
          I   +   +   +   +   +   +   +   +   +   +I
A25     2530 I*************                         I
          I   +   +   +   +   +   +   +   +   +   +I
A27     0540 I***                                 I
          I   +   +   +   +   +   +   +   +   +   +I
A28     0410 I**                                  I
          I   +   +   +   +   +   +   +   +   +   +I
A29     6520 I*********************************                I
          I----+----+----+----+----+----+----+----+----+----+I
               1   2   3   4   5   6   7   8   9  10
```

LAST RANDOM NUMBER SEED = 1396644667

NODES MEAN COMPLETION TIME & REALIZATION FREQUENCY

N01	0000	1000
N02	0000	1000
N11	0000	1000
N06	8 0055	1000
N03	12 6701	1000
N08	13 7201	1000
N07	15 6867	1000
N04	16 2970	1000
N09	20 0429	1000
N12	20 4314	1000
N10	25 9995	1000
N05	26 0008	1000
N13	29 4273	1000
N14	30 8570	1000
N15	32 2583	1000
N24	32 4297	54
N16	33 0325	946
N17	33 9299	946
N18	38 0427	946
N19	39 1260	946
N20	39 9303	946
N25	42 6869	41

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File rmix0303 03-04-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 2

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION-------
0

MEAN PRINT ORDER---------- 1

INITIAL SEED---------- 169875

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS-------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING----
00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE---
00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	1 00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N03    1 0  LAG TIME 1
A01    DTIME 1       3    12 66    12 68    12 67
A01    RCOST 123SK       TA01    K      0

A02    N03    N04    1 0  PROCUREMENT
A02    DTIME 1       3     3 0     4 5     3 33
A02    RCOST 123SK 2064 56TA02    K      0

A03    N04    N12    1 0  LAG TIME 2
A03    DTIME 1       3     3 4     3 6     3 5
A03    RCOST 123SK       TA03    K      0

A04    N01    N05    1 0  LAG TIME 3
A04    DTIME 1       3    25 9    26 1    26 0
A04    RCOST 123SK       TA04    K      0

A05    N05    N14    1 0  READINESS REVIEW
A05    DTIME 1       3     2 0     4 0     2 5
A05    RCOST 123SK   98 4TA05    K      0

A06    N01    N06    1 0  NEPA
A06    DTIME 1       3       6       9       8
A06    RCOST 123SK       TA06    K      0

A07    N02    N12    1 0  INTEGRATE A/B POND EQUIPMENT
A07    DTIME 1       3    19 4    19 6    19 5
A07    RCOST 123SK 4358 97TA07    K    6640

A08    N02    N08    1 0  LAG TIME 4
A08    DTIME 1       3    13 71   13 73   13 72
A08    RCOST 123SK       TA08    K      0

A09    N08    N09    1 0  PROCEDURES & DOCUMENTS
A09    DTIME 1       3       5       8       6
A09    RCOST 123SK   61 17TA09    K      0

A10    N02    N10    1 0  LAG TIME 5
A10    DTIME 1       3    25 9    26 1    26 0
A10    RCOST 123SK       TA10    K      0

A11    N10    N15    999 TRAIN OPERATIONS PERSONNEL
A11    DTIME 1       3     2 0     4 0     2 5
A11    RCOST 123SK   201 6TA11    K      0
```

```
A12    N02    N06    1 0  TREATABILTY
A12    DTIME 1       3       6       9       8
A12    RCOST 123SK  402 75TA12    K      0

A13    N06    N07    1 0  DESIGNS
A13    DTIME 1       3       6       9       8
A13    RCOST 123SK 1626 17TA13    K      0

A14    N07    N12    1 0  TRAIN ERECTION PERSONNEL
A14    DTIME 1       3      3 0     6 0     4 5
A14    RCOST 123SK       TA14    K      0

A15    N09    N15    1 0  LAG TIME 6
A15    DTIME 1       3     8 82    8 84    8 83
A15    RCOST 123SK       TA15    K      0

A16    N12    N13    1 0  ERECTION
A16    DTIME 1       3       7      11       9
A16    RCOST 123SK 1880 99TA16    K      0

A17    N13    N14    1 0  COLD TEST
A17    DTIME 1       3      75     2 5     1 0
A17    RCOST 123SK 1903 21TA17    K      0

A18    N14    N15     95  DOE APPROVAL FOR HOT TEST
A18    DTIME 1       3      75     2 5     1 0
A18    RCOST 123SK 1964 21TA18    K      0

A19    N15    N16    1 0  HOT TEST
A19    DTIME 1       3       3     1 5       5
A19    RCOST 123SK 1602 21TA19    K      0

A20    N16    N17    1 0  DOE TEST EVALUATION APPROVAL
A20    DTIME 1       3       5     1 5      67
A20    RCOST 123SK 1639 73TA20    K      0

A21    N17    N18    1 0  TREAT PONDCRETE
A21    DTIME 1       3      3 5       5    3 85
A21    RCOST 123SK 4961 61TA21    K      0

A22    N18    N19    1 0  SALTCRETE HOT TEST
A22    DTIME 1       3      75     1 5     1 0
A22    RCOST 123SK 1601 21TA22    K      0

A23    N19    N20    1 0  DOE APPROVAL
A23    DTIME 1       3       4     1 5       5
```

```
A23     RCOST 123SK 1910 21TA23     K       0

A24     N20     N21     95  TREAT SALTCRETE
A24     DTIME 1         3       2 0       4 0       2 5
A24     RCOST 123SK 5036 21TA24     K       0

A25     N21     N22     1 0  DISPOSAL
A25     DTIME 1         3       6 0       8 0       7 2
A25     RCOST 123SK 1639 44TA25     K       0
A25     M     1       30

A26     N21     N23     1 0  DEMOBILIZE
A26     DTIME 1         3       6 0       8 5       6 5
A26     RCOST 123SK  403 23TA26     K       0
A26     M     1       70

A27     N15     N24     1 0  ESCAPE AT N15
A27     DTIME 1         3       09        11        10
A27     RCOST 123SK         TA27     K       0

A28     N21     N25     1 0  ESCAPE AT N21
A28     DTIME 1         3       09        11        10
A28     RCOST 123SK         TA28     K       0

ENDARC

N01     1  2 5

N02     1  2 5

N03     2  2 5

N04     2  2 5

N05     2  2 5

N06     2  2 5

N07     2  2 5

N08     2  2 5

N09     2  2 5

N10     2  2 5
```

```
N12     2  2 5

N13     2  2 5

N14     2  2 5

N15     2  2 5

N16     2  2 5

N17     2  2 5

N18     2  2 5

N19     2  2 5

N20     2  2 5

N21     2  3 5

N22     2  1 5

N23     2  1 5

N24     2  1 5

N25     2  1 5

ENDNODE

   NETWORK TIME FOR NODE N22

                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
          46 5116  I----I----I----I----I----I----I----I----I----I----I  MIN                    46 5116
I----I----I----I----I----I----I MIN
                I                                        000                I
    000
          46 5116 I                                                   46 5116 I
                I                                        008                I
    008
          46 8841 I                                                   46 8841 I
                I**                                       031                I**
     024
          47 2565 I                                                   47 2565 I
                I***                                      055                I**
```

```
024
47 6290 I                                                    47 6290 I
        I*****                                  106                I*****
051
48 0014 I                                                    48 0014 I
        I*********                              173                I******
067
48 3739 I                                                    48 3739 I
        I*************                           263                I*********
090
48 7463 I                                                    48 7463 I
        I*****************                       349                I********
086
49 1188 I                                                    49 1188 I
        I**********************                  431                I********
082
49 4912 I                                                    49 4912 I
        I*************************                            518
I********              086
49 8637 I                                                    49 8637 I
        I******************************                       616
I*********             098
50 2361 I                                                    50 2361 I
        I***********************************                  722
I**********            106
50 6086 I                                                    50 6086 I
        I****************************************             800
I*******               078
50 9810 I                                                    50 9810 I
        I*******************************************          875
I*******               075
51 3535 I                                                    51 3535 I
        I*********************************************        918
I****                  043
51 7259 I                                                    51 7259 I
        I*********************************************        937
I*                     020
52 0984 I                                                    52 0984 I
        I*********************************************        941
I                      004
52 4708 I                                                    52 4708 I
        I*********************************************        961
I*                     020
52 8433 I                                                    52 8433 I
        I*********************************************        980
I*                     020
```

```
        53 2157 I                                                  53 2157 I
                I*************************************************  980
 I                    000
        53 5882 I                                                  53 5882 I
                I*************************************************  992
 I*                   012
        53 9606 I                                                  53 9606 I
                I*************************************************  996
 I                    004
        54 3331 I                                                  54 3331 I
                I*************************************************1 000
 I                    004
        54 7056 I                                                  54 7056 I
                I*************************************************1 000
 I                    000
        54 7056  I----I----I----I----I----I----I----I----I----I----I  MAX                    54 7056
I----I----I----I----I----I----I MAX

                NO OBS-----------     255  STD ERROR-          1 4933
                COEF OF VARIATION-     03  MEAN------          49 8034
                KURTOSIS (BETA 2)-   3 21  MEDIAN----          49 7581
                PEARSONIAN SKEW---     35  MODE------          50 3189
```

PATH COST FOR NODE N22

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
 15   20   25
      181385 8000  I----I----I----I----I----I----I----I----I----I----I  MIN              181385 8000
I----I----I----I----I----I MIN
                I                                   000              I
    000
      181385 8000 I                                                181385 8000 I
                I                                   004              I
    004
      182346 8000 I                                                182346 8000 I
                I*                                  016              I*
     012
      183307 8000 I                                                183307 8000 I
                I**                                 039              I**
      024
      184268 7000 I                                                184268 7000 I
                I*****                              090              I*****
        051
      185229 7000 I                                                185229 7000 I
                I*******                            137              I****
         047
      186190 7000 I                                                186190 7000 I
                I**********                         200              I******
           063
      187151 7000 I                                                187151 7000 I
                I**************                     278              I*******
             078
      188112 7000 I                                                188112 7000 I
                I*******************                                 388
I**********              110
      189073 7000 I                                                189073 7000 I
                I************************                           475
I********              086
      190034 6000 I                                                190034 6000 I
                I*****************************                       588
I***********              114
      190995 6000 I                                                190995 6000 I
                I***********************************                 722
I*************              133
      191956 6000 I                                                191956 6000 I
                I*************************************               776
I*****              055
      192917 6000 I                                                192917 6000 I
```

```
                I****************************************          827
I*****                  051
      193878 6000 I                                          193878 6000 I
                I*****************************************       878
I*****                  051
      194839 6000 I                                          194839 6000 I
                I******************************************      910
 I***                   031
      195800 5000 I                                          195800 5000 I
                I*******************************************    933
 I**                    024
      196761 5000 I                                          196761 5000 I
                I********************************************   965
  I***                   031
      197722 5000 I                                          197722 5000 I
                I*********************************************  984
  I*                     020
      198683 5000 I                                          198683 5000 I
                I*********************************************  988
  I                      004
      199644 5000 I                                          199644 5000 I
                I********************************************** 996
   I                     008
      200605 5000 I                                          200605 5000 I
                I********************************************** 996
   I                     000
      201566 5000 I                                          201566 5000 I
                I**********************************************1 000
   I                     004
      202527 5000 I                                          202527 5000 I
                I**********************************************1 000
   I                     000
      202527 5000  I----I----I----I----I----I----I----I----I----I----I  MAX          202527 5000
I----I----I----I----I----I MAX

                NO OBS-----------      255  STD ERROR-        3771 5750
                COEF OF VARIATION-      02  MEAN------       190318 8000
                KURTOSIS (BETA 2)-    2 88  MEDIAN----       190202 2000
                PEARSONIAN SKEW---      23  MODE------       191187 8000
```

NETWORK TIME FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10
15   20   25
          45 8384  I----I----I----I----I----I----I----I----I----I----I  MIN                    45 8384
I----I----I----I----I----I MIN
                I                                       000                I
     000
          45 8384 I                                                   45 8384 I
                I                                       005                I
     005
          46 2291 I                                                   46 2291 I
                I*                                      013                I
      008
          46 6199 I                                                   46 6199 I
                I*                                      025                I*
      013
          47 0106 I                                                   47 0106 I
                I**                                     041                I*
       016
          47 4013 I                                                   47 4013 I
                I****                                   082                I****
        041
          47 7920 I                                                   47 7920 I
                I*******                                133                I*****
          052
          48 1827 I                                                   48 1827 I
                I***********                            210                I*******
            077
          48 5734 I                                                   48 5734 I
                I***************                        297                I********
             086
          48 9641 I                                                   48 9641 I
                I******************                     381                I********
             085
          49 3548 I                                                   49 3548 I
                I************************                              498
I***********              116
          49 7456 I                                                   49 7456 I
                I****************************                          586
I********                088
          50 1363 I                                                   50 1363 I
                I*********************************                     666
I********                080
          50 5270 I                                                   50 5270 I
```

```
                I***********************************          752
I********                086
        50 9177 I                                          50 9177 I
                I*****************************************      840
I********                088
        51 3084 I                                          51 3084 I
                I******************************************     900
 I*****                  060
        51 6991 I                                          51 6991 I
                I*******************************************    945
 I****                   046
        52 0898 I                                          52 0898 I
                I********************************************   967
  I**                    022
        52 4805 I                                          52 4805 I
                I*********************************************  980
  I*                     013
        52 8713 I                                          52 8713 I
                I********************************************** 991
   I*                    011
        53 2620 I                                          53 2620 I
                I********************************************** 994
   I                     003
        53 6527 I                                          53 6527 I
                I********************************************** 995
   I                     002
        54 0434 I                                          54 0434 I
                I**********************************************1 000
   I                     005
        54 4341 I                                          54 4341 I
                I**********************************************1 000
   I                     000
        54 4341  I----I----I----I----I----I----I----I----I----I----I  MAX                    54 4341
I----I----I----I----I----I MAX
```

NO OBS----------	637	STD ERROR-	1 4684
COEF OF VARIATION-	03	MEAN------	49 8237
KURTOSIS (BETA 2)-	2 81	MEDIAN----	49 7554
PEARSONIAN SKEW---	18	MODE------	49 5605

PATH COST FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
      172407 5000  I----I----I----I----I----I----I----I----I----I----I  MIN              172407 5000
I----I----I----I----I----I MIN
                I                                   000                I
    000
      172407 5000 I                                                172407 5000 I
                I                                   008                I
    008
      173322 1000 I                                                173322 1000 I
                I*                                  016                I
     008
      174236 7000 I                                                174236 7000 I
                I**                                 035                I*
     019
      175151 2000 I                                                175151 2000 I
                I***                                050                I*
     016
      176065 8000 I                                                176065 8000 I
                I****                               077                I**
     027
      176980 4000 I                                                176980 4000 I
                I*******                            135                I*****
       058
      177894 9000 I                                                177894 9000 I
                I**********                         209                I*******
         074
      178809 5000 I                                                178809 5000 I
                I****************                   311                I**********
         102
      179724 0000 I                                                179724 0000 I
                I********************               407                I*********
          096
      180638 6000 I                                                180638 6000 I
                I************************           484                I*******
           077
      181553 2000 I                                                181553 2000 I
                I******************************                     576
I*********              093
      182467 7000 I                                                182467 7000 I
                I*********************************                 670
I*********              094
      183382 3000 I                                                183382 3000 I
```

```
                I************************************          757
I********                086
     184296 9000 I                                          184296 9000 I
                I*****************************************        829
I*******                072
     185211 4000 I                                          185211 4000 I
                I*******************************************      890
 I******                061
     186126 0000 I                                          186126 0000 I
                I*********************************************     925
 I***                   035
     187040 5000 I                                          187040 5000 I
                I**********************************************    962
  I***                  038
     187955 1000 I                                          187955 1000 I
                I**********************************************    980
  I*                    017
     188869 7000 I                                          188869 7000 I
                I**********************************************    987
  I                     008
     189784 2000 I                                          189784 2000 I
                I**********************************************    998
   I*                   011
     190698 8000 I                                          190698 8000 I
                I**********************************************    998
   I                    000
     191613 4000 I                                          191613 4000 I
                I**********************************************1 000
   I                    002
     192527 9000 I                                          192527 9000 I
                I**********************************************1 000
   I                    000
     192527 9000  I----I----I----I----I----I----I----I----I----I----I  MAX          192527 9000
I----I----I----I----I----I MAX
```

NO OBS----------	637	STD ERROR-	3538 9760
COEF OF VARIATION-	02	MEAN------	181734 5000
KURTOSIS (BETA 2)-	2 73	MEDIAN----	181821 5000
PEARSONIAN SKEW---	62	MODE------	179557 8000

NETWORK TIME FOR NODE N24

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
          29 5232  I----I----I----I----I----I----I----I----I----I----I  MIN                    29 5232
I----I----I----I----I----I MIN
                I                                   000              I
    000
          29 5232 I                                                29 5232 I
                I*                                  017              I*
    017
          29 7473 I                                                29 7473 I
                I*                                  017              I
    000
          29 9713 I                                                29 9713 I
                I*                                  017              I
    000
          30 1954 I                                                30 1954 I
                I**                                 034              I*
    017
          30 4194 I                                                30 4194 I
                I****                               085              I*****
      051
          30 6435 I                                                30 6435 I
                I*****                              102              I*
    017
          30 8675 I                                                30 8675 I
                I********                           153              I*****
     051
          31 0916 I                                                31 0916 I
                I***********                        220              I******
       068
          31 3156 I                                                31 3156 I
                I*************                      254              I***
      034
          31 5397 I                                                31 5397 I
                I****************                   322              I******
         068
          31 7638 I                                                31 7638 I
                I********************               407              I********
         085
          31 9878 I                                                31 9878 I
                I***************************                       542
I*************          136
          32 2119 I                                                32 2119 I
```

```
                I******************************                627
I********                085
        32 4359 I                                          32 4359 I
                I*********************************                678
I*****                   051
        32 6600 I                                          32 6600 I
                I***********************************                729
I*****                   051
        32 8840 I                                          32 8840 I
                I**************************************                780
I*****                   051
        33 1081 I                                          33 1081 I
                I*****************************************                831
I*****                   051
        33 3322 I                                          33 3322 I
                I******************************************                864
I***                    034
        33 5562 I                                          33 5562 I
                I*********************************************                932
 I******                    068
        33 7803 I                                          33 7803 I
                I**********************************************                949
 I*                     017
        34 0043 I                                          34 0043 I
                I**********************************************                949
 I                      000
        34 2284 I                                          34 2284 I
                I************************************************1 000
  I*****                    051
        34 4524 I                                          34 4524 I
                I************************************************1 000
  I                       000
        34 4524  I----I----I----I----I----I----I----I----I----I----I  MAX                    34 4524
I----I----I----I----I----I MAX

                NO OBS------------       59  STD ERROR-            1 0898
                COEF OF VARIATION-       03  MEAN------           32 2028
                KURTOSIS (BETA 2)-    2 59  MEDIAN----            32 0926
                PEARSONIAN SKEW---       09  MODE------           32 0998
```

PATH COST FOR NODE N24

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
      132016 8000  I----I----I----I----I----I----I----I----I----I----I  MIN              132016 8000
I----I----I----I----I----I MIN
                I                                        000              I
    000
      132016 8000 I                                                   132016 8000 I
                I*                                       017              I*
    017
      132501 5000 I                                                   132501 5000 I
                I*                                       017              I
    000
      132986 3000 I                                                   132986 3000 I
                I*                                       017              I
    000
      133471 0000 I                                                   133471 0000 I
                I*                                       017              I
    000
      133955 8000 I                                                   133955 8000 I
                I**                                      034              I*
    017
      134440 5000 I                                                   134440 5000 I
                I***                                     068              I***
    034
      134925 2000 I                                                   134925 2000 I
                I******                                   119              I*****
    051
      135410 0000 I                                                   135410 0000 I
                I*********                                186              I******
    068
      135894 7000 I                                                   135894 7000 I
                I**************                             271              I********
    085
      136379 4000 I                                                   136379 4000 I
                I****************                           322              I*****
    051
      136864 2000 I                                                   136864 2000 I
                I********************                       407              I********
    085
      137348 9000 I                                                   137348 9000 I
                I*************************                                525
I***********            119
      137833 6000 I                                                   137833 6000 I
```

```
                I*****************************                    610
I********                085
      138318 4000 I                                          138318 4000 I
                I*******************************                  661
I*****                   051
      138803 1000 I                                          138803 1000 I
                I************************************                763
I**********                102
      139287 8000 I                                          139287 8000 I
                I*******************************************         881
I***********                119
      139772 6000 I                                          139772 6000 I
                I*********************************************        898
 I*                     017
      140257 3000 I                                          140257 3000 I
                I**********************************************      932
 I***                    034
      140742 0000 I                                          140742 0000 I
                I***********************************************      966
  I***                    034
      141226 8000 I                                          141226 8000 I
                I************************************************     983
  I*                     017
      141711 5000 I                                          141711 5000 I
                I************************************************     983
  I                      000
      142196 2000 I                                          142196 2000 I
                I*************************************************1 000
   I*                    017
      142681 0000 I                                          142681 0000 I
                I*************************************************1 000
   I                     000
      142681 0000  I----I----I----I----I----I----I----I----I----I----I  MAX              142681 0000
I----I----I----I----I----I MAX
```

NO OBS---------- 59 STD ERROR- 1998 3370
COEF OF VARIATION- 01 MEAN------ 137731 0000
KURTOSIS (BETA 2)- 3 09 MEDIAN---- 137803 3000
MULTIMODAL DISTRIBUTION

NETWORK TIME FOR NODE N25

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          40 1282  I----I----I----I----I----I----I----I----I----I  MIN                    40 1282
I----I----I----I----I----I MIN
                I                                   000              I
     000
          40 1282 I                                                 40 1282 I
                I*                                  020              I**
      020
          40 3780 I                                                 40 3780 I
                I**                                 041              I**
      020
          40 6278 I                                                 40 6278 I
                I**                                 041              I
     000
          40 8776 I                                                 40 8776 I
                I****                               082              I****
        041
          41 1274 I                                                 41 1274 I
                I******                             122              I****
        041
          41 3772 I                                                 41 3772 I
                I*******                            143              I**
        020
          41 6270 I                                                 41 6270 I
                I*********                          204              I******
         061
          41 8769 I                                                 41 8769 I
                I***************                    306              I**********
          102
          42 1267 I                                                 42 1267 I
                I*****************                      367              I******
            061
          42 3765 I                                                 42 3765 I
                I**********************                              469
I**********              102
          42 6263 I                                                 42 6263 I
                I****************************                        551
I********              082
          42 8761 I                                                 42 8761 I
                I******************************                      612
I******              061
          43 1259 I                                                 43 1259 I
```

```
                I*********************************                673
I******                 061
          43 3757 I                                          43 3757 I
                I************************************          735
I******                 061
          43 6255 I                                          43 6255 I
                I*****************************************      816
I*******                 082
          43 8753 I                                          43 8753 I
                I*****************************************      816
I                       000
          44 1251 I                                          44 1251 I
                I******************************************     837
I**                     020
          44 3749 I                                          44 3749 I
                I*******************************************    878
I****                   041
          44 6247 I                                          44 6247 I
                I*********************************************   939
 I******                 061
          44 8745 I                                          44 8745 I
                I**********************************************   959
  I**                   020
          45 1243 I                                          45 1243 I
                I**********************************************   959
  I                     000
          45 3741 I                                          45 3741 I
                I*************************************************1 000
   I****                 041
          45 6240 I                                          45 6240 I
                I*************************************************1 000
   I                    000
          45 6240  I----I----I----I----I----I----I----I----I----I----I  MAX                    45 6240
I----I----I----I----I----I MAX
```

NO OBS---------- 49 STD ERROR- 1 2740
COEF OF VARIATION- 03 MEAN------ 42 8683
KURTOSIS (BETA 2)- 2 53 MEDIAN---- 42 7628
MULTIMODAL DISTRIBUTION

PATH COST FOR NODE N25

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
        171887 2000  I----I----I----I----I----I----I----I----I----I----I  MIN              171887 2000
I----I----I----I----I----I----I MIN
                I                                       000                I
    000
        171887 2000 I                                                   171887 2000 I
                I*                                      020                I**
        020
        172614 5000 I                                                   172614 5000 I
                I****                                    082                I******
          061
        173341 8000 I                                                   173341 8000 I
                I****                                    082                I
        000
        174069 1000 I                                                   174069 1000 I
                I******                                   122                I****
          041
        174796 5000 I                                                   174796 5000 I
                I********                                 163                I****
           041
        175523 8000 I                                                   175523 8000 I
                I***********                               224                I******
             061
        176251 1000 I                                                   176251 1000 I
                I**************                            286                I******
            061
        176978 4000 I                                                   176978 4000 I
                I*******************                                     388
I**********              102
        177705 7000 I                                                   177705 7000 I
                I**********************                                469                I********
            082
        178433 0000 I                                                   178433 0000 I
                I***************************                             551
I********              082
        179160 3000 I                                                   179160 3000 I
                I******************************                          633
I********              082
        179887 6000 I                                                   179887 6000 I
                I*********************************                     673                I****
                 041
        180615 0000 I                                                   180615 0000 I
```

```
                I************************************          755
I********                082
      181342 3000 I                                        181342 3000 I
                I************************************          776              I**
                  020
      182069 6000 I                                        182069 6000 I
                I*****************************************      878
I**********              102
      182796 9000 I                                        182796 9000 I
                I*****************************************      878
I                     000
      183524 2000 I                                        183524 2000 I
                I******************************************     939
 I******                061
      184251 5000 I                                        184251 5000 I
                I******************************************     939
 I                    000
      184978 8000 I                                        184978 8000 I
                I******************************************     939
 I                    000
      185706 1000 I                                        185706 1000 I
                I*******************************************    980
  I****                 041
      186433 5000 I                                        186433 5000 I
                I*******************************************    980
  I                    000
      187160 8000 I                                        187160 8000 I
                I*********************************************1 000
   I**                  020
      187888 1000 I                                        187888 1000 I
                I*********************************************1 000
   I                    000
      187888 1000  I----I----I----I----I----I----I----I----I----I----I  MAX              187888 1000
I----I----I----I----I----I MAX
```

NO OBS---------- 49 STD ERROR- 3608 0140
COEF OF VARIATION- 02 MEAN------ 178966 5000
KURTOSIS (BETA 2)- 2 70 MEDIAN---- 178663 9000
MULTIMODAL DISTRIBUTION

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10
15   20   25
          29 5232  I----I----I----I----I----I----I----I----I----I  MIN                    29 5232
I----I----I----I----I----I MIN
                I                                   000              I
     000
          29 5232 I                                                29 5232 I
                I                                   005              I
     005
          30 6679 I                                                30 6679 I
                I*                                  020              I*
      015
          31 8125 I                                                31 8125 I
                I**                                 045              I**
      025
          32 9572 I                                                32 9572 I
                I***                                056              I*
      011
          34 1018 I                                                34 1018 I
                I***                                059              I
      003
          35 2465 I                                                35 2465 I
                I***                                059              I
      000
          36 3911 I                                                36 3911 I
                I***                                059              I
      000
          37 5358 I                                                37 5358 I
                I***                                059              I
      000
          38 6804 I                                                38 6804 I
                I***                                059              I
      000
          39 8251 I                                                39 8251 I
                I***                                061              I
      002
          40 9697 I                                                40 9697 I
                I****                               073              I*
      012
          42 1144 I                                                42 1144 I
                I*****                              091              I*
      018
          43 2590 I                                                43 2590 I
```

```
                I*****                                    100                I
      009
        44 4037 I                                                      44 4037 I
                I*****                                    107                I
      007
        45 5483 I                                                      45 5483 I
                I******                                   117                I*
      010
        46 6930 I                                                      46 6930 I
                I*********                                183                I******
        066
        47 8377 I                                                      47 8377 I
                I*******************                                   376
I*******************        193
        48 9823 I                                                      48 9823 I
                I******************************                        628
I************************ 252
        50 1270 I                                                      50 1270 I
                I*****************************************             854
I*********************     226
        51 2716 I                                                      51 2716 I
                I*************************************************    963
 I**********              109
        52 4163 I                                                      52 4163 I
                I*************************************************** 991
 I**                    028
        53 5609 I                                                      53 5609 I
                I***************************************************1 000
 I                     009
        54 7056 I                                                      54 7056 I
                I***************************************************1 000
 I                     000
        54 7056  I----I----I----I----I----I----I----I----I----I----I  MAX                    54 7056
I----I----I----I----I----I----I MAX
```

NO OBS----------	1000	STD ERROR-	4 5690
COEF OF VARIATION-	09	MEAN------	48 4381
KURTOSIS (BETA 2)-	9 90	MEDIAN----	49 5312
PEARSONIAN SKEW---	29	MODE------	49 7768

PATH COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
      132016 8000  I----I----I----I----I----I----I----I----I----I----I  MIN              132016 8000
I----I----I----I----I----I----I MIN
                I                                   000              I
    000
      132016 8000 I                                                132016 8000 I
                I                                   005              I
    005
      135221 8000 I                                                135221 8000 I
                I**                                  036              I***
      031
      138426 9000 I                                                138426 9000 I
                I***                                 058              I**
      022
      141631 9000 I                                                141631 9000 I
                I***                                 059              I
      001
      144836 9000 I                                                144836 9000 I
                I***                                 059              I
      000
      148042 0000 I                                                148042 0000 I
                I***                                 059              I
      000
      151247 0000 I                                                151247 0000 I
                I***                                 059              I
      000
      154452 0000 I                                                154452 0000 I
                I***                                 059              I
      000
      157657 1000 I                                                157657 1000 I
                I***                                 059              I
      000
      160862 1000 I                                                160862 1000 I
                I***                                 059              I
      000
      164067 1000 I                                                164067 1000 I
                I***                                 059              I
      000
      167272 2000 I                                                167272 2000 I
                I***                                 059              I
      000
      170477 2000 I                                                170477 2000 I
```

```
                I***                                    069              I*
      010
      173682 2000 I                                                173682 2000 I
                I******                                 119              I*****
        050
      176887 3000 I                                                176887 3000 I
                I****************                                    313
I*******************        194
      180092 3000 I                                                180092 3000 I
                I*************************                           525
I*********************      212
      183297 3000 I                                                183297 3000 I
                I***********************************                728
I********************      203
      186502 3000 I                                                186502 3000 I
                I*****************************************          853
I************            125
      189707 4000 I                                                189707 4000 I
                I*********************************************     943
 I*********            090
      192912 4000 I                                                192912 4000 I
                I************************************************ 979
  I***                036
      196117 4000 I                                                196117 4000 I
                I********************************************** 997
  I*                  018
      199322 5000 I                                                199322 5000 I
                I**********************************************1 000
  I                   003
      202527 5000 I                                                202527 5000 I
                I**********************************************1 000
  I                   000
      202527 5000  I----I----I----I----I----I----I----I----I----I----I  MAX            202527 5000
I----I----I----I----I----I MAX
```

NO OBS---------- 1000 STD ERROR- 12070 4000
COEF OF VARIATION- 07 MEAN------ 181191 9000
KURTOSIS (BETA 2)- 10 25 MEDIAN---- 182931 1000
PEARSONIAN SKEW--- 09 MODE------ 182229 0000

OVERALL COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
      132016 8000  I----I----I----I----I----I----I----I----I----I----I  MIN              132016 8000
I----I----I----I----I----I----I MIN
                I                                       000              I
    000
      132016 8000 I                                                  132016 8000 I
                I                                       005              I
    005
      135221 8000 I                                                  135221 8000 I
                I**                                     036              I***
      031
      138426 9000 I                                                  138426 9000 I
                I***                                    058              I**
      022
      141631 9000 I                                                  141631 9000 I
                I***                                    059              I
      001
      144836 9000 I                                                  144836 9000 I
                I***                                    059              I
      000
      148042 0000 I                                                  148042 0000 I
                I***                                    059              I
      000
      151247 0000 I                                                  151247 0000 I
                I***                                    059              I
      000
      154452 0000 I                                                  154452 0000 I
                I***                                    059              I
      000
      157657 1000 I                                                  157657 1000 I
                I***                                    059              I
      000
      160862 1000 I                                                  160862 1000 I
                I***                                    059              I
      000
      164067 1000 I                                                  164067 1000 I
                I***                                    059              I
      000
      167272 2000 I                                                  167272 2000 I
                I***                                    059              I
      000
      170477 2000 I                                                  170477 2000 I
```

```
                I***                                    069                I*
      010
      173682 2000 I                                                173682 2000 I
                I******                                 119                I*****
         050
      176887 3000 I                                                176887 3000 I
                I****************                                   313
I*******************       194
      180092 3000 I                                                180092 3000 I
                I*************************                          525
I*********************     212
      183297 3000 I                                                183297 3000 I
                I************************************               728
I********************     203
      186502 3000 I                                                186502 3000 I
                I*****************************************        853
I************           125
      189707 4000 I                                                189707 4000 I
                I*********************************************    943
 I*********           090
      192912 4000 I                                                192912 4000 I
                I*********************************************** 979
  I***                 036
      196117 4000 I                                                196117 4000 I
                I************************************************ 997
   I*                  018
      199322 5000 I                                                199322 5000 I
                I*************************************************1 000
   I                   003
      202527 5000 I                                                202527 5000 I
                I*************************************************1 000
   I                   000
      202527 5000  I----I----I----I----I----I----I----I----I----I----I  MAX              202527 5000
I----I----I----I----I----I MAX

                NO OBS-----------     1000  STD ERROR-        12070 4000
                COEF OF VARIATION-      07  MEAN------       181191 9000
                KURTOSIS (BETA 2)-   10 25  MEDIAN----       182931 1000
                PEARSONIAN SKEW---      09  MODE------       182229 0000


PATH PERFORMANCE FOR THE COMPOSITE TERMINAL NODE
NO OBS =            1000  AVE =              0000
MIN =             0000  MAX =             0000
```

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9 10
               I----+----+----+----+----+----+----+----+----+----+I
N22        2550 I*************                                    I
               I   +   +   +   +   +   +   +   +   +   +I
N23        6370 I*******************************                   I
               I   +   +   +   +   +   +   +   +   +   +I
N24        0590 I***                                   I
               I   +   +   +   +   +   +   +   +   +   +I
N25        0490 I**                                    I
               I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9 10
```

NODES CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9 10
            I----+----+----+----+----+----+----+----+----+----+I
N01      5970 I*****************************                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N02      4030 I*******************                             I
            I   +   +   +   +   +   +   +   +   +   +I
N03      2470 I************                                     I
            I   +   +   +   +   +   +   +   +   +   +I
N04      2470 I************                                     I
            I   +   +   +   +   +   +   +   +   +   +I
N05      0330 I**                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N06      6100 I******************************                   I
            I   +   +   +   +   +   +   +   +   +   +I
N07      6100 I******************************                   I
            I   +   +   +   +   +   +   +   +   +   +I
N08      0360 I**                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N09      0360 I**                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N10      0250 I*                                    I
            I   +   +   +   +   +   +   +   +   +   +I
N12      9060 I*******************************************   I
            I   +   +   +   +   +   +   +   +   +   +I
N13      9060 I*******************************************   I
            I   +   +   +   +   +   +   +   +   +   +I
N14      9390 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N15    1 0000 I*************************************************I
            I   +   +   +   +   +   +   +   +   +   +I
N16      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N17      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N18      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N19      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N20      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N21      9410 I********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N22      2550 I*************                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N23      6370 I******************************                   I
```

ARCS CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I----+----+----+----+----+----+----+----+----+----+I
A01     2470 I************                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A02     2470 I************                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A03     2470 I************                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A04     0330 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A05     0330 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A06     3170 I****************                              I
            I   +   +   +   +   +   +   +   +   +   +   +I
A07     0490 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A08     0360 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A09     0360 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A10     0250 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A11     0250 I*                                         I
            I   +   +   +   +   +   +   +   +   +   +   +I
A12     2930 I***************                                I
            I   +   +   +   +   +   +   +   +   +   +   +I
A13     6100 I******************************                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
A14     6100 I******************************                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
A15     0360 I**                                        I
            I   +   +   +   +   +   +   +   +   +   +   +I
A16     9060 I*******************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A17     9060 I*******************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A18     9390 I********************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A19     9410 I********************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A20     9410 I********************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A21     9410 I********************************************      I
            I   +   +   +   +   +   +   +   +   +   +   +I
A22     9410 I********************************************      I
```

```
          I   +   +   +   +   +   +   +   +   +   +I
A23     9410 I*********************************************  I
          I   +   +   +   +   +   +   +   +   +   +I
A24     9410 I*********************************************  I
          I   +   +   +   +   +   +   +   +   +   +I
A25     2550 I*************                          I
          I   +   +   +   +   +   +   +   +   +   +I
A26     6370 I*******************************              I
          I   +   +   +   +   +   +   +   +   +   +I
A27     0590 I***                                I
          I   +   +   +   +   +   +   +   +   +   +I
A28     0490 I**                                 I
          I----+----+----+----+----+----+----+----+----+----+I
               1   2   3   4   5   6   7   8   9  10
```

LAST RANDOM NUMBER SEED = 56545612

NODES MEAN COMPLETION TIME & REALIZATION FREQUENCY

N01	0000	1000
N02	0000	1000
N06	8 0090	1000
N03	12 6701	1000
N08	13 7199	1000
N07	15 6705	1000
N04	16 2552	1000
N09	20 0736	1000
N12	20 4425	1000
N05	25 9984	1000
N10	25 9997	1000
N13	29 4508	1000
N14	30 8952	1000
N24	32 2028	59
N15	32 3083	1000
N16	33 0827	941
N17	33 9697	941
N18	38 0987	941
N19	39 1871	941
N20	39 9906	941
N21	42 7978	941
N25	42 8683	49

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File abpd0302 03-03-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 2

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION-------
0

MEAN PRINT ORDER---------- 1

INITIAL SEED---------- 65897

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS-------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING----
00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE---
00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	1 00	00	00

```
INITIAL VALUES                    00      00      00

A01     N01     N04     1 0  NEW STORAGE PERMITS
A01     DTIME 1         3        7        10        8
A01     RCOST 123SK        0TA01     K       0

A02     N04     N17     1 0  CONSTRUCT NEW STORAGE
A02     DTIME 1         3        8        12        10
A02     RCOST 123SK    65 0TA02     K       0

A03     N01     N05     1 0  LAG TIME 1
A03     DTIME 1         3      1 99      2 01       2 0
A03     RCOST 123SK        TA03     K       0

A04     N05     N15     1 0  PROCEDURE AND DOCUMENTS
A04     DTIME 1         3        5        7         6
A04     RCOST 123SK   61 17TA04     K       0

A05     N01     N06     1 0  LAG TIME 2
A05     DTIME 1         3       12        15        14
A05     RCOST 123SK        TA05     K       0

A06     N06     N15     1 0  OPERATIONS READINESS
A06     DTIME 1         3        3        7         5
A06     RCOST 123SK   22 20TA06     K       0

A07     N02     N08     1 0  DESIGN
A07     DTIME 1         3      3 5       5 0       4 0
A07     RCOST 123SK     304TA07     K       0

A08     N03     N08     1 0  NEPA
A08     DTIME 1         3        3        6         4
A08     RCOST 123SK        TA08     K       0

A09     N03     N10     1 0  LAG TIME 3
A09     DTIME 1         3      1 5       3 0       2 0
A09     RCOST 123SK        TA09     K       0

A10     N03     N09     1 0  INTEGRATE C POND
A10     DTIME 1         3     16 9      19 4      18 3
A10     RCOST 123SK 1524 36TA10     K   26040

A11     N03     N12     1 0  LAG TIME 4
A11     DTIME 1         3     2 49      2 51      2 50
A11     RCOST 123SK        TA11     K       0
```

```
A12    N12    N13    1 0  DOE WAIVERS
A12    DTIME 1       3     10 5     13 5     12 0
A12    RCOST 123SK       TA12    K     0

A13    N08    N09    1 0  ERECTION - STAGE 1
A13    DTIME 1       3     3 5       6       4
A13    RCOST 123SK   570 9TA13    K     0

A14    N09    N13    1 0  ERECTION - STAGE 2
A14    DTIME 1       3       1       4       3
A14    RCOST 123SK   375 6TA14    K     0

A15    N13    N14    1 0  COLD TEST
A15    DTIME 1       3       6     2 0     1 0
A15    RCOST 123SK  2018 0TA15    K     0

A16    N14    N15    95  DOE APPROVAL FOR HOT TEST
A16    DTIME 1       3     1 0     2 5     1 6
A16    RCOST 123SK  1121 6TA16    K     0

A17    N15    N16    1 0  HOT TEST
A17    DTIME 1       3       2       6       3
A17    RCOST 123SK    4640TA17    K     0

A18    N16    N17    1 0  DOE TEST EVALUATION
A18    DTIME 1       3       3     1 0       5
A18    RCOST 123SK    1830TA18    K     0

A19    N17    N18    95  TREAT WASTE
A19    DTIME 1       3     2 0     5 8     4 0
A19    RCOST 123SK 2878 17TA19    K     0

A20    N18    N19    1 0  STORAGE
A20    DTIME 1       3       8      12      10
A20    RCOST 123SK   251 3TA20    K     0
A20    M    1       3

A21    N19    N20    1 0  DISPOSAL
A21    DTIME 1       3     2 0     3 0     2 5
A21    RCOST 123SK    1480TA21    K     0

A22    N18    N21    1 0  DEMOBILIZATION
A22    DTIME 1       3       4       6       5
A22    RCOST 123SK   954 8TA22    K     0
A22    M    1       70
```

```
A23     N15     N22     1 0  ESCAPE AT N15
A23     DTIME 1         3        09        11        10
A23     RCOST 123SK        TA23     K       0

A24     N18     N23     1 0  ESCAPE AT N17
A24     DTIME 1         3        09        11        10
A24     RCOST 123SK        TA24     K       0

A25     N10     N08     1 0  PROCURMENT
A25     DTIME 1         3       3 5       6 0       4 85
A25     RCOST 123SK  294 85TA25     K       0

A26     N02     N07     1 0  LAG TIME 5
A26     DTIME 1         3        15        17        16
A26     RCOST 123SK        TA26     K       0

A27     N07     N13     1 0  TRAIN OPERATORS
A27     DTIME 1         3         5       1 5         1
A27     RCOST 123SK     549TA27     K       0

ENDARC

N01     1  2 5

N02     1  2 5

N03     1  2 5

N04     2  2 5

N05     2  2 5

N06     2  2 5

N07     2  2 5

N08     2  2 5

N09     2  2 5

N10     2  2 5

N12     2  2 5

N13     2  2 5
```

NETWORK TIME FOR NODE N20

```
                CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10
 15   20   25
            37 2175  I----I----I----I----I----I----I----I----I----I----I  MIN                    37 2175
I----I----I----I----I----I MIN
                I                                   000                I
     000
            37 2175 I                                                 37 2175 I
                I*                                  011                I*
      011
            37 5562 I                                                 37 5562 I
                I*                                  011                I
      000
            37 8949 I                                                 37 8949 I
                I*                                  019                I
      008
            38 2336 I                                                 38 2336 I
                I**                                 030                I*
       011
            38 5723 I                                                 38 5723 I
                I***                                064                I***
        034
            38 9110 I                                                 38 9110 I
                I*****                              098                I***
        034
            39 2497 I                                                 39 2497 I
                I********                           174                I*******
         076
            39 5884 I                                                 39 5884 I
                I***********                        216                I****
         042
            39 9271 I                                                 39 9271 I
                I***************                    295                I*******
           080
            40 2658 I                                                 40 2658 I
                I******************                 375                I*******
           080
            40 6045 I                                                 40 6045 I
                I**********************             436                I******
           061
            40 9432 I                                                 40 9432 I
                I*************************          508                I*******
           072
            41 2820 I                                                 41 2820 I
```

```
                I*****************************                    598
I*********              091
        41 6207 I                                                41 6207 I
                I*********************************                689
I*********              091
        41 9594 I                                                41 9594 I
                I*************************************             773
I********              083
        42 2981 I                                                42 2981 I
                I****************************************          830
I*****                 057
        42 6368 I                                                42 6368 I
                I*****************************************         875
I****                  045
        42 9755 I                                                42 9755 I
                I******************************************        909
 I***                  034
        43 3142 I                                                43 3142 I
                I*******************************************       932
 I**                   023
        43 6529 I                                                43 6529 I
                I********************************************      951
  I*                   019
        43 9916 I                                                43 9916 I
                I*********************************************     985
  I***                  034
        44 3303 I                                                44 3303 I
                I**********************************************1 000
   I*                   015
        44 6690 I                                                44 6690 I
                I**********************************************1 000
   I                    000
        44 6690  I----I----I----I----I----I----I----I----I----I----I  MAX                    44 6690
I----I----I----I----I----I MAX
```

NO OBS---------- 264 STD ERROR- 1 5277
COEF OF VARIATION- 04 MEAN------ 41 1807
KURTOSIS (BETA 2)- 2 54 MEDIAN---- 41 2329
MULTIMODAL DISTRIBUTION

PATH COST FOR NODE N20

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
        80676 6500  I----I----I----I----I----I----I----I----I----I----I  MIN                80676 6500
I----I----I----I----I----I----I MIN
                I                                        000                I
    000
        80676 6500 I                                                   80676 6500 I
                I*                                       011                I*
     011
        81272 2300 I                                                   81272 2300 I
                I*                                       027                I*
     015
        81867 8200 I                                                   81867 8200 I
                I***                                      057               I***
        030
        82463 4100 I                                                   82463 4100 I
                I*****                                    091               I***
         034
        83058 9900 I                                                   83058 9900 I
                I*******                                   140              I****
          049
        83654 5800 I                                                   83654 5800 I
                I***********                               212              I*******
            072
        84250 1600 I                                                   84250 1600 I
                I*************                              269              I*****
            057
        84845 7500 I                                                   84845 7500 I
                I*****************                          337              I******
              068
        85441 3400 I                                                   85441 3400 I
                I**********************                                 447
I**********              110
        86036 9200 I                                                   86036 9200 I
                I*************************                              511              I******
              064
        86632 5100 I                                                   86632 5100 I
                I******************************                          606
I*********              095
        87228 0900 I                                                   87228 0900 I
                I***********************************                     705
I*********              098
        87823 6800 I                                                   87823 6800 I
```

```
                I*************************************          795
I*********              091
      88419 2700 I                                          88419 2700 I
                I*****************************************        852
I*****                 057
      89014 8500 I                                          89014 8500 I
                I*******************************************      917
 I******                064
      89610 4400 I                                          89610 4400 I
                I*********************************************     947
 I***                   030
      90206 0200 I                                          90206 0200 I
                I**********************************************    966
  I*                    019
      90801 6100 I                                          90801 6100 I
                I***********************************************   985
  I*                    019
      91397 2000 I                                          91397 2000 I
                I************************************************ 992
   I                    008
      91992 7800 I                                          91992 7800 I
                I************************************************ 992
   I                    000
      92588 3700 I                                          92588 3700 I
                I************************************************ 996
   I                    004
      93183 9500 I                                          93183 9500 I
                I*************************************************1 000
   I                    004
      93779 5400 I                                          93779 5400 I
                I*************************************************1 000
   I                    000
      93779 5400  I----I----I----I----I----I----I----I----I----I----I  MAX              93779 5400
I----I----I----I----I----I MAX

                NO OBS-----------      264  STD ERROR-          2433 2810
                COEF OF VARIATION-      03  MEAN------         86414 0900
                KURTOSIS (BETA 2)-    2 67  MEDIAN----         86440 5300
                PEARSONIAN SKEW---      28  MODE------         85726 1800
```

NETWORK TIME FOR NODE N21

```
                CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10
15   20   25
          29 9738  I----I----I----I----I----I----I----I----I----I----I  MIN                    29 9738
I----I----I----I----I----I----I MIN
                I                                   000                I
     000
          29 9738 I                                                  29 9738 I
                I                                   003                I
     003
          30 2955 I                                                  30 2955 I
                I                                   003                I
     000
          30 6171 I                                                  30 6171 I
                I                                   008                I
     005
          30 9388 I                                                  30 9388 I
                I*                                  024                I*
      016
          31 2604 I                                                  31 2604 I
                I**                                 048                I**
       024
          31 5821 I                                                  31 5821 I
                I****                               087                I***
        039
          31 9037 I                                                  31 9037 I
                I*******                            133                I****
         047
          32 2254 I                                                  32 2254 I
                I**********                         193                I*****
          059
          32 5471 I                                                  32 5471 I
                I*************                      264                I*******
            071
          32 8687 I                                                  32 8687 I
                I*****************                  344                I********
            080
          33 1904 I                                                  33 1904 I
                I**********************                             437
I*********              093
          33 5120 I                                                  33 5120 I
                I***************************                          532
I*********              095
          33 8337 I                                                  33 8337 I
```

```
                I*******************************                640
I**********              108
        34 1553 I                                          34 1553 I
                I***********************************          715
I*******              076
        34 4770 I                                          34 4770 I
                I*************************************        777
I******              061
        34 7986 I                                          34 7986 I
                I*****************************************      865
I********              088
        35 1203 I                                          35 1203 I
                I*********************************************    928
 I******              063
        35 4420 I                                          35 4420 I
                I**********************************************   955
  I**              027
        35 7636 I                                          35 7636 I
                I***********************************************  976
  I**              021
        36 0853 I                                          36 0853 I
                I***********************************************  987
  I*              011
        36 4069 I                                          36 4069 I
                I************************************************ 995
   I              008
        36 7286 I                                          36 7286 I
                I*************************************************1 000
   I              005
        37 0502 I                                          37 0502 I
                I*************************************************1 000
   I              000
        37 0502  I----I----I----I----I----I----I----I----I----I----I  MAX                37 0502
I----I----I----I----I----I MAX

                NO OBS------------      622  STD ERROR-          1 2609
                COEF OF VARIATION-       04  MEAN------          33 7057
                KURTOSIS (BETA 2)-    2 59  MEDIAN----          33 7424
                PEARSONIAN SKEW---       17  MODE------          33 9256
```

PATH COST FOR NODE N21

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
        78350 0800  I----I----I----I----I----I----I----I----I----I----I  MIN                78350 0800
I----I----I----I----I----I MIN
                I                                   000                I
    000
        78350 0800 I                                                78350 0800 I
                I                                   010                I
    010
        78958 3500 I                                                78958 3500 I
                I*                                  016                I
     006
        79566 6300 I                                                79566 6300 I
                I**                                 032                I*
      016
        80174 9000 I                                                80174 9000 I
                I***                                053                I**
        021
        80783 1700 I                                                80783 1700 I
                I****                               079                I**
        026
        81391 4500 I                                                81391 4500 I
                I******                             119                I****
         040
        81999 7200 I                                                81999 7200 I
                I*********                          178                I*****
           059
        82607 9900 I                                                82607 9900 I
                I*************                      262                I********
              084
        83216 2700 I                                                83216 2700 I
                I*****************                  342                I********
              080
        83824 5400 I                                                83824 5400 I
                I********************               410                I******
               068
        84432 8100 I                                                84432 8100 I
                I*************************                          510
I*********                100
        85041 0900 I                                                85041 0900 I
                I******************************                      592
I********                082
        85649 3600 I                                                85649 3600 I
```

```
                I*********************************                678
I********                087
        86257 6300 I                                          86257 6300 I
                I*************************************             756
I*******                077
        86865 9100 I                                          86865 9100 I
                I****************************************          826
I*******                071
        87474 1800 I                                          87474 1800 I
                I*********************************************      891
 I******                064
        88082 4500 I                                          88082 4500 I
                I**********************************************     926
 I***                   035
        88690 7300 I                                          88690 7300 I
                I***********************************************    953
  I**                   027
        89299 0000 I                                          89299 0000 I
                I************************************************   971
  I*                    018
        89907 2700 I                                          89907 2700 I
                I************************************************   987
  I*                    016
        90515 5500 I                                          90515 5500 I
                I*************************************************  995
   I                    008
        91123 8200 I                                          91123 8200 I
                I**************************************************1 000
   I                    005
        91732 0900 I                                          91732 0900 I
                I**************************************************1 000
   I                    000
        91732 0900  I----I----I----I----I----I----I----I----I----I----I  MAX                91732 0900
I----I----I----I----I----I MAX

                NO OBS-----------      622  STD ERROR-          2556 8950
                COEF OF VARIATION-      03  MEAN------         85002 4900
                KURTOSIS (BETA 2)-    2 67  MEDIAN----         84980 5300
                PEARSONIAN SKEW---      07  MODE------         84825 2500
```

NETWORK TIME FOR NODE N22

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
          21 3920  I----I----I----I----I----I----I----I----I----I----I  MIN                    21 3920
I----I----I----I----I----I MIN
                I                                   000              I
    000
          21 3920 I                                                21 3920 I
                I**                                  032              I***
      032
          21 5981 I                                                21 5981 I
                I**                                  032              I
     000
          21 8042 I                                                21 8042 I
                I**                                  048              I*
      016
          22 0103 I                                                22 0103 I
                I**                                  048              I
     000
          22 2164 I                                                22 2164 I
                I******                               113              I******
         065
          22 4225 I                                                22 4225 I
                I******                               129              I*
        016
          22 6286 I                                                22 6286 I
                I**********                            194              I******
          065
          22 8348 I                                                22 8348 I
                I**************                         274              I********
            081
          23 0409 I                                                23 0409 I
                I***************                        306              I***
           032
          23 2470 I                                                23 2470 I
                I*******************                    371              I******
            065
          23 4531 I                                                23 4531 I
                I*******************                    387              I*
           016
          23 6592 I                                                23 6592 I
                I*************************                500
I***********            113
          23 8653 I                                                23 8653 I
```

```
                I***************************                565              I******
              065
          24 0714 I                                                  24 0714 I
                I*********************************                   661
I*********              097
          24 2775 I                                                  24 2775 I
                I***********************************             710              I****
               048
          24 4837 I                                                  24 4837 I
                I**************************************               774
I******                 065
          24 6898 I                                                  24 6898 I
                I****************************************             823
I****                   048
          24 8959 I                                                  24 8959 I
                I*****************************************           871
I****                   048
          25 1020 I                                                  25 1020 I
                I******************************************          903
 I***                   032
          25 3081 I                                                  25 3081 I
                I*******************************************         919
 I*                     016
          25 5142 I                                                  25 5142 I
                I********************************************        968
  I****                   048
          25 7203 I                                                  25 7203 I
                I*********************************************1 000
   I***                   032
          25 9264 I                                                  25 9264 I
                I*********************************************1 000
   I                     000
          25 9264  I----I----I----I----I----I----I----I----I----I----I  MAX                25 9264
I----I----I----I----I----I MAX

                NO OBS-----------      62  STD ERROR-          1 0830
                COEF OF VARIATION-     05  MEAN------          23 8358
                KURTOSIS (BETA 2)-   2 36  MEDIAN----         23 8810
                PEARSONIAN SKEW---     04  MODE------          23 7966
```

PATH COST FOR NODE N22

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
        63151 0500  I----I----I----I----I----I----I----I----I----I----I  MIN                63151 0500
I----I----I----I----I----I MIN
                I                                        000                I
    000
        63151 0500 I                                                   63151 0500 I
                I*                                       016                I*
    016
        63395 1600 I                                                   63395 1600 I
                I*                                       016                I
    000
        63639 2600 I                                                   63639 2600 I
                I***                                      065                I****
     048
        63883 3700 I                                                   63883 3700 I
                I*******                                   145                I********
         081
        64127 4700 I                                                   64127 4700 I
                I**********                                194                I****
         048
        64371 5800 I                                                   64371 5800 I
                I************                               242                I****
         048
        64615 6800 I                                                   64615 6800 I
                I***************                            306                I******
          065
        64859 7900 I                                                   64859 7900 I
                I******************                         355                I****
          048
        65103 8900 I                                                   65103 8900 I
                I***********************                                468
I***********              113
        65348 0000 I                                                   65348 0000 I
                I****************************                           565
I*********              097
        65592 1000 I                                                   65592.1000 I
                I*******************************                      613              I****
                 048
        65836 2000 I                                                   65836 2000 I
                I*********************************                    661              I****
                 048
        66080 3000 I                                                   66080 3000 I
```

```
                I***************************************          790
I************          129
        66324 4100 I                                          66324 4100 I
                I***************************************        806              I*
                   016
        66568 5100 I                                          66568 5100 I
                I****************************************       839
I***                    032
        66812 6100 I                                          66812 6100 I
                I*****************************************      871
I***                    032
        67056 7100 I                                          67056 7100 I
                I******************************************     903
 I***                    032
        67300 8100 I                                          67300 8100 I
                I*******************************************   952
  I****                    048
        67544 9100 I                                          67544 9100 I
                I********************************************  984
  I***                    032
        67789 0200 I                                          67789 0200 I
                I********************************************  984
  I                     000
        68033 1200 I                                          68033 1200 I
                I********************************************  984
  I                     000
        68277 2200 I                                          68277 2200 I
                I*********************************************1 000
   I*                    016
        68521 3500 I                                          68521 3500 I
                I*********************************************1 000
   I                    000
        68521 3500  I----I----I----I----I----I----I----I----I----I----I  MAX              68521 3500
I----I----I----I----I----I MAX

                NO OBS------------      62  STD ERROR-        1174 5760
                COEF OF VARIATION-      02  MEAN------        65529 8300
                KURTOSIS (BETA 2)-    2 48  MEDIAN----        65357 5700
                PEARSONIAN SKEW---      56  MODE------        66182 0200
```

NETWORK TIME FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
          25 6147  I----I----I----I----I----I----I----I----I----I----I  MIN                    25 6147
I----I----I----I----I----I----I MIN
                I                                   000                I
    000
          25 6147 I                                                25 6147 I
                I*                                  019                I*
     019
          25 9285 I                                                25 9285 I
                I*                                  019                I
     000
          26 2424 I                                                26 2424 I
                I**                                 038                I*
      019
          26 5563 I                                                26 5563 I
                I******                               115                I*******
           077
          26 8701 I                                                26 8701 I
                I********                             154                I***
          038
          27 1840 I                                                27 1840 I
                I*************                         250                I*********
             096
          27 4978 I                                                27 4978 I
                I****************                       327                I*******
            077
          27 8117 I                                                27 8117 I
                I*****************                     346                I*
           019
          28 1256 I                                                28 1256 I
                I************************                481
I*************          135
          28 4394 I                                                28 4394 I
                I******************************          596
I***********          115
          28 7533 I                                                28 7533 I
                I*******************************       615                I*
                 019
          29 0672 I                                                29 0672 I
                I*************************************   769
I***************          154
          29 3810 I                                                29 3810 I
```

```
                I*****************************************      885
I***********            115
        29 6949 I                                          29 6949 I
                I*****************************************      904
 I*                  019
        30 0088 I                                          30 0088 I
                I*********************************************   962
 I*****                 058
        30 3226 I                                          30 3226 I
                I********************************************** 981
 I*                  019
        30 6365 I                                          30 6365 I
                I********************************************** 981
 I                  000
        30 9503 I                                          30 9503 I
                I********************************************** 981
 I                  000
        31 2642 I                                          31 2642 I
                I********************************************** 981
 I                  000
        31 5781 I                                          31 5781 I
                I********************************************** 981
 I                  000
        31 8919 I                                          31 8919 I
                I********************************************** 981
 I                  000
        32 2058 I                                          32 2058 I
                I*************************************************1 000
  I*                 019
        32 5197 I                                          32 5197 I
                I*************************************************1 000
  I                 000
        32 5197  I----I----I----I----I----I----I----I----I----I----I  MAX                    32 5197
I----I----I----I----I----I MAX

                NO OBS-----------      52  STD ERROR-          1 2475
                COEF OF VARIATION-     04  MEAN------         28 4962
                KURTOSIS (BETA 2)-   3 71  MEDIAN----         28 4924
                PEARSONIAN SKEW---     65  MODE------         29 3113
```

PATH COST FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
        73409 6500  I----I----I----I----I----I----I----I----I----I----I  MIN                73409 6500
I----I----I----I----I----I MIN
                I                                       000                I
    000
        73409 6500 I                                                   73409 6500 I
                I*                                      019                I*
    019
        74004 3800 I                                                   74004 3800 I
                I*                                      019                I
    000
        74599 1200 I                                                   74599 1200 I
                I**                                      038               I*
    019
        75193 8500 I                                                   75193 8500 I
                I**                                      038               I
    000
        75788 5900 I                                                   75788 5900 I
                I**                                      038               I
    000
        76383 3200 I                                                   76383 3200 I
                I******                                   115               I*******
        077
        76978 0500 I                                                   76978 0500 I
                I********                                 154               I***
        038
        77572 7900 I                                                   77572 7900 I
                I**************                                         288
I*************            135
        78167 5200 I                                                   78167 5200 I
                I****************                                327               I***
        038
        78762 2600 I                                                   78762 2600 I
                I*********************                                423
I*********            096
        79356 9900 I                                                   79356 9900 I
                I**************************                             519
I*********            096
        79951 7300 I                                                   79951 7300 I
                I*********************************                      654
I*************            135
        80546 4600 I                                                   80546 4600 I
```

```
                I*************************************          769
I***********            115
      81141 2000 I                                          81141 2000 I
                I****************************************        827
I*****                  058
      81735 9300 I                                          81735 9300 I
                I*****************************************       865
I***                    038
      82330 6600 I                                          82330 6600 I
                I******************************************      904
 I***                   038
      82925 4000 I                                          82925 4000 I
                I*******************************************     923
 I*                     019
      83520 1300 I                                          83520 1300 I
                I********************************************    942
 I*                     019
      84114 8700 I                                          84114 8700 I
                I********************************************    942
 I                      000
      84709 6000 I                                          84709 6000 I
                I*********************************************   981
  I***                   038
      85304 3400 I                                          85304 3400 I
                I*********************************************   981
  I                      000
      85899 0700 I                                          85899 0700 I
                I**********************************************1 000
   I*                    019
      86493 8200 I                                          86493 8200 I
                I**********************************************1 000
   I                     000
      86493 8200  I----I----I----I----I----I----I----I----I----I----I  MAX              86493 8200
I----I----I----I----I----I MAX
```

NO OBS---------- 52 STD ERROR- 2505 2380
COEF OF VARIATION- 03 MEAN------ 79766 6800
KURTOSIS (BETA 2)- 3 51 MEDIAN---- 79808 3400
MULTIMODAL DISTRIBUTION

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
          21 3920  I----I----I----I----I----I----I----I----I----I----I  MIN                    21 3920
I----I----I----I----I----I----I MIN
                I                                   000                I
     000
          21 3920 I                                                  21 3920 I
                I                                   007                I
     007
          22 4500 I                                                  22 4500 I
                I*                                  023                I*
      016
          23 5081 I                                                  23 5081 I
                I**                                 046                I**
       023
          24 5661 I                                                  24 5661 I
                I***                                061                I*
       015
          25 6241 I                                                  25 6241 I
                I***                                065                I
       004
          26 6822 I                                                  26 6822 I
                I****                               077                I*
       012
          27 7402 I                                                  27 7402 I
                I*****                              093                I*
       016
          28 7983 I                                                  28 7983 I
                I*****                              108                I*
       015
          29 8563 I                                                  29 8563 I
                I******                             118                I*
       010
          30 9144 I                                                  30 9144 I
                I*********                          173                I*****
        055
          31 9724 I                                                  31 9724 I
                I***************                                     303
I*************          130
          33 0305 I                                                  33 0305 I
                I************************                            497
I*******************        194
          34 0885 I                                                  34 0885 I
```

```
                I*********************************                659
I****************          162
          35 1466 I                                          35 1466 I
                I***********************************          723
I******                 064
          36 2046 I                                          36 2046 I
                I************************************         737              I*
                  014
          37 2627 I                                          37 2627 I
                I************************************         742               I
                   005
          38 3207 I                                          38 3207 I
                I*************************************        769             I**
                  027
          39 3788 I                                          39 3788 I
                I****************************************       826
I*****                  057
          40 4368 I                                          40 4368 I
                I*******************************************     883
I*****                  057
          41 4949 I                                          41 4949 I
                I*********************************************** 954
 I*******                 071
          42 5529 I                                          42 5529 I
                I************************************************ 982
 I**                     028
          43 6110 I                                          43 6110 I
                I*************************************************1 000
  I*                     018
          44 6690 I                                          44 6690 I
                I*************************************************1 000
  I                      000
          44 6690  I----I----I----I----I----I----I----I----I----I----I  MAX                    44 6690
I----I----I----I----I----I----I MAX

                NO OBS------------     1000  STD ERROR-          4 7736
                COEF OF VARIATION-       14  MEAN------          34 7963
                KURTOSIS (BETA 2)-    3 19  MEDIAN----          34 1030
                PEARSONIAN SKEW---       22  MODE------          33 7359
```

PATH COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 10                RFD   05   10
15   20   25
        63151 0500  I----I----I----I----I----I----I----I----I----I----I  MIN                63151 0500
I----I----I----I----I----I----I MIN
                I                                   000                I
    000
        63151 0500 I                                                   63151 0500 I
                I*                                  014                I*
    014
        64543 2500 I                                                   64543 2500 I
                I**                                 039                I**
    025
        65935 4600 I                                                   65935 4600 I
                I***                                056                I*
    017
        67327 6600 I                                                   67327 6600 I
                I***                                062                I
    006
        68719 8700 I                                                   68719 8700 I
                I***                                062                I
    000
        70112 0700 I                                                   70112 0700 I
                I***                                062                I
    000
        71504 2700 I                                                   71504 2700 I
                I***                                062                I
    000
        72896 4800 I                                                   72896 4800 I
                I***                                063                I
    001
        74288 6800 I                                                   74288 6800 I
                I***                                064                I
    001
        75680 8800 I                                                   75680 8800 I
                I***                                069                I
    005
        77073 0900 I                                                   77073 0900 I
                I****                               079                I*
    010
        78465 2900 I                                                   78465 2900 I
                I*****                              102                I**
    023
        79857 4900 I                                                   79857 4900 I
```

```
                I********                                    151                I****
          049
        81249 7000 I                                                    81249 7000 I
                I************                                  242                I*********
            091
        82641 9000 I                                                    82641 9000 I
                I*******************                                     386
I**************          144
        84034 1000 I                                                    84034 1000 I
                I***************************                             546
I****************          160
        85426 3000 I                                                    85426 3000 I
                I************************************                    723
I*****************          177
        86818 5100 I                                                    86818 5100 I
                I*******************************************             875
I***************          152
        88210 7100 I                                                    88210 7100 I
                I************************************************     955
  I********          080
        89602 9100 I                                                    89602 9100 I
                I************************************************     986
  I***          031
        90995 1200 I                                                    90995 1200 I
                I************************************************     998
   I*          012
        92387 3200 I                                                    92387 3200 I
                I*************************************************1 000
   I          002
        93779 5400 I                                                    93779 5400 I
                I*************************************************1 000
   I          000
        93779 5400  I----I----I----I----I----I----I----I----I----I----I  MAX                93779 5400
I----I----I----I----I----I----I MAX
```

NO OBS---------- 1000 STD ERROR- 5503 3970
COEF OF VARIATION- 07 MEAN------ 83895 6500
KURTOSIS (BETA 2)- 8 15 MEDIAN---- 84994 2200
PEARSONIAN SKEW--- 38 MODE------ 85989 8100

OVERALL COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10
15   20   25
        63815 2000  I----I----I----I----I----I----I----I----I----I----I  MIN                63815 2000
I----I----I----I----I----I----I MIN
                I                                       000                I
    000
        63815 2000 I                                                   63815 2000 I
                I*                                      013                I*
    013
        65177 2100 I                                                   65177 2100 I
                I**                                     038                I**
    025
        66539 2300 I                                                   66539 2300 I
                I***                                    056                I*
    018
        67901 2400 I                                                   67901 2400 I
                I***                                    062                I
    006
        69263 2600 I                                                   69263 2600 I
                I***                                    062                I
    000
        70625 2700 I                                                   70625 2700 I
                I***                                    062                I
    000
        71987 2900 I                                                   71987 2900 I
                I***                                    062                I
    000
        73349 3000 I                                                   73349 3000 I
                I***                                    063                I
    001
        74711 3200 I                                                   74711 3200 I
                I***                                    064                I
    001
        76073 3400 I                                                   76073 3400 I
                I***                                    069                I
    005
        77435 3500 I                                                   77435 3500 I
                I****                                   085                I*
    016
        78797 3700 I                                                   78797 3700 I
                I******                                 111                I**
    026
        80159 3800 I                                                   80159 3800 I
```

```
                I********                                    158                I****
        047
       81521 4000 I                                                      81521 4000 I
                I*************                                 259                I**********
          101
       82883 4100 I                                                      82883 4100 I
                I********************                                    406
I**************          147
       84245 4300 I                                                      84245 4300 I
                I****************************                              574
I****************          168
       85607 4500 I                                                      85607 4500 I
                I************************************                      744
I*****************          170
       86969 4600 I                                                      86969 4600 I
                I*******************************************              884
I**************          140
       88331 4800 I                                                      88331 4800 I
                I************************************************     956
 I*******          072
       89693 4900 I                                                      89693 4900 I
                I************************************************     988
 I***          032
       91055 5100 I                                                      91055 5100 I
                I************************************************     998
  I*          010
       92417 5200 I                                                      92417 5200 I
                I*************************************************1 000
  I          002
       93779 5300 I                                                      93779 5300 I
                I*************************************************1 000
  I          000
       93779 5300  I----I----I----I----I----I----I----I----I----I----I  MAX                93779 5300
I----I----I----I----I----I----I MAX

                NO OBS-----------     1000  STD ERROR-          5369 1350
                COEF OF VARIATION-      06  MEAN------         83935 9500
                KURTOSIS (BETA 2)-    7 90  MEDIAN----         84994 2200
                PEARSONIAN SKEW---      33  MODE------         85692 5700


PATH PERFORMANCE FOR THE COMPOSITE TERMINAL NODE
NO OBS =            1000  AVE =              0000
MIN =             0000  MAX =             0000
```

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9 10
            I----+----+----+----+----+----+----+----+----+----+I
N20       2640 I*************                                  I
            I   +   +   +   +   +   +   +   +   +   +I
N21       6220 I******************************                    I
            I   +   +   +   +   +   +   +   +   +   +I
N22       0620 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N23       0520 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +I
            I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9 10
```

NODES CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I----+----+----+----+----+----+----+----+----+----+I
N01      0620 I***                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N03      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N06      0620 I***                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N09      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N13      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N14      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N15     1 0000 I*************************************************I
            I   +   +   +   +   +   +   +   +   +   +   +I
N16      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N17      9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N19      2640 I*************                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N20      2640 I*************                           I
            I   +   +   +   +   +   +   +   +   +   +   +I
N21      6220 I******************************                I
            I   +   +   +   +   +   +   +   +   +   +   +I
N22      0620 I***                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N23      0520 I***                                  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N18      9380 I*********************************************  I
            I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9  10
```

ARCS CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9 10
            I----+----+----+----+----+----+----+----+----+----+I
A05     0620 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
A06     0620 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
A10     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A14     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A15     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A16     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A17     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A18     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A19     9380 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
A20     2640 I*************                            I
            I   +   +   +   +   +   +   +   +   +   +   +I
A21     2640 I*************                            I
            I   +   +   +   +   +   +   +   +   +   +   +I
A22     6220 I******************************                I
            I   +   +   +   +   +   +   +   +   +   +   +I
A23     0620 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
A24     0520 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
            I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9 10
```

LAST RANDOM NUMBER SEED = 1288186492

NODES MEAN COMPLETION TIME & REALIZATION FREQUENCY

N01	0000	1000
N02	0000	1000
N03	0000	1000
N05	2 0001	1000
N10	2 1804	1000
N12	2 5000	1000
N08	6 9627	1000
N04	8 3277	1000
N06	13 6725	1000
N07	15 9821	1000
N09	18 1906	1000
N13	20 8641	1000
N14	22 0566	1000
N15	23 7468	1000
N22	23 8358	62
N16	24 1146	938
N17	24 7186	938
N23	28 4962	52
N18	28 6833	938
N21	33 7057	622
N19	38 6786	264
N20	41 1807	264

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File cpd0302 03-03-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 2

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION------- 0

MEAN PRINT ORDER---------- 1

INITIAL SEED---------- 35987

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS-------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING---- 00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE--- 00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	1 00	00	00
INITIAL VALUES	00	00	00

A01 N01 N02 1 0 LAG TIME 1
A01 DTIME 1 3 66 68 67

```
A01    RCOST 123SK      0TA01    K      0

A02    N01    N03    1 0  LAG TIME 2
A02    DTIME 1       3     2 32     2 34     2 33
A02    RCOST 123SK      TA02    K      0

A03    N03    N04    1 0  TRAIN ERECTION PERSONNEL
A03    DTIME 1       3     1 50     2 0     1 67
A03    RCOST 123SK  349 70TA03    K      0

A04    N04    N05    1 0  ERECTION
A04    DTIME 1       3      1 0     3 0      2 0
A04    RCOST 123SK 1316 81TA04    K      0

A05    N01    N05    1 0  DOE WAIVERS
A05    DTIME 1       3       5       7       6
A05    RCOST 123SK      0TA05    K      0

A06    N05    N06    1 0  COLD TEST
A06    DTIME 1       3      1 0     2 5      1 6
A06    RCOST 123SK 1555 63TA06    K      0

A07    N08    N09    1 0  LAG TIME 3
A07    DTIME 1       3     3 99    4 01     4 0
A07    RCOST 123SK      0TA07    K      0

A08    N08    N06    1 0  PROCEDURES & DOCUMENTS
A08    DTIME 1       3       5       8       7
A08    RCOST 123SK   73 14TA08    K      0

A09    N06    N10     95  DOE APPROVAL FOR HOT TEST
A09    DTIME 1       3       5       2       8
A09    RCOST 123SK 2428 75TA09    K      0

A10    N10    N11    1 0  HOT TEST
A10    DTIME 1       3       3     1 0       5
A10    RCOST 123SK 3558 00TA10    K      0

A11    N11    N12    1 0  DOE TEST EVALUATION APPROVAL
A11    DTIME 1       3       3     1 0       5
A11    RCOST 123SK 2428 00TA11    K      0

A12    N12    N13     95  TREATMENT
A12    DTIME 1       3      2 0     5 5      4 0
A12    RCOST 123SK 2667 75TA12    K      0
```

```
A13    N13    N14    1 0  STORAGE
A13    DTIME 1       3     32 0     40 0     37 33
A13    RCOST 123SK  439 59TA13     K      0
A13    M     1       30

A14    N14    N15    95  DISPOSAL
A14    DTIME 1       3       7       11       9
A14    RCOST 123SK  970 67TA14     K      0

A15    N13    N16    95  DEMOBILIZATION
A15    DTIME 1       3     3 3      4 5     3 85
A15    RCOST 123SK  585 98TA15     K      0
A15    M     1       70

A16    N10    N17    1 0  ESCAPE AT NODE 10
A16    DTIME 1       3      09       11      10
A16    RCOST 123SK      0TA16     K      0

A17    N13    N18    1 0  ESCAPE AT N13
A17    DTIME 1       3      09       11       1
A17    RCOST 123SK      0TA17     K      0

A18    N02    N04    1 0  PROCURMENT
A18    DTIME 1       3       1        2     1 33
A18    RCOST 123SK 1432 33TA18     K      0

A19    N09    N06    1 0  OPERATIONS READINESS
A19    DTIME 1       3     2 0      3 5     3 0
A19    RCOST 123SK   82 0TA19     K      0

A20    N15    N19    1 0  Dummy Activity From N15
A20    DTIME 1       3     009      011      01
A20    RCOST 123SK      0TA20     K      0

A21    N15    N20    1 0  Terminate From N15
A21    DTIME 1       3     009      011      01
A21    RCOST 123SK      0TA21     K      0

A22    N16    N21    1 0  Dummy Activity From N16
A22    DTIME 1       3     009      011      01
A22    RCOST 123SK      0TA22     K      0

A23    N16    N22    1 0  Terminate From N16
A23    DTIME 1       3     009      011      01
A23    RCOST 123SK      0TA23     K      0
```

```
A24     N19     N23     1 0  Terminate ARC From N19
A24     DTIME 1         3       009       011       01
A24     RCOST 123SK        0TA24     K       0

A25     N21     N24     1 0  Terminate ARC From N21
A25     DTIME 1         3       009       011       01
A25     RCOST 123SK        0TA25     K       0

ENDARC

N01     1  2 5

N02     2  2 5

N03     2  2 5

N04     2  2 5

N05     2  2 5

N06     2  2 5

N08     1  2 5

N09     2  2 5

N10     2  2 5

N11     2  2 5

N12     2  2 5

N14     2  2 5

N15     2  2 5

N16     2  2 5

N17     2  1 5

N18     2  1 5

N19     2  2 5

N20     2  1 5
```

N21 2 2 5

N22 2 1 5

N23 2 1 5

N24 2 1 5

N13 2 3 5

ENDNODE

NETWORK TIME FOR NODE N17

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
10   15   20   25
          8 1714  I----I----I----I----I----I----I----I----I----I----I MIN                  8.1714
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
          8 1714 I                                                8 1714 I
                I*                                  020              I**
     020
          8 2799 I                                                8 2799 I
                I**                                 041              I**
     020
          8 3885 I                                                8 3885 I
                I****                               082              I****
     041
          8 4971 I                                                8 4971 I
                I********                           163              I********
     082
          8 6057 I                                                8 6057 I
                I**************                                  286
I************            122
          8 7142 I                                                8 7142 I
                I***************                        306              I**
     020
          8 8228 I                                                8 8228 I
                I****************                       327              I**
     020
          8 9314 I                                                8 9314 I
                I********************                   408              I********
     082
          9 0400 I                                                9 0400 I
                I**********************                 449              I****
```

```
            041
        9 1485 I                                                    9 1485 I
            I************************                          490              I****
            041
        9 2571 I                                                    9 2571 I
            I*******************************                          633
I**************          143
        9 3657 I                                                    9 3657 I
            I*******************************                        633              I
             000
        9 4743 I                                                    9 4743 I
            I***********************************                     694
I******                 061
        9 5828 I                                                    9 5828 I
            I*************************************                    776
I********                082
        9 6914 I                                                    9 6914 I
            I*****************************************                857
I********                082
        9 8000 I                                                    9 8000 I
            I******************************************                898
 I****                  041
        9 9086 I                                                    9 9086 I
            I*******************************************                918
 I**                    020
       10 0171 I                                                   10 0171 I
            I*********************************************                959
  I****                 041
       10 1257 I                                                   10 1257 I
            I**********************************************                980
  I**                   020
       10 2343 I                                                   10 2343 I
            I**********************************************                980
  I                     000
       10 3429 I                                                   10 3429 I
            I**********************************************                980
  I                     000
       10 4514 I                                                   10 4514 I
            I***********************************************1 000
   I**                  020
       10 5600 I                                                   10 5600 I
            I***********************************************1 000
   I                    000
       10 5600  I----I----I----I----I----I----I----I----I----I----I MAX                    10 5600
I----I----I----I----I----I MAX
```

NO OBS----------	49	STD ERROR-	5628
COEF OF VARIATION-	06	MEAN------	9 2158
KURTOSIS (BETA 2)-	2 18	MEDIAN----	9 2885
PEARSONIAN SKEW---	15	MODE------	9 3024

PATH COST FOR NODE N17

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
10   15   20   25
        9165 8560  I----I----I----I----I----I----I----I----I----I----I MIN                9165 8560
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
        9165 8560 I                                                 9165 8560 I
                I**                                 041                I****
        041
        9366 4930 I                                                 9366 4930 I
                I***                                061                I**
       020
        9567 1300 I                                                 9567 1300 I
                I***                                061                I
      000
        9767 7670 I                                                 9767 7670 I
                I*******                             143                I********
           082
        9968 4030 I                                                 9968 4030 I
                I*******                             143                I
        000
        10169 0400 I                                                10169 0400 I
                I*********                           184                I****
           041
        10369 6800 I                                                10369 6800 I
                I***********                          224                I****
           041
        10570 3100 I                                                10570 3100 I
                I***************                      306                I********
              082
        10770 9500 I                                                10770 9500 I
                I*******************                  388                I********
              082
        10971 5900 I                                                10971 5900 I
                I*********************                429                I****
               041
        11172 2200 I                                                11172 2200 I
                I***************************                         510
I********                082
        11372 8600 I                                                11372 8600 I
                I****************************                      531                I**
                 020
        11573 5000 I                                                11573 5000 I
```

```
                I******************************                592
I******                061
      11774 1300 I                                          11774 1300 I
                I*********************************              673
I********              082
      11974 7700 I                                          11974 7700 I
                I************************************           735
I******                061
      12175 4100 I                                          12175 4100 I
                I*************************************          796
I******                061
      12376 0400 I                                          12376 0400 I
                I**************************************          816
I**                   020
      12576 6800 I                                          12576 6800 I
                I***************************************          837
I**                   020
      12777 3200 I                                          12777 3200 I
                I****************************************          898
 I******                061
      12977 9500 I                                          12977 9500 I
                I*****************************************          918
 I**                   020
      13178 5900 I                                          13178 5900 I
                I******************************************          939
  I**                   020
      13379 2300 I                                          13379 2300 I
                I*******************************************1 000
   I******                061
      13579 8700 I                                          13579 8700 I
                I*******************************************1 000
   I                    000
      13579 8700  I----I----I----I----I----I----I----I----I----I----I MAX              13579 8700
I----I----I----I----I----I MAX

                NO OBS------------      49  STD ERROR-          1150 3410
                COEF OF VARIATION-      10  MEAN------          11433 2100
                KURTOSIS (BETA 2)-    2 22  MEDIAN----          11325 4200
                                  MULTIMODAL DISTRIBUTION
```

NETWORK TIME FOR NODE N18

```
                CFD    1    2    3    4    5    6    7    8    9 1 0                RFD    05
 10   15   20   25
          12 2734  I----I----I----I----I----I----I----I----I----I----I MIN                12 2734
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
          12 2734 I                                                12 2734 I
                I**                                 043              I****
       043
          12 4370 I                                                12 4370 I
                I***                                065              I**
      022
          12 6006 I                                                12 6006 I
                I*****                               109              I****
       043
          12 7642 I                                                12 7642 I
                I********                            152              I****
          043
          12 9278 I                                                12 9278 I
                I*********                           174              I**
          022
          13 0913 I                                                13 0913 I
                I************                         239              I******
            065
          13 2549 I                                                13 2549 I
                I**************                       283              I****
            043
          13 4185 I                                                13 4185 I
                I****************                     326              I****
            043
          13 5821 I                                                13 5821 I
                I*****************                    348              I**
            022
          13 7457 I                                                13 7457 I
                I******************                   370              I**
            022
          13 9093 I                                                13 9093 I
                I*********************                413              I****
            043
          14 0728 I                                                14 0728 I
                I****************************                       565
I***************          152
          14 2364 I                                                14 2364 I
```

```
                I*****************************                609              I****
                 043
          14 4000 I                                                    14 4000 I
                I*********************************                     674
I******                 065
          14 5636 I                                                    14 5636 I
                I************************************                   739
I******                 065
          14 7272 I                                                    14 7272 I
                I***************************************                 783
I****                   043
          14 8908 I                                                    14 8908 I
                I******************************************               848
I******                 065
          15 0543 I                                                    15 0543 I
                I*********************************************             891
 I****                  043
          15 2179 I                                                    15 2179 I
                I*********************************************             891
 I                      000
          15 3815 I                                                    15 3815 I
                I**********************************************            913
 I**                    022
          15 5451 I                                                    15 5451 I
                I***********************************************           957
  I****                  043
          15 7087 I                                                    15 7087 I
                I*************************************************1 000
   I****                  043
          15 8723 I                                                    15 8723 I
                I*************************************************1 000
   I                      000
          15 8723  I----I----I----I----I----I----I----I----I----I----I MAX                    15 8723
I----I----I----I----I----I MAX

                NO OBS------------      46  STD ERROR-            9645
                COEF OF VARIATION-      07  MEAN------           14 1017
                KURTOSIS (BETA 2)-    2 15  MEDIAN----           14 1849
                PEARSONIAN SKEW---      05  MODE------           14 1546
```

PATH COST FOR NODE N18

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
 10   15   20   25
        20261 3400  I----I----I----I----I----I----I----I----I----I----I MIN              20261 3400
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
        20261 3400 I                                                 20261 3400 I
                I**                                 043                I****
      043
        20723 5500 I                                                 20723 5500 I
                I***                                065                I**
        022
        21185 7600 I                                                 21185 7600 I
                I*****                               109                I****
         043
        21647 9700 I                                                 21647 9700 I
                I*******                             130                I**
         022
        22110 1900 I                                                 22110 1900 I
                I********                            152                I**
         022
        22572 4000 I                                                 22572 4000 I
                I***********                          217                I******
            065
        23034 6100 I                                                 23034 6100 I
                I**************                       283                I******
           065
        23496 8300 I                                                 23496 8300 I
                I******************                   370                I********
          087
        23959 0400 I                                                 23959 0400 I
                I**********************                435                I******
           065
        24421 2500 I                                                 24421 2500 I
                I***************************                543
I**********              109
        24883 4600 I                                                 24883 4600 I
                I****************************            565                I**
           022
        25345 6800 I                                                 25345 6800 I
                I*********************************                652
I********              087
        25807 8900 I                                                 25807 8900 I
```

```
                I**********************************          696          I****
                 043
        26270 1000 I                                                 26270 1000 I
                I*************************************                 783
I********              087
        26732 3200 I                                                 26732 3200 I
                I****************************************               826
I****                   043
        27194 5300 I                                                 27194 5300 I
                I*****************************************               870
I****                   043
        27656 7400 I                                                 27656 7400 I
                I*********************************************           913
 I****                  043
        28118 9600 I                                                 28118 9600 I
                I**********************************************           935
  I**                   022
        28581 1700 I                                                 28581 1700 I
                I***********************************************           957
  I**                   022
        29043 3800 I                                                 29043 3800 I
                I************************************************          978
   I**                   022
        29505 5900 I                                                 29505 5900 I
                I************************************************          978
   I                    000
        29967 8100 I                                                 29967 8100 I
                I*************************************************1 000
    I**                   022
        30430 0100 I                                                 30430 0100 I
                I*************************************************1 000
    I                    000
        30430 0100  I----I----I----I----I----I----I----I----I----I----I MAX              30430 0100
I----I----I----I----I----I MAX
```

NO OBS---------- 46 STD ERROR- 2409 2340
COEF OF VARIATION- 10 MEAN------ 24890 3700
KURTOSIS (BETA 2)- 2 46 MEDIAN---- 24767 1600
PEARSONIAN SKEW--- 13 MODE------ 24575 3200

NETWORK TIME FOR NODE N20

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
 10   15   20   25
          55 3974  I----I----I----I----I----I----I----I----I----I----I MIN                55 3974
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
          55 3974 I                                                 55 3974 I
                I******                              111                I***********
           111
          55 7797 I                                                 55 7797 I
                I******                              111                I
        000
          56 1621 I                                                 56 1621 I
                I******                              111                I
        000
          56 5445 I                                                 56 5445 I
                I******                              111                I
        000
          56 9268 I                                                 56 9268 I
                I******                              111                I
        000
          57 3092 I                                                 57 3092 I
                I******                              111                I
        000
          57 6915 I                                                 57 6915 I
                I***********                         222                I***********
           111
          58 0739 I                                                 58 0739 I
                I***********                          222               I
          000
          58 4562 I                                                 58 4562 I
                I***********                          222               I
          000
          58 8386 I                                                 58 8386 I
                I***********                          222               I
          000
          59 2209 I                                                 59 2209 I
                I**********************                              444
I**********************    222
          59 6033 I                                                 59 6033 I
                I****************************                        556
I***********            111
          59 9856 I                                                 59 9856 I
```

```
                I*********************************                667
I***********            111
        60 3680 I                                          60 3680 I
                I***************************************     778
I***********            111
        60 7504 I                                          60 7504 I
                I***************************************     778              I
                    000
        61 1327 I                                          61 1327 I
                I***************************************     778              I
                    000
        61 5151 I                                          61 5151 I
                I***************************************     778              I
                    000
        61 8974 I                                          61 8974 I
                I***************************************     778              I
                    000
        62 2798 I                                          62 2798 I
                I*******************************************  889
I***********            111
        62 6621 I                                          62 6621 I
                I*******************************************  889
I                   000
        63 0445 I                                          63 0445 I
                I*******************************************  889
I                   000
        63 4268 I                                          63 4268 I
                I*************************************************1 000
   I***********            111
        63 8092 I                                          63 8092 I
                I*************************************************1 000
   I                   000
        63 8092  I----I----I----I----I----I----I----I----I----I----I MAX                63 8092
I----I----I----I----I----I MAX
```

NO OBS----------	9	STD ERROR-	2 3974
COEF OF VARIATION-	04	MEAN------	59 8434
KURTOSIS (BETA 2)-	2 61	MEDIAN----	59 6919
PEARSONIAN SKEW---	15	MODE------	59 4758

PATH COST FOR NODE N20

```
                CFD    1    2    3    4    5    6    7    8    9 1 0                RFD    05
 10   15   20   25
        47408 3000  I----I----I----I----I----I----I----I----I----I----I MIN              47408 3000
I----I----I----I----I----I MIN
                I                                        000              I
     000
        47408 3000 I                                                47408 3000 I
                I******                                  111              I***********
           111
        47703 9100 I                                                47703 9100 I
                I******                                  111              I
         000
        47999 5200 I                                                47999 5200 I
                I******                                  111              I
         000
        48295 1300 I                                                48295 1300 I
                I******                                  111              I
         000
        48590 7400 I                                                48590 7400 I
                I******                                  111              I
         000
        48886 3500 I                                                48886 3500 I
                I******                                  111              I
         000
        49181 9600 I                                                49181 9600 I
                I******                                  111              I
         000
        49477 5700 I                                                49477 5700 I
                I*****************                                   333
I**********************    222
        49773 1800 I                                                49773 1800 I
                I**********************                              444
I***********             111
        50068 7900 I                                                50068 7900 I
                I**********************                        444              I
              000
        50364 3900 I                                                50364 3900 I
                I****************************                        556
I***********             111
        50660 0000 I                                                50660 0000 I
                I****************************                    556              I
                000
        50955 6100 I                                                50955 6100 I
```

```
                I*********************************                667
I***********              111
      51251 2200 I                                          51251 2200 I
                I*********************************        667              I
                  000
      51546 8300 I                                          51546 8300 I
                I*********************************        667              I
                  000
      51842 4400 I                                          51842 4400 I
                I*********************************        667              I
                  000
      52138 0500 I                                          52138 0500 I
                I*********************************        667              I
                  000
      52433 6600 I                                          52433 6600 I
                I*************************************        778
I***********              111
      52729 2700 I                                          52729 2700 I
                I*************************************        778              I
                   000
      53024 8800 I                                          53024 8800 I
                I*************************************        778              I
                   000
      53320 4900 I                                          53320 4900 I
                I*************************************        778              I
                   000
      53616 1000 I                                          53616 1000 I
                I*************************************************1 000
   I**********************     222
      53911 7300 I                                          53911 7300 I
                I*************************************************1 000
   I                    000
      53911 7300  I----I----I----I----I----I----I----I----I----I----I MAX              53911 7300
I----I----I----I----I----I MAX
```

NO OBS---------- 9 STD ERROR- 2129 7070
COEF OF VARIATION- 04 MEAN------ 50928 1100
KURTOSIS (BETA 2)- 1 84 MEDIAN---- 50614 2500
MULTIMODAL DISTRIBUTION

NETWORK TIME FOR NODE N22

```
                CFD    1    2    3    4    5    6    7    8    9  1 0                RFD    05
 10   15   20   25
          16 2609  I----I----I----I----I----I----I----I----I----I----I MIN                 16 2609
I----I----I----I----I----I MIN
                I                                   000              I
     000
          16 2609 I                                                16 2609 I
                I*                                  029              I**
      029
          16 4197 I                                                16 4197 I
                I***                                 059             I**
       029
          16 5785 I                                                16 5785 I
                I****                                088             I**
        029
          16 7372 I                                                16 7372 I
                I****                                088             I
       000
          16 8960 I                                                16 8960 I
                I******                              118             I**
        029
          17 0548 I                                                17 0548 I
                I*********                            176              I*****
         059
          17 2135 I                                                17 2135 I
                I*********                            176              I
        000
          17 3723 I                                                17 3723 I
                I**********                           206              I**
        029
          17 5311 I                                                17 5311 I
                I*************                         265              I*****
          059
          17 6898 I                                                17 6898 I
                I****************                      324              I*****
         059
          17 8486 I                                                17 8486 I
                I*******************                   382              I*****
         059
          18 0074 I                                                18 0074 I
                I**********************                441              I*****
                059
          18 1661 I                                                18 1661 I
```

```
                I**********************                    441              I
            000
        18 3249 I                                                18 3249 I
                I*************************                        529
I********              088
        18 4837 I                                                18 4837 I
                I****************************                588              I*****
                059
        18 6424 I                                                18 6424 I
                I**********************************                706
I***********              118
        18 8012 I                                                18 8012 I
                I*************************************                765
I*****                  059
        18 9600 I                                                18 9600 I
                I****************************************        794              I**
                  029
        19 1187 I                                                19 1187 I
                I*******************************************        853
I*****                  059
        19 2775 I                                                19 2775 I
                I********************************************        882
I**                    029
        19 4363 I                                                19 4363 I
                I**********************************************        912
 I**                    029
        19 5950 I                                                19 5950 I
                I*************************************************1 000
   I********              088
        19 7538 I                                                19 7538 I
                I*************************************************1 000
   I                    000
        19 7538  I----I----I----I----I----I----I----I----I----I----I MAX                19 7538
I----I----I----I----I----I MAX

                NO OBS------------      34  STD ERROR-          9451
                COEF OF VARIATION-      05  MEAN------          18 2669
                KURTOSIS (BETA 2)-    2 21  MEDIAN----          18 4382
                PEARSONIAN SKEW---      48  MODE------          18 7218
```

PATH COST FOR NODE N22

```
                CFD    1    2    3    4    5    6    7    8    9 1 0                RFD    05
10   15   20   25
       23167 0800  I----I----I----I----I----I----I----I----I----I----I MIN              23167 0800
I----I----I----I----I----I MIN
                I                                        000              I
     000
       23167 0800 I                                                    23167 0800 I
                I*                                       029              I**
      029
       23532 0700 I                                                    23532 0700 I
                I*                                       029              I
     000
       23897 0600 I                                                    23897 0600 I
                I*                                       029              I
     000
       24262 0500 I                                                    24262 0500 I
                I****                                     088              I*****
        059
       24627 0400 I                                                    24627 0400 I
                I******                                    118              I**
      029
       24992 0200 I                                                    24992.0200 I
                I******                                    118              I
      000
       25357 0100 I                                                    25357 0100 I
                I******                                    118              I
      000
       25722 0000 I                                                    25722 0000 I
                I*********                                 176              I*****
         059
       26086 9900 I                                                    26086 9900 I
                I************                               235              I*****
           059
       26451 9800 I                                                    26451 9800 I
                I***************                            294              I*****
          059
       26816 9600 I                                                    26816 9600 I
                I*******************                        382              I********
         088
       27181 9500 I                                                    27181 9500 I
                I*******************                        382              I
          000
       27546 9400 I                                                    27546 9400 I
```

```
                I************************                    471
I********              088
      27911 9300 I                                        27911 9300 I
                I****************************                588
I***********              118
      28276 9200 I                                        28276 9200 I
                I*******************************          647          I*****
                059
      28641 9100 I                                        28641 9100 I
                I*********************************        676            I**
                  029
      29006 8900 I                                        29006 8900 I
                I**********************************        706            I**
                  029
      29371 8800 I                                        29371 8800 I
                I****************************************      824
I***********              118
      29736 8700 I                                        29736 8700 I
                I*******************************************     882
I*****                 059
      30101 8600 I                                        30101 8600 I
                I********************************************     912
 I**                  029
      30466 8500 I                                        30466 8500 I
                I********************************************     912
 I                    000
      30831 8400 I                                        30831 8400 I
                I*************************************************1 000
   I********              088
      31196 8200 I                                        31196 8200 I
                I*************************************************1 000
   I                    000
      31196 8200  I----I----I----I----I----I----I----I----I----I----I MAX              31196 8200
I----I----I----I----I----I MAX
```

NO OBS---------- 34 STD ERROR- 1994 8250
COEF OF VARIATION- 07 MEAN------ 27850 1900
KURTOSIS (BETA 2)- 2 46 MEDIAN---- 27966 7200
MULTIMODAL DISTRIBUTION

NETWORK TIME FOR NODE N23

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
10   15   20   25
          54 6151  I----I----I----I----I----I----I----I----I----I----I MIN                54 6151
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
          54 6151 I                                                54 6151 I
                I                                   008              I
     008
          55 0500 I                                                55 0500 I
                I*                                  016              I
     008
          55 4849 I                                                55 4849 I
                I**                                  045              I**
      029
          55 9198 I                                                55 9198 I
                I****                                 074              I**
       029
          56 3548 I                                                56 3548 I
                I*****                                102              I**
       029
          56 7897 I                                                56 7897 I
                I*******                               131              I**
        029
          57 2246 I                                                57 2246 I
                I********                              164              I***
        033
          57 6595 I                                                57 6595 I
                I**********                             201              I***
         037
          58 0945 I                                                58 0945 I
                I************                            250              I****
          049
          58 5294 I                                                58 5294 I
                I****************                         311              I******
            061
          58 9643 I                                                58 9643 I
                I********************                     406              I*********
           094
          59 3993 I                                                59 3993 I
                I*************************                                508
I**********              102
          59 8342 I                                                59 8342 I
```

```
                I****************************                574              I******
              066
         60 2691 I                                                    60 2691 I
                I*********************************                    680
I**********              107
         60 7040 I                                                    60 7040 I
                I*************************************                  754
I*******                074
         61 1390 I                                                    61 1390 I
                I*****************************************              820
I******                 066
         61 5739 I                                                    61 5739 I
                I*******************************************           885
I******                 066
         62 0088 I                                                    62 0088 I
                I*********************************************         918
 I***                   033
         62 4437 I                                                    62 4437 I
                I**********************************************        955
  I***                  037
         62 8787 I                                                    62 8787 I
                I***********************************************       980
   I**                  025
         63 3136 I                                                    63 3136 I
                I************************************************     996
   I*                   016
         63 7485 I                                                    63 7485 I
                I*************************************************1 000
    I                   004
         64 1835 I                                                    64 1835 I
                I*************************************************1 000
    I                   000
         64 1835  I----I----I----I----I----I----I----I----I----I----I MAX                    64 1835
I----I----I----I----I----I----I MAX

                NO OBS-----------     244  STD ERROR-          1 9818
                COEF OF VARIATION-     03  MEAN------          59 7144
                KURTOSIS (BETA 2)-   2 61  MEDIAN----         59 8217
                PEARSONIAN SKEW---     40  MODE------          60 5107
```

PATH COST FOR NODE N23

```
                CFD    1    2    3    4    5    6    7    8    9 1 0                RFD    05
 10   15   20   25
        43153 5800  I----I----I----I----I----I----I----I----I----I----I MIN              43153 5800
I----I----I----I----I----I MIN
                I                                        000              I
      000
        43153 5800 I                                                43153 5800 I
                I                                        004              I
      004
        43731 3400 I                                                43731 3400 I
                I                                        004              I
      000
        44309 1000 I                                                44309 1000 I
                I                                        004              I
      000
        44886 8600 I                                                44886 8600 I
                I**                                      041              I***
        037
        45464 6300 I                                                45464 6300 I
                I***                                     066              I**
        025
        46042 3900 I                                                46042 3900 I
                I*****                                   094              I**
         029
        46620 1500 I                                                46620 1500 I
                I*******                                 139              I****
           045
        47197 9100 I                                                47197 9100 I
                I**********                              201              I******
            061
        47775 6700 I                                                47775 6700 I
                I**************                          270              I******
              070
        48353 4300 I                                                48353 4300 I
                I*****************                       348              I*******
               078
        48931 2000 I                                                48931 2000 I
                I*********************                   414              I******
               066
        49508 9600 I                                                49508 9600 I
                I*************************                504
I*********              090
        50086 7200 I                                                50086 7200 I
```

```
                I****************************                    578
I*******                074
      50664 4800 I                                          50664 4800 I
                I*********************************              668
I*********              090
      51242 2400 I                                          51242 2400 I
                I************************************           750
I********              082
      51820 0000 I                                          51820 0000 I
                I*****************************************       820
I******                070
      52397 7700 I                                          52397 7700 I
                I*********************************************     881
I******                061
      52975 5300 I                                          52975 5300 I
                I**********************************************    918
 I***                  037
      53553 2900 I                                          53553 2900 I
                I************************************************   955
  I***                 037
      54131 0500 I                                          54131 0500 I
                I*************************************************  980
   I**                 025
      54708 8100 I                                          54708 8100 I
                I**************************************************  992
   I*                  012
      55286 5700 I                                          55286 5700 I
                I***************************************************1 000
    I                  008
      55864 3600 I                                          55864 3600 I
                I***************************************************1 000
    I                  000
      55864 3600  I----I----I----I----I----I----I----I----I----I----I MAX          55864 3600
I----I----I----I----I----I MAX

                NO OBS------------     244  STD ERROR-        2492 3620
                COEF OF VARIATION-      05  MEAN------        50012 7900
                KURTOSIS (BETA 2)-    2 44  MEDIAN----        49990 8900
                                MULTIMODAL DISTRIBUTION
```

NETWORK TIME FOR NODE N24

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
 10   15   20   25
          15 1185  I----I----I----I----I----I----I----I----I----I----I MIN                15 1185
I----I----I----I----I----I MIN
                I                                   000              I
     000
          15 1185 I                                                15 1185 I
                I                                   002              I
     002
          15 3770 I                                                15 3770 I
                I                                   003              I
     002
          15 6355 I                                                15 6355 I
                I*                                  013              I
     010
          15 8941 I                                                15 8941 I
                I*                                  028              I*
      015
          16 1526 I                                                16 1526 I
                I**                                 049              I**
       021
          16 4111 I                                                16 4111 I
                I*****                              094              I****
        045
          16 6697 I                                                16 6697 I
                I********                           154              I*****
         060
          16 9282 I                                                16 9282 I
                I**********                         206              I*****
          052
          17 1867 I                                                17.1867 I
                I***************                    298              I*********
            092
          17 4453 I                                                17 4453 I
                I******************                 388              I*********
            091
          17 7038 I                                                17 7038 I
                I*************************                        526
I*************          138
          17 9623 I                                                17 9623 I
                I*******************************                   633
I**********          107
          18 2209 I                                                18 2209 I
```

```
                I***********************************          728
I*********              095
        18 4794 I                                          18 4794 I
                I****************************************     807
I*******                079
        18 7379 I                                          18 7379 I
                I*******************************************  874
I******                 066
        18 9965 I                                          18 9965 I
                I********************************************** 914
 I****                  040
        19 2550 I                                          19 2550 I
                I*********************************************** 951
  I***                  037
        19 5136 I                                          19 5136 I
                I*********************************************** 971
   I*                   019
        19 7721 I                                          19 7721 I
                I*********************************************** 987
   I*                   016
        20 0306 I                                          20 0306 I
                I********************************************** 992
   I                    005
        20 2892 I                                          20 2892 I
                I********************************************** 997
   I                    005
        20 5477 I                                          20 5477 I
                I**********************************************1 000
    I                   003
        20 8062 I                                          20 8062 I
                I**********************************************1 000
    I                   000
        20 8062  I----I----I----I----I----I----I----I----I----I----I MAX                20 8062
I----I----I----I----I----I MAX

                NO OBS------------     618  STD ERROR-          9324
                COEF OF VARIATION-      05  MEAN------         17 9320
                KURTOSIS (BETA 2)-    2 93  MEDIAN----         17 9163
                PEARSONIAN SKEW---      08  MODE------         17 8600
```

PATH COST FOR NODE N24

```
                CFD    1    2    3    4    5    6    7    8    9 1 0                RFD    05
 10   15   20   25
       21364 6000  I----I----I----I----I----I----I----I----I----I----I MIN              21364 6000
I----I----I----I----I----I----I MIN
                I                                        000              I
     000
       21364 6000 I                                                   21364 6000 I
                I                                        010              I
     010
       21927 5300 I                                                   21927 5300 I
                I*                                       015              I
     005
       22490 4700 I                                                   22490 4700 I
                I**                                      032              I*
      018
       23053 4000 I                                                   23053 4000 I
                I**                                      047              I*
      015
       23616 3300 I                                                   23616 3300 I
                I****                                    079              I***
       032
       24179 2700 I                                                   24179 2700 I
                I*******                                 136              I*****
         057
       24742 2000 I                                                   24742 2000 I
                I*********                               188              I*****
         052
       25305 1300 I                                                   25305 1300 I
                I*************                           261              I*******
            073
       25868 0700 I                                                   25868 0700 I
                I*****************                       350              I********
           089
       26431 0000 I                                                   26431 0000 I
                I**********************                  426              I*******
           076
       26993 9400 I                                                   26993 9400 I
                I****************************                          545
I***********              120
       27556 8700 I                                                   27556 8700 I
                I*********************************                    634
I********              089
       28119 8000 I                                                   28119 8000 I
```

```
                I***********************************          718
I********                084
      28682 7400 I                                        28682 7400 I
                I*************************************        807
I********                089
      29245 6700 I                                        29245 6700 I
                I*******************************************      872
I******                  065
      29808 6000 I                                        29808 6000 I
                I*********************************************     916
 I****                   044
      30371 5400 I                                        30371 5400 I
                I*********************************************     948
  I***                   032
      30934 4700 I                                        30934 4700 I
                I*********************************************     969
  I**                    021
      31497 4000 I                                        31497 4000 I
                I*********************************************     982
   I*                    013
      32060 3400 I                                        32060 3400 I
                I*********************************************     990
   I                     008
      32623 2700 I                                        32623 2700 I
                I*********************************************     995
   I                     005
      33186 2100 I                                        33186 2100 I
                I*********************************************1 000
    I                     005
      33749 1400 I                                        33749 1400 I
                I*********************************************1 000
    I                     000
      33749 1400  I----I----I----I----I----I----I----I----I----I----I MAX          33749 1400
I----I----I----I----I----I MAX
```

NO OBS---------- 618 STD ERROR- 2233 5180
COEF OF VARIATION- 08 MEAN------ 27314 0600
KURTOSIS (BETA 2)- 2 84 MEDIAN---- 27371 2700
PEARSONIAN SKEW--- 00 MODE------ 27324 3500

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05
 10   15   20   25
           8 1714  I----I----I----I----I----I----I----I----I----I----I MIN                  8 1714
I----I----I----I----I----I MIN
                I                                   000              I
     000
           8 1714 I                                                 8 1714 I
                I**                                 049                 I****
       049
           10 7174 I                                                10 7174 I
                I***                                060                 I*
      011
           13 2634 I                                                13 2634 I
                I*****                              097                 I***
       037
           15 8094 I                                                15 8094 I
                I***************************                         537
I************************** 440
           18 3554 I                                                18 3554 I
                I*************************************                747
I********************     210
           20 9014 I                                                20 9014 I
                I*************************************                747              I
                    000
           23 4474 I                                                23 4474 I
                I*************************************                747              I
                    000
           25 9934 I                                                25 9934 I
                I*************************************                747              I
                    000
           28 5394 I                                                28 5394 I
                I*************************************                747              I
                    000
           31 0854 I                                                31 0854 I
                I*************************************                747              I
                    000
           33 6314 I                                                33 6314 I
                I*************************************                747              I
                    000
           36 1774 I                                                36 1774 I
                I*************************************                747              I
                    000
           38 7234 I                                                38 7234 I
```

```
                I***********************************          747              I
                    000
        41 2694 I                                                41 2694 I
                I***********************************          747              I
                    000
        43 8154 I                                                43 8154 I
                I***********************************          747              I
                    000
        46 3614 I                                                46 3614 I
                I***********************************          747              I
                    000
        48 9074 I                                                48 9074 I
                I***********************************          747              I
                    000
        51 4534 I                                                51 4534 I
                I***********************************          747              I
                    000
        53 9995 I                                                53 9995 I
                I*************************************        769            I**
                  022
        56 5455 I                                                56 5455 I
                I*****************************************      830
I******                 061
        59 0915 I                                                59 0915 I
                I*************************************************  955
 I************           125
        61 6375 I                                                61 6375 I
                I*************************************************1 000
  I****                 045
        64 1835 I                                                64 1835 I
                I*************************************************1 000
  I                     000
        64 1835  I----I----I----I----I----I----I----I----I----I----I MAX                64 1835
I----I----I----I----I----I MAX

                NO OBS-----------    1000  STD ERROR-          18 6694
                COEF OF VARIATION-     67  MEAN------          27 9122
                KURTOSIS (BETA 2)-   2 30  MEDIAN----          18 2155
                PEARSONIAN SKEW---     56  MODE------          17 4303
```

PATH COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD    05
 10   15   20   25
        9165 8560  I----I----I----I----I----I----I----I----I----I----I MIN                9165 8560
I----I----I----I----I----I MIN
                I                                   000                I
     000
        9165 8560 I                                                 9165 8560 I
                I*                                  024                I**
     024
        11288 5200 I                                                11288 5200 I
                I**                                 046                I**
     022
        13411 1700 I                                                13411 1700 I
                I**                                 049                I
     003
        15533 8300 I                                                15533 8300 I
                I**                                 049                I
     000
        17656 4900 I                                                17656 4900 I
                I**                                 049                I
     000
        19779 1500 I                                                19779 1500 I
                I***                                061                I*
     012
        21901 8100 I                                                21901 8100 I
                I******                              113                I*****
       052
        24024 4700 I                                                24024 4700 I
                I**************                                      276
I****************          163
        26147 1300 I                                                26147 1300 I
                I*************************                           523
I************************  247
        28269 7900 I                                                28269 7900 I
                I***********************************                 693
I*****************          170
        30392 4500 I                                                30392 4500 I
                I*************************************                740
I****                  047
        32515 1100 I                                                32515 1100 I
                I*************************************                747                I
                   007
        34637 7700 I                                                34637 7700 I
```

```
                I***********************************          747              I
                    000
        36760 4300 I                                        36760 4300 I
                I***********************************          747              I
                    000
        38883 0900 I                                        38883 0900 I
                I***********************************          747              I
                    000
        41005 7500 I                                        41005 7500 I
                I***********************************          747              I
                    000
        43128 4100 I                                        43128 4100 I
                I*************************************        753              I
                    006
        45251 0700 I                                        45251 0700 I
                I*************************************        786
I***                    033
        47373 7300 I                                        47373 7300 I
                I*******************************************      849
I******                 063
        49496 3900 I                                        49496 3900 I
                I*********************************************** 932
 I********              083
        51619 0500 I                                        51619 0500 I
                I************************************************ 980
  I****                 048
        53741 7100 I                                        53741 7100 I
                I*************************************************1 000
   I**                  020
        55864 3600 I                                        55864 3600 I
                I*************************************************1 000
   I                    000
        55864 3600  I----I----I----I----I----I----I----I----I----I----I MAX          55864 3600
I----I----I----I----I----I MAX

                NO OBS------------    1000  STD ERROR-        11169 9400
                COEF OF VARIATION-      35  MEAN------        32193 6700
                KURTOSIS (BETA 2)-    2 51  MEDIAN----        28068 8700
                PEARSONIAN SKEW---      44  MODE------        27254 6100
```

OVERALL COST FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD    05
 10   15   20   25
        9165 8570  I----I----I----I----I----I----I----I----I----I----I MIN                9165 8570
I----I----I----I----I----I----I MIN
                I                                   000              I
     000
        9165 8570 I                                                 9165 8570 I
                I*                                  024              I**
     024
        11288 5200 I                                                11288 5200 I
                I**                                  046             I**
     022
        13411 1800 I                                                13411 1800 I
                I**                                  049             I
     003
        15533 8300 I                                                15533 8300 I
                I**                                  049             I
     000
        17656 4900 I                                                17656 4900 I
                I**                                  049             I
     000
        19779 1500 I                                                19779 1500 I
                I***                                 061             I*
     012
        21901 8100 I                                                21901 8100 I
                I******                               113             I*****
       052
        24024 4700 I                                                24024 4700 I
                I**************                                     276
I****************          163
        26147 1300 I                                                26147 1300 I
                I***************************                         523
I************************  247
        28269 7900 I                                                28269 7900 I
                I*********************************                   693
I*****************          170
        30392 4400 I                                                30392 4400 I
                I************************************                 740
I****                   047
        32515 1000 I                                                32515 1000 I
                I************************************                 747                I
                   007
        34637 7600 I                                                34637 7600 I
```

```
                I***********************************          747              I
                    000
        36760 4200 I                                        36760 4200 I
                I***********************************          747              I
                    000
        38883 0800 I                                        38883 0800 I
                I***********************************          747              I
                    000
        41005 7400 I                                        41005 7400 I
                I***********************************          747              I
                    000
        43128 4000 I                                        43128 4000 I
                I*************************************        753              I
                    006
        45251 0600 I                                        45251 0600 I
                I**************************************        786
I***                    033
        47373 7200 I                                        47373 7200 I
                I****************************************        849
I******                    063
        49496 3800 I                                        49496 3800 I
                I*********************************************      932
 I********                    083
        51619 0400 I                                        51619 0400 I
                I**********************************************      980
  I****                    048
        53741 7000 I                                        53741 7000 I
                I*************************************************1 000
   I**                    020
        55864 3600 I                                        55864 3600 I
                I*************************************************1 000
   I                    000
        55864 3600  I----I----I----I----I----I----I----I----I----I----I MAX              55864 3600
I----I----I----I----I----I MAX

                NO OBS-----------    1000  STD ERROR-        11169 9400
                COEF OF VARIATION-      35  MEAN------        32193 6700
                KURTOSIS (BETA 2)-    2 51  MEDIAN----        28068 8700
                PEARSONIAN SKEW---      44  MODE------        27254 6000


 PATH PERFORMANCE FOR THE COMPOSITE TERMINAL NODE
 NO OBS =            1000  AVE =              0000
 MIN =              0000  MAX =              0000
```

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
               I----+----+----+----+----+----+----+----+----+----+I
N17      0490 I**                                        I
               I   +   +   +   +   +   +   +   +   +   +I
N18      0460 I**                                        I
               I   +   +   +   +   +   +   +   +   +   +I
N20      0090 I                                          I
               I   +   +   +   +   +   +   +   +   +   +I
N22      0340 I**                                        I
               I   +   +   +   +   +   +   +   +   +   +I
N23      2440 I************                                  I
               I   +   +   +   +   +   +   +   +   +   +I
N24      6180 I*******************************                  I
               I   +   +   +   +   +   +   +   +   +   +I
               I----+----+----+----+----+----+----+----+----+----+I
                 1   2   3   4   5   6   7   8   9  10
```

NODES CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9 1 0
               I----+----+----+----+----+----+----+----+----+----+I
N01        9440 I*********************************************  I
               I   +   +   +   +   +   +   +   +   +   +I
N03        4840 I***********************                   I
               I   +   +   +   +   +   +   +   +   +   +I
N04        4840 I***********************                   I
               I   +   +   +   +   +   +   +   +   +   +I
N05        9440 I*********************************************  I
               I   +   +   +   +   +   +   +   +   +   +I
N06       1 0000 I**************************************************I
               I   +   +   +   +   +   +   +   +   +   +I
N08        0560 I***                                I
               I   +   +   +   +   +   +   +   +   +   +I
N09        0190 I*                                  I
               I   +   +   +   +   +   +   +   +   +   +I
N10       1 0000 I**************************************************I
               I   +   +   +   +   +   +   +   +   +   +I
N11        9510 I********************************************* I
               I   +   +   +   +   +   +   +   +   +   +I
N12        9510 I********************************************* I
               I   +   +   +   +   +   +   +   +   +   +I
N14        2530 I*************                         I
               I   +   +   +   +   +   +   +   +   +   +I
N15        2530 I*************                         I
               I   +   +   +   +   +   +   +   +   +   +I
N16        6520 I*******************************                I
               I   +   +   +   +   +   +   +   +   +   +I
N17        0490 I**                                 I
               I   +   +   +   +   +   +   +   +   +   +I
N18        0460 I**                                 I
               I   +   +   +   +   +   +   +   +   +   +I
N19        2440 I************                          I
               I   +   +   +   +   +   +   +   +   +   +I
N20        0090 I                                   I
               I   +   +   +   +   +   +   +   +   +   +I
N21        6180 I******************************                 I
               I   +   +   +   +   +   +   +   +   +   +I
N22        0340 I**                                 I
               I   +   +   +   +   +   +   +   +   +   +I
N23        2440 I************                          I
               I   +   +   +   +   +   +   +   +   +   +I
N24        6180 I******************************                 I
               I   +   +   +   +   +   +   +   +   +   +I
N13        9510 I********************************************* I
```

ARCS CRITICAL-OPTIMUM PATH INDEX - NO PATHS = 1000

```
                 1   2   3   4   5   6   7   8   9 1 0
               I----+----+----+----+----+----+----+----+----+----+I
A02        4840 I************************                         I
               I   +   +   +   +   +   +   +   +   +   +I
A03        4840 I************************                         I
               I   +   +   +   +   +   +   +   +   +   +I
A04        4840 I************************                         I
               I   +   +   +   +   +   +   +   +   +   +I
A05        4600 I***********************                            I
               I   +   +   +   +   +   +   +   +   +   +I
A06        9440 I*********************************************** I
               I   +   +   +   +   +   +   +   +   +   +I
A07        0190 I*                                   I
               I   +   +   +   +   +   +   +   +   +   +I
A08        0370 I**                                  I
               I   +   +   +   +   +   +   +   +   +   +I
A09      1 0000 I**************************************************I
               I   +   +   +   +   +   +   +   +   +   +I
A10        9510 I********************************************** I
               I   +   +   +   +   +   +   +   +   +   +I
A11        9510 I********************************************** I
               I   +   +   +   +   +   +   +   +   +   +I
A12        9510 I********************************************** I
               I   +   +   +   +   +   +   +   +   +   +I
A13        2530 I*************                             I
               I   +   +   +   +   +   +   +   +   +   +I
A14        2530 I*************                             I
               I   +   +   +   +   +   +   +   +   +   +I
A15        6520 I*******************************                 I
               I   +   +   +   +   +   +   +   +   +   +I
A16        0490 I**                                  I
               I   +   +   +   +   +   +   +   +   +   +I
A17        0460 I**                                  I
               I   +   +   +   +   +   +   +   +   +   +I
A19        0190 I*                                   I
               I   +   +   +   +   +   +   +   +   +   +I
A20        2440 I************                             I
               I   +   +   +   +   +   +   +   +   +   +I
A21        0090 I                                    I
               I   +   +   +   +   +   +   +   +   +   +I
A22        6180 I******************************                  I
               I   +   +   +   +   +   +   +   +   +   +I
A23        0340 I**                                  I
               I   +   +   +   +   +   +   +   +   +   +I
A24        2440 I************                             I
```

NODES MEAN COMPLETION TIME & REALIZATION FREQUENCY

N01	0000	1000
N08	0000	1000
N02	6702	1000
N03	2 3300	1000
N09	4 0000	1000
N04	4 0521	1000
N05	6 2598	1000
N06	7 9777	1000
N10	9 0767	1000
N17	9 2158	49
N11	9 6760	951
N12	10 2699	951
N13	14 0801	951
N18	14 1017	46
N21	17 9220	618
N16	17 9300	652
N24	17 9320	618
N22	18 2669	34
N14	50 6837	253
N15	59 6993	253
N19	59 7044	244
N23	59 7144	244

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPT2A 03-03-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 5

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION------- 0

MEAN PRINT ORDER---------- 0

INITIAL SEED---------- 1

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING---- 00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE--- 1 00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL- OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N02    1 0  LAG TIME 1
A01    DTIME 1       3    48 4    48 6    48 5
A01    RCOST 123SK      0TA01    K    0

A02    N02    N03    1 0  TRAIN ERECTION PERSONNEL
```

```
A02   DTIME1      3     1 0     2 5     1 5
A02   RCOST 123SK  744 36TA02    K     0

A03   N03    N04    1 0  ERECTION/TITLEIIIDESIGN (C POND)
A03   DTIME1      3     1 9     4 0     2 0
A03   RCOST 123SK 1350 50TA03    K     0

A04   N04    N05    1 0  COLD TEST (C POND)
A04   DTIME1      3     2 0     4 0     2 5
A04   RCOST 123SK   702 0TA04    K     0

A05   N05    N06    1 0  HOT TEST (C POND)
A05   DTIME1      3       5     2 0     1 5
A05   RCOST 123SK  4260 0TA05    K     0

A06   N06    N08    1 0  DOE TEST EVAL/APPROV(C POND)
A06   DTIME1      3       5     1 3       6
A06   RCOST 123SK  3130 0TA06    K     0

A07   N01    N09    1 0  LAG TIME2
A07   DTIME1      3    47 9    48 1    48 0

A08   N09    N03    1 0  PROCUREMENT (C POND)
A08   DTIME1      3     1 9     6 0     2 0
A08   RCOST 123SK  952 50TA08    K     0

A09   N01    N10    1 0  LAG TIME3
A09   DTIME1      3    49 9    50 1    50 0

A10   N10    N04    1 0  DOE WAIVERS (C POND)
A10   DTIME1      3     3 0     5 0     4 0

A11   N01    N11    1 0  LAG TIME4
A11   DTIME1      3    51 4    51 6    51 5

A12   N11    N12    1 0  TRAINOPERATIONS PERSONNEL (C POND)
A12   DTIME1      3     1 0     2 5     1 5
A12   RCOST 123SK   714 0TA12    K     0

A13   N12    N05    1 0  OPERATIONALREADINESS (C POND)
A13   DTIME1      3     3 0     6 5     4 0
A13   RCOST 123SK   61 52TA13    K     0

A14   N01    N13    1 0  LAG TIME5
A14   DTIME1      3    45 9    46 1    46 0

A15   N13    N05    1 0  PROCEDURE AND DOCUMENTS (C POND)
A15   DTIME1      3     8 0     9 5     9 0
A15   RCOST 123SK    89 0TA15    K     0
```

```
A16    N01    N14    1 0  LAG TIME 6
A16    DTIME 1       3     55 9     56 1     56 0

A17    N14    N05     95  DOE APPROVAL FOR HOT TEST (C POND)
A17    DTIME 1       3      95      2 5      1 0
A17    RCOST 123SK  2242 0TA17     K      0

A18    N01    N15    1 0  RCRA PERMIT MODIFICATION(C POND)
A18    DTIME 1       3     12 0     20 0     18 0
A18    RCOST 123SK    9 78TA18     K      0

A19    N15    N16    1 0  TITLE II DESIGN (C POND)
A19    DTIME 1       3      2 0      4 0      3 0
A19    RCOST 123SK   96 0TA19     K      0

A20    N16    N17    1 0  PROCUREMENT (POND LINER)
A20    DTIME 1       3      1 0      3 0      2 0
A20    RCOST 123SK    5 67TA20     K      0

A21    N17    N18    1 0  LINER CONSTRUCTION
A21    DTIME 1       3      3 0      5 0      4 5
A21    RCOST 123SK  1016 0TA21     K      0

A22    N18    N08    1 0  STORE C POND WASTE
A22    DTIME 1       3     13 9     14 1     14 0
A22    RCOST 123SK   56 86TA22     K      0

A23    N08    N21    1 0  TREAT C POND WASTE
A23    DTIME 1       3      2 0      4 5      3 0
A23    RCOST 123SK   530 0TA23     K      0

A24    N01    N15    1 0  NEPA DOCUMENTATION
A24    DTIME 1       3      5 0     12 0      5 5
A24    RCOST 123SK    4 33TA24     K      0

A25    N01    N20    1 0  LAG TIME 7
A25    DTIME 1       3     27 4     27 6     27 5

A26    N20    N18    1 0  READINESS CHECKOUT
A26    DTIME 1       3       25      1 0        5

A27    N18    N31    1 0  STORE A/B POND WASTE
A27    DTIME 1       3     25 9     26 1     26 0
A27    RCOST 123SK   35 0TA27     K      0

A28    N08    N22    1 0  DISPOSAL OF C POND WASTES
A28    DTIME 1       3      6 0     10 0      8 0
A28    RCOST 123SK   56 86TA28     K      0

A44    N05    N07    1 0  C POND TERMINAL ARC
```

```
A44    DTIME1        3       9      1 1      1 0

A29    N21    N23    1 0  DEMOBILIZEC POND EQUIPMENT
A29    DTIME1        3      1 5      2 5      2 0
A29    RCOST 123SK  3850 0TA29     K      0

A30    N01    N24    1 0  LAG TIME 10
A30    DTIME1        3     45 9     46 1     46 0

A31    N24    N25    1 0  DESIGN (A/B POND)
A31    DTIME1        3      3 5      5 5      4 5
A31    RCOST 123SK  281 95TA31     K      0

A32    N25    N23    1 0  ERECTION STAGE 1 (A/B POND)
A32    DTIME1        3     11 0     13 0     12 0
A32    RCOST 123SK   308 2TA32     K      0

A33    N23    N27    1 0  ERECTION STAGE 2 (A/B POND)4
A33    DTIME1        3       5      1 5      1 0
A33    RCOST 123SK 1401 95TA33     K      0

A34    N27    N28    1 0  COLD TEST (A/B POND)
A34    DTIME1        3       5      3 0      1 0
A34    RCOST 123SK 2018 95TA34     K      0

A35    N28    N31     95  DOE APPROVAL FOR HOT TEST (A/B POND)
A35    DTIME1        3      1 0      2 5     1 67
A35    RCOST 123SK  1083 6TA35     K      0

A36    N01    N26    1 0  LAG TIME 11
A36    DTIME1        3     48 9     49 1     49 0

A37    N26    N25    1 0  PROCUREMENT (A/B POND)
A37    DTIME1        3      3 0      5 0      4 0
A37    RCOST 123SK   156 4TA37     K      0

A38    N01    N29    1 0  LAG TIME 12
A38    DTIME1        3     64 9     65 1     65 0

A39    N29    N28    1 0  CHLORINATION
A39    DTIME1        3      1 5      2 5      2 0
A39    RCOST 123SK    24 5TA39     K      0

A40    N01    N30    1 0  LAG TIME 8
A40    DTIME1        3     61 9     62 1     62 0

A41    N30    N31    1 0  PROCEDURE AND DOCUMENTS (A/B POND)
A41    DTIME1        3      5 0      6 5      6 0
A41    RCOST 123SK    79 67TA41     K      0
```

```
A42    N01    N19    1 0  LAG TIME 9
A42    DTIME 1       3     63 9     64 1     64 0

A43    N19    N31    1 0  OPERATIONAL READINESS (A/B POND)
A43    DTIME 1       3      5 0      6 5      6 0
A43    RCOST 123SK  198 75TA43     K      0

A45    N31    N58    1 0  A/B POND TERMINAL ARC
A45    DTIME 1       3        9      1 1      1 0

A46    N31    N32    1 0  HOT TEST (A/B POND)
A46    DTIME 1       3        3       75        5
A46    RCOST 123SK  1700 7TA46     K      0

A47    N32    N33    1 0  DOE TEST EVAL/APPROV (A/B POND)
A47    DTIME 1       3        5      1 3      1 0
A47    RCOST 123SK 1122 15TA47     K      0

A48    N33    N34    1 0  TREAT A/B WASTE
A48    DTIME 1       3      2 0      4 5      3 0
A48    RCOST 123SK  2866 5TA48     K      0

A49    N34    N36    1 0  DEMOBILIZE EQUIPMENT (A/B POND)
A49    DTIME 1       3      5 5      6 5      6 0
A49    RCOST 123SK  984 73TA49     K      0

A50    N33    N35    1 0  DISPOSAL OF A/B POND WASTE
A50    DTIME 1       3      2 0      6 0      4 0
A50    RCOST 123SK  628 25TA50     K      0

A51    N01    N37    1 0  LAG TIME 13
A51    DTIME 1       3     42 9     43 1     43 0

A52    N37    N38    1 0  TREATABILITY (REMIX)
A52    DTIME 1       3      7 5      8 5      8 0
A52    RCOST 123SK  580 70TA52     K      0

A53    N38    N39    1 0  DESIGNS (REMIX)
A53    DTIME 1       3      6 0      8 0      7 0
A53    RCOST 123SK 1741 09TA53     K      0

A54    N39    N36    1 0  PERMITS (REMIX)
A54    DTIME 1       3      2 5      3 5      3 0
A54    RCOST 123SK  159 95TA54     K      0

A55    N36    N40    1 0  ERECTION STAGE 1 (REMIX)
A55    DTIME 1       3      5 0      7 0      6 0
A55    RCOST 123SK 1251 37TA55     K      0

A56    N40    N41    1 0  ERECTION STAGE 2 (REMIX)
```

```
A56   DTIME1       3     2 0     4 0     3 0
A56   RCOST 123SK 2046 28TA56    K     0

A57   N01    N42    1 0  LAG TIME 14
A57   DTIME1       3     55 9    56 1    56 0

A58   N42    N36    1 0  PROCUREMENT (REMIX)
A58   DTIME1       3     20 0    28 0    24 0
A58   RCOST 123SK  869 42TA58    K     0

A59   N01    N43    1 0  LAG TIME 16
A59   DTIME1       3     66 9    67 1    67 0

A60   N43    N41    1 0  PROCEDURES AND DOCUMENTS (REMIX)
A60   DTIME1       3      4 5     5 5     5 0
A60   RCOST 123SK   95 6TA60    K     0

A61   N01    N44    1 0  LAG TIME 17
A61   DTIME1       3     86 9    87 1    87 0

A62   N44    N41    1 0  TRAIN OPERATIONS PERSONNEL (REMIX)
A62   DTIME1       3       5     1 5     1 0

A63   N01    N45    1 0  LAG TIME 15
A63   DTIME1       3     84 9    85 1    85 0

A64   N45    N46    1 0  OPERATIONAL READINESS REVIEW (REMIX)
A64   DTIME1       3      3 5     4 5     4 0
A64   RCOST 123SK  246 0TA64    K     0

A65   N41    N46    1 0  COLD TEST (REMIX)
A65   DTIME1       3       5     3 0     1 0
A65   RCOST 123SK 1355 5TA65    K     0

A66   N46    N47     95  DOE APPROVAL FOR HOT TEST (REMIX)
A66   DTIME1       3       5     2 5     1 0
A66   RCOST 123SK 1576 45TA66    K     0

A67   N47    N48    1 0  REMIX TERMINATE ARC
A67   DTIME1       3       9     1 1     1 0

A68   N47    N49    1 0  PONDCRETE HOT TEST
A68   DTIME1       3       3      75      5
A68   RCOST 123SK 1213 45TA68    K     0

A69   N49    N50    1 0  DOE TEST EVAL/APPROV (REMIX)
A69   DTIME1       3      25     1 0      5
A69   RCOST 123SK  989 45TA69    K     0

A70   N50    N51    1 0  TREAT PONDCRETE
```

```
A70    DTIME1        3      3 0      5 5      4 0
A70    RCOST 123SK 5740 45TA70     K      0

A71    N51     N52     1 0  DISPOSAL OF REMIXPONDCRETE
A71    DTIME1        3      2 0      4 5      3 0
A71    RCOST 123SK  2568 0TA71     K      0

A72    N51     N53     1 0  SALTCRETEHOT TEST
A72    DTIME1        3        4      1 0      67
A72    RCOST 123SK 1213 45TA72     K      0

A73    N53     N54     1 0  DOE TEST EVAL/APPROV(REMIXSALTCRETE)
A73    DTIME1        3        5      1 5      1 0
A73    RCOST 123SK  989 45TA73     K      0

A74    N54     N55     1 0  TREATSALTCRETE(REMIX)
A74    DTIME1        3      1 5      4 0      2 67
A74    RCOST 123SK 4381 54TA74     K      0

A75    N55     N56     1 0  DISPOSAL OF REMIXSALTCRETE
A75    DTIME1        3      2 5      6 0      4 67
A75    RCOST 123SK  942 18TA75     K      0

A76    N55     N57     1 0  DEMOBILIZE(REMIX)
A76    DTIME1        3      5 5      6 5      6 0
A76    RCOST 123SK  596 73TA76     K      0

A77    N01     N55     1 0  PAD OPERATIONS/PROGRAM MANAGEMENT/TECHSUPPORT

A77    DTIME1        3    100 0    110 0    105 0
A77    RCOST 123SK 1129 77TA77     K      0

A78    N01     N03     1 0  MAINTAINHNUS EQUIPMENT
A78    DTIME1        3     45 0     50 0     48 0
A78    RCOST 123SK   83 33TA78     K      0

A79    N01     N03     1 0  DEMOBILIZESELECTED EQUIPMENT
A79    DTIME1        3      3 0      5 0      4 0
A79    RCOST 123SK   75 0TA79     K      0

ENDARC
```

NETWORK TIME FOR NODE N07

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
        58 2701 I----I----I----I----I----I----I----I----I----I-MIN        58 2701 I----I----I----I----I---MIN
            I                                          000                  I                    000
        58 2701 I                                                       58 2701 I
            I***                                     058                     I*****
058
        58 3595 I                                                       58 3595 I
            I******                                  115                     I*****
058
        58 4488 I                                                       58 4488 I
            I********                                154                      I***
038
        58 5382 I                                                       58 5382 I
            I*********                               173                       I*
019
        58 6275 I                                                       58 6275 I
            I*************                            269                        I*********
   096
        58 7169 I                                                       58 7169 I
            I********************                     404                          I*************
        135
        58 8062 I                                                       58 8062 I
            I*********************                   423                          I*
   019
        58 8956 I                                                       58 8956 I
            I**************************               519                            I*********
         096
        58 9849 I                                                       58 9849 I
            I****************************             558                             I***
       038
        59 0743 I                                                       59 0743 I
            I********************************         635                              I*******
         077
        59 1636 I                                                       59 1636 I
            I***********************************      692                               I*****
         058
        59 2530 I                                                       59 2530 I
            I*************************************      750                                I*****
          058
        59 3423 I                                                       59 3423 I
            I*****************************************      827                                I*******
          077
        59 4317 I                                                       59 4317 I
            I*****************************************      827                                I
         000
        59 5210 I                                                       59 5210 I
```

```
     I*****************************************      865                I***
    038
59 6104 I                                          59 6104 I
     I*****************************************      865                I
    000
59 6997 I                                          59 6997 I
     I*********************************************  923                I*****
     058
59 7891 I                                          59 7891 I
     I*********************************************** 962                I***
     038
59 8784 I                                          59 8784 I
     I*********************************************** 962                I
    000
59 9678 I                                          59 9678 I
     I*********************************************** 962                I
    000
60 0571 I                                          60 0571 I
     I*********************************************** 981                I*
     019
60 1465 I                                          60 1465 I
     I*************************************************1 000                I*
     019
60 2358 I                                          60 2358 I
     I*************************************************1 000                I
     000
60 2358 I---I---I---I---I---I---I---I---I---I-MAX     60 2358 I---I---I---I---I---MAX

     NO OBS---------      52  STD ERROR-          4781
     COEF OF VARIATION-    01  MEAN-----          59 0339
     KURTOSIS (BETA 2)-   2 57  MEDIAN---         58 9468
     PEARSONIAN SKEW---    62  MODE-----          58 7392
```

PATH COST FOR NODE N07

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
    16956 1200 I---I---I---I---I---I---I---I---I---IMIN     16956 1200 I---I---I---I---I---MIN
          I                                   000                I                    000
    16956 1200 I                                         16956 1200 I
          I*                                  019              I*                     019
    17255 6700 I                                         17255 6700 I
          I***                                058              I***                   038
    17555 2300 I                                         17555 2300 I
          I***                                 058             I                      000
    17854 7900 I                                         17854 7900 I
          I******                                115            I*****
058
    18154 3400 I                                         18154 3400 I
          I*********                            173            I*****
 058
    18453 9000 I                                         18453 9000 I
          I************                         231            I*****
 058
    18753 4600 I                                         18753 4600 I
          I***************                      308            I*******
  077
    19053 0100 I                                         19053 0100 I
          I********************                404            I*********
   096
    19352 5700 I                                         19352 5700 I
          I*************************           519            I***********
      115
    19652 1300 I                                         19652 1300 I
          I*****************************       577            I*****
     058
    19951 6800 I                                         19951 6800 I
          I*******************************     635            I*****
      058
    20251 2400 I                                         20251 2400 I
          I************************************ 712            I*******
     077
    20550 8000 I                                         20550 8000 I
          I************************************* 769            I*****
     058
    20850 3500 I                                         20850 3500 I
          I****************************************** 808            I***
     038
    21149 9100 I                                         21149 9100 I
          I******************************************** 846            I***
     038
    21449 4700 I                                         21449 4700 I
```

```
          I*******************************************      904                I*****
          058
     21749 0200  I                                        21749 0200  I
          I*********************************************    942                I***
          038
     22048 5800  I                                        22048 5800  I
          I*********************************************    962                I*
          019
     22348 1400  I                                        22348 1400  I
          I*********************************************    962                I
          000
     22647 6900  I                                        22647 6900  I
          I*********************************************    981                I*
          019
     22947 2500  I                                        22947 2500  I
          I*********************************************    981                I
          000
     23246 8100  I                                        23246 8100  I
          I*************************************************1 000                I*
           019
     23546 3800  I                                        23546 3800  I
          I*************************************************1 000                I
           000
     23546 3800  I---I---I---I---I---I---I---I---I---I---I-MAX        23546 3800  I---I---I---I---I---I
MAX
```

NO OBS---------- 52 STD ERROR- 1430 7730
COEF OF VARIATION- 07 MEAN----- 19814 5700
KURTOSIS (BETA 2)- 2 75 MEDIAN--- 19634 1900
PEARSONIAN SKEW--- 27 MODE----- 19427 4600

NETWORK TIME FOR NODE N22

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
      65 3503 I---I---I---I---I---I---I---I---I---I-MIN        65 3503 I---I---I---I---I---MIN
          I                                     000                I                    000
      65 3503 I                                              65 3503 I
          I                                     003                I                    003
      65 6480 I                                              65 6480 I
          I                                     008                I                    005
      65 9457 I                                              65 9457 I
          I*                                    023                I*                   015
      66 2434 I                                              66 2434 I
          I***                                  058                I***                 035
      66 5412 I                                              66 5412 I
          I*****                                  108              I****
050
      66 8389 I                                              66 8389 I
          I*********                                170          I******
062
      67 1366 I                                              67 1366 I
          I************                              248          I*******
078
      67 4344 I                                              67 4344 I
          I*****************                           332        I********
083
      67 7321 I                                              67 7321 I
          I*********************                         422      I*********
091
      68 0298 I                                              68 0298 I
          I***************************                   530        I**********
108
      68 3275 I                                              68 3275 I
          I********************************              640        I**********
110
      68 6253 I                                              68 6253 I
          I************************************           729        I********
089
      68 9230 I                                              68 9230 I
          I*****************************************      811        I********
082
      69 2207 I                                              69 2207 I
          I*********************************************  878        I******
067
      69 5185 I                                              69 5185 I
          I*********************************************** 926       I****
049
      69 8162 I                                              69 8162 I
```

```
     I*********************************************  961                I***
      035
70 1139 I                                          70 1139 I
     I*********************************************  981                I**
      020
70 4117 I                                          70 4117 I
     I*********************************************  988                I
      007
70 7094 I                                          70 7094 I
     I*********************************************  996                I
      007
71 0071 I                                          71 0071 I
     I*********************************************  998                I
      002
71 3048 I                                          71 3048 I
     I*********************************************  999                I
      001
71 6026 I                                          71 6026 I
     I*********************************************1 000                I
      001
71 9004 I                                          71 9004 I
     I*********************************************1 000                I
      000
71 9004 I----I----I----I----I----I----I----I----I----IMAX        71 9004 I----I----I----I----I----MAX
```

NO OBS----------	947	STD ERROR-	1 0778
COEF OF VARIATION-	02	MEAN-----	68 2339
KURTOSIS (BETA 2)-	2 62	MEDIAN----	68 2253
PEARSONIAN SKEW---	11	MODE-----	68 3546

PATH COST FOR NODE N22

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     26483 8600 I---I---I---I---I---I---I---I---I---IMIN     26483 8600 I---I---I---I---I---MIN
          I                                   000                I                    000
     26483 8600 I                                        26483 8600 I
          I                                   001                I                    001
     27110 4400 I                                        27110 4400 I
          I                                   001                I                    000
     27737 0200 I                                        27737 0200 I
          I                                   004                I                    003
     28363 6000 I                                        28363 6000 I
          I                                   010                I                    005
     28990 1800 I                                        28990 1800 I
          I*                                  023                I*                    014
     29616 7600 I                                        29616 7600 I
          I**                                 036                I*                    013
     30243 3400 I                                        30243 3400 I
          I****                               075                I***                  039
     30869 9200 I                                        30869 9200 I
          I******                                128              I*****
053
     31496 5000 I                                        31496 5000 I
          I*********                             202              I*******
 074
     32123 0800 I                                        32123 0800 I
          I**************                          285              I********
   083
     32749 6600 I                                        32749 6600 I
          I********************                     398              I***********
      113
     33376 2400 I                                        33376 2400 I
          I*************************               528              I************
       130
     34002 8200 I                                        34002 8200 I
          I*******************************          631              I**********
        103
     34629 4100 I                                        34629 4100 I
          I************************************       733              I**********
        101
     35255 9900 I                                        35255 9900 I
          I****************************************   812              I*******
         079
     35882 5700 I                                        35882 5700 I
          I*******************************************  876              I******
         064
     36509 1500 I                                        36509 1500 I
```

```
            I*********************************************  930              I*****
            054
      37135 7300  I                                        37135 7300  I
            I*********************************************  967               I***
             037
      37762 3200  I                                        37762 3200  I
            I*********************************************  984               I*
            017
      38388 9000  I                                        38388 9000  I
            I********************************************** 990               I
            006
      39015 4800  I                                        39015 4800  I
            I********************************************** 999               I
            008
      39642 0600  I                                        39642 0600  I
            I**********************************************1 000               I
             001
      40268 6300  I                                        40268 6300  I
            I**********************************************1 000               I
             000
      40268 6300  I----I----I----I----I----I----I----I----I----I-MAX        40268 6300  I----I----I----I----I----I
MAX

            NO OBS---------     947  STD ERROR-        2124 3290
            COEF OF VARIATION-   06  MEAN-----         33931 9700
            KURTOSIS (BETA 2)-   2 84  MEDIAN----      33880 9200
            PEARSONIAN SKEW---    15  MODE-----        33620 7600


   NETWORK TIME FOR NODE N58
NO OBS  =            1  AVE =          71 0593
MIN =          71 0593  MAX =          71 0593


    PATH COST  FOR NODE N58
NO OBS  =            1  AVE =        57299 3200
MIN =        57299 3200  MAX =        57299 3200
```

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
                CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
          58 2701 I---I---I---I---I---I---I---I---I---I---IMIN        58 2701 I---I---I---I---I---MIN
                I                                       000                I                   000
          58 2701 I                                                  58 2701 I
                I*                                      022                I**                 022
          58 8897 I                                                  58 8897 I
                I**                                     043                I**                 021
          59 5093 I                                                  59 5093 I
                I***                                    051                I                   008
          60 1288 I                                                  60 1288 I
                I***                                    052                I                   001
          60 7484 I                                                  60 7484 I
                I***                                    052                I                   000
          61 3679 I                                                  61 3679 I
                I***                                    052                I                   000
          61 9875 I                                                  61 9875 I
                I***                                    052                I                   000
          62 6070 I                                                  62 6070 I
                I***                                    052                I                   000
          63 2266 I                                                  63 2266 I
                I***                                    052                I                   000
          63 8462 I                                                  63 8462 I
                I***                                    052                I                   000
          64 4657 I                                                  64 4657 I
                I***                                    052                I                   000
          65 0853 I                                                  65 0853 I
                I***                                    055                I                   003
          65 7048 I                                                  65 7048 I
                I****                                   078                I**                 023
          66 3244 I                                                  66 3244 I
                I*********                                 176            I*********
   098
          66 9439 I                                                  66 9439 I
                I*****************                          331            I***************
        155
          67 5635 I                                                  67 5635 I
                I*************************                                512
I******************        181
          68 1830 I                                                  68 1830 I
                I***********************************                      709
I*******************        197
          68 8026 I                                                  68 8026 I
                I*****************************************                862
I***************        153
          69 4221 I                                                  69 4221 I
```

```
                I*************************************************    958
I*********            096
        70 0417 I                                          70 0417 I
                I*************************************************  988                I***
                 030
        70 6612 I                                          70 6612 I
                I*************************************************  998                I*
                 010
        71 2808 I                                          71 2808 I
                I*************************************************1 000                I
                 002
        71 9004 I                                          71 9004 I
                I*************************************************1 000                I
                 000
        71 9004 I---I---I---I---I---I---I---I---I---I---IMAX        71 9004 I---I---I---I---I---IMAX

                NO OBS----------    1000  STD ERROR-          2 3020
                COEF OF VARIATION-    03  MEAN------         67 7584
                KURTOSIS (BETA 2)-   11 11  MEDIAN----        68 1457
                PEARSONIAN SKEW---     26  MODE------        68 3482
```

PATH COST FOR THE COMPOSITE TERMINALNODE

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     16956 1200 I---I---I---I---I---I---I---I---I---IMIN     16956 1200 I---I---I---I---I---MIN
          I                                   000                I                    000
     16956 1200 I                                          16956 1200 I
          I*                                  012                I*                   012
     18789 9000 I                                          18789 9000 I
          I**                                 037                I**                  025
     20623 6800 I                                          20623 6800 I
          I***                                050                I*                   013
     22457 4600 I                                          22457 4600 I
          I***                                052                I                    002
     24291 2400 I                                          24291 2400 I
          I***                                052                I                    000
     26125 0200 I                                          26125 0200 I
          I***                                053                I                    001
     27958 8000 I                                          27958 8000 I
          I****                               079                I**                  026
     29792 5900 I                                          29792 5900 I
          I*********                                188            I**********
  109
     31626 3700 I                                          31626 3700 I
          I**********************                                439
I************************* 251
     33460 1500 I                                          33460 1500 I
          I************************************                   749
I************************* 310
     35293 9300 I                                          35293 9300 I
          I*********************************************      933
I******************      184
     37127 7100 I                                          37127 7100 I
          I*************************************************  990          I*****
          057
     38961 4900 I                                          38961 4900 I
          I************************************************* 999            I
          009
     40795 2700 I                                          40795 2700 I
          I************************************************* 999            I
          000
     42629 0500 I                                          42629 0500 I
          I************************************************* 999            I
          000
     44462 8400 I                                          44462 8400 I
          I************************************************* 999            I
          000
     46296 6200 I                                          46296 6200 I
```

```
            I************************************************ 999                I
            000
      48130 4000  I                                          48130 4000  I
            I************************************************ 999                I
            000
      49964 1800  I                                          49964 1800  I
            I************************************************ 999                I
            000
      51797 9600  I                                          51797 9600  I
            I************************************************ 999                I
            000
      53631 7400  I                                          53631 7400  I
            I************************************************ 999                I
            000
      55465 5200  I                                          55465 5200  I
            I*************************************************1 000                I
             001
      57299 3200  I                                          57299 3200  I
            I*************************************************1 000                I
             000
      57299 3200  I---I---I---I---I---I---I---I---I---I-MAX        57299 3200  I---I---I---I---I---I
MAX

            NO OBS---------- 1000  STD ERROR-        3846 1430
            COEF OF VARIATION-   12  MEAN-----        33221 2300
            KURTOSIS (BETA 2)-  10 04  MEDIAN----     33724 8900
            PEARSONIAN SKEW---   21  MODE-----        34044 9800
```

OVERALLCOST FOR THE COMPOSITE TERMINALNODE

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     180729 4000 I---I---I---I---I---I---I---I---I---IMIN    180729 4000 I----I----I----I----I---MIN
            I                                   000                I                    000
     180729 4000 I                                         180729 4000 I
            I                                   002                I                    002
     182828 1000 I                                         182828 1000 I
            I                                   005                I                    003
     184926 8000 I                                         184926 8000 I
            I*                                  013                I                    008
     187025 5000 I                                         187025 5000 I
            I**                                 031                I*                   018
     189124 2000 I                                         189124 2000 I
            I**                                 040                I                    009
     191223 0000 I                                         191223 0000 I
            I**                                 049                I                    009
     193321 7000 I                                         193321 7000 I
            I***                                051                I                    002
     195420 4000 I                                         195420 4000 I
            I***                                052                I                    001
     197519 1000 I                                         197519 1000 I
            I***                                052                I                    000
     199617 8000 I                                         199617 8000 I
            I***                                052                I                    000
     201716 5000 I                                         201716 5000 I
            I***                                055                I                    003
     203815 3000 I                                         203815 3000 I
            I****                               074                I*                   019
     205914 0000 I                                         205914 0000 I
            I******                                124            I*****
050
     208012 7000 I                                         208012 7000 I
            I***********                           216            I*********
   092
     210111 4000 I                                         210111 4000 I
            I*****************                        363            I**************
      147
     212210 1000 I                                         212210 1000 I
            I***************************                          554
I*******************      191
     214308 9000 I                                         214308 9000 I
            I*********************************                   727
I*****************      173
     216407 6000 I                                         216407 6000 I
            I*****************************************            869
I**************      142
     218506 3000 I                                         218506 3000 I
```

```
            I*************************************************     956
I********              087
     220605 0000  I                                          220605 0000  I
            I************************************************* 988                I***
             032
     222703 7000  I                                          222703 7000  I
            I************************************************* 998                I*
             010
     224802 5000  I                                          224802 5000  I
            I*************************************************1 000               I
             002
     226901 0000  I                                          226901 0000  I
            I*************************************************1 000               I
             000
     226901 0000  I---I---I---I---I---I---I---I---I---I-MAX      226901 0000  I---I---I---I---I---I
MAX
```

NO OBS---------- 1000 STD ERROR- 6902 2350
COEF OF VARIATION- 03 MEAN------ 212683 2000
KURTOSIS (BETA 2)- 8 74 MEDIAN---- 213639 6000
PEARSONIAN SKEW--- 15 MODE------ 213699 5000

PATH PERFORMANCE FOR THE COMPOSITE TERMINALNODE
NO OBS = 1000 AVE = 0000
MIN = 0000 MAX = 0000

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9 1 0
            I---+---+---+---+---+---+---+---+---+---+---+I
N07     0520 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +I
N22     9470 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +I
N58     0010 I                                       I
            I---+---+---+---+---+---+---+---+---+---+---+I
                 1   2   3   4   5   6   7   8   9 1 0
```

LAST RANDOM NUMBER SEED = 1609888621

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPTION2B
02-21-93

PROBLEM IDENTIFICATION SCREEN OPTION----------	0
TYPE OF INPUT OPTION----------	0
TYPE OF OUTPUT OPTION----------	5
COSTING AND PRUNING OPTION----------	0
FULL PRINT TRIP OPTION----------	0
CORRELATION COMPUTATION AND PLOT OPTION----------	0
COST-PERFORMANCE TIME INTERVAL OPTION----------	0
COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION-------	0
MEAN PRINT ORDER----------	0
INITIAL SEED----------	0
NUMBER OF ITERATIONS----------	1000
YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS--------	00
YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING----	00
TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE---	00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

A01 N01 N02 1 0 C POND PROCESS ERECTION/DOE APPROVAL

A01 DTIME 1 3 9 9 10 1 10 0

A02 N02 N03 1 0 TREAT C WASTE

A02	DTIME 1		3	2 9	3 1	3 0	
A03	N04	N05	1 0	ENVIRONMENTAL ASSESSMENT			
A03	DTIME 1		3	2 9	3 1	3 0	
A04	N05	N06	1 0	DOE REVIEW OF ENVIRONMENTAL ASSESSMENT			
A04	DTIME 1		3	8 9	9 1	9 0	
A05	N06	N07	1 0	STATE REVIEW OF ENVIRONMENTAL ASSESSMENT			
A05	DTIME 1		3	9	1 1	1 0	
A06	N07	N08	1 0	TITLE II DESIGN			
A06	DTIME 1		3	2 4	2 6	2 5	
A07	N08	N09	1 0	PROCUREMENT (C POND)			
A07	DTIME 1		3	5 0	5 2	5 17	
A08	N09	N10	1 0	CONSTRUCTION (C POND)			
A08	DTIME 1		3	9 9	10 1	10 0	
A09	N10	N11	1 0	LAG TIME 1			
A09	DTIME 1		3	1	2	17	
A10	N11	N12	1 0	PUMP B POND CONTENTS			
A10	DTIME 1		3	2 9	3 1	3 0	
A11	N12	N13	1 0	PUMP C POND CONTENTS			
A11	DTIME 1		3	2 9	3 1	3 0	
A12	N13	N02	1 0	C WASTE STORAGE			
A12	DTIME 1		3	21 9	22 1	22 0	
A13	N14	N15	1 0	RCRA PERMIT			

A13	DTIME 1		3	17 9	18 1	18 0	
A14	N15	N09	1 0	LAG TIME 2			
A14	DTIME 1		3	1 5	1 7	1 67	
A15	N16	N17	1 0	TITLE III DESIGN			
A15	DTIME 1		3	2 9	3 1	3 0	
A16	N17	N02	1 0	LAG TIME 8			
A16	DTIME 1		3	5 9	6 1	6 0	
A17	N18	N19	1 0	OPERATIONS READINESS			
A17	DTIME 1		3	3 9	4 1	4 0	
A18	N19	N02	1 0	LAG TIME 9			
A18	DTIME 1		3	2 9	3 1	3 0	
A19	N02	N20	1 0	REJECT C POND WASTE,INPUT TO REMIX			
A19	DTIME 1		3	3 9	4 1	4 0	
A20	N02	N21	1 0	DISPOSAL C POND WASTES			
A20	DTIME 1		3	6 9	7 1	7 0	
A21	N12	N22	1 0	A/B WASTE STORAGE			
A21	DTIME 1		3	35 5	35 7	35 67	
A22	N22	N23	1 0	A/B POND HOT TEST/DOE APPROVAL			
A22	DTIME 1		3	1 2	1 4	1 33	
A23	N23	N24	1 0	TREAT A/B WASTE			
A23	DTIME 1		3	2 9	3 1	3 0	

```
A24     N24     N25     1 0  A/B POND EQUIPMENT AVAIL FOR REMIX WASTE
A24     DTIME 1         3       5 9       6 1       6 0

A25     N23     N26     1 0  A/B POND REJECTS,INPUT TO REMIX
A25     DTIME 1         3       2 9       3 1       3 0

A26     N23     N27     1 0  DISPOSAL A/B POND WASTE
A26     DTIME 1         3       3 9       4 1       4 0

A27     N03     N31     1 0  C POND EQUIPMENT AVAIL FOR A/B POND WASTE
A27     DTIME 1         3       1 9       2 1       2 0

A28     N28     N29     1 0  DESIGN (A/B WASTE)
A28     DTIME 1         3       4 4       4 6       4 5

A53     N29     N30     1 0  LAG TIME 3
A53     DTIME 1         3       2 4       2 6       2 5

A29     N30     N31     1 0  A/B POND ERECTION STAGE I
A29     DTIME 1         3      11 9      12 1      12 0

A30     N31     N32     1 0  A/B POND ERECTION STAGE II
A30     DTIME 1         3         9       1 1       1 0

A31     N32     N33     1 0  A/B POND COLD TEST
A31     DTIME 1         3         9       1 1       1 0

A32     N33     N22     1 0  DOE APPROVAL FOR A/B HOT TEST
A32     DTIME 1         3       1 5       1 7      1 67

A33     N34     N30     1 0  PROCUREMENT (A/B POND)
A33     DTIME 1         3       3 9       4 1       4 0
```

A34	N35	N33	1	0	CHLORINATION (A/B POND WASTES)		
A34	DTIME 1		3		1 9	2 1	2 0
A35	N36	N37	1	0	PROCEDURE AND DOCUMENTS (A/B POND)		
A35	DTIME 1		3		5 9	6 1	6 0
A36	N37	N22	1	0	LAG TIME 4		
A36	DTIME 1		3		1 5	1 7	1 67
A37	N38	N39	1	0	OPERATIONS READINESS (A/B POND)		
A37	DTIME 1		3		3 9	4 1	4 0
A38	N39	N22	1	0	LAG TIME 5		
A38	DTIME 1		3		5	7	67
A39	N40	N41	1	0	TREATABILITY (REMIX)		
A39	DTIME 1		3		7 9	8 1	8 0
A40	N41	N42	1	0	DESIGN (REMIX)		
A40	DTIME 1		3		6 9	7 1	7 0
A41	N42	N43	1	0	PERMITS (REMIX)		
A41	DTIME 1		3		2 9	3 1	3 0
A42	N43	N25	1	0	LAG TIME 6		
A42	DTIME 1		3		17 1	18 1	18 0
A43	N25	N44	1	0	REMIX ERECTION STAGES I AND II		
A43	DTIME 1		3		8 9	9 1	9 0
A44	N44	N45	1	0	SO TEST/DOE APPROVAL		
A44	DTIME 1		3		2 9	3 1	3 0

```
A45     N45     N46     1 0  TREAT REMIX PONDCRETE
A45     DTIME 1         3       3 9       4 1       4 0

A46     N46     N47     1 0  SALTCRETE HOT TEST/DOE APPROVAL
A46     DTIME 1         3       1 2       1 4      1 33

A47     N47     N48     1 0  TREAT REMIX SALTCRETE
A47     DTIME 1         3       2 5       2 7      2 67

A48     N48     N50     1 0  DISPOSAL REMIX SALTCRETE
A48     DTIME 1         3       2 5       2 7      2 67

A49     N46     N49     1 0  DISPOSAL REMIX PONDCRETE
A49     DTIME 1         3       2 9       3 1       3 0

A50     N51     N25     1 0  PROCUREMENT (REMIX)
A50     DTIME 1         3      23 9      24 1      24 0

A51     N52     N53     1 0  PROCEDURES AND DOCUMENTS (REMIX)
A51     DTIME 1         3       4 9       5 1       5 0

A52     N53     N44     1 0  LAG TIME 7
A52     DTIME 1         3      15 9      16 1      16 0

ENDARC

N01     1  2 1

N02     2  2 1

N03     2  2 1
```

NETWORK TIME FOR NODE N20

```
             CFD    1    2    3    4    5    6    7    8    9  1 0
       RFD    05   10   15   20   25
     62 3782 I----I----I----I----I----I----I----I----I----I----I MIN
  62 3782 I----I----I----I----I----I MIN
             I                                                    000
        I                          000
     62 3782 I
  62 3782 I
             I                                                    003
        I                          003
     62 4175 I
  62 4175 I
             I                                                    007
        I                          004
     62 4568 I
  62 4568 I
             I*                                                   013
        I                          006
     62 4960 I
  62 4960 I
             I**                                                  035
        I**                        022
     62 5353 I
  62 5353 I
             I***                                                 064
        I**                        029
     62 5746 I
  62 5746 I
             I******                                              113
        I****                      049
     62 6139 I
  62 6139 I
             I********                                            157
        I****                      044
     62 6532 I
  62 6532 I
             I************                                         242
        I********                  085
     62 6924 I
  62 6924 I
             I*****************                                   346
        I**********                104
     62 7317 I
  62 7317 I
             I***********************                             448
        I**********                102
     62 7710 I
  62 7710 I
             I******************************                       573
        I************               125
     62 8103 I
```

```
62 8103 I
            I*********************************                    676
        I**********                  103
     62 8496 I
62 8496 I
            I***************************************              783
        I**********                  107
     62 8888 I
62 8888 I
            I*********************************************         852
        I******                      069
     62.9281 I
62 9281 I
            I************************************************      912
        I******                      060
     62 9674 I
62 9674 I
            I*************************************************     949
        I***                         037
     63 0067 I
63 0067 I
            I**************************************************   971
        I**                          022
     63 0460 I
63 0460 I
            I**************************************************   989
        I*                           018
     63 0852 I
63 0852 I
            I***************************************************  994
        I                            005
     63 1245 I
63 1245 I
            I***************************************************  996
        I                            002
     63 1638 I
63 1638 I
            I***************************************************  998
        I                            002
     63 2031 I
63 2031 I
            I****************************************************1 000
        I                            002
     63 2423 I
63 2423 I
            I****************************************************1 000
        I                            000
     63 2423 I----I----I----I----I----I----I----I----I----I----I MAX
63 2423 I----I----I----I----I----I MAX

            NO OBS------------    1000  STD ERROR-              1352
            COEF OF VARIATION-      00  MEAN------           62 7855
            KURTOSIS (BETA 2)-    3 01  MEDIAN----           62 7884
            PEARSONIAN SKEW---      04  MODE------           62 7911
```

```
 50     0          0 1000   0   0   1 0
A01     N01     N02     1 0  C POND PROCESS ERECTION/DOE APPROVAL
A01     DTIME 1         3       9 9      10 1      10 0
A02     N02     N03     1 0  TREAT C WASTE
A02     DTIME 1         3       2 9       3 1       3 0
A03     N04     N05     1 0  ENVIRONMENTAL ASSESSMENT
A03     DTIME 1         3       2 9       3 1       3 0
A04     N05     N06     1 0  DOE REVIEW OF ENVIRONMENTAL ASSESSMENT
A04     DTIME 1         3       8 9       9 1       9.0
A05     N06     N07     1 0  STATE REVIEW OF ENVIRONMENTAL ASSESSMENT
A05     DTIME 1         3         9       1 1       1 0
A06     N07     N08     1 0  TITLE II DESIGN
A06     DTIME 1         3       2 4       2 6       2 5
A07     N08     N09     1 0  PROCUREMENT (C POND)
A07     DTIME 1         3       5.0       5.2      5 17
A08     N09     N10     1 0  CONSTRUCTION (C POND)
A08     DTIME 1         3       9 9      10 1      10 0
A09     N10     N11     1 0  LAG TIME 1
A09     DTIME 1         3         1         2        17
A10     N11     N12     1 0  PUMP B POND CONTENTS
A10     DTIME 1         3       2 9       3 1       3 0
A11     N12     N13     1 0  PUMP C POND CONTENTS
A11     DTIME 1         3       2 9       3 1       3 0
A12     N13     N02     1 0  C WASTE STORAGE
A12     DTIME 1         3      21 9      22 1      22 0
A13     N14     N15     1 0  RCRA PERMIT
A13     DTIME 1         3      17 9      18 1      18 0
A14     N15     N09     1 0  LAG TIME 2
A14     DTIME 1         3       1 5       1 7      1 67
A15     N16     N17     1 0  TITLE III DESIGN
A15     DTIME 1         3       2 9       3 1       3 0
A16     N17     N02     1 0  LAG TIME 8
A16     DTIME 1         3       5 9       6 1       6 0
A17     N18     N19     1 0  OPERATIONS READINESS
A17     DTIME 1         3       3 9       4 1       4 0
A18     N19     N02     1 0  LAG TIME 9
A18     DTIME 1         3       2 9       3 1       3 0
A19     N02     N20     1 0  REJECT C POND WASTE,INPUT TO REMIX
A19     DTIME 1         3       3 9       4 1       4 0
A20     N02     N21     1 0  DISPOSAL C POND WASTES
A20     DTIME 1         3       6 9       7 1       7 0
A21     N12     N22     1 0  A/B WASTE STORAGE
A21     DTIME 1         3      35 5      35 7     35 67
A22     N22     N23     1 0  A/B POND HOT TEST/DOE APPROVAL
A22     DTIME 1         3       1 2       1 4      1 33
A23     N23     N24     1 0  TREAT A/B WASTE
A23     DTIME 1         3       2 9       3 1       3 0
A24     N24     N25     1 0  A/B POND EQUIPMENT AVAIL FOR REMIX WASTE
A24     DTIME 1         3       5 9       6 1       6 0
A25     N23     N26     1 0  A/B POND REJECTS,INPUT TO REMIX
A25     DTIME 1         3       2 9       3.1       3 0
A26     N23     N27     1 0  DISPOSAL A/B POND WASTE
A26     DTIME 1         3       3 9       4 1       4 0
A27     N03     N31     1 0  C POND EQUIPMENT AVAIL FOR A/B POND WASTE
```

```
A27     DTIME 1         3       1 9       2 1       2 0
A28     N28     N29     1 0  DESIGN (A/B WASTE)
A28     DTIME 1         3       4 4       4 6       4 5
A53     N29     N30     1 0  LAG TIME 3
A53     DTIME 1         3       2 4       2 6       2 5
A29     N30     N31     1 0  A/B POND ERECTION STAGE I
A29     DTIME 1         3      11 9      12 1      12 0
A30     N31     N32     1 0  A/B POND ERECTION STAGE II
A30     DTIME 1         3         9       1 1       1 0
A31     N32     N33     1 0  A/B POND COLD TEST
A31     DTIME 1         3         9       1 1       1 0
A32     N33     N22     1 0  DOE APPROVAL FOR A/B HOT TEST
A32     DTIME 1         3       1 5       1 7      1 67
A33     N34     N30     1 0  PROCUREMENT (A/B POND)
A33     DTIME 1         3       3 9       4 1       4 0
A34     N35     N33     1 0  CHLORINATION (A/B POND WASTES)
A34     DTIME 1         3       1 9       2 1       2 0
A35     N36     N37     1 0  PROCEDURE AND DOCUMENTS (A/B POND)
A35     DTIME 1         3       5 9       6 1       6 0
A36     N37     N22     1 0  LAG TIME 4
A36     DTIME 1         3       1 5       1 7      1 67
A37     N38     N39     1 0  OPERATIONS READINESS (A/B POND)
A37     DTIME 1         3       3 9       4 1       4 0
A38     N39     N22     1 0  LAG TIME 5
A38     DTIME 1         3         5         7        67
A39     N40     N41     1 0  TREATABILITY (REMIX)
A39     DTIME 1         3       7 9       8 1       8 0
A40     N41     N42     1 0  DESIGN (REMIX)
A40     DTIME 1         3       6 9       7 1       7 0
A41     N42     N43     1 0  PERMITS (REMIX)
A41     DTIME 1         3       2 9       3 1       3 0
A42     N43     N25     1 0  LAG TIME 6
A42     DTIME 1         3      17 1      18 1      18 0
A43     N25     N44     1 0  REMIX ERECTION STAGES I AND II
A43     DTIME 1         3       8 9       9 1       9 0
A44     N44     N45     1 0  SO TEST/DOE APPROVAL
A44     DTIME 1         3       2 9       3 1       3 0
A45     N45     N46     1 0  TREAT REMIX PONDCRETE
A45     DTIME 1         3       3 9       4 1       4 0
A46     N46     N47     1 0  SALTCRETE HOT TEST/DOE APPROVAL
A46     DTIME 1         3       1 2       1 4      1 33
A47     N47     N48     1 0  TREAT REMIX SALTCRETE
A47     DTIME 1         3       2 5       2 7      2 67
A48     N48     N50     1 0  DISPOSAL REMIX SALTCRETE
A48     DTIME 1         3       2 5       2.7      2 67
A49     N46     N49     1 0  DISPOSAL REMIX PONDCRETE
A49     DTIME 1         3       2 9       3 1       3 0
A50     N51     N25     1 0  PROCUREMENT (REMIX)
A50     DTIME 1         3      23 9      24 1      24 0
A51     N52     N53     1 0  PROCEDURES AND DOCUMENTS (REMIX)
A51     DTIME 1         3       4 9       5 1       5 0
A52     N53     N44     1 0  LAG TIME 7
A52     DTIME 1         3      15 9      16 1      16 0
ENDARC
```

```
N01     1  2  1
N02     2  2  1
N03     2  2  1
N04     1  2  1
N05     2  2  1
N06     2  2  1
N07     2  2  1
N08     2  2  1
N09     2  2  1
N10     2  2  1
N11     2  2  1
N12     2  2  1
N13     2  2  1
N14     1  2  1
N15     2  2  1
N16     1  2  1
N17     2  2  1
N18     1  2  1
N19     2  2  1
N20     2  1  1
N21     2  1  1
N22     2  2  1
N23     2  2  1
N24     2  2  1
N25     2  2  1
N26     2  1  1
N27     2  1  1
N28     1  2  1
N29     2  2  1
N30     2  2  1
N31     2  2  1
N33     2  2  1
N32     2  2  1
N34     1  2  1
N35     1  2  1
N36     1  2  1
N37     2  2  1
N38     1  2  1
N39     2  2  1
N40     1  2  1
N41     2  2  1
N42     2  2  1
N43     2  2  1
N44     2  2  1
N45     2  2  1
N46     2  2  1
N47     2  2  1
N48     2  2  1
N49     2  1  1
N50     2  1  1
N51     1  2  1
N52     1  2  1
N53     2  2  1
ENDNODE
```

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPT2D 03-02-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 5

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION------ 0

MEAN PRINT ORDER---------- 0

INITIAL SEED---------- 1

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING--- 00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE--- 1 00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL- OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N02    1 0  LAG TIME 1
A01    DTIME 1       3    48 4    48 6    48 5
A01    RCOST 123SK      0TA01    K    0

A02    N02    N03    1 0  TRAIN ERECTION PERSONNEL
A02    DTIME 1       3    1 0    2 5    1 5
```

```
A02    RCOST 123SK  744 36TA02     K      0

A03    N03    N04    1 0  ERECTION/TITLEIIIDESIGN (C POND)
A03    DTIME1        3      1 9      4 0      2 0
A03    RCOST 123SK 1350 50TA03     K      0

A04    N04    N05    1 0  COLD TEST (C POND)
A04    DTIME1        3      2 0      4 0      2 5
A04    RCOST 123SK   702 0TA04     K      0

A05    N05    N06    1 0  HOT TEST (C POND)
A05    DTIME1        3        5      2 0      1 5
A05    RCOST 123SK  4260 0TA05     K      0

A06    N06    N08    1 0  DOE TEST EVAL/APPROV(C POND)
A06    DTIME1        3        5      1 3        6
A06    RCOST 123SK  3130 0TA06     K      0

A07    N01    N09    1 0  LAG TIME2
A07    DTIME1        3     47 9     48 1     48 0

A08    N09    N03    1 0  PROCUREMENT (C POND)
A08    DTIME1        3      1 9      6 0      2 0
A08    RCOST 123SK  952 50TA08     K      0

A09    N01    N10    1 0  LAG TIME3
A09    DTIME1        3     49 9     50 1     50 0

A10    N10    N04    1 0  DOE WAIVERS (C POND)
A10    DTIME1        3      3 0      5 0      4 0

A11    N01    N11    1 0  LAG TIME4
A11    DTIME1        3     51 4     51 6     51 5

A12    N11    N12    1 0  TRAINOPERATIONS PERSONNEL (C POND)
A12    DTIME1        3      1 0      2 5      1 5
A12    RCOST 123SK   714 0TA12     K      0

A13    N12    N05    1 0  OPERATIONALREADINESS (C POND)
A13    DTIME1        3      3 0      6 5      4 0
A13    RCOST 123SK   61 52TA13     K      0

A14    N01    N13    1 0  LAG TIME5
A14    DTIME1        3     45 9     46 1     46 0

A15    N13    N05    1 0  PROCEDURE AND DOCUMENTS (C POND)
A15    DTIME1        3      8 0      9 5      9 0
A15    RCOST 123SK    89 0TA15     K      0

A16    N01    N14    1 0  LAG TIME6
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```
A16    DTIME1        3     55 9     56 1     56 0

A17    N14    N05     95  DOE APPROVAL FOR HOT TEST (C POND)
A17    DTIME1        3      95      2 5      1 0
A17    RCOST  123SK  2242 0TA17     K       0

A18    N01    N15     1 0  RCRA PERMIT MODIFICATION(C POND)
A18    DTIME1        3     12 0     20 0     18 0
A18    RCOST  123SK    9 78TA18     K       0

A19    N15    N16     1 0  TITLEII DESIGN (C POND)
A19    DTIME1        3      2 0      4 0      3 0
A19    RCOST  123SK   96 0TA19     K       0

A20    N16    N17     1 0  PROCUREMENT (POND LINER)
A20    DTIME1        3      1 0      3 0      2 0
A20    RCOST  123SK    5 67TA20     K       0

A21    N17    N18     1 0  LINER CONSTRUCTION
A21    DTIME1        3      3 0      5 0      4 5
A21    RCOST  123SK  837 56TA21     K       0

A22    N18    N08     1 0  STORE C POND WASTE
A22    DTIME1        3     13 9     14 1     14 0
A22    RCOST  123SK   56 86TA22     K       0

A23    N08    N21     1 0  TREAT C POND WASTE
A23    DTIME1        3      2 0      4 5      3 0
A23    RCOST  123SK  530 0TA23     K       0

A24    N01    N15     1 0  NEPA DOCUMENTATION
A24    DTIME1        3      5 0     12 0      5 5
A24    RCOST  123SK    4 33TA24     K       0

A25    N01    N20     1 0  LAG TIME7
A25    DTIME1        3     27 4     27 6     27 5

A26    N20    N18     1 0  READINESS CHECKOUT
A26    DTIME1        3       25      1 0        5

A27    N18    N31     1 0  STORE A/B POND WASTE
A27    DTIME1        3     25 9     26 1     26 0
A27    RCOST  123SK   35 0TA27     K       0

A28    N08    N22     1 0  DISPOSAL OF C POND WASTES
A28    DTIME1        3      6 0     10 0      8 0
A28    RCOST  123SK   56 86TA28     K       0

A44    N05    N07     1 0  C POND TERMINAL ARC
A44    DTIME1        3        9      1 1      1 0
```

```
A29    N21    N23    1 0  DEMOBILIZEC POND EQUIPMENT
A29    DTIME1        3      1 5      2 5      2 0
A29    RCOST 123SK  3850 0TA29     K      0

A30    N01    N24    1 0  LAG TIME 10
A30    DTIME1        3     45 9     46 1     46 0

A31    N24    N25    1 0  DESIGN (A/B POND)
A31    DTIME1        3      3 5      5 5      4 5
A31    RCOST 123SK  281 95TA31     K      0

A32    N25    N23    1 0  ERECTION STAGE 1 (A/B POND)
A32    DTIME1        3     11 0     13 0     12 0
A32    RCOST 123SK   308 2TA32     K      0

A33    N23    N27    1 0  ERECTION STAGE 2 (A/B POND)4
A33    DTIME1        3        5      1 5      1 0
A33    RCOST 123SK 1401 95TA33     K      0

A34    N27    N28    1 0  COLD TEST (A/B POND)
A34    DTIME1        3        5      3 0      1 0
A34    RCOST 123SK 2018 95TA34     K      0

A35    N28    N31     95  DOE APPROVAL FOR HOT TEST (A/B POND)
A35    DTIME1        3      1 0      2 5     1 67
A35    RCOST 123SK  1083 6TA35     K      0

A36    N01    N26    1 0  LAG TIME 11
A36    DTIME1        3     48 9     49 1     49 0

A37    N26    N25    1 0  PROCUREMENT (A/B POND)
A37    DTIME1        3      3 0      5 0      4 0
A37    RCOST 123SK   156 4TA37     K      0

A38    N01    N29    1 0  LAG TIME 12
A38    DTIME1        3     64 9     65 1     65 0

A39    N29    N28    1 0  CHLORINATION
A39    DTIME1        3      1 5      2 5      2 0
A39    RCOST 123SK    24 5TA39     K      0

A40    N01    N30    1 0  LAG TIME 8
A40    DTIME1        3     61 9     62 1     62 0

A41    N30    N31    1 0  PROCEDURE AND DOCUMENTS (A/B POND)
A41    DTIME1        3      5 0      6 5      6 0
A41    RCOST 123SK    79 67TA41     K      0

A42    N01    N19    1 0  LAG TIME 9
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A42   DTIME1      3    63 9    64 1    64 0

A43   N19   N31   1 0  OPERATIONALREADINESS (A/B POND)
A43   DTIME1      3     5 0     6 5     6 0
A43   RCOST 123SK  198 75TA43    K     0

A45   N31   N58   1 0  A/B POND TERMINALARC
A45   DTIME1      3      9     1 1     1 0

A46   N31   N32   1 0  HOT TEST (A/B POND)
A46   DTIME1      3      3     75      5
A46   RCOST 123SK  1700 7TA46    K     0

A47   N32   N33   1 0  DOE TEST EVAL/APPROV(A/B POND)
A47   DTIME1      3      5     1 3     1 0
A47   RCOST 123SK 1122 15TA47    K     0

A48   N33   N34   1 0  TREAT A/B WASTE
A48   DTIME1      3     2 0     4 5     3 0
A48   RCOST 123SK  2866 5TA48    K     0

A49   N34   N36   1 0  DEMOBILIZEEQUIPMENT (A/B POND)
A49   DTIME1      3     5 5     6 5     6 0
A49   RCOST 123SK  984 73TA49    K     0

A50   N33   N35   1 0  DISPOSAL OF A/B POND WASTE
A50   DTIME1      3     2 0     6 0     4 0
A50   RCOST 123SK  628 25TA50    K     0

A51   N01   N37   1 0  LAG TIME 13
A51   DTIME1      3    42 9    43 1    43 0

A52   N37   N38   1 0  TREATABILITY(REMIX)
A52   DTIME1      3     7 5     8 5     8 0
A52   RCOST 123SK  580 70TA52    K     0

A53   N38   N39   1 0  DESIGNS (REMIX)
A53   DTIME1      3     6 0     8 0     7 0
A53   RCOST 123SK 1741 09TA53    K     0

A54   N39   N36   1 0  PERMITS (REMIX)
A54   DTIME1      3     2 5     3 5     3 0
A54   RCOST 123SK  159 95TA54    K     0

A55   N36   N40   1 0  ERECTION STAGE 1 (REMIX)
A55   DTIME1      3     5 0     7 0     6 0
A55   RCOST 123SK 1251 37TA55    K     0

A56   N40   N41   1 0  ERECTION STAGE 2 (REMIX)
A56   DTIME1      3     2 0     4 0     3 0
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A56   RCOST 123SK 2046 28TA56    K     0

A57   N01    N42    1 0  LAG TIME 14
A57   DTIME 1       3     55 9    56 1    56 0

A58   N42    N36    1 0  PROCUREMENT (REMIX)
A58   DTIME 1       3     20 0    28 0    24 0
A58   RCOST 123SK  869 42TA58    K     0

A59   N01    N43    1 0  LAG TIME 16
A59   DTIME 1       3     66 9    67 1    67 0

A60   N43    N41    1 0  PROCEDURES AND DOCUMENTS (REMIX)
A60   DTIME 1       3      4 5     5 5     5 0
A60   RCOST 123SK    95 6TA60    K     0

A61   N01    N44    1 0  LAG TIME 17
A61   DTIME 1       3     86 9    87 1    87 0

A62   N44    N41    1 0  TRAIN OPERATIONS PERSONNEL (REMIX)
A62   DTIME 1       3       5     1 5     1 0

A63   N01    N45    1 0  LAG TIME 15
A63   DTIME 1       3     84 9    85 1    85 0

A64   N45    N46    1 0  OPERATIONAL READINESS REVIEW (REMIX)
A64   DTIME 1       3      3 5     4 5     4 0
A64   RCOST 123SK   246 0TA64    K     0

A65   N41    N46    1 0  COLD TEST (REMIX)
A65   DTIME 1       3       5     3 0     1 0
A65   RCOST 123SK  1355 5TA65    K     0

A66   N46    N47     95  DOE APPROVAL FOR HOT TEST (REMIX)
A66   DTIME 1       3       5     2 5     1 0
A66   RCOST 123SK 1576 45TA66    K     0

A67   N47    N48    1 0  REMIX TERMINATE ARC
A67   DTIME 1       3       9     1 1     1 0

A68   N47    N49    1 0  POND CRETE HOT TEST
A68   DTIME 1       3       3      75       5
A68   RCOST 123SK  834 95TA68    K     0

A69   N49    N50    1 0  DOE TEST EVAL/APPROV (REMIX)
A69   DTIME 1       3      25     1 0       5
A69   RCOST 123SK  722 95TA69    K     0

A70   N50    N51    1 0  TREAT POND CRETE
A70   DTIME 1       3      3 0     5 5     4 0
```

```
A70    RCOST 123SK 5740 45TA70     K      0

A71    N51    N52     1 0  DISPOSAL OF REMIXPONDCRETE
A71    DTIME1         3      2 0      4 5      3 0
A71    RCOST 123SK  2568 0TA71     K      0

A72    N51    N53     1 0  SALTCRETEHOT TEST
A72    DTIME1         3       4       1 0      67
A72    RCOST 123SK  834 95TA72     K      0

A73    N53    N54     1 0  DOE TEST EVAL/APPROV(REMIXSALTCRETE)
A73    DTIME1         3       5       1 5      1 0
A73    RCOST 123SK  989 45TA73     K      0

A74    N54    N55     1 0  TREATSALTCRETE(REMIX)
A74    DTIME1         3      1 5      4 0      2 67
A74    RCOST 123SK 4381 54TA74     K      0

A75    N55    N56     1 0  DISPOSAL OF REMIXSALTCRETE
A75    DTIME1         3      2 5      6 0      4 67
A75    RCOST 123SK  942 18TA75     K      0

A76    N55    N57     1 0  DEMOBILIZE(REMIX)
A76    DTIME1         3      5 5      6 5      6 0
A76    RCOST 123SK  596 73TA76     K      0

A77    N01    N55     1 0  PAD OPERATIONS/PROGRAM MANAGEMENT/TECHSUPPORT

A77    DTIME1         3    100 0    110 0    105 0
A77    RCOST 123SK 1129 77TA77     K      0

A78    N01    N03     1 0  MAINTAINHNUS EQUIPMENT
A78    DTIME1         3     45 0     50 0     48 0
A78    RCOST 123SK   83 33TA78     K      0

A79    N01    N03     1 0  DEMOBILIZESELECTED EQUIPMENT
A79    DTIME1         3      3 0      5 0      4 0
A79    RCOST 123SK   75 0TA79     K      0

ENDARC
```

NETWORK TIME FOR NODE N07

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     58 2701 I---I---I---I---I---I---I---I---I---I-MIN        58 2701 I---I---I---I---I---MIN
          I                                   000                I                   000
     58 2701 I                                                58 2701 I
          I***                                 058                I*****
058
     58 3595 I                                                58 3595 I
          I******                              115                I*****
058
     58 4488 I                                                58 4488 I
          I********                            154                I***
038
     58 5382 I                                                58 5382 I
          I*********                           173                I*
019
     58 6275 I                                                58 6275 I
          I*************                       269                I*********
  096
     58 7169 I                                                58 7169 I
          I********************                404                I*************
     135
     58 8062 I                                                58 8062 I
          I*********************               423                I*
  019
     58 8956 I                                                58 8956 I
          I**************************          519                I*********
      096
     58 9849 I                                                58 9849 I
          I****************************        558                I***
    038
     59 0743 I                                                59 0743 I
          I*******************************     635                I*******
      077
     59 1636 I                                                59 1636 I
          I**********************************  692                I*****
      058
     59 2530 I                                                59 2530 I
          I************************************ 750             I*****
       058
     59 3423 I                                                59 3423 I
          I***************************************** 827      I*******
      077
     59 4317 I                                                59 4317 I
          I***************************************** 827      I
      000
     59 5210 I                                                59 5210 I
```

```
     I*****************************************      865                I***
    038
59 6104 I                                        59 6104 I
     I*****************************************      865                I
    000
59 6997 I                                        59 6997 I
     I*********************************************   923                I*****
     058
59 7891 I                                        59 7891 I
     I************************************************ 962                I***
      038
59 8784 I                                        59 8784 I
     I************************************************ 962                I
     000
59 9678 I                                        59 9678 I
     I************************************************ 962                I
     000
60 0571 I                                        60 0571 I
     I************************************************ 981                I*
     019
60 1465 I                                        60 1465 I
     I*************************************************1 000                I*
      019
60 2358 I                                        60 2358 I
     I*************************************************1 000                I
      000
60 2358 I----I----I----I----I----I----I----I----I----I-MAX        60 2358 I----I----I----I----I----I--MAX

     NO OBS---------      52  STD ERROR-          4781
     COEF OF VARIATION-    01  MEAN-----          59 0339
     KURTOSIS (BETA 2)-   2 57  MEDIAN----        58 9468
     PEARSONIAN SKEW---     62  MODE-----         58 7392
```

PATH COST FOR NODE N07

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
    16956 1200 I---I---I---I---I---I---I---I---I---IMIN     16956 1200 I---I---I---I---I---MIN
          I                                     000              I                    000
    16956 1200 I                                          16956 1200 I
          I*                                    019              I*                   019
    17255 6700 I                                          17255 6700 I
          I***                                  058              I***                 038
    17555 2300 I                                          17555 2300 I
          I***                                   058              I                   000
    17854 7900 I                                          17854 7900 I
          I******                                  115            I*****
058
    18154 3400 I                                          18154 3400 I
          I*********                               173            I*****
 058
    18453 9000 I                                          18453 9000 I
          I************                             231            I*****
 058
    18753 4600 I                                          18753 4600 I
          I***************                           308            I*******
  077
    19053 0100 I                                          19053 0100 I
          I********************                       404            I*********
    096
    19352 5700 I                                          19352 5700 I
          I*************************                 519            I***********
      115
    19652 1300 I                                          19652 1300 I
          I****************************              577            I*****
     058
    19951 6800 I                                          19951 6800 I
          I*******************************            635            I*****
      058
    20251 2400 I                                          20251 2400 I
          I***********************************        712            I*******
       077
    20550 8000 I                                          20550 8000 I
          I*************************************      769            I*****
       058
    20850 3500 I                                          20850 3500 I
          I****************************************   808            I***
       038
    21149 9100 I                                          21149 9100 I
          I******************************************* 846            I***
       038
    21449 4700 I                                          21449 4700 I
```

```
        I*********************************************      904              I*****
        058
21749 0200  I                                          21749 0200  I
        I*********************************************     942              I***
        038
22048 5800  I                                          22048 5800  I
        I*********************************************     962              I*
        019
22348 1400  I                                          22348 1400  I
        I*********************************************     962              I
        000
22647 6900  I                                          22647 6900  I
        I*********************************************     981              I*
        019
22947 2500  I                                          22947 2500  I
        I*********************************************     981              I
        000
23246 8100  I                                          23246 8100  I
        I*************************************************1 000              I*
        019
23546 3800  I                                          23546 3800  I
        I*************************************************1 000              I
        000
23546 3800  I---I---I---I---I---I---I---I---I---I-MAX   23546 3800  I---I---I---I---I---I
MAX

        NO OBS----------     52  STD ERROR-       1430 7730
        COEF OF VARIATION-   07  MEAN-----        19814 5700
        KURTOSIS (BETA 2)-   2 75  MEDIAN----     19634 1900
        PEARSONIAN SKEW---   27  MODE-----        19427 4600
```

NETWORK TIME FOR NODE N22

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
      65 3503 I---I---I---I---I---I---I---I---I---I---IMIN       65 3503 I---I---I---I---I---MIN
          I                                   000                    I                   000
      65 3503 I                                                  65 3503 I
          I                                   003                    I                   003
      65 6480 I                                                  65 6480 I
          I                                   008                    I                   005
      65 9457 I                                                  65 9457 I
          I*                                  023                    I*                   015
      66 2434 I                                                  66 2434 I
          I***                                058                    I***                 035
      66 5412 I                                                  66 5412 I
          I*****                                108                I****
050
      66 8389 I                                                  66 8389 I
          I*********                            170                I******
062
      67 1366 I                                                  67 1366 I
          I************                          248                I*******
078
      67 4344 I                                                  67 4344 I
          I*****************                     332                I********
083
      67 7321 I                                                  67 7321 I
          I*********************                 422                I*********
091
      68 0298 I                                                  68 0298 I
          I***************************           530                I**********
108
      68 3275 I                                                  68 3275 I
          I*******************************       640                I**********
110
      68 6253 I                                                  68 6253 I
          I************************************  729                I********
089
      68 9230 I                                                  68 9230 I
          I*****************************************811                I********
082
      69 2207 I                                                  69 2207 I
          I*********************************************878                I******
067
      69 5185 I                                                  69 5185 I
          I*********************************************926                I****
049
      69 8162 I                                                  69 8162 I
```

```
     I*********************************************  961                I***
      035
70 1139 I                                        70 1139 I
     I*********************************************  981                I**
      020
70 4117 I                                        70 4117 I
     I*********************************************  988                I
      007
70 7094 I                                        70 7094 I
     I*********************************************  996                I
      007
71 0071 I                                        71 0071 I
     I*********************************************  998                I
      002
71 3048 I                                        71 3048 I
     I*********************************************  999                I
      001
71 6026 I                                        71 6026 I
     I*********************************************1 000                I
      001
71 9004 I                                        71 9004 I
     I*********************************************1 000                I
      000
71 9004 I---I---I---I---I---I---I---I---I---I-MAX      71 9004 I---I---I---I---I---MAX
```

NO OBS---------- 947 STD ERROR- 1 0778
COEF OF VARIATION- 02 MEAN----- 68 2339
KURTOSIS (BETA 2)- 2 62 MEDIAN---- 68 2253
PEARSONIAN SKEW--- 11 MODE----- 68 3546

PATH COST FOR NODE N22

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     25886 0400 I---I---I---I---I---I---I---I---I---IMIN     25886 0400 I---I---I---I---I---MIN
          I                                     000              I                    000
     25886 0400 I                                          25886 0400 I
          I                                     001              I                    001
     26505 2000 I                                          26505 2000 I
          I                                     001              I                    000
     27124 3700 I                                          27124 3700 I
          I                                     004              I                    003
     27743 5400 I                                          27743 5400 I
          I*                                    013              I                    008
     28362 7000 I                                          28362 7000 I
          I*                                    025              I*                   013
     28981 8700 I                                          28981 8700 I
          I**                                   040              I*                   015
     29601 0300 I                                          29601 0300 I
          I****                                   080              I****
040
     30220 2000 I                                          30220 2000 I
          I*******                                135              I*****
055
     30839 3700 I                                          30839 3700 I
          I*********                               209              I*******
 074
     31458 5300 I                                          31458 5300 I
          I***************                           298              I********
  089
     32077 7000 I                                          32077 7000 I
          I*******************                        407              I**********
   109
     32696 8600 I                                          32696 8600 I
          I**************************                  537              I*************
     131
     33316 0300 I                                          33316 0300 I
          I*******************************              640              I**********
      102
     33935 2000 I                                          33935 2000 I
          I************************************          737              I*********
      097
     34554 3700 I                                          34554 3700 I
          I****************************************      815              I*******
      078
     35173 5400 I                                          35173 5400 I
          I*******************************************  880              I******
      064
     35792 7000 I                                          35792 7000 I
```

```
          I*********************************************   933              I*****
          054
     36411 8700  I                                        36411 8700  I
          I*********************************************   969              I***
           036
     37031 0400  I                                        37031 0400  I
          I*********************************************   983              I*
          014
     37650 2100  I                                        37650 2100  I
          I*********************************************   993              I
          010
     38269 3800  I                                        38269 3800  I
          I*********************************************   999              I
          006
     38888 5400  I                                        38888 5400  I
          I*********************************************1 000              I
           001
     39507 7000  I                                        39507 7000  I
          I*********************************************1 000              I
           000
     39507 7000  I----I----I----I----I----I----I----I----I----I-MAX        39507 7000  I----I----I----I----I----I
MAX

          NO OBS----------     947  STD ERROR-        2111 3830
          COEF OF VARIATION-    06  MEAN------        33191 2200
          KURTOSIS (BETA 2)-   2 83  MEDIAN----        33125 4300
          PEARSONIAN SKEW---     11  MODE------        32967 7500


   NETWORK TIME FOR NODE N58
NO OBS =            1  AVE =          71 0593
MIN =          71 0593  MAX =          71 0593


    PATH COST FOR NODE N58
NO OBS =            1  AVE =        56454 1200
MIN =        56454 1200  MAX =        56454 1200
```

NETWORK TIME FOR THE COMPOSITE TERMINAL NODE

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
        58 2701 I----I----I----I----I----I----I----I----I----I-MIN        58 2701 I----I----I----I----I---MIN
            I                                                 000            I                    000
        58 2701 I                                                        58 2701 I
            I*                                                022            I**                  022
        58 8897 I                                                        58 8897 I
            I**                                               043            I**                  021
        59 5093 I                                                        59 5093 I
            I***                                               051            I                    008
        60 1288 I                                                        60 1288 I
            I***                                               052            I                    001
        60 7484 I                                                        60 7484 I
            I***                                               052            I                    000
        61 3679 I                                                        61 3679 I
            I***                                               052            I                    000
        61 9875 I                                                        61 9875 I
            I***                                               052            I                    000
        62 6070 I                                                        62 6070 I
            I***                                               052            I                    000
        63 2266 I                                                        63 2266 I
            I***                                               052            I                    000
        63 8462 I                                                        63 8462 I
            I***                                               052            I                    000
        64 4657 I                                                        64 4657 I
            I***                                               052            I                    000
        65 0853 I                                                        65 0853 I
            I***                                               055            I                    003
        65 7048 I                                                        65 7048 I
            I****                                              078            I**                  023
        66 3244 I                                                        66 3244 I
            I********                                              176            I********
   098
        66 9439 I                                                        66 9439 I
            I****************                                      331            I***************
       155
        67 5635 I                                                        67 5635 I
            I*************************                                      512
I******************       181
        68 1830 I                                                        68 1830 I
            I*********************************                                709
I*******************       197
        68 8026 I                                                        68 8026 I
            I*****************************************                          862
I***************       153
        69 4221 I                                                        69 4221 I
```

```
                I*********************************************     958
I*********            096
        70 0417 I                                          70 0417 I
                I*********************************************** 988                I***
                 030
        70 6612 I                                          70 6612 I
                I*********************************************** 998                I*
                 010
        71 2808 I                                          71 2808 I
                I*************************************************1 000                I
                 002
        71 9004 I                                          71 9004 I
                I*************************************************1 000                I
                 000
        71 9004 I---I---I---I---I---I---I---I---I---I-MAX        71 9004 I---I---I---I---I---MAX
```

NO OBS---------- 1000 STD ERROR- 2 3020
COEF OF VARIATION- 03 MEAN----- 67 7584
KURTOSIS (BETA 2)- 11 11 MEDIAN---- 68 1457
PEARSONIAN SKEW--- 26 MODE----- 68 3482

PATH COST FOR THE COMPOSITE TERMINALNODE

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     16956 1200 I---I---I---I---I---I---I---I---I---IMIN     16956 1200 I---I---I---I---I---MIN
          I                                     000              I                    000
     16956 1200 I                                          16956 1200 I
          I*                                    012              I*                   012
     18751 4800 I                                          18751 4800 I
          I**                                   037              I**                  025
     20546 8400 I                                          20546 8400 I
          I***                                  050              I*                   013
     22342 2100 I                                          22342 2100 I
          I***                                  052              I                    002
     24137 5700 I                                          24137 5700 I
          I***                                  053              I                    001
     25932 9300 I                                          25932 9300 I
          I***                                  056              I                    003
     27728 3000 I                                          27728 3000 I
          I****                                 089              I***                 033
     29523 6600 I                                          29523 6600 I
          I************                                 230              I**************
    141
     31319 0200 I                                          31319 0200 I
          I*************************                              523
I************************* 293
     33114 3900 I                                          33114 3900 I
          I***************************************                  802
I************************* 279
     34909 7500 I                                          34909 7500 I
          I*************************************************      953
I***************          151
     36705 1100 I                                          36705 1100 I
          I************************************************* 996                I****
           043
     38500 4800 I                                          38500 4800 I
          I************************************************* 999                 I
          003
     40295 8400 I                                          40295 8400 I
          I************************************************* 999                 I
          000
     42091 2000 I                                          42091 2000 I
          I************************************************* 999                 I
          000
     43886 5700 I                                          43886 5700 I
          I************************************************* 999                 I
          000
     45681 9300 I                                          45681 9300 I
```

```
          I************************************************ 999                I
          000
     47477 2900  I                                        47477 2900  I
          I************************************************ 999                I
          000
     49272 6600  I                                        49272 6600  I
          I************************************************ 999                I
          000
     51068 0200  I                                        51068 0200  I
          I************************************************ 999                I
          000
     52863 3800  I                                        52863 3800  I
          I************************************************ 999                I
          000
     54658 7500  I                                        54658 7500  I
          I*************************************************1 000                I
           001
     56454 1200  I                                        56454 1200  I
          I*************************************************1 000                I
           000
     56454 1200  I----I----I----I----I----I----I----I----I----I-MAX        56454 1200  I----I----I----I----I----I
MAX

          NO OBS---------- 1000  STD ERROR-        3705 2800
          COEF OF VARIATION-   11  MEAN-----        32518 8900
          KURTOSIS (BETA 2)-   9 80  MEDIAN----     33005 7900
          PEARSONIAN SKEW---    12  MODE-----        32962 9700
```

OVERALLCOST FOR THE COMPOSITE TERMINALNODE

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     180165 0000 I---I---I---I---I---I---I---I---I---IMIN    180165 0000 I---I---I---I---I--MIN
            I                                     000             I                    000
     180165 0000 I                                          180165 0000 I
            I                                     003             I                    003
     182259 3000 I                                          182259 3000 I
            I                                     005             I                    002
     184353 6000 I                                          184353 6000 I
            I*                                    014             I                    009
     186447 9000 I                                          186447 9000 I
            I**                                   032             I*                   018
     188542 2000 I                                          188542 2000 I
            I**                                   040             I                    008
     190636 5000 I                                          190636 5000 I
            I**                                   049             I                    009
     192730 8000 I                                          192730 8000 I
            I***                                  051             I                    002
     194825 1000 I                                          194825 1000 I
            I***                                  052             I                    001
     196919 4000 I                                          196919 4000 I
            I***                                  052             I                    000
     199013 7000 I                                          199013 7000 I
            I***                                  052             I                    000
     201108 0000 I                                          201108 0000 I
            I***                                  055             I                    003
     203202 3000 I                                          203202 3000 I
            I****                                 075             I**                  020
     205296 6000 I                                          205296 6000 I
            I******                                 128             I*****
053
     207390 9000 I                                          207390 9000 I
            I***********                              218             I*********
   090
     209485 2000 I                                          209485 2000 I
            I******************                          376             I***************
      158
     211579 5000 I                                          211579 5000 I
            I***************************                          563
I*****************       187
     213673 8000 I                                          213673 8000 I
            I************************************                 733
I*****************       170
     215768 0000 I                                          215768 0000 I
            I*****************************************          876
I**************       143
     217862 3000 I                                          217862 3000 I
```

```
            I*************************************************    959
I********            083
     219956 6000  I                                          219956 6000  I
            I************************************************* 988                I**
             029
     222050 9000  I                                          222050 9000  I
            I************************************************* 998                I*
             010
     224145 2000  I                                          224145 2000  I
            I*************************************************1 000               I
             002
     226239 5000  I                                          226239 5000  I
            I*************************************************1 000               I
             000
     226239 5000  I---I---I---I---I---I---I---I---I---I-MAX      226239 5000  I---I---I---I---I---I
MAX
```

NO OBS--------- 1000 STD ERROR- 6896 7330
COEF OF VARIATION- 03 MEAN----- 211942 8000
KURTOSIS (BETA 2)- 8 74 MEDIAN--- 212894 1000
PEARSONIAN SKEW--- 14 MODE----- 212899 8000

PATH PERFORMANCE FOR THE COMPOSITE TERMINALNODE
NO OBS = 1000 AVE = 0000
MIN = 0000 MAX = 0000

OPTIMUM TERMINAL NODE INDEX - NO ITERATIONS = 1000

```
                 1   2   3   4   5   6   7   8   9  10
            I---+---+---+---+---+---+---+---+---+---+---+I
N07     0520 I***                                   I
            I   +   +   +   +   +   +   +   +   +   +   +I
N22     9470 I*********************************************  I
            I   +   +   +   +   +   +   +   +   +   +   +I
N58     0010 I                                       I
            I---+---+---+---+---+---+---+---+---+---+---+I
                 1   2   3   4   5   6   7   8   9  10
```

LAST RANDOM NUMBER SEED = 1609888621

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPT4 03-03-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 5

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION------ 0

MEAN PRINT ORDER---------- 0

INITIAL SEED---------- 1

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING--- 00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE-- 1 00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL- OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N08    1 0  PREPARE IN-SITU ENVIRONMENTAL IMPACT STATEMENT
A01    DTIME 1       3     59 0     62 0     60 0
A01    RCOST 123SK    25 0TA01    K     0

A02    N01    N02    1 0  NEPA DOCUMENTATION
A02    DTIME 1       3      1 5      3 0      2 0
A02    RCOST 123SK     6 5TA02    K     0
```

```
A03    N01    N02    1 0  IM/IRA
A03    DTIME1        3      5 5      6 5      6 0
A03    RCOST 123SK   29 33TA03    K      0

A04    N02    N03    1 0  DESIGN (C, A/B PONDS)
A04    DTIME1        3      2 0      4 0      3 0
A04    RCOST 123SK   98 0TA04    K      0

A05    N03    N04    1 0  PROCUREMENT (LINER)
A05    DTIME1        3      1 5      2 5      2 0
A05    RCOST 123SK    8 5TA05    K      0

A06    N04    N05    1 0  LINER CONSTRUCTION (B NORTH AND CENTRAL)
A06    DTIME1        3      4 25     5 0      4 5
A06    RCOST 123SK  1003 33TA06    K      0

A07    N05    N06    1 0  TEST LINER
A07    DTIME1        3       4       75       5

A08    N06    N07    1 0  PUMP B POND SOUTH TO B POND CENTER
A08    DTIME1        3      2 75     3 25     3 0
A08    RCOST 123SK  256 67TA08    K      0

A09    N07    N08    1 0  PUMB C POND TO B POND NORTH
A09    DTIME1        3      2 75     3 25     3 0
A09    RCOST 123SK  265 33TA09    K      0

A10    N01    N09    1 0  LAG TIME 1
A10    DTIME1        3      8 0      10 0     9 0

A11    N09    N05    1 0  READINESS ASSESSMENT
A11    DTIME1        3      1 75     2 25     2 0
A11    RCOST 123SK   49 5TA11    K      0

A12    N05    N08    1 0  RELINE A POND
A12    DTIME1        3      5 5      6 5      6 0
A12    RCOST 123SK  416 67TA12    K      0

A13    N01    N11    1 0  DEMOBILIZE SELECTED EQUIPMENT
A13    DTIME1        3      3 5      4 75     4 0
A13    RCOST 123SK   75 0TA13    K      0

A14    N11    N08    1 0  MAINTAIN EQUIPMENT
A14    DTIME1        3      55 0     58 0     56 0
A14    RCOST 123SK   89 29TA14    K      0

A15    N01    N12    1 0  LAG TIME 3
A15    DTIME1        3      56 0     64 0     60 0
```

```
A16   N08    N13    1 0  RELOCATE C POND PROCESSING  TRAINEQUIPMENT
A16   DTIME1        3     2 0     4 0     3 0
A16   RCOST 123SK   100 0TA16    K     0

A17   N12    N13    1 0  PROCUREMENT (C, A/B POND)
A17   DTIME1        3     1 0     2 0     1 5
A17   RCOST 123SK  1270 0TA17    K     0

A18   N13    N14    1 0  ERECTION AND TITLEII
A18   DTIME1        3    2 25     3 0     2 5
A18   RCOST 123SK   782 4TA18    K     0

A19   N14    N15    1 0  COLD TEST (C, A/B POND)
A19   DTIME1        3       9     1 5     1 0
A19   RCOST 123SK    2489TA19    K     0

A20   N15    N16    1 0  DOE APPROVAL FOR HOT TEST
A20   DTIME1        3       9     1 5     1 0
A20   RCOST 123SK    1943TA20    K     0

A21   N16    N17    1 0  HOT TEST (PONDCRETE)
A21   DTIME1        3      45     1 0      5
A21   RCOST 123SK    1779TA21    K     0

A22   N17    N18    1 0  DOE HOT TEST EVALUATION/APPROVAL
A22   DTIME1        3      45     1 0      5
A22   RCOST 123SK    1214TA22    K     0

A52   N22    N10    1 0  DOE TEST EVALUATION/APPROVAL(A/B POND)
A52   DTIME1        3       4       6      5
A52   RCOST 123SK    2245TA52    K     0

A23   N18    N19    1 0  WASTE TREATMENT(C POND SLUDGE)
A23   DTIME1        3     1 7     1 8    1 75
A23   RCOST 123SK 2006 86TA23    K     0

A24   N19    N20    1 0  COLD TEST (A/B POND WASTE)
A24   DTIME1        3      15       5     25
A24   RCOST 123SK   175 0TA24    K     0

A25   N20    N21    1 0  DOE APPROVAL FOR HOT TEST (A/B POND)
A25   DTIME1        3      45     1 0      5
A25   RCOST 123SK    1464TA25    K     0

A26   N21    N22    1 0  HOT TEST (B POND SLUDGE)
A26   DTIME1        3       4       6      5
A26   RCOST 123SK  1330 0TA26    K     0

A27   N10    N23    1 0  TREAT A/B POND SLUDGE
A27   DTIME1        3    1 75     2 5     2 0
```

```
A27    RCOST 123SK    1840TA27     K      0

A28    N23    N24     1 0  DEMOBILIZATION(C, A/B POND)
A28    DTIME1         3      5 9      7 0      6 0
A28    RCOST 123SK  1574 5TA28     K      0

A29    N01    N25     1 0  LAG TIME2
A29    DTIME1         3     60 0     65 0     63 0

A30    N25    N14     1 0  OPERATIONS READINESS REVIEW (C POND)
A30    DTIME1         3      2 75     3 25      3 0
A30    RCOST 123SK  656 67TA30     K      0

A31    N01    N26     1 0  LAG TIME7
A31    DTIME1         3     55 0     59 0     57 0

A32    N26    N19     1 0  CHLORINATION(A/B POND SLUDGE)
A32    DTIME1         3      1 8      2 2      2 0
A32    RCOST 123SK    24 5TA32     K      0

A33    N01    N27     1 0  LAG TIME8
A33    DTIME1         3     65 0     69 0     67 0
A33    RCOST 123SK     1 0TA33     K      0

A34    N27    N21     1 0  OPERATIONS READINESS REVIEW (A/B POND)
A34    DTIME1         3      3 5      5 0      4 0
A34    RCOST 123SK    61 5TA34     K      0

A35    N01    N28     1 0  LAG TIME4
A35    DTIME1         3     50 0     54 0     52 0

A36    N28    N29     1 0  TREATABILITY(REMIX)
A36    DTIME1         3     15 0     17 5     17 0
A36    RCOST 123SK   198 0TA36     K      0

A37    N29    N30     1 0  DESIGN (REMIX)
A37    DTIME1         3      6 5      7 5      7 0
A37    RCOST 123SK 1581 14TA37     K      0

A38    N30    N31     1 0  PERMIT (REMIX)
A38    DTIME1         3      4 2      4 9      4 5
A38    RCOST 123SK   112 0TA38     K      0

A39    N31    N32     1 0  ERECTION (REMIX)
A39    DTIME1         3      9 0     11 5     10 75
A39    RCOST 123SK  887 35TA39     K      0

A40    N32    N33     1 0  COLD TEST (REMIX)
A40    DTIME1         3        4        8        5
A40    RCOST 123SK    1059TA40     K      0
```

```
A41    N33    N34    1 0  DOE HOT TEST APPROVAL
A41    DTIME1        3       5      1 0      75
A41    RCOST 123SK    1120TA41     K      0

A42    N34    N35    1 0  HOT TEST/DOE TEST EVALUATION/APPROVAL(REMIX)
A42    DTIME1        3       8      1 5      1 0
A42    RCOST 123SK    1290TA42     K      0

A43    N35    N36    1 0  TREAT PONDCRETE (REMIX)
A43    DTIME1        3      2 0     4 0      3 0
A43    RCOST 123SK  2400 0TA43     K      0

A44    N36    N37    1 0  SALTCRETE HOT TEST/DOE TEST EVAL/APPROV(REMIX)
A44    DTIME1        3      1 0     1 5     1 25
A44    RCOST 123SK  1032 0TA44     K      0

A45    N37    N38    1 0  TREAT SALTCRETE (REMIX)
A45    DTIME1        3       75     1 5      1 0
A45    RCOST 123SK    4850TA45     K      0

A46    N38    N39    1 0  DEMOBILIZATION(REMIX)
A46    DTIME1        3      6 5     7 5      7 0
A46    RCOST 123SK  374 43TA46     K      0

A47    N01    N40    1 0  LAG TIME5
A47    DTIME1        3     63 0    67 0     65 0

A48    N40    N32    1 0  PROCUREMENT (REMIX)
A48    DTIME1        3     10 0    12 5     12 0
A48    RCOST 123SK  572 92TA48     K      0

A49    N01    N41    1 0  LAG TIME6
A49    DTIME1        3     77 0    81 0     79 0

A50    N41    N34    1 0  OPERATIONS READINESS REVIEW/PROCEDURES (REMIX)
A50    DTIME1        3      3 5     5 0      4 0
A50    RCOST 123SK   181 0TA50     K      0

A51    N01    N39    1 0  PAD OPERATIONS/PROG MANAG/PROJ MANAG/TECHSUPPORT

A51    DTIME1        3     92 0   100 0     96 0
A51    RCOST 123SK  571 89TA51     K      0

A53    N01    N24    1 0  PAD OPERATIONS/PROG MANAG/PROJ MANAG/TECHSUPPORT

A53    DTIME1        3     94 0    98 0       96
A53    RCOST 123SK  571 89TA53     K      0

ENDARC
```

NETWORK TIME FOR NODE N24

```
            CFD   1   2   3   4   5   6   7   8   9  10                RFD   05   10   15
20   25
        94 1285 I---I---I---I---I---I---I---I---I---IMIN        94 1285 I---I---I---I---I---MIN
            I                                   000                 I                   000
        94 1285 I                                               94 1285 I
            I                                   009                 I                   009
        94 2978 I                                               94 2978 I
            I*                                  029                 I**                  020
        94 4672 I                                               94 4672 I
            I***                                057                 I**                  028
        94 6366 I                                               94 6366 I
            I*****                                091               I***
034
        94 8060 I                                               94 8060 I
            I*******                              131               I****
040
        94 9754 I                                               94 9754 I
            I*********                            176               I****
045
        95 1447 I                                               95 1447 I
            I************                          233               I*****
 057
        95 3141 I                                               95 3141 I
            I**************                        285               I*****
 052
        95 4835 I                                               95 4835 I
            I******************                     361               I*******
   076
        95 6529 I                                               95 6529 I
            I**********************                436               I*******
     075
        95 8223 I                                               95 8223 I
            I*************************             504               I******
     068
        95 9916 I                                               95 9916 I
            I******************************        599               I*********
       095
        96 1610 I                                               96 1610 I
            I**********************************    677               I*******
      078
        96 3304 I                                               96 3304 I
            I************************************  729               I*****
      052
        96 4998 I                                               96 4998 I
            I***************************************  781          I*****
       052
        96 6692 I                                               96 6692 I
```

```
     I*****************************************        832                I*****
    051
96 8385 I                                          96 8385 I
     I*******************************************     889                I*****
     057
97 0079 I                                          97 0079 I
     I*********************************************    923                I***
     034
97 1773 I                                          97 1773 I
     I**********************************************   947                I**
     024
97 3467 I                                          97 3467 I
     I***********************************************  969                I**
     022
97 5161 I                                          97 5161 I
     I************************************************ 991                I**
      022
97 6854 I                                          97 6854 I
     I*************************************************1 000               I
      009
97 8549 I                                          97 8549 I
     I*************************************************1 000               I
      000
97 8549 I----I----I----I----I----I----I----I----I----I-MAX        97 8549 I----I----I----I----I---MAX

     NO OBS---------     1000  STD ERROR-          8201
     COEF OF VARIATION-    01  MEAN-----          95 9655
     KURTOSIS (BETA 2)-   2 35  MEDIAN----         95 9812
     PEARSONIAN SKEW---     16  MODE-----          96 0956
```

PATH COST FOR NODE N24

```
          CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
101687 6000 I---I---I---I---I---I---I---I---I---IMIN   101687 6000 I---I---I---I---I---MIN
          I                                   000            I                    000
101687 6000 I                                         101687 6000 I
          I                                   001            I                    001
101934 4000 I                                         101934 4000 I
          I                                   003            I                    002
102181 3000 I                                         102181 3000 I
          I                                   008            I                    005
102428 1000 I                                         102428 1000 I
          I*                                  012            I                    004
102674 9000 I                                         102674 9000 I
          I*                                  027            I*                   015
102921 8000 I                                         102921 8000 I
          I**                                 044            I*                   017
103168 6000 I                                         103168 6000 I
          I*****                                096            I*****
052
103415 5000 I                                         103415 5000 I
          I*******                              144            I****
048
103662 3000 I                                         103662 3000 I
          I***********                          214            I*******
 070
103909 2000 I                                         103909 2000 I
          I****************                     320            I**********
106
104156 0000 I                                         104156 0000 I
          I**********************               430            I***********
   110
104402 8000 I                                         104402 8000 I
          I***************************          536            I**********
    106
104649 7000 I                                         104649 7000 I
          I*******************************        639            I**********
     103
104896 5000 I                                         104896 5000 I
          I************************************     725            I********
      086
105143 4000 I                                         105143 4000 I
          I****************************************  806            I********
      081
105390 2000 I                                         105390 2000 I
          I******************************************861            I*****
      055
105637 1000 I                                         105637 1000 I
```

```
          I*********************************************     912              I*****
          051
105883 9000  I                                          105883 9000  I
          I*********************************************     946              I***
          034
106130 8000  I                                          106130 8000  I
          I*********************************************     961              I*
          015
106377 6000  I                                          106377 6000  I
          I*********************************************     983              I**
           022
106624 4000  I                                          106624 4000  I
          I*********************************************     988              I
          005
106871 3000  I                                          106871 3000  I
          I*********************************************1 000                 I*
           012
107118 1000  I                                          107118 1000  I
          I*********************************************1 000                 I
           000
107118 1000  I----I----I----I----I----I----I----I----I----I-MAX      107118 1000  I----I----I----I----I----I
MAX

          NO OBS----------    1000  STD ERROR-        912 4166
          COEF OF VARIATION-    01  MEAN------       104611 9000
          KURTOSIS (BETA 2)-   2 93  MEDIAN----       104572 6000
          PEARSONIAN SKEW---     36  MODE------       104279 4000


LAST RANDOM NUMBER SEED =   1055049927
```

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPT4A 03-03-93

PROBLEM IDENTIFICATION SCREEN OPTION---------- 0

TYPE OF INPUT OPTION---------- 0

TYPE OF OUTPUT OPTION---------- 5

COSTING AND PRUNING OPTION---------- 0

FULL PRINT TRIP OPTION---------- 0

CORRELATION COMPUTATION AND PLOT OPTION---------- 0

COST-PERFORMANCE TIME INTERVAL OPTION---------- 0

COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION------- 0

MEAN PRINT ORDER---------- 0

INITIAL SEED---------- 1

NUMBER OF ITERATIONS---------- 1000

YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS-------- 00

YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING---- 00

TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE--- 1 00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL- OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

```
A01    N01    N02    1 0  NEPA DOCUMENTATION
A01    DTIME 1       3     1 75     3 5     3 0
A01    RCOST 123SK    4 33TA01    K     0

A02    N01    N02    1 0  IM/IRA
A02    DTIME 1       3     5 0     6 5     6 0
```

```
A02    RCOST 123SK   29 33TA02    K      0

A03    N01    N02    1 0  DEMOBILIZEHNUS EQUIPMENT
A03    DTIME1        3      1 5      2 5      2 0
A03    RCOST 123SK    300TA03    K      0

A04    N02    N03    1 0  TITLEII
A04    DTIME1        3      2 0      4 0      3 0
A04    RCOST 123SK   98 0TA04    K      0

A05    N03    N04    1 0  PROCUREMENT (LINER)
A05    DTIME1        3      1 75     2 5      2 0
A05    RCOST 123SK    8 5TA05    K      0

A06    N04    N05    1 0  LINERCONSTRUCTION
A06    DTIME1        3      4 0      6 5      5 5
A06    RCOST 123SK   794 3TA06    K      0

A07    N05    N06    1 0  PUMP B POND
A07    DTIME1        3      2 75     3 5      3 0
A07    RCOST 123SK   256 6TA07    K      0

A08    N06    N07    1 0  PUMP C POND
A08    DTIME1        3      2 75     3 25     3 0
A08    RCOST 123SK   265 33TA08   K      0

A09    N07    N08    1 0  C POND SLUDGE DRYING
A09    DTIME1        3      3 5      6 0      4 0
A09    RCOST 123SK   525 0TA09    K      0

A10    N08    N09    1 0  A/B POND SLUDGE DRYING
A10    DTIME1        3      3 5      6 0      4 0
A10    RCOST 123SK   732 5TA10    K      0

A11    N09    N27    1 0  OU4 PHASE II CONSTRUCTION
A11    DTIME1        3      9 0      14 0     10 0
A11    RCOST 123SK    15 3TA11    K      0

A12    N01    N11    1 0  LAG TIME 1
A12    DTIME1        3      16 0     20 0     18 0

A13    N11    N27    1 0  PROCESS  EQUIPMENT RENTAL
A13    DTIME1        3      55 0     62 0     58 0
A13    RCOST 123SK   291 4TA13    K      0

A38    N01    N07    1 0  PREPARE IN-SITU DISPOSAL EIS
A38    DTIME1        3      58 0     65 0     60 0
A38    RCOST 123SK    25 0TA38    K      0

A14    N01    N12    1 0  LAG TIME 2
```

```
A14   DTIME1      3    34 0    38 0    36 0

A15   N12   N13   1 0  TREATABILITY
A15   DTIME1      3     7 5     9 5     8 5
A15   RCOST 123SK   396 0TA15    K     0

A16   N13   N14   1 0  DESIGN
A16   DTIME1      3     5 5     7 5     6 5
A16   RCOST 123SK 1702 77TA16    K     0

A17   N14   N15   1 0  PERMITS
A17   DTIME1      3     1 7     3 5    2 67

A18   N15   N16   1 0  TRAINERECTION PERSONNEL
A18   DTIME1      3     1 5     2 5     2 0

A19   N16   N17   1 0  ERECTION AND TITLEIII
A19   DTIME1      3     7 5     9 5    8 17
A19   RCOST 123SK 1167 56TA19    K     0

A20   N01   N33   1 0  LAG TIME3
A20   DTIME1      3    45 5    48 5    47 0

A21   N33   N17   1 0  PROCUREMENT
A21   DTIME1      3    11 0    14 0    12 0
A21   RCOST 123SK  820 67TA21    K     0

A22   N01   N29   1 0  LAG TIME4
A22   DTIME1      3    56 0    60 0    58 0

A23   N29   N17   1 0  PROCEDURES  AND DOCUMENTS
A23   DTIME1      3     4 5     5 5     5 0
A23   RCOST 123SK    73 5TA23    K     0

A24   N17   N18   1 0  COLD TEST
A24   DTIME1      3       9    1 25     1 0
A24   RCOST 123SK  1059 0TA24    K     0

A25   N18   N19   1 0  DOE HOT TEST APPROVAL
A25   DTIME1      3      75     2 0     1 0
A25   RCOST 123SK    1120TA25    K     0

A26   N19   N20   1 0  HOT TEST
A26   DTIME1      3       4      75       5
A26   RCOST 123SK   757 0TA26    K     0

A27   N20   N21   1 0  DOE EVALUATION/APPROVAL
A27   DTIME1      3       1       5       3
A27   RCOST 123SK     533TA27    K     0
```

```
A28    N21    N22    1 0  TREATPONDCRETE
A28    DTIME1        3     4 0     4 7     4 3
A28    RCOST 123SK 3686 52TA28     K     0

A29    N22    N24    1 0  SALTCRETEHOT TEST
A29    DTIME1        3     1 0     2 0     1 3
A29    RCOST 123SK  582 31TA29     K     0

A30    N22    N23    1 0  SHIP PONDCRETE
A30    DTIME1        3     2 0     2 6     2 3
A30    RCOST 123SK 3219 13TA30     K     0

A31    N24    N25    1 0  DOE EVALUATION/APPROVAL(SALTCRETE)
A31    DTIME1        3       1       5     25
A31    RCOST 123SK     533TA31     K     0

A32    N25    N26    1 0  TREATSALTCRETE
A32    DTIME1        3     1 0     2 0     1 25
A32    RCOST 123SK  8384 0TA32     K     0

A33    N26    N27    1 0  DEMOBILIZATION
A33    DTIME1        3     2 3     2 7     2 5
A33    RCOST 123SK  1048 4TA33     K     0

A34    N26    N27    1 0  SHIP PONDCRETE
A34    DTIME1        3     2 3     3 0     2 5
A34    RCOST 123SK  1760 0TA34     K     0

A35    N01    N30    1 0  LAG TIME5
A35    DTIME1        3    56 0    62 0    59 0

A36    N01    N27    1 0  HNUS PROJ MANAGEMENT/PROGMANAGEMENT/TECHSUPPORT

A36    DTIME1        3    62 0    66 0    64 0
A36    RCOST 123SK  443 95TA36     K     0

A37    N01    N27    1 0  PAD OPERATIONS
A37    DTIME1        3    62 0    66 0    64 0
A37    RCOST 123SK 1003 13TA37     K     0

A39    N30    N17    1 0  OPERATIONALREADINESS
A39    DTIME1        3     2 0     4 0     2 75
A39    RCOST 123SK  313 09TA39     K     0

ENDARC
```

NETWORK TIME FOR NODE N23

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
        71 4394 I---I---I---I---I---I---I---I---I---I---IMIN        71 4394 I---I---I---I---I---MIN
            I                                   000                     I                   000
        71 4394 I                                                   71 4394 I
            I                                   006                     I                   006
        71 7257 I                                                   71 7257 I
            I*                                  010                     I                   004
        72 0119 I                                                   72 0119 I
            I**                                 030                     I**                 020
        72 2982 I                                                   72 2982 I
            I***                                059                     I**                 029
        72 5845 I                                                   72 5845 I
            I*****                                107                 I****
048
        72 8707 I                                                   72 8707 I
            I*********                              195               I********
  088
        73 1570 I                                                   73 1570 I
            I**************                          286              I*********
   091
        73 4432 I                                                   73 4432 I
            I******************                        389              I**********
     103
        73 7295 I                                                   73 7295 I
            I************************                  500              I***********
      111
        74 0158 I                                                   74 0158 I
            I******************************            618              I***********
       118
        74 3020 I                                                   74 3020 I
            I***********************************      722             I**********
        104
        74 5883 I                                                   74 5883 I
            I*************************************    808             I********
          086
        74 8746 I                                                   74 8746 I
            I*****************************************  862            I*****
           054
        75 1608 I                                                   75 1608 I
            I*********************************************  912      I*****
            050
        75 4471 I                                                   75 4471 I
            I*********************************************  946      I***
            034
        75 7333 I                                                   75 7333 I
```

```
     I************************************************ 970                I**
      024
76 0196 I                                          76 0196 I
     I************************************************ 987                I*
     017
76 3059 I                                          76 3059 I
     I************************************************ 991                I
     004
76 5921 I                                          76 5921 I
     I************************************************ 996                I
     005
76 8784 I                                          76 8784 I
     I************************************************ 998                I
     002
77 1647 I                                          77 1647 I
     I************************************************ 999                I
     001
77 4509 I                                          77 4509 I
     I************************************************1 000               I
      001
77 7371 I                                          77 7371 I
     I************************************************1 000               I
      000
77 7371 I----I----I----I----I----I----I----I----I----IMAX        77 7371 I----I----I----I----I----MAX
```

NO OBS---------- 1000 STD ERROR- 9849
COEF OF VARIATION- 01 MEAN----- 74 0482
KURTOSIS (BETA 2)- 2 94 MEDIAN--- 74 0147
PEARSONIAN SKEW--- 06 MODE----- 74 1112

PATH COST FOR NODE N23

```
            CFD   1   2   3   4   5   6   7   8   9 1 0                RFD   05   10   15
20   25
     58330 5400 I---I---I---I---I---I---I---I---I---IMIN     58330 5400 I---I---I---I---I---MIN
            I                                   000              I                    000
     58330 5400 I                                         58330 5400 I
            I                                   001              I                    001
     58660 0600 I                                         58660 0600 I
            I                                   005              I                    004
     58989 5800 I                                         58989 5800 I
            I*                                  012              I                    007
     59319 1000 I                                         59319 1000 I
            I*                                  021              I                    009
     59648 6200 I                                         59648 6200 I
            I**                                 047              I**                  026
     59978 1400 I                                         59978 1400 I
            I****                               078              I***                 031
     60307 6600 I                                         60307 6600 I
            I*******                              132              I*****
054
     60637 1800 I                                         60637 1800 I
            I*********                            181              I****
049
     60966 7000 I                                         60966 7000 I
            I**************                          271              I*********
   090
     61296 2100 I                                         61296 2100 I
            I******************                        362              I*********
    091
     61625 7300 I                                         61625 7300 I
            I***********************                     457              I*********
     095
     61955 2500 I                                         61955 2500 I
            I***************************                  547              I*********
      090
     62284 7700 I                                         62284 7700 I
            I********************************             653              I**********
       106
     62614 2900 I                                         62614 2900 I
            I************************************          736              I********
        083
     62943 8100 I                                         62943 8100 I
            I****************************************      827              I*********
        091
     63273 3300 I                                         63273 3300 I
            I*********************************************  896              I******
         069
     63602 8500 I                                         63602 8500 I
```

```
          I*********************************************   932                I***
          036
     63932 3700  I                                        63932 3700  I
          I*********************************************   959                I**
          027
     64261 8900  I                                        64261 8900  I
          I*********************************************   983                I**
           024
     64591 4100  I                                        64591 4100  I
          I*********************************************   988                I
          005
     64920 9300  I                                        64920 9300  I
          I*********************************************   993                I
          005
     65250 4500  I                                        65250 4500  I
          I*********************************************1 000                I
           007
     65579 9600  I                                        65579 9600  I
          I*********************************************1 000                I
           000
     65579 9600  I----I----I----I----I----I----I----I----I-MAX        65579 9600  I----I----I----I----I----I
MAX
```

NO OBS----------	1000	STD ERROR-	1241 1620
COEF OF VARIATION-	02	MEAN-----	62089 6000
KURTOSIS (BETA 2)-	2 77	MEDIAN---	62076 8400
PEARSONIAN SKEW---	27	MODE-----	62419 9600

LAST RANDOM NUMBER SEED = 1660599478

VENTURE EVALUATION AND REVIEW TECHNIQUE (VERT) - PC VERSION 1 0

Input Data File OPTION5
02-21-93

PROBLEM IDENTIFICATION SCREEN OPTION----------	0
TYPE OF INPUT OPTION----------	0
TYPE OF OUTPUT OPTION----------	5
COSTING AND PRUNING OPTION----------	0
FULL PRINT TRIP OPTION----------	0
CORRELATION COMPUTATION AND PLOT OPTION----------	0
COST-PERFORMANCE TIME INTERVAL OPTION----------	0
COMPOSITE TERMINAL NODE MINIMUMS AND MAXIMUMS OPTION-------	0
MEAN PRINT ORDER----------	0
INITIAL SEED----------	0
NUMBER OF ITERATIONS----------	1000
YEARLY INTEREST RATE USED FOR INFLATION ADJUSTMENTS--------	00
YEARLY INTEREST RATE USED FOR PRESENT VALUE DISCOUNTING----	00
TIME FACTOR WHICH CONVERTS PROGRAM TIME TO A YEARLY BASE---	00

	TIME	COST	PERF
TERMINAL NODE SELECTION WEIGHTS	1 00	00	00
CRITICAL - OPTIMUM PATH WEIGHTS	00	00	00
INITIAL VALUES	00	00	00

A01 N01 N02 1 0 C POND BASELINE LOGIC CHAIN

A01 DTIME 1 3 12 5 12 7 12 67

A02 N02 N03 1 0 MOVE EQUIPMENT TO REMIX PROCESS

A02	DTIME 1		3		4 2	4 4	4 33
A03	N03	N04	1	0	LAG TIME 1		
A03	DTIME 1		3		32 9	33 1	33 0
A04	N04	N05	1	0	REMIX BASELINE LOGIC CHAIN		
A04	DTIME 1		3		23 4	23 6	23 5
A05	N05	N06	1	0	DISPOSAL		
A05	DTIME 1		3		5 0	5 2	5 10
A06	N02	N07	1	0	STORAGE		
A06	DTIME 1		3		37 5	37 8	37 67
A07	N07	N08	1	0	DISPOSAL		
A07	DTIME 1		3		10 9	11 1	11 0
A08	N02	N09	1	0	INPUT TO REMIX		
A08	DTIME 1		3		37 5	37 7	37 67
A09	N10	N11	1	0	EIS FOR ONSITE REPOSITORY		
A09	DTIME 1		3		59 9	60 1	60 0
A10	N11	N12	1	0	ONSITE DISPOSAL OPERATIONS		
A10	DTIME 1		3		24 9	25 1	25 0
A11	N12	N13	1	0	FINAL CLOSURE		
A11	DTIME 1		3		7 4	7 6	7 5
A12	N14	N15	1	0	PLAN/PERMIT/CONSTRUCT RELINED PONDS		
A12	DTIME 1		3		29 9	30 1	30 0
A13	N15	N16	1	0	STORE A/B POND WASTE		

```
A13     DTIME 1         3       2 9       3 1       3 0

A14     N16     N17     1 0  LAG TIME 2
A14     DTIME 1         3      26 9      27 1      27 0

A15     N17     N12     1 0  DRY A/B POND WASTE
A15     DTIME 1         3      24 9      25 1      25 0

ENDARC

N01     1  2 1

N02     2  2 1

N03     2  2 1

N04     2  2 1

N05     2  2 1

N06     2  1 1

N07     2  2 1

N08     2  1 1

N09     2  1 1

N10     1  2 1

N11     2  2 1

N12     2  2 1

N13     2  1 1
```

NETWORK TIME FOR NODE N09

```
                CFD     1     2     3     4     5     6     7     8     9  1 0
          RFD    05    10    15    20    25
       50 0532 I----I----I----I----I----I----I----I----I----I----I----I MIN
  50 0532 I----I----I----I----I----I MIN
                I                                                          000
          I                                 000
       50 0532 I
  50 0532 I
                I                                                          003
          I                                 003
       50 0686 I
  50 0686 I
                I                                                          006
          I                                 003
       50 0840 I
  50 0840 I
                I*                                                         011
          I                                 005
       50 0994 I
  50 0994 I
                I*                                                         015
          I                                 004
       50 1148 I
  50 1148 I
                I**                                                        030
          I*                                015
       50 1303 I
  50 1303 I
                I***                                                       060
          I***                              030
       50 1457 I
  50 1457 I
                I*****                                                     091
          I***                              031
       50 1611 I
  50 1611 I
                I*******                                                   138
          I****                             047
       50 1765 I
  50 1765 I
                I**********                                                190
          I*****                            052
       50 1919 I
  50 1919 I
                I**************                                            259
          I******                           069
       50 2073 I
  50 2073 I
                I******************                                        340
          I********                         081
       50 2227 I
```

```
50 2227 I
            I********************                                    409
        I******                      069
     50 2381 I
50 2381 I
            I*************************                               508
        I*********                   099
     50 2536 I
50 2536 I
            I******************************                           598
        I*********                   090
     50 2690 I
50 2690 I
            I***********************************                      689
        I*********                   091
     50 2844 I
50 2844 I
            I****************************************                 781
        I*********                   092
     50 2998 I
50 2998 I
            I*********************************************            864
        I********                    083
     50 3152 I
50 3152 I
            I************************************************         929
        I******                      065
     50 3306 I
50 3306 I
            I**************************************************       965
        I***                         036
     50 3460 I
50 3460 I
            I****************************************************     989
        I**                          024
     50 3614 I
50 3614 I
            I*****************************************************   997
        I                            008
     50 3768 I
50 3768 I
            I******************************************************1 000
        I                            003
     50 3923 I
50 3923 I
            I******************************************************1 000
        I                            000
     50 3923 I----I----I----I----I----I----I----I----I----I----I MAX
50 3923 I----I----I----I----I----I MAX

            NO OBS------------    1000  STD ERROR-              0610
            COEF OF VARIATION-      00  MEAN------           50 2478
            KURTOSIS (BETA 2)-    2 63  MEDIAN----           50 2520
            PEARSONIAN SKEW---      04  MODE------           50 2500
```

```
  50     0          0 1000   0   0   1 0
A01      N01      N02      1 0  C POND BASELINE LOGIC CHAIN
A01      DTIME 1           3      12 5       12 7      12 67
A02      N02      N03      1 0  MOVE EQUIPMENT TO REMIX PROCESS
A02      DTIME 1           3       4 2        4 4       4 33
A03      N03      N04      1 0  LAG TIME 1
A03      DTIME 1           3      32 9       33 1       33 0
A04      N04      N05      1 0  REMIX BASELINE LOGIC CHAIN
A04      DTIME 1           3      23 4       23 6       23 5
A05      N05      N06      1 0  DISPOSAL
A05      DTIME 1           3       5 0        5 2       5 10
A06      N02      N07      1 0  STORAGE
A06      DTIME 1           3      37 5       37 8      37 67
A07      N07      N08      1 0  DISPOSAL
A07      DTIME 1           3      10 9       11 1       11 0
A08      N02      N09      1 0  INPUT TO REMIX
A08      DTIME 1           3      37 5       37 7      37 67
A09      N10      N11      1 0  EIS FOR ONSITE REPOSITORY
A09      DTIME 1           3      59 9       60 1       60 0
A10      N11      N12      1 0  ONSITE DISPOSAL OPERATIONS
A10      DTIME 1           3      24 9       25 1       25 0
A11      N12      N13      1 0  FINAL CLOSURE
A11      DTIME 1           3       7 4        7 6        7 5
A12      N14      N15      1 0  PLAN/PERMIT/CONSTRUCT RELINED PONDS
A12      DTIME 1           3      29 9       30 1       30 0
A13      N15      N16      1 0  STORE A/B POND WASTE
A13      DTIME 1           3       2 9        3 1        3 0
A14      N16      N17      1 0  LAG TIME 2
A14      DTIME 1           3      26 9       27 1       27 0
A15      N17      N12      1 0  DRY A/B POND WASTE
A15      DTIME 1           3      24 9       25 1       25 0
ENDARC
N01      1  2 1
N02      2  2 1
N03      2  2 1
N04      2  2 1
N05      2  2 1
N06      2  1 1
N07      2  2 1
N08      2  1 1
N09      2  1 1
N10      1  2 1
N11      2  2 1
N12      2  2 1
N13      2  1 1
N14      1  2 1
N15      2  2 1
N16      2  2 1
N17      2  2 1
ENDNODE
```