HARZA-EBASCO
Susitna Joint Venture
Document Number
2697
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# ALASKA POWER AUTHORITY
# SUSITNA HYDROELECTRIC PROJECT
## Project No. 7114-000

# TASK 40
# NEED FOR POWER STUDY
# CAPITAL COST ESTIMATES
## Estimate No. APA 1707M-1

1985

HARZA-EBASCO
SUSITNA JOINT VENTURE

Alaska Power Authority
Susitna Hydroelectric Project

Need for Power Study
Capital Cost Estimates
Number APA-1707-M1

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77 MW Simple Cycle
Gas Turbine Plant

1

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
77 MW SIMPLE CYCLE PLANT
KENAI SITE

ESTIMATE NO. APA 1707M-1

## BASIS OF ESTIMATE

### General

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a one unit facility and excludes owner's cost (including Land and AFUDC). This estimate has a base pricing level of January, 1983 working 60 hours per week.

The estimate is based on a scope that includes the facilities and systems required for self-sustaining unit.

The estimate is based on the following:

1. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

2. A work week consisting of working 10 hours per day, 6 days per week.

3. Sufficient craftsmen available to meet project requirements without labor camps.

4. Professional services including Engineering, Design, Related Services, and Construction Management based on generic plant of comparable size.

5. Land and Land Rights not included.

6. Allowance for Funds Used During Construction (AFUDC) not included.

7. Client cost not included.

8. Permanent town for plant operating personnel not included.

9. Capital cost of gas pipeline not included.

10. Operating and maintenance costs not included.

11. Contingency included at the rate of 12% for material and 15% for installation.

12. Construction performed on a Contract basis.

13. Project being exempt from sales/use taxes.

14. Labor productivity being "average U.S." with no Alaska adjustment.

15. Spare parts and special tools not included.

16. Startup costs not included.

17. Maintenance machinery, laboratory, and office equipment not included.

Civil (Categories 1, 2, 4, 5, 6, 16, 17)

Clear and grub 75 acres based on scrub brush and trees up to 25 feet. No dewatering of excavated areas is assumed. No asphalt or concrete paving is included. A 1.5-mile access road is included. Fencing perimeter of 75 acres plant site plus interior security fencing as required. Simple cycle building 100 ft x 192 ft x 70 ft eave height.

Mechanical (Categories 7, 8, 9, 10, and 14)

General Electric provided a budgetary quotation for one 77 MW G.E. PG7111E gas turbine, and the necessary auxiliary equipment.

Piping and Insulation (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are based on historical data from similar units.

Electrical (Categories 15 and 19)

Pricing is based on historical data from similar units and in accordance with representative historical inflation indices. The substation is sized for multiple units.

Indirect Construction Cost

Indirect construction cost is priced in accordance with Ebasco experience based on a contract job. Included in indirect costs are:

- Construction management local hire personnel
- Casual premium pay (other than scheduled 60-hour week)
- Construction management automotive equipment
- Construction management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Ten-mile 25 kV temporary transmission line
- Offsite unloading and hauling
- Security guard service
- Final construction cleanup

Testing is assumed to be the contractor's responsibility and witnessed by construction management personnel. Temporary power is assumed to be furnished without cost to contractors.

Professional Services

The professional services estimate is based on a standardized workday package for Engineering, Design, Related Services, Consulting Engineering, ESSE Engineering, and Design and Construction Management Services.

UNIT 1

77 MW SIMPLE CYCLE PLANT



APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 11:48:11

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 37422995* | 19975088 | ---- * | ---- | 17447907* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 4416002* | 2140188 | ---- * | ---- | 2275814* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 33006993* | 17834900 | ---- * | ---- | 15172093* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1101585* | 295080 | ---- * | ---- | 806505* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 672088* | 95050 | ---- * | ---- | 577038* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 1010338* | 230400 | ---- * | ---- | 779938* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1732216* | 672770 | ---- * | ---- | 1059446* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 972776* | 625000 | ---- * | ---- | 347776* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 768077* | 262000 | ---- * | ---- | 506077* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 129329* | 36000 | ---- * | ---- | 93329* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 2744527* | 1510000 | ---- * | ---- | 1234527* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1958879* | 300000 | ---- * | ---- | 1658879* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 4334068* | 0 | ---- * | ---- | 4334068* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 2110000* | 0 | ---- * | ---- | 2110000* | 0 | 0 | 0 |

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 37422995* | 19975088 | ---- * | ---- | 17447907* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 4416002* | 2140188 | ---- * | ---- | 2275814* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 33006993* | 17834900 | ---- * | ---- | 15172093* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1101585* | 295080 | ---- * | ---- | 806505* | 0 | 0 | 0 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 155763* | 0 | ---- * | ---- | 155763* | 0 | 0 | 0 |
| 1.110000 | CLEARING | AC* | 75 | 2076.8 | 155763* | 0 | 0.00* | 2076.8 | 155763* | 0 | 0 | 0 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 256381* | 104080 | ---- * | ---- | 152301* | 0 | 0 | 0 |
| 1.210000 | ROADS | LS* | ---- | ---- | 89462* | 34080 | ---- * | ---- | 55382* | 0 | 0 | 0 |
| 1.260000 | FENCING | LS* | ---- | ---- | 166919* | 70000 | ---- * | ---- | 96919* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 414603* | 110000 | ---- * | ---- | 304603* | 0 | 0 | 0 |
| 1.400000 | WELLS PUMPING EQP | LS* | ---- | ---- | 90228* | 21000 | ---- * | ---- | 69228* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 184610* | 60000 | ---- * | ---- | 124610* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 672088* | 95050 | ---- * | ---- | 577038* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 509150* | 74050 | ---- * | ---- | 435100* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 509150* | 74050 | ---- * | ---- | 435100* | 0 | 0 | 0 |
| 2.212000 | EARTH EXCAVATION | CY* | 4000 | 9.2 | 36951* | 0 | 0.00* | 9.2 | 36951* | 0 | 0 | 0 |
| 2.213000 | ROCK EXCAVATION | CY* | 700 | 27.7 | 19398* | 0 | 0.00* | 27.7 | 19398* | 0 | 0 | 0 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 79427* | 24000 | ---- * | ---- | 55427* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 49560* | 0 | ---- * | ---- | 49560* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 49560* | 0 | ---- * | ---- | 49560* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 3200 | 15.5 | 49560* | 0 | 0.00* | 15.5 | 49560* | 0 | 0 | 0 |
| 2.400000 | EARTH STRUCTURES | CY* | 4000 | 28.3 | 113378* | 21000 | 5.25* | 23.1 | 92378* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 1010338* | 230400 | ---- * | ---- | 779938* | 0 | 0 | 0 |

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APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.100000 | TURBINE BLDG CONCR | CY* | 1600 | 631.5 | 1010388* | 230400 | 144.00* | 487.5 | 779938* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 500 | 2135.7 | 1067850* | 585000 | 1170.00* | 965.7 | 482850* | 0 | 0 | 0 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 202212* | 81500 | ---- * | ---- | 120712* | 0 | 0 | 0 |
| 5.139000 | MISC STEEL | LS* | ---- | ---- | 14547* | 6500 | ---- * | ---- | 8047* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 698760* | 570000 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 698760* | 570000 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.150000 | SUPPORT STEEL | LS* | ---- | ---- | 51642* | 27500 | ---- * | ---- | 24142* | 0 | 0 | 0 |
| 5.151000 | EQUIP SUPPORT | TN* | 25 | 2065.7 | 51642* | 27500 | 1100.00* | 965.7 | 24142* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1732216* | 672770 | ---- * | ---- | 1059446* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1057418* | 372350 | ---- * | ---- | 685068* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 42752* | 7500 | ---- * | ---- | 35252* | 0 | 0 | 0 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 592524* | 240000 | ---- * | ---- | 352524* | 0 | 0 | 0 |
| 6.130000 | DOORS | LS* | ---- | ---- | 67726* | 36000 | ---- * | ---- | 31726* | 0 | 0 | 0 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 226262* | 50000 | ---- * | ---- | 176262* | 0 | 0 | 0 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 90353* | 29250 | ---- * | ---- | 61103* | 0 | 0 | 0 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 37801* | 9600 | ---- * | ---- | 28201* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 674798* | 300420 | ---- * | ---- | 374378* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 478815* | 241920 | ---- * | ---- | 236895* | 0 | 0 | 0 |
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 478815* | 241920 | ---- * | ---- | 236895* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 195983* | 58500 | ---- * | ---- | 137483* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 7.111000 | GAS TURB GEN | EA* | 1 | 0.0 | 13083090* | 12400000 | ---- * | 0.0 | 683090* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 972776* | 625000 | ---- * | ---- | 347776* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 131051* | 100000 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 131051* | 100000 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 1 | 0.0 | 131051* | 100000 | ---- * | 0.0 | 31051* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 93472* | 50000 | ---- * | ---- | 43472* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 93472* | 50000 | 50000.00* | 0.0 | 43472* | 0 | 0 | 0 |
| 10.400000 | TANKS | LS* | ---- | ---- | 261627* | 125000 | ---- * | ---- | 136627* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 261627* | 125000 | ---- * | ---- | 136627* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 454206* | 330000 | ---- * | ---- | 124206* | 0 | 0 | 0 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 58631* | 40000 | ---- * | ---- | 18631* | 0 | 0 | 0 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 64841* | 40000 | ---- * | ---- | 24841* | 0 | 0 | 0 |
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 330734* | 250000 | ---- * | ---- | 80734* | 0 | 0 | 0 |
| 10.700000 | CECI | LS* | ---- | ---- | 32420* | 20000 | ---- * | ---- | 12420* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 768077* | 262000 | ---- * | ---- | 506077* | 0 | 0 | 0 |
| 12.300000 | PIPING | LS* | ---- | ---- | 206495* | 86000 | ---- * | ---- | 120495* | 0 | 0 | 0 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 206495* | 86000 | ---- * | ---- | 120495* | 0 | 0 | 0 |
| 12.400000 | PIPING | LS* | ---- | ---- | 261742* | 81000 | ---- * | ---- | 180742* | 0 | 0 | 0 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 158445* | 50000 | ---- * | ---- | 108445* | 0 | 0 | 0 |
| 12.460000 | CO2 SYSTEM | LF* | 1 | 0.0 | 103297* | 31000 | 31000.00* | 0.0 | 72297* | 0 | 0 | 0 |
| 12.500000 | PIPING | LS* | ---- | ---- | 122420* | 20000 | ---- * | ---- | 102420* | 0 | 0 | 0 |

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SUSITNA SIMPLE CYCLE
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 122420* | 20000 | ---- * | ---- | 102420* | 0 | 0 | 0 |
| 12.600000 | PIPING | LS* | ---- | ---- | 177420* | 75000 | ---- * | ---- | 102420* | 0 | 0 | 0 |
| 12.630000 | POTABLE WATER | LF* | 1 | 0.0 | 177420* | 75000 | 75000.00* | 0.0 | 102420* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 129329* | 36000 | ---- * | ---- | 93329* | 0 | 0 | 0 |
| 13.100000 | PIPING INSULATION | SF* | 15000 | 8.6 | 129329* | 36000 | 2.40* | 6.2 | 93329* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 2744527* | 1510000 | ---- * | ---- | 1234527* | 0 | 0 | 0 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 897169* | 760000 | ---- * | ---- | 137169* | 0 | 0 | 0 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 826196* | 700000 | ---- * | 0.0 | 126196* | 0 | 0 | 0 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 70973* | 60000 | ---- * | ---- | 10973* | 0 | 0 | 0 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 283894* | 240000 | ---- * | ---- | 43894* | 0 | 0 | 0 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 35486* | 30000 | ---- * | ---- | 5486* | 0 | 0 | 0 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 1315058* | 300000 | ---- * | ---- | 1015058* | 0 | 0 | 0 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 212920* | 180000 | ---- * | ---- | 32920* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 167514* | 33600 | ---- * | ---- | 133914* | 0 | 0 | 0 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 14956* | 3000 | ---- * | ---- | 11956* | 0 | 0 | 0 |
| 16.130000 | WALLS & CEILINGS | LS* | ---- | ---- | 8673* | 1500 | ---- * | ---- | 7173* | 0 | 0 | 0 |
| 16.140000 | EQUIPMENT | LS* | ---- | ---- | 18456* | 6500 | ---- * | ---- | 11956* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1958879* | 300000 | ---- * | ---- | 1658879* | 0 | 0 | 0 |
| 17.200000 | ACCESS ROADS | LS* | ---- | ---- | 1958879* | 300000 | ---- * | ---- | 1658879* | 0 | 0 | 0 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 4334068* | 0 | ---- * | ---- | 4334068* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 513864* | 0 | ---- * | ---- | 513864* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 205680* | 0 | ---- * | ---- | 205680* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 137120* | 0 | ---- * | ---- | 137120* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 68560* | 0 | ---- * | ---- | 68560* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 22500* | 0 | ---- * | ---- | 22500* | 0 | 0 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 22500* | 0 | ---- * | ---- | 22500* | 0 | 0 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 2286794* | 0 | ---- * | ---- | 2286794* | 0 | 0 | 0 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 240300* | 0 | ---- * | ---- | 240300* | 0 | 0 | 0 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 2046494* | 0 | ---- * | ---- | 2046494* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 346030* | 0 | ---- * | ---- | 346030* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 9600* | 0 | ---- * | ---- | 9600* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 57550* | 0 | ---- * | ---- | 57550* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 60480* | 0 | ---- * | ---- | 60480* | 0 | 0 | 0 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 218400* | 0 | ---- * | ---- | 218400* | 0 | 0 | 0 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 903600* | 0 | ---- * | ---- | 903600* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 55600* | 0 | ---- * | ---- | 55600* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 2110000* | 0 | ---- * | ---- | 2110000* | 0 | 0 | 0 |

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UNIT 1
77 MW SIMPLE CYCLE PLANT

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 27-NOV-84 TIME: 11:48:11

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACC% NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 17447907 | 7345672 | 4368521 | 3457900* | --- | 38.81 | 189268 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 2275814 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 15172093 | 7345672 | 4368521 | 3457900* | --- | 38.81 | 189268 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 806505 | 448059 | 0 | 358446* | --- | 38.46 | 11650 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 577038 | 228295 | 20000 | 328743* | --- | 37.86 | 6030 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 779938 | 527544 | 15000 | 237394* | --- | 38.79 | 13600 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1059446 | 730653 | 0 | 328793* | --- | 40.52 | 18032 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 347776 | 239848 | 0 | 107928* | --- | 42.83 | 5600 |
| 12.000000 | PIPING | LS* | ---- | ---- | 506077 | 349020 | 0 | 157057* | --- | 41.55 | 8400 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 93329 | 64365 | 0 | 28964* | --- | 42.91 | 1500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 1234527 | 851400 | 0 | 383127* | --- | 37.84 | 22500 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 4334068 | 2110547 | 2223521 | 0* | --- | 35.09 | 60146 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 2110000 | 0 | 2110000 | 0* | --- | 0.00 | 0 |

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 17447907 | 7345672 | 4368521 | 3457900* | --- | 38.81 | 189268 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 2275814 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 15172093 | 7345672 | 4368521 | 3457900* | --- | 38.81 | 189268 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 806505 | 448059 | 0 | 358446* | --- | 38.46 | 11650 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 155763 | 86535 | 0 | 69228* | --- | 38.46 | 2250 |
| 1.110000 | CLEARING | AC* | 75 | 2076.84 | 155763 | 86535 | 0 | 69228* | 30.00 | 38.46 | 2250 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 152301 | 84612 | 0 | 67689* | --- | 38.46 | 2200 |
| 1.210000 | ROADS | LS* | ---- | ---- | 55382 | 30768 | 0 | 24614* | --- | 38.46 | 800 |
| 1.260000 | FENCING | LS* | ---- | ---- | 96919 | 53844 | 0 | 43075* | --- | 38.46 | 1400 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 304603 | 169224 | 0 | 135379* | --- | 38.46 | 4400 |
| 1.400000 | WELLS PUMPING EQP | LS* | ---- | ---- | 69228 | 38460 | 0 | 30768* | --- | 38.46 | 1000 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 124610 | 69228 | 0 | 55382* | --- | 38.46 | 1800 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 577038 | 228295 | 20000 | 328743* | --- | 37.86 | 6030 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 435100 | 178320 | 0 | 256780* | --- | 37.86 | 4710 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 435100 | 178320 | 0 | 256780* | --- | 37.86 | 4710 |
| 2.212000 | EARTH EXCAVATION | CY* | 4000 | 9.24 | 36951 | 15144 | 0 | 21807* | 0.10 | 37.86 | 400 |
| 2.213000 | ROCK EXCAVATION | CY* | 700 | 27.71 | 19398 | 7950 | 0 | 11448* | 0.30 | 37.86 | 210 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 55427 | 22716 | 0 | 32711* | --- | 37.86 | 600 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 49560 | 12115 | 20000 | 17445* | --- | 37.86 | 320 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 49560 | 12115 | 20000 | 17445* | --- | 37.86 | 320 |
| 2.312000 | EARTH EXCAVATION | CY* | 3200 | 15.49 | 49560 | 12115 | 20000 | 17445* | 0.10 | 37.86 | 320 |
| 2.400000 | EARTH STRUCTURES | CY* | 4000 | 23.09 | 92378 | 37860 | 0 | 54518* | 0.25 | 37.86 | 1000 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 779938 | 527544 | 15000 | 237394* | --- | 38.79 | 13600 |

BY: WMP CHECKED: JDF

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.100000 | TURBINE BLDG CONCR | CY* | 1600 | 487.46 | 779938 | 527544 | 15000 | 237394* | 8.50 | 38.79 | 13600 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 5.110000 | MAIN STEEL | TN* | 500 | 965.70 | 482850 | 333000 | 0 | 149850* | 15.00 | 44.40 | 7500 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 120712 | 83250 | 0 | 37462* | --- | 44.40 | 1875 |
| 5.139000 | MISC STEEL | LS* | ---- | ---- | 8047 | 5550 | 0 | 2497* | --- | 44.40 | 125 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.150000 | SUPPORT STEEL | LS* | ---- | ---- | 24142 | 16650 | 0 | 7492* | --- | 44.40 | 375 |
| 5.151000 | EQUIP SUPPORT | TN* | 25 | 965.68 | 24142 | 16650 | 0 | 7492* | 15.00 | 44.40 | 375 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1059446 | 730653 | 0 | 328793* | --- | 40.52 | 18032 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 685068 | 472461 | 0 | 212607* | --- | 40.52 | 11660 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 35252 | 24312 | 0 | 10940* | --- | 40.52 | 600 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 352524 | 243120 | 0 | 109404* | --- | 40.52 | 6000 |
| 6.130000 | DOORS | LS* | ---- | ---- | 31726 | 21880 | 0 | 9846* | --- | 40.52 | 540 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 176262 | 121560 | 0 | 54702* | --- | 40.52 | 3000 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 61103 | 42140 | 0 | 18963* | --- | 40.52 | 1040 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 28201 | 19449 | 0 | 8752* | --- | 40.52 | 480 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 374378 | 258192 | 0 | 116186* | --- | 40.52 | 6372 |
| 6.270000 | HVAC | LS* | ---- | ---- | 236895 | 163376 | 0 | 73519* | --- | 40.52 | 4032 |
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 236895 | 163376 | 0 | 73519* | --- | 40.52 | 4032 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 137483 | 94816 | 0 | 42667* | --- | 40.52 | 2340 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 7.111000 | GAS TURB GEN | EA* | 1 | 0.0 | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 347776 | 239848 | 0 | 107928* | --- | 42.83 | 5600 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 1 | 0.0 | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 43472 | 29981 | 0 | 13491* | --- | 42.83 | 700 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 43472 | 29981 | 0 | 13491* | --- | 42.83 | 700 |
| 10.400000 | TANKS | LS* | ---- | ---- | 136627 | 94226 | 0 | 42401* | --- | 42.83 | 2200 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 136627 | 94226 | 0 | 42401* | --- | 42.83 | 2200 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 124206 | 85660 | 0 | 38546* | --- | 42.83 | 2000 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 18631 | 12849 | 0 | 5782* | --- | 42.83 | 300 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 24841 | 17132 | 0 | 7709* | --- | 42.83 | 400 |
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 80734 | 55679 | 0 | 25055* | --- | 42.83 | 1300 |
| 10.700000 | CECI | LS* | ---- | ---- | 12420 | 8566 | 0 | 3854* | --- | 42.83 | 200 |
| 12.000000 | PIPING | LS* | ---- | ---- | 506077 | 349020 | 0 | 157057* | --- | 41.55 | 8400 |
| 12.300000 | PIPING | LS* | ---- | ---- | 120495 | 83100 | 0 | 37395* | --- | 41.55 | 2000 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 120495 | 83100 | 0 | 37395* | --- | 41.55 | 2000 |
| 12.400000 | PIPING | LS* | ---- | ---- | 180742 | 124650 | 0 | 56092* | --- | 41.55 | 3000 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 108445 | 74790 | 0 | 33655* | --- | 41.55 | 1800 |
| 12.460000 | CO2 SYSTEM | LF* | 1 | 0.0 | 72297 | 49860 | 0 | 22437* | --- | 41.55 | 1200 |
| 12.500000 | PIPING | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 12.600000 | PIPING | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 12.630000 | POTABLE WATER | LF* | 1 | 0.0 | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 93329 | 64365 | 0 | 28964* | --- | 42.91 | 1500 |
| 13.100000 | PIPING INSULATION | SF* | 15000 | 6.22 | 93329 | 64365 | 0 | 28964* | 0.10 | 42.91 | 1500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 1234527 | 851400 | 0 | 383127* | --- | 37.84 | 22500 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 137169 | 94600 | 0 | 42569* | --- | 37.84 | 2500 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 126196 | 87032 | 0 | 39164* | --- | 37.84 | 2300 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 10973 | 7568 | 0 | 3405* | --- | 37.84 | 200 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 43894 | 30272 | 0 | 13622* | --- | 37.84 | 800 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 5486 | 3784 | 0 | 1702* | --- | 37.84 | 100 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 1015058 | 700040 | 0 | 315018* | --- | 37.84 | 18500 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 32920 | 22704 | 0 | 10216* | --- | 37.84 | 600 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 133914 | 92355 | 0 | 41559* | --- | 41.23 | 2240 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 11956 | 8246 | 0 | 3710* | --- | 41.23 | 200 |
| 16.130000 | WALLS & CEILINGS | LS* | ---- | ---- | 7173 | 4947 | 0 | 2226* | --- | 41.23 | 120 |
| 16.140000 | EQUIPMENT | LS* | ---- | ---- | 11956 | 8246 | 0 | 3710* | --- | 41.23 | 200 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |
| 17.200000 | ACCESS ROADS | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |

APA
SUSITNA SIMPLE CYCLE
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 11:48:11

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 4334068 | 2110547 | 2223521 | 0* | --- | 35.09 | 60146 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 513864 | 513864 | 0 | 0* | --- | 24.40 | 21060 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 205680 | 0 | 205680 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 137120 | 0 | 137120 | 0* | --- | ***** | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 68560 | 0 | 68560 | 0* | --- | 39.13 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 22500 | 0 | 22500 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 22500 | 0 | 22500 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 2286794 | 903203 | 1383591 | 0* | --- | 43.33 | 20846 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 240300 | 88000 | 152300 | 0* | --- | 40.00 | 2200 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 2046494 | 815203 | 1231291 | 0* | --- | 43.72 | 18646 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 346030 | 333480 | 12550 | 0* | --- | 36.09 | 9240 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 9600 | 0 | 9600 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 57550 | 54600 | 2950 | 0* | --- | 35.00 | 1560 |
| 71.630000 | TESTING | LS* | ---- | ---- | 60480 | 60480 | 0 | 0* | --- | 42.00 | 1440 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 218400 | 218400 | 0 | 0* | --- | 35.00 | 6240 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 903600 | 308000 | 595600 | 0* | --- | 40.00 | 7700 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 55600 | 52000 | 3600 | 0* | --- | 40.00 | 1300 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 2110000 | 0 | 2110000 | 0* | --- | 0.00 | 0 |

77 MW Simple Cycle
Gas Turbine Plant
Extension

2

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
77 MW SIMPLE CYCLE EXTENSION PLANT
KENAI SITE

ESTIMATE NO. APA 1707M-1

## BASIS OF ESTIMATE

### General

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a one unit facility and excludes owner's cost (including Land and AFUDC). This estimate has a base pricing level of January, 1983 working 60 hours per week.

The estimate is based on a scope that includes the facilities and systems required for self-sustaining unit.

The estimate is based on the following:

1. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

2. A work week consisting of working 10 hours per day, 6 days per week.

3. Sufficient craftsmen available to meet project requirements without labor camps.

4. Professional services including Engineering, Design, Related Services, and Construction Management based on generic plant of comparable size.

5. Land and Land Rights not included.

6. Allowance for Funds Used During Construction (AFUDC) not included.

7. Client cost not included.

8. Permanent town for plant operating personnel not included.

9. Capital cost of gas pipeline not included.

10. Operating and maintenance costs not included.

11. Contingency included at the rate of 12% for material and 15% for installation.

12. Construction performed on a Contract basis.

13. Project being exempt from sales/use taxes.

14. Labor productivity being "average U.S." with no Alaska adjustment.

15. Spare parts and special tools not included.

16. Startup costs not included.

17. Maintenance machinery, laboratory, and office equipment not included.

Civil (Categories 2, 4, 5, 6, and 16)

No dewatering of excavated areas is assumed. No asphalt or concrete paving is included. Simple cycle extension building 100 ft x 192 ft x 70 ft eave height.

Mechanical (Categories 7, 10, and 14)

General Electric provided a budgetary quotation for one 77 MW G.E. PG7111E gas turbine, and the necessary auxiliary equipment.

Piping and Insulation (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are based on historical data from similar units.

Electrical (Category 15)

Pricing is based on historical data from similar units and in accordance with representative historical inflation indices. The substation is included with Unit 1.

Indirect Construction Cost

Indirect construction cost is priced in accordance with Ebasco experience based on a contract job. Included in indirect costs are:

- Construction management local hire personnel
- Casual premium pay (other than scheduled 60-hour week)
- Construction management automotive equipment
- Construction management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Offsite unloading and hauling
- Security guard service
- Final construction cleanup

Testing is assumed to be the contractor's responsibility and witnessed by construction management personnel. Temporary power is assumed to be furnished without cost to contractors.

## Professional Services

The professional services estimate is based on a standardized workday package for Engineering, Design, Related Services, Consulting Engineering, ESSE Engineering, and Design and Construction Management Services.

UNIT 2

77 MW SIMPLE CYCLE EXTENSION PLANT

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 27-NOV-84 TIME: 14:48:25

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 29551357* | 19308598 | ---- * | ---- | 10242759* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 3404790* | 2068778 | ---- * | ---- | 1336012* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 26146567* | 17239820 | ---- * | ---- | 8906747* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 672088* | 95050 | ---- * | ---- | 577038* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 1010338* | 230400 | ---- * | ---- | 779938* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1732216* | 672770 | ---- * | ---- | 1059446* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 972776* | 625000 | ---- * | ---- | 347776* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 768077* | 262000 | ---- * | ---- | 506077* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 129329* | 36000 | ---- * | ---- | 93329* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 2113545* | 1510000 | ---- * | ---- | 603545* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 2011088* | 0 | ---- * | ---- | 2011088* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 1264000* | 0 | ---- * | ---- | 1264000* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

DATE: 27-NOV-84 TIME: 14:48:25

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 29551357* | 19308598 | ---- * | ---- | 10242759* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 3404790* | 2068778 | ---- * | ---- | 1336012* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 26146567* | 17239820 | ---- * | ---- | 8906747* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 672088* | 95050 | ---- * | ---- | 577038* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 509150* | 74050 | ---- * | ---- | 435100* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 509150* | 74050 | ---- * | ---- | 435100* | 0 | 0 | 0 |
| 2.212000 | EARTH EXCAVATION | CY* | 4000 | 9.2 | 36951* | 0 | 0.00* | 9.2 | 36951* | 0 | 0 | 0 |
| 2.213000 | ROCK EXCAVATION | CY* | 700 | 27.7 | 19398* | 0 | 0.00* | 27.7 | 19398* | 0 | 0 | 0 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 79427* | 24000 | ---- * | ---- | 55427* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 49560* | 0 | ---- * | ---- | 49560* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 49560* | 0 | ---- * | ---- | 49560* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 3200 | 15.5 | 49560* | 0 | 0.00* | 15.5 | 49560* | 0 | 0 | 0 |
| 2.400000 | EARTH STRUCTURES | CY* | 4000 | 28.3 | 113378* | 21000 | 5.25* | 23.1 | 92378* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 1010338* | 230400 | ---- * | ---- | 779938* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 1600 | 631.5 | 1010338* | 230400 | 144.00* | 487.5 | 779938* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2020464* | 1264000 | ---- * | ---- | 756464* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 500 | 2135.7 | 1067850* | 585000 | 1170.00* | 965.7 | 482850* | 0 | 0 | 0 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 202212* | 81500 | ---- * | ---- | 120712* | 0 | 0 | 0 |
| 5.139000 | MISC STEEL | LS* | ---- | ---- | 14547* | 6500 | ---- * | ---- | 8047* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 698760* | 570000 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 698760* | 570000 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.150000 | SUPPORT STEEL | LS* | ---- | ---- | 51642* | 27500 | ---- * | ---- | 24142* | 0 | 0 | 0 |

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 14:48:25

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.151000 | EQUIP SUPPORT | TN* | 25 | 2065.7 | 51642* | 27500 | 1100.00* | 965.7 | 24142* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1732216* | 672770 | ---- * | ---- | 1059446* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1057418* | 372350 | ---- * | ---- | 685068* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 42752* | 7500 | ---- * | ---- | 35252* | 0 | 0 | 0 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 592524* | 240000 | ---- * | ---- | 352524* | 0 | 0 | 0 |
| 6.130000 | DOORS | LS* | ---- | ---- | 67726* | 36000 | ---- * | ---- | 31726* | 0 | 0 | 0 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 226262* | 50000 | ---- * | ---- | 176262* | 0 | 0 | 0 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 90353* | 29250 | ---- * | ---- | 61103* | 0 | 0 | 0 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 37801* | 9600 | ---- * | ---- | 28201* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 674798* | 300420 | ---- * | ---- | 374378* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 478815* | 241920 | ---- * | ---- | 236895* | 0 | 0 | 0 |
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 478815* | 241920 | ---- * | ---- | 236895* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 195983* | 58500 | ---- * | ---- | 137483* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 13083090* | 12400000 | ---- * | ---- | 683090* | 0 | 0 | 0 |
| 7.111000 | GAS TURB GEN | EA* | 1 | 0.0 | 13083090* | 12400000 | ---- * | 0.0 | 683090* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 972776* | 625000 | ---- * | ---- | 347776* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 131051* | 100000 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 131051* | 100000 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 1 | 0.0 | 131051* | 100000 | ---- * | 0.0 | 31051* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 93472* | 50000 | ---- * | ---- | 43472* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 93472* | 50000 | 50000.00* | 0.0 | 43472* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.400000 | TANKS | LS* | ---- | ---- | 261627* | 125000 | ---- * | ---- | 136627* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 261627* | 125000 | ---- * | ---- | 136627* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 454206* | 330000 | ---- * | ---- | 124206* | 0 | 0 | 0 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 58631* | 40000 | ---- * | ---- | 18631* | 0 | 0 | 0 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 64841* | 40000 | ---- * | ---- | 24841* | 0 | 0 | 0 |
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 330734* | 250000 | ---- * | ---- | 80734* | 0 | 0 | 0 |
| 10.700000 | CECI | LS* | ---- | ---- | 32420* | 20000 | ---- * | ---- | 12420* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 768077* | 262000 | ---- * | ---- | 506077* | 0 | 0 | 0 |
| 12.300000 | PIPING | LS* | ---- | ---- | 206495* | 86000 | ---- * | ---- | 120495* | 0 | 0 | 0 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 206495* | 86000 | ---- * | ---- | 120495* | 0 | 0 | 0 |
| 12.400000 | PIPING | LS* | ---- | ---- | 261742* | 81000 | ---- * | ---- | 180742* | 0 | 0 | 0 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 158445* | 50000 | ---- * | ---- | 108445* | 0 | 0 | 0 |
| 12.460000 | CO2 SYSTEM | LF* | 1 | 0.0 | 103297* | 31000 | 31000.00* | 0.0 | 72297* | 0 | 0 | 0 |
| 12.500000 | PIPING | LS* | ---- | ---- | 122420* | 20000 | ---- * | ---- | 102420* | 0 | 0 | 0 |
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 122420* | 20000 | ---- * | ---- | 102420* | 0 | 0 | 0 |
| 12.600000 | PIPING | LS* | ---- | ---- | 177420* | 75000 | ---- * | ---- | 102420* | 0 | 0 | 0 |
| 12.630000 | POTABLE WATER | LF* | 1 | 0.0 | 177420* | 75000 | 75000.00* | 0.0 | 102420* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 129329* | 36000 | ---- * | ---- | 93329* | 0 | 0 | 0 |
| 13.100000 | PIPING INSULATION | SF* | 15000 | 8.6 | 129329* | 36000 | 2.40* | 6.2 | 93329* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 159957* | 100000 | ---- * | ---- | 59957* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 2113545* | 1510000 | ---- * | ---- | 603545* | 0 | 0 | 0 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 1110089* | 940000 | ---- * | ---- | 170089* | 0 | 0 | 0 |

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APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 826196* | 700000 | ---- * | 0.0 | 126196* | 0 | 0 | 0 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 283893* | 240000 | ---- * | ---- | 43893* | 0 | 0 | 0 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 212920* | 180000 | ---- * | 0.0 | 32920* | 0 | 0 | 0 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 283894* | 240000 | ---- * | ---- | 43894* | 0 | 0 | 0 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 35486* | 30000 | ---- * | ---- | 5486* | 0 | 0 | 0 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 684076* | 300000 | ---- * | ---- | 384076* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 209599* | 44600 | ---- * | ---- | 164999* | 0 | 0 | 0 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 167514* | 33600 | ---- * | ---- | 133914* | 0 | 0 | 0 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 14956* | 3000 | ---- * | ---- | 11956* | 0 | 0 | 0 |
| 16.130000 | WALLS & CEILINGS | LS* | ---- | ---- | 8673* | 1500 | ---- * | ---- | 7173* | 0 | 0 | 0 |
| 16.140000 | EQUIPMENT | LS* | ---- | ---- | 18456* | 6500 | ---- * | ---- | 11956* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 2011088* | 0 | ---- * | ---- | 2011088* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 513864* | 0 | ---- * | ---- | 513864* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 167094* | 0 | ---- * | ---- | 167094* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 111396* | 0 | ---- * | ---- | 111396* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 55698* | 0 | ---- * | ---- | 55698* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 22500* | 0 | ---- * | ---- | 22500* | 0 | 0 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 22500* | 0 | ---- * | ---- | 22500* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 348430* | 0 | ---- * | ---- | 348430* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 9600* | 0 | ---- * | ---- | 9600* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 59950* | 0 | ---- * | ---- | 59950* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 60480* | 0 | ---- * | ---- | 60480* | 0 | 0 | 0 |

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 218400* | 0 | ---- * | ---- | 218400* | 0 | 0 | 0 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 903600* | 0 | ---- * | ---- | 903600* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 55600* | 0 | ---- * | ---- | 55600* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 1264000* | 0 | ---- * | ---- | 1264000* | 0 | 0 | 0 |

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UNIT 2

77 MW SIMPLE CYCLE EXTENSION PLANT

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 14:48:25

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 10242759 | 4911250 | 2102744 | 1892753* | --- | 37.70 | 130272 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 1336012 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 8906747 | 4911250 | 2102744 | 1892753* | --- | 37.70 | 130272 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 577038 | 228295 | 20000 | 328743* | --- | 37.86 | 6030 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 779938 | 527544 | 15000 | 237394* | --- | 38.79 | 13600 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1059446 | 730653 | 0 | 328793* | --- | 40.52 | 18032 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 347776 | 239848 | 0 | 107928* | --- | 42.83 | 5600 |
| 12.000000 | PIPING | LS* | ---- | ---- | 506077 | 349020 | 0 | 157057* | --- | 41.55 | 8400 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 93329 | 64365 | 0 | 28964* | --- | 42.91 | 1500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 603545 | 416240 | 0 | 187305* | --- | 37.84 | 11000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 2011088 | 1207344 | 803744 | 0* | --- | 30.72 | 39300 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 1264000 | 0 | 1264000 | 0* | --- | 0.00 | 0 |

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 10242759 | 4911250 | 2102744 | 1892753* | --- | 37.70 | 130272 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 1336012 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 8906747 | 4911250 | 2102744 | 1892753* | --- | 37.70 | 130272 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 577038 | 228295 | 20000 | 328743* | --- | 37.86 | 6030 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 435100 | 178320 | 0 | 256780* | --- | 37.86 | 4710 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 435100 | 178320 | 0 | 256780* | --- | 37.86 | 4710 |
| 2.212000 | EARTH EXCAVATION | CY* | 4000 | 9.24 | 36951 | 15144 | 0 | 21807* | 0.10 | 37.86 | 400 |
| 2.213000 | ROCK EXCAVATION | CY* | 700 | 27.71 | 19398 | 7950 | 0 | 11448* | 0.30 | 37.86 | 210 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 55427 | 22716 | 0 | 32711* | --- | 37.86 | 600 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 49560 | 12115 | 20000 | 17445* | --- | 37.86 | 320 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 49560 | 12115 | 20000 | 17445* | --- | 37.86 | 320 |
| 2.312000 | EARTH EXCAVATION | CY* | 3200 | 15.49 | 49560 | 12115 | 20000 | 17445* | 0.10 | 37.86 | 320 |
| 2.400000 | EARTH STRUCTURES | CY* | 4000 | 23.09 | 92378 | 37860 | 0 | 54518* | 0.25 | 37.86 | 1000 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 779938 | 527544 | 15000 | 237394* | --- | 38.79 | 13600 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 1600 | 487.46 | 779938 | 527544 | 15000 | 237394* | 8.50 | 38.79 | 13600 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 756464 | 521700 | 0 | 234764* | --- | 44.40 | 11750 |
| 5.110000 | MAIN STEEL | TN* | 500 | 965.70 | 482850 | 333000 | 0 | 149850* | 15.00 | 44.40 | 7500 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 120712 | 83250 | 0 | 37462* | --- | 44.40 | 1875 |
| 5.139000 | MISC STEEL | LS* | ---- | ---- | 8047 | 5550 | 0 | 2497* | --- | 44.40 | 125 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.150000 | SUPPORT STEEL | LS* | --- | ---- | 24142 | 16650 | 0 | 7492* | --- | 44.40 | 375 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.151000 | EQUIP SUPPORT | TN* | 25 | 965.68 | 24142 | 16650 | 0 | 7492* | 15.00 | 44.40 | 375 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 1059446 | 730653 | 0 | 328793* | --- | 40.52 | 18032 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 685068 | 472461 | 0 | 212607* | --- | 40.52 | 11660 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 35252 | 24312 | 0 | 10940* | --- | 40.52 | 600 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 352524 | 243120 | 0 | 109404* | --- | 40.52 | 6000 |
| 6.130000 | DOORS | LS* | ---- | ---- | 31726 | 21880 | 0 | 9846* | --- | 40.52 | 540 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 176262 | 121560 | 0 | 54702* | --- | 40.52 | 3000 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 61103 | 42140 | 0 | 18963* | --- | 40.52 | 1040 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 28201 | 19449 | 0 | 8752* | --- | 40.52 | 480 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 374378 | 258192 | 0 | 116186* | --- | 40.52 | 6372 |
| 6.270000 | HVAC | LS* | ---- | ---- | 236895 | 163376 | 0 | 73519* | --- | 40.52 | 4032 |
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 236895 | 163376 | 0 | 73519* | --- | 40.52 | 4032 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 137483 | 94816 | 0 | 42667* | --- | 40.52 | 2340 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 7.111000 | GAS TURB GEN | EA* | 1 | 0.0 | 683090 | 471097 | 0 | 211993* | --- | 41.69 | 11300 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 347776 | 239848 | 0 | 107928* | --- | 42.83 | 5600 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 1 | 0.0 | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 43472 | 29981 | 0 | 13491* | --- | 42.83 | 700 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 43472 | 29981 | 0 | 13491* | --- | 42.83 | 700 |

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 14:48:25

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.400000 | TANKS | LS* | ---- | ---- | 136627 | 94226 | 0 | 42401* | --- | 42.83 | 2200 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 136627 | 94226 | 0 | 42401* | --- | 42.83 | 2200 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 124206 | 85660 | 0 | 38546* | --- | 42.83 | 2000 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 18631 | 12849 | 0 | 5782* | --- | 42.83 | 300 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 24841 | 17132 | 0 | 7709* | --- | 42.83 | 400 |
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 80734 | 55679 | 0 | 25055* | --- | 42.83 | 1300 |
| 10.700000 | CECI | LS* | ---- | ---- | 12420 | 8566 | 0 | 3854* | --- | 42.83 | 200 |
| 12.000000 | PIPING | LS* | ---- | ---- | 506077 | 349020 | 0 | 157057* | --- | 41.55 | 8400 |
| 12.300000 | PIPING | LS* | ---- | ---- | 120495 | 83100 | 0 | 37395* | --- | 41.55 | 2000 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 120495 | 83100 | 0 | 37395* | --- | 41.55 | 2000 |
| 12.400000 | PIPING | LS* | ---- | ---- | 180742 | 124650 | 0 | 56092* | --- | 41.55 | 3000 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 108445 | 74790 | 0 | 33655* | --- | 41.55 | 1800 |
| 12.460000 | CO2 SYSTEM | LF* | 1 | 0.0 | 72297 | 49860 | 0 | 22437* | --- | 41.55 | 1200 |
| 12.500000 | PIPING | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 12.600000 | PIPING | LS* | ---- | ---- | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 12.630000 | POTABLE WATER | LF* | 1 | 0.0 | 102420 | 70635 | 0 | 31785* | --- | 41.55 | 1700 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 93329 | 64365 | 0 | 28964* | --- | 42.91 | 1500 |
| 13.100000 | PIPING INSULATION | SF* | 15000 | 6.22 | 93329 | 64365 | 0 | 28964* | 0.10 | 42.91 | 1500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 59957 | 41350 | 0 | 18607* | --- | 41.35 | 1000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 603545 | 416240 | 0 | 187305* | --- | 37.84 | 11000 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 170089 | 117304 | 0 | 52785* | --- | 37.84 | 3100 |

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 27-NOV-84 TIME: 14:48:25

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 126196 | 87032 | 0 | 39164* | --- | 37.84 | 2300 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 43893 | 30272 | 0 | 13621* | --- | 37.84 | 800 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 32920 | 22704 | 0 | 10216* | --- | 37.84 | 600 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 43894 | 30272 | 0 | 13622* | --- | 37.84 | 800 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 5486 | 3784 | 0 | 1702* | --- | 37.84 | 100 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 384076 | 264880 | 0 | 119196* | --- | 37.84 | 7000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 164999 | 113794 | 0 | 51205* | --- | 41.23 | 2760 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 133914 | 92355 | 0 | 41559* | --- | 41.23 | 2240 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 11956 | 8246 | 0 | 3710* | --- | 41.23 | 200 |
| 16.130000 | WALLS & CEILINGS | LS* | ---- | ---- | 7173 | 4947 | 0 | 2226* | --- | 41.23 | 120 |
| 16.140000 | EQUIPMENT | LS* | ---- | ---- | 11956 | 8246 | 0 | 3710* | --- | 41.23 | 200 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 2011088 | 1207344 | 803744 | 0* | --- | 30.72 | 39300 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 513864 | 513864 | 0 | 0* | --- | 24.40 | 21060 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 167094 | 0 | 167094 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 111396 | 0 | 111396 | 0* | --- | ***** | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 55698 | 0 | 55698 | 0* | --- | 39.13 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 22500 | 0 | 22500 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 22500 | 0 | 22500 | 0* | --- | 0.00 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 348430 | 333480 | 14950 | 0* | --- | 36.09 | 9240 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 9600 | 0 | 9600 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 59950 | 54600 | 5350 | 0* | --- | 35.00 | 1560 |
| 71.630000 | TESTING | LS* | ---- | ---- | 60480 | 60480 | 0 | 0* | --- | 42.00 | 1440 |

BY: WMP CHECKED: JDF

APA
SUSITNA SIMPLECYCEXT
ESTIMATE NO. APA 1707 M-1

DATE: 27-NOV-84 TIME: 14:48:25

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 218400 | 218400 | 0 | 0* | --- | 35.00 | 6240 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 903600 | 308000 | 595600 | 0* | --- | 40.00 | 7700 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 55600 | 52000 | 3600 | 0* | --- | 40.00 | 1300 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 1264000 | 0 | 1264000 | 0* | --- | 0.00 | 0 |

220 MW Combine Cycle
Gas Turbine Plant

3

ALASKA POWER AUTHORITY

SUSITNA NEED FOR POWER STUDY

220 MW COMBINED CYCLE PLANT

KENAI SITE

ESTIMATE NO. APA 1707M-1

BASIS OF ESTIMATE (continued)
GENERAL

Electrical (Categories 15 and 19)

Pricing is based on historical data from similar units and in accordance with representative historical inflation indices.

Indirect Construction Cost

Indirect construction cost is priced in accordance with Ebasco experience based on a contract job. Included in indirect costs are:

- Construction management local hire personnel
- Casual premium pay (other than scheduled 60-hour week)
- Construction management automotive equipment
- Construction management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Ten-mile 25 kV temporary transmission line
- Offsite unloading and hauling
- Security guard service
- Final construction cleanup

Testing is assumed to be the contractor's responsibility and witnessed by construction management personnel. Temporary power is assumed to be furnished without cost to contractors.

Professional Services

The professional services estimate is based on a standardized workday package for Engineering, Design, Related Services, Consulting Engineering, ESSE Engineering, and Design and Construction Management Services.

0476C

ALASKA POWER AUTHORITY

SUSITNA NEED FOR POWER STUDY

220 MW COMBINED CYCLE PLANT

KENAI SITE

ESTIMATE NO. APA 1707M-1

## BASIS OF ESTIMATE

### General

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a two unit facility and excludes owner's cost (including Land and AFUDC). This estimate has a base pricing level of January, 1983 working 60 hours per week.

The estimate is based on a scope that includes the facilities and systems required for self-sustaining unit.

The estimate is based on the following:

1. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

2. A work week consisting of working 10 hours per day, 6 days per week.

3. Sufficient craftsmen available to meet project requirements without labor camps.

4. Professional services including Engineering, Design, Related Services, and Construction Management based on generic plant of comparable size.

5. Land and Land Rights not included.

6. Allowance for Funds Used During Construction (AFUDC) not included.

7. Client cost not included.

8. Permanent town for plant operating personnel not included.

9. Capital cost of gas pipeline not included.

10. Operating and maintenance costs not included.

11. Contingency included at the rate of 12% for material and 15% for installation.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
220 MW COMBINED CYCLE PLANT
KENAI SITE
ESTIMATE NO. APA 1707M-1

BASIS OF ESTIMATE (continued)
GENERAL

12. Construction performed on a Contract basis.

13. Project being exempt from sales/use taxes.

14. Labor productivity being "average U.S." with no Alaska adjustment.

15. Spare parts and special tools not included.

16. Startup costs not included.

17. Maintenance machinery, laboratory, and office equipment not included.

Civil (Categories 1, 2, 3, 4, 5, 6, 16, 17, and 18)

Clearing is assumed based on scrub brush and trees up to 25 feet. Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. Waste would be trucked to disposal on an off-site facility. The capital cost of constructing the off-site facility is not included. No asphalt or concrete paving is included. A 1.5-mile access road is included. Air-cooled condenser used in lieu of cooling tower/circulating water lines.

Mechanical (Categories 7, 8, 9, 10, and 14)

General Electric provided a budgetary quotation for one 227 MW G.E. STAG 207E plant consisting of two MS 7001E gas turbines, two heat recovery steam generators, one steam turbine generator, and the necessary auxiliary equipment. Water treatment system pricing is based on a Illinois Water Treatment Company quotation. GEA Power Cooling Systems Inc. provided budgetary quotation for a direct air cooled condenser system.

Piping and Insulation (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are based on historical data from similar units.

BY: WMP CHECKED: JDF

APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

DATE: 12-OCT-84 TIME: 16:14:20

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 141431520* | 80932184 | ---- * | ---- | 60499336* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 16562523* | 8671305 | ---- * | ---- | 7891218* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 124868997* | 72260879 | ---- * | ---- | 52608118* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1666463* | 420360 | ---- * | ---- | 1246103* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 1976563* | 627840 | ---- * | ---- | 1348723* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 6983993* | 1580040 | ---- * | ---- | 5403953* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 7202073* | 4044234 | ---- * | ---- | 3157839* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 4781186* | 1892256 | ---- * | ---- | 2888930* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 35916416* | 33740200 | ---- * | ---- | 2176216* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 17595910* | 13808800 | ---- * | ---- | 3787110* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 9324008* | 6628720 | ---- * | ---- | 2695288* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 4394939* | 1943842 | ---- * | ---- | 2451097* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 1103310* | 339879 | ---- * | ---- | 763431* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 2048630* | 1808800 | ---- * | ---- | 239830* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 11588296* | 4894400 | ---- * | ---- | 6693896* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 881280* | 212308 | ---- * | ---- | 668972* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1978079* | 319200 | ---- * | ---- | 1658879* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 10227851* | 0 | ---- * | ---- | 10227851* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 7200000* | 0 | ---- * | ---- | 7200000* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 141431520* | 80932184 | ---- * | ---- | 60499336* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 16562523* | 8671305 | ---- * | ---- | 7891218* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 124868997* | 72260879 | ---- * | ---- | 52608118* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1666463* | 420360 | ---- * | ---- | 1246103* | 0 | 0 | 0 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 207684* | 0 | ---- * | ---- | 207684* | 0 | 0 | 0 |
| 1.110000 | CLEARING | AC* | 75 | 2769.1 | 207684* | 0 | 0.00* | 2769.1 | 207684* | 0 | 0 | 0 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 395055* | 159680 | ---- * | ---- | 235375* | 0 | 0 | 0 |
| 1.210000 | ROADS | LS* | ---- | ---- | 223656* | 85200 | ---- * | ---- | 138456* | 0 | 0 | 0 |
| 1.260000 | FENCING | LS* | ---- | ---- | 171399* | 74480 | ---- * | ---- | 96919* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 573944* | 117040 | ---- * | ---- | 456904* | 0 | 0 | 0 |
| 1.400000 | WELLS PUMPING EQP | LS* | ---- | ---- | 181016* | 42560 | ---- * | ---- | 138456* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 308764* | 101080 | ---- * | ---- | 207684* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 1976563* | 627840 | ---- * | ---- | 1348723* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1455784* | 532000 | ---- * | ---- | 923784* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 1455784* | 532000 | ---- * | ---- | 923784* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 179804* | 32000 | ---- * | ---- | 147804* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 179804* | 32000 | ---- * | ---- | 147804* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 5000 | 9.2 | 46189* | 0 | 0.00* | 9.2 | 46189* | 0 | 0 | 0 |
| 2.313000 | ROCK EXCAVATION | CY* | 1000 | 27.7 | 27713* | 0 | 0.00* | 27.7 | 27713* | 0 | 0 | 0 |
| 2.314000 | SELECT BACKFILL | CY* | 4000 | 26.5 | 105902* | 32000 | 8.00* | 18.5 | 73902* | 0 | 0 | 0 |
| 2.400000 | EARTH STRUCTURES | CY* | 8000 | 42.6 | 340975* | 63840 | 7.98* | 34.6 | 277135* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 6983993* | 1580040 | ---- * | ---- | 5403953* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4800 | 635.0 | 3048088* | 689472 | 143.64* | 491.4 | 2358616* | 0 | 0 | 0 |

APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 141431520* | 80932184 | ---- * | ---- | 60499336* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 16562523* | 8671305 | ---- * | ---- | 7891218* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 124868997* | 72260879 | ---- * | ---- | 52608118* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1666463* | 420360 | ---- * | ---- | 1246103* | 0 | 0 | 0 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 207684* | 0 | ---- * | ---- | 207684* | 0 | 0 | 0 |
| 1.110000 | CLEARING | AC* | 75 | 2769.1 | 207684* | 0 | 0.00* | 2769.1 | 207684* | 0 | 0 | 0 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 395055* | 159680 | ---- * | ---- | 235375* | 0 | 0 | 0 |
| 1.210000 | ROADS | LS* | ---- | ---- | 223656* | 85200 | ---- * | ---- | 138456* | 0 | 0 | 0 |
| 1.260000 | FENCING | LS* | ---- | ---- | 171399* | 74480 | ---- * | ---- | 96919* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 573944* | 117040 | ---- * | ---- | 456904* | 0 | 0 | 0 |
| 1.400000 | WELLS PUMPING EQP | LS* | ---- | ---- | 181016* | 42560 | ---- * | ---- | 138456* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 308764* | 101080 | ---- * | ---- | 207684* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 1976563* | 627840 | ---- * | ---- | 1348723* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1455784* | 532000 | ---- * | ---- | 923784* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 1455784* | 532000 | ---- * | ---- | 923784* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 179804* | 32000 | ---- * | ---- | 147804* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 179804* | 32000 | ---- * | ---- | 147804* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 5000 | 9.2 | 46189* | 0 | 0.00* | 9.2 | 46189* | 0 | 0 | 0 |
| 2.313000 | ROCK EXCAVATION | CY* | 1000 | 27.7 | 27713* | 0 | 0.00* | 27.7 | 27713* | 0 | 0 | 0 |
| 2.314000 | SELECT BACKFILL | CY* | 4000 | 26.5 | 105902* | 32000 | 8.00* | 18.5 | 73902* | 0 | 0 | 0 |
| 2.400000 | EARTH STRUCTURES | CY* | 8000 | 42.6 | 340975* | 63840 | 7.98* | 34.6 | 277135* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 6983993* | 1580040 | ---- * | ---- | 5403953* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4800 | 635.0 | 3048088* | 689472 | 143.64* | 491.4 | 2358616* | 0 | 0 | 0 |

APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.200000 | BOILER AREA CONCRT | CY* | 4000 | 634.7 | 2538907* | 574560 | 143.64* | 491.1 | 1964347* | 0 | 0 | 0 |
| 4.400000 | AQCS CONCRETE | CY* | 2200 | 635.0 | 1396998* | 316008 | 143.64* | 491.4 | 1080990* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 7202073* | 4044234 | ---- * | ---- | 3157839* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 6802412* | 3853808 | ---- * | ---- | 2948604* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 2500 | 2136.1 | 5340250* | 2926000 | 1170.40* | 965.7 | 2414250* | 0 | 0 | 0 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 577395* | 239400 | ---- * | ---- | 337995* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 735240* | 606480 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 735240* | 606480 | ---- * | ---- | 128760* | 0 | 0 | 0 |
| 5.150000 | SUPPORT STEEL | LS* | ---- | ---- | 149527* | 81928 | ---- * | ---- | 67599* | 0 | 0 | 0 |
| 5.151000 | EQUIP SUPPORT | TN* | 70 | 2136.1 | 149527* | 81928 | 1170.40* | 965.7 | 67599* | 0 | 0 | 0 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 399661* | 190426 | ---- * | ---- | 209235* | 0 | 0 | 0 |
| 5.250000 | SUPPORT STEEL | LS* | ---- | ---- | 89751* | 41466 | ---- * | ---- | 48285* | 0 | 0 | 0 |
| 5.290000 | OTHER S.G. BLD ST | TN* | 100 | 3099.1 | 309910* | 148960 | 1489.60* | 1609.5 | 160950* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 4781186* | 1892256 | ---- * | ---- | 2888930* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2282485* | 784260 | ---- * | ---- | 1498225* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 72054* | 13300 | ---- * | ---- | 58754* | 0 | 0 | 0 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 1064217* | 447300 | ---- * | ---- | 616917* | 0 | 0 | 0 |
| 6.130000 | DOORS | LS* | ---- | ---- | 77812* | 42560 | ---- * | ---- | 35252* | 0 | 0 | 0 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 688386* | 159600 | ---- * | ---- | 528786* | 0 | 0 | 0 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 284012* | 96000 | ---- * | ---- | 188012* | 0 | 0 | 0 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 96004* | 25500 | ---- * | ---- | 70504* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2498701* | 1107996 | ---- * | ---- | 1390705* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1449048* | 744000 | ---- * | ---- | 705048* | 0 | 0 | 0 |

APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 1449048* | 744000 | ---- * | ---- | 705048* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 615028* | 192000 | ---- * | ---- | 423028* | 0 | 0 | 0 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 434625* | 171996 | ---- * | ---- | 262629* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 35916416* | 33740200 | ---- * | ---- | 2176216* | 0 | 0 | 0 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 35916416* | 33740200 | ---- * | ---- | 2176216* | 0 | 0 | 0 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 35916416* | 33740200 | ---- * | ---- | 2176216* | 0 | 0 | 0 |
| 7.111000 | GAS TURB GEN | EA* | 2 | ********* | 28557160* | 27166800 | ---- * | 695180.0 | 1390360* | 0 | 0 | 0 |
| 7.112000 | STEAM TURB GEN | EA* | 1 | 0.0 | 7359256* | 6573400 | ---- * | 0.0 | 785856* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 17595910* | 13808800 | ---- * | ---- | 3787110* | 0 | 0 | 0 |
| 8.100000 | HEAT RECOV ST GEN | EA* | 2 | 8797955.0 | 17595910* | 13808800 | ---- * | 1893555.0 | 3787110* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 9324008* | 6628720 | ---- * | ---- | 2695288* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 998489* | 824600 | ---- * | ---- | 173889* | 0 | 0 | 0 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 998489* | 824600 | ---- * | ---- | 173889* | 0 | 0 | 0 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 5035428* | 3458000 | ---- * | ---- | 1577428* | 0 | 0 | 0 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 5035428* | 3458000 | ---- * | ---- | 1577428* | 0 | 0 | 0 |
| 10.211000 | SUPT/SRV ENG | LS* | ---- | ---- | 5035428* | 3458000 | ---- * | ---- | 1577428* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 518755* | 425600 | ---- * | ---- | 93155* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 518755* | 425600 | ---- * | 0.0 | 93155* | 0 | 0 | 0 |
| 10.400000 | TANKS | LS* | ---- | ---- | 603117* | 292600 | ---- * | ---- | 310517* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 603117* | 292600 | ---- * | ---- | 310517* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 2083968* | 1574720 | ---- * | ---- | 509248* | 0 | 0 | 0 |
| 10.510000 | COMPRESSED AIR EQP | LS* | ---- | ---- | 122382* | 85120 | ---- * | ---- | 37262* | 0 | 0 | 0 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 1136876* | 851200 | ---- * | ---- | 285676* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
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ESTIMATE NO. APA 1707 M-1

DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 824710* | 638400 | ---- * | ---- | 186310* | 0 | 0 | 0 |
| 10.700000 | CECI | LS* | ---- | ---- | 84251* | 53200 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 4394939* | 1943842 | ---- * | ---- | 2451097* | 0 | 0 | 0 |
| 12.100000 | PIPING | LS* | ---- | ---- | 186790* | 78225 | ---- * | ---- | 108565* | 0 | 0 | 0 |
| 12.130000 | AUXIL STEAM | LF* | 350 | 533.7 | 186790* | 78225 | 223.50* | 310.2 | 108565* | 0 | 0 | 0 |
| 12.200000 | PIPING | LS* | ---- | ---- | 435699* | 216520 | ---- * | ---- | 219179* | 0 | 0 | 0 |
| 12.230000 | BOILER FEED | LF* | 850 | 512.6 | 435699* | 216520 | 254.73* | 257.9 | 219179* | 0 | 0 | 0 |
| 12.300000 | PIPING | LS* | ---- | ---- | 1113883* | 457850 | ---- * | ---- | 656033* | 0 | 0 | 0 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 744427* | 296850 | ---- * | ---- | 447577* | 0 | 0 | 0 |
| 12.380000 | CONDENSATE | LF* | 1000 | 369.5 | 369456* | 161000 | 161.00* | 208.5 | 208456* | 0 | 0 | 0 |
| 12.400000 | PIPING | LS* | ---- | ---- | 1046822* | 493270 | ---- * | ---- | 553552* | 0 | 0 | 0 |
| 12.430000 | EXTRACT STEAM | LF* | 275 | 882.8 | 242770* | 168245 | 611.80* | 271.0 | 74525* | 0 | 0 | 0 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 483189* | 159600 | ---- * | ---- | 323589* | 0 | 0 | 0 |
| 12.460000 | CO2 SYSTEM | LF* | 650 | 493.6 | 320863* | 165425 | 254.50* | 239.1 | 155438* | 0 | 0 | 0 |
| 12.500000 | PIPING | LS* | ---- | ---- | 311359* | 53200 | ---- * | ---- | 258159* | 0 | 0 | 0 |
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 311359* | 53200 | ---- * | ---- | 258159* | 0 | 0 | 0 |
| 12.600000 | PIPING | LS* | ---- | ---- | 800691* | 348717 | ---- * | ---- | 451974* | 0 | 0 | 0 |
| 12.610000 | MAIN STEAM | LF* | 460 | 1164.4 | 535628* | 278493 | 605.42* | 559.0 | 257135* | 0 | 0 | 0 |
| 12.630000 | POTABLE WATER | LF* | 550 | 481.9 | 265063* | 70224 | 127.68* | 354.3 | 194839* | 0 | 0 | 0 |
| 12.700000 | PIPING | LS* | ---- | ---- | 339319* | 212800 | ---- * | ---- | 126519* | 0 | 0 | 0 |
| 12.760000 | TURBINE DRAINS | LS* | ---- | ---- | 339319* | 212800 | ---- * | ---- | 126519* | 0 | 0 | 0 |
| 12.800000 | PIPING | LS* | ---- | ---- | 60838* | 31920 | ---- * | ---- | 28918* | 0 | 0 | 0 |
| 12.840000 | AQCS PIPING | LS* | ---- | ---- | 60838* | 31920 | ---- * | ---- | 28918* | 0 | 0 | 0 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.900000 | PIPING | LS* | ---- | ---- | 99538* | 51340 | ---- * | ---- | 48198* | 0 | 0 | 0 |
| 12.910000 | BOILER BLOWDOWN | LF* | 500 | 199.1 | 99538* | 51340 | 102.68* | 96.4 | 48198* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 1103310* | 339879 | ---- * | ---- | 763431* | 0 | 0 | 0 |
| 13.100000 | PIPING INSULATION | SF* | 29200 | 9.0 | 262564* | 80884 | 2.77* | 6.2 | 181680* | 0 | 0 | 0 |
| 13.400000 | AQCS INSULATION | LS* | ---- | ---- | 840746* | 258995 | ---- * | ---- | 581751* | 0 | 0 | 0 |
| 13.420000 | AQCS EQUIPT INSUL | LS* | ---- | ---- | 840746* | 258995 | ---- * | ---- | 581751* | 0 | 0 | 0 |
| 13.421000 | PRECIPITATOR INS | SF* | 30000 | 9.0 | 269758* | 83100 | 2.77* | 6.2 | 186658* | 0 | 0 | 0 |
| 13.423000 | BREECHING INSUL | SF* | 63500 | 9.0 | 570988* | 175895 | 2.77* | 6.2 | 395093* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 2048630* | 1808800 | ---- * | ---- | 239830* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 2048630* | 1808800 | ---- * | ---- | 239830* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 11588296* | 4894400 | ---- * | ---- | 6693896* | 0 | 0 | 0 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 2323374* | 2021600 | ---- * | ---- | 301774* | 0 | 0 | 0 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 1921872* | 1702400 | ---- * | 0.0 | 219472* | 0 | 0 | 0 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 401502* | 319200 | ---- * | ---- | 82302* | 0 | 0 | 0 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 988370* | 851200 | ---- * | ---- | 137170* | 0 | 0 | 0 |
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 748136* | 638400 | ---- * | ---- | 109736* | 0 | 0 | 0 |
| 15.610000 | ISOLATED PHASE BUS | LS* | ---- | ---- | 748136* | 638400 | ---- * | ---- | 109736* | 0 | 0 | 0 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 7312280* | 1276800 | ---- * | ---- | 6035480* | 0 | 0 | 0 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 216136* | 106400 | ---- * | ---- | 109736* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 881280* | 212308 | ---- * | ---- | 668972* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | [illegible] | [illegible] | [illegible] | [illegible] | ---- * | ---- | 617262* | 0 | 0 | 0 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 710013* | 165984 | ---- * | ---- | 544029* | 0 | 0 | 0 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 95577* | 22344 | ---- * | ---- | 73233* | 0 | 0 | 0 |

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SUSITNA COMBINED CYC
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MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 10470* | 2700 | ---- * | ---- | 7770* | 0 | 0 | 0 |
| 16.230000 | WALLS & CEILINGS | LS* | ---- | ---- | 10470* | 2700 | ---- * | ---- | 7770* | 0 | 0 | 0 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 65220* | 21280 | ---- * | ---- | 43940* | 0 | 0 | 0 |
| 16.350000 | PIPING | LS* | ---- | ---- | 65220* | 21280 | ---- * | ---- | 43940* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1978079* | 319200 | ---- * | ---- | 1658879* | 0 | 0 | 0 |
| 17.200000 | ACCESS ROADS | LS* | ---- | ---- | 1978079* | 319200 | ---- * | ---- | 1658879* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 10227851* | 0 | ---- * | ---- | 10227851* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 944580* | 0 | ---- * | ---- | 944580* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 696126* | 0 | ---- * | ---- | 696126* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 464084* | 0 | ---- * | ---- | 464084* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 232042* | 0 | ---- * | ---- | 232042* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 56000* | 0 | ---- * | ---- | 56000* | 0 | 0 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 56000* | 0 | ---- * | ---- | 56000* | 0 | 0 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 3437558* | 0 | ---- * | ---- | 3437558* | 0 | 0 | 0 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 788043* | 0 | ---- * | ---- | 788043* | 0 | 0 | 0 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 2649515* | 0 | ---- * | ---- | 2649515* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1232783* | 0 | ---- * | ---- | 1232783* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 18900* | 0 | ---- * | ---- | 18900* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 333563* | 0 | ---- * | ---- | 333563* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 225120* | 0 | ---- * | ---- | 225120* | 0 | 0 | 0 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 655200* | 0 | ---- * | ---- | 655200* | 0 | 0 | 0 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 3756399* | 0 | ---- * | ---- | 3756399* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 104405* | 0 | ---- * | ---- | 104405* | 0 | 0 | 0 |

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 7200000* | 0 | ---- * | ---- | 7200000* | 0 | 0 | 0 |
| $ | | | | | | | | | | | | |

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APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

DATE: 12-OCT-84 TIME: 16:14:20

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 50499336 | 28054215 | 12640349 | 11913554* | --- | 39.17 | 716304 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 7891218 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 52608118 | 28054215 | 12640349 | 11913554* | --- | 39.17 | 716304 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1246103 | 692280 | 0 | 553823* | --- | 38.46 | 18000 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 1348723 | 552756 | 0 | 795967* | --- | 37.86 | 14600 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 5403953 | 3626865 | 145000 | 1632088* | --- | 38.79 | 93500 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 3157839 | 2177820 | 0 | 980019* | --- | 44.40 | 49050 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 2888930 | 1992368 | 0 | 896562* | --- | 40.52 | 49170 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2176216 | 1500839 | 0 | 675377* | --- | 41.69 | 36000 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 3787110 | 2611800 | 0 | 1175310* | --- | 43.53 | 60000 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 2695288 | 1858822 | 0 | 836466* | --- | 42.83 | 43400 |
| 12.000000 | PIPING | LS* | ---- | ---- | 2451097 | 1690416 | 0 | 760681* | --- | 41.55 | 40684 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 763431 | 526505 | 0 | 236926* | --- | 42.91 | 12270 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 239830 | 165400 | 0 | 74430* | --- | 41.35 | 4000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 6693896 | 4616480 | 0 | 2077416* | --- | 37.84 | 122000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 668972 | 461362 | 0 | 207610* | --- | 41.23 | 11190 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 10227851 | 4932502 | 5295349 | 0* | --- | 33.45 | 147440 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 7200000 | 0 | 7200000 | 0* | --- | 0.00 | 0 |

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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 60499336 | 28054215 | 12640349 | 11913554* | --- | 39.17 | 716304 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 7891218 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 52608118 | 28054215 | 12640349 | 11913554* | --- | 39.17 | 716304 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 1246103 | 692280 | 0 | 553823* | --- | 38.46 | 18000 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 207684 | 115380 | 0 | 92304* | --- | 38.46 | 3000 |
| 1.110000 | CLEARING | AC* | 75 | 2769.12 | 207684 | 115380 | 0 | 92304* | 40.00 | 38.46 | 3000 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 235375 | 130764 | 0 | 104611* | --- | 38.46 | 3400 |
| 1.210000 | ROADS | LS* | ---- | ---- | 138456 | 76920 | 0 | 61536* | --- | 38.46 | 2000 |
| 1.260000 | FENCING | LS* | ---- | ---- | 96919 | 53844 | 0 | 43075* | --- | 38.46 | 1400 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 456904 | 253836 | 0 | 203068* | --- | 38.46 | 6600 |
| 1.400000 | WELLS PUMPING EQP | LS* | ---- | ---- | 138456 | 76920 | 0 | 61536* | --- | 38.46 | 2000 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 207684 | 115380 | 0 | 92304* | --- | 38.46 | 3000 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 1348723 | 552756 | 0 | 795967* | --- | 37.86 | 14600 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 923784 | 378600 | 0 | 545184* | --- | 37.86 | 10000 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 923784 | 378600 | 0 | 545184* | --- | 37.86 | 10000 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 147804 | 60576 | 0 | 87228* | --- | 37.86 | 1600 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 147804 | 60576 | 0 | 87228* | --- | 37.86 | 1600 |
| 2.312000 | EARTH EXCAVATION | CY* | 5000 | 9.24 | 46189 | 18930 | 0 | 27259* | 0.10 | 37.86 | 500 |
| 2.313000 | ROCK EXCAVATION | CY* | 1000 | 27.71 | 27713 | 11358 | 0 | 16355* | 0.30 | 37.86 | 300 |
| 2.314000 | SELECT BACKFILL | CY* | 4000 | 18.48 | 73902 | 30288 | 0 | 43614* | 0.20 | 37.86 | 800 |
| 2.400000 | EARTH STRUCTURES | CY* | 8000 | 34.64 | 277135 | 113580 | 0 | 163555* | 0.38 | 37.86 | 3000 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 5403953 | 3626865 | 145000 | 1632088* | --- | 38.79 | 93500 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4800 | 491.38 | 2358616 | 1582632 | 63800 | 712184* | 8.50 | 38.79 | 40800 |

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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.200000 | BOILER AREA CONCRT | CY* | 4000 | 491.09 | 1964347 | 1318860 | 52000 | 593487* | 8.50 | 38.79 | 34000 |
| 4.400000 | AQCS CONCRETE | CY* | 2200 | 491.36 | 1080990 | 725373 | 29200 | 326417* | 8.50 | 38.79 | 18700 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 3157839 | 2177820 | 0 | 980019* | --- | 44.40 | 49050 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2948604 | 2033520 | 0 | 915084* | --- | 44.40 | 45800 |
| 5.110000 | MAIN STEEL | TN* | 2500 | 965.70 | 2414250 | 1665000 | 0 | 749250* | 15.00 | 44.40 | 37500 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 337995 | 233100 | 0 | 104895* | --- | 44.40 | 5250 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 128760 | 88800 | 0 | 39960* | --- | 44.40 | 2000 |
| 5.150000 | SUPPORT STEEL | LS* | ---- | ---- | 67599 | 46620 | 0 | 20979* | --- | 44.40 | 1050 |
| 5.151000 | EQUIP SUPPORT | TN* | 70 | 965.70 | 67599 | 46620 | 0 | 20979* | 15.00 | 44.40 | 1050 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 209235 | 144300 | 0 | 64935* | --- | 44.40 | 3250 |
| 5.250000 | SUPPORT STEEL | LS* | ---- | ---- | 48285 | 33300 | 0 | 14985* | --- | 44.40 | 750 |
| 5.290000 | OTHER S.G. BLD ST | TN* | 100 | 1609.50 | 160950 | 111000 | 0 | 49950* | 25.00 | 44.40 | 2500 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 2888930 | 1992368 | 0 | 896562* | --- | 40.52 | 49170 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1498225 | 1033260 | 0 | 464965* | --- | 40.52 | 25500 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 58754 | 40520 | 0 | 18234* | --- | 40.52 | 1000 |
| 6.120000 | SIDING(UNINSULAT) | LS* | ---- | ---- | 616917 | 425460 | 0 | 191457* | --- | 40.52 | 10500 |
| 6.130000 | DOORS | LS* | ---- | ---- | 35252 | 24312 | 0 | 10940* | --- | 40.52 | 600 |
| 6.140000 | ROOF & SHT METAL | LS* | ---- | ---- | 528786 | 364680 | 0 | 164106* | --- | 40.52 | 9000 |
| 6.150000 | FLOORS | LS* | ---- | ---- | 188012 | 129664 | 0 | 58348* | --- | 40.52 | 3200 |
| 6.160000 | CEILINGS | LS* | ---- | ---- | 70504 | 48624 | 0 | 21880* | --- | 40.52 | 1200 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 1390705 | 959108 | 0 | 431597* | --- | 40.52 | 23670 |
| 6.270000 | HVAC | LS* | ---- | ---- | 705048 | 486240 | 0 | 218808* | --- | 40.52 | 12000 |

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APA
SUSITNA COMBINED CYC
ESTIMATE NO. APA 1707 M-1

DATE: 12-OCT-84 TIME: 16:14:20

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.272000 | EQUIPMENT | LS* | ---- | ---- | 705048 | 486240 | 0 | 218808* | --- | 40.52 | 12000 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 423028 | 291744 | 0 | 131284* | --- | 40.52 | 7200 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 262629 | 181124 | 0 | 81505* | --- | 40.52 | 4470 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2176216 | 1500839 | 0 | 675377* | --- | 41.69 | 36000 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 2176216 | 1500839 | 0 | 675377* | --- | 41.69 | 36000 |
| 7.110000 | TURBINE GENERATORS | LS* | ---- | ---- | 2176216 | 1500839 | 0 | 675377* | --- | 41.69 | 36000 |
| 7.111000 | GAS TURB GEN | EA* | 2 | 695180.0 | 1390360 | 958869 | 0 | 431491* | --- | 41.69 | 23000 |
| 7.112000 | STEAM TURB GEN | EA* | 1 | 0.0 | 785856 | 541970 | 0 | 243886* | --- | 41.69 | 13000 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 3787110 | 2611800 | 0 | 1175310* | --- | 43.53 | 60000 |
| 8.100000 | HEAT RECOV ST GEN | EA* | 2 | 1893555.0 | 3787110 | 2611800 | 0 | 1175310* | --- | 43.53 | 60000 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 2695288 | 1858822 | 0 | 836466* | --- | 42.83 | 43400 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 173889 | 119924 | 0 | 53965* | --- | 42.83 | 2800 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 173889 | 119924 | 0 | 53965* | --- | 42.83 | 2800 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 1577428 | 1087882 | 0 | 489546* | --- | 42.83 | 25400 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 1577428 | 1087882 | 0 | 489546* | --- | 42.83 | 25400 |
| 10.211000 | SUPT/SRV ENG | LS* | ---- | ---- | 1577428 | 1087882 | 0 | 489546* | --- | 42.83 | 25400 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 93155 | 64245 | 0 | 28910* | --- | 42.83 | 1500 |
| 10.310000 | FEEDWATER HEATERS | EA* | 1 | 0.0 | 93155 | 64245 | 0 | 28910* | --- | 42.83 | 1500 |
| 10.400000 | TANKS | LS* | ---- | ---- | 310517 | 214150 | 0 | 96367* | --- | 42.83 | 5000 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 310517 | 214150 | 0 | 96367* | --- | 42.83 | 5000 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 509248 | 351206 | 0 | 158042* | --- | 42.83 | 8200 |
| 10.510000 | COMPRESSED AIR EQP | LS* | ---- | ---- | 37262 | 25698 | 0 | 11564* | --- | 42.83 | 600 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 285676 | 197018 | 0 | 88658* | --- | 42.83 | 4600 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.530000 | GENERAL PLT EQUIP | LS* | ---- | ---- | 186310 | 128490 | 0 | 57820* | --- | 42.83 | 3000 |
| 10.700000 | CECI | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 12.000000 | PIPING | LS* | ---- | ---- | 2451097 | 1690416 | 0 | 760681* | --- | 41.55 | 40684 |
| 12.100000 | PIPING | LS* | ---- | ---- | 108565 | 74873 | 0 | 33692* | --- | 41.55 | 1802 |
| 12.130000 | AUXIL STEAM | LF* | 350 | 310.19 | 108565 | 74873 | 0 | 33692* | 5.15 | 41.55 | 1802 |
| 12.200000 | PIPING | LS* | ---- | ---- | 219179 | 151158 | 0 | 68021* | --- | 41.55 | 3638 |
| 12.230000 | BOILER FEED | LF* | 850 | 257.86 | 219179 | 151158 | 0 | 68021* | 4.28 | 41.55 | 3638 |
| 12.300000 | PIPING | LS* | ---- | ---- | 656033 | 452437 | 0 | 203596* | --- | 41.55 | 10889 |
| 12.350000 | CIRCULATING WATER | LS* | ---- | ---- | 447577 | 308674 | 0 | 138903* | --- | 41.55 | 7429 |
| 12.380000 | CONDENSATE | LF* | 1000 | 208.46 | 208456 | 143763 | 0 | 64693* | 3.46 | 41.55 | 3460 |
| 12.400000 | PIPING | LS* | ---- | ---- | 553552 | 381761 | 0 | 171791* | --- | 41.55 | 9188 |
| 12.430000 | EXTRACT STEAM | LF* | 275 | 271.00 | 74525 | 51397 | 0 | 23128* | 4.50 | 41.55 | 1237 |
| 12.450000 | FIRE PROTECTION | LS* | ---- | ---- | 323589 | 223165 | 0 | 100424* | --- | 41.55 | 5371 |
| 12.460000 | CO2 SYSTEM | LF* | 650 | 239.14 | 155438 | 107199 | 0 | 48239* | 3.97 | 41.55 | 2580 |
| 12.500000 | PIPING | LS* | ---- | ---- | 258159 | 178041 | 0 | 80118* | --- | 41.55 | 4285 |
| 12.550000 | INSTR AIR | LS* | ---- | ---- | 258159 | 178041 | 0 | 80118* | --- | 41.55 | 4285 |
| 12.600000 | PIPING | LS* | ---- | ---- | 451974 | 311707 | 0 | 140267* | --- | 41.55 | 7502 |
| 12.610000 | MAIN STEAM | LF* | 460 | 558.99 | 257135 | 177335 | 0 | 79800* | 9.28 | 41.55 | 4268 |
| 12.630000 | POTABLE WATER | LF* | 550 | 354.25 | 194839 | 134372 | 0 | 60467* | 5.88 | 41.55 | 3234 |
| 12.700000 | PIPING | LS* | ---- | ---- | 126519 | 87255 | 0 | 39264* | --- | 41.55 | 2100 |
| 12.760000 | TURBINE DRAINS | LS* | ---- | ---- | 126519 | 87255 | 0 | 39264* | --- | 41.55 | 2100 |
| 12.800000 | PIPING | LS* | ---- | ---- | 28918 | 19944 | 0 | 8974* | --- | 41.55 | 480 |
| 12.840000 | ABCS PIPING | LS* | ---- | ---- | 28918 | 19944 | 0 | 8974* | --- | 41.55 | 480 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.900000 | PIPING | LS* | ---- | ---- | 48198 | 33240 | 0 | 14958* | --- | 41.55 | 800 |
| 12.910000 | BOILER BLOWDOWN | LF* | 500 | 96.40 | 48198 | 33240 | 0 | 14958* | 1.60 | 41.55 | 800 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 763431 | 526505 | 0 | 236926* | --- | 42.91 | 12270 |
| 13.100000 | PIPING INSULATION | SF* | 29200 | 6.22 | 181680 | 125297 | 0 | 56383* | 0.10 | 42.91 | 2920 |
| 13.400000 | AQCS INSULATION | LS* | ---- | ---- | 581751 | 401208 | 0 | 180543* | --- | 42.91 | 9350 |
| 13.420000 | AQCS EQUIPT INSUL | LS* | ---- | ---- | 581751 | 401208 | 0 | 180543* | --- | 42.91 | 9350 |
| 13.421000 | PRECIPITATOR INS | SF* | 30000 | 6.22 | 186658 | 128730 | 0 | 57928* | 0.10 | 42.91 | 3000 |
| 13.42[illegible]00 | BREECHING INSUL | SF* | 63500 | 6.22 | 395093 | 272478 | 0 | 122615* | 0.10 | 42.91 | 6350 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 239830 | 165400 | 0 | 74430* | --- | 41.35 | 4000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 239830 | 165400 | 0 | 74430* | --- | 41.35 | 4000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 6693896 | 4616480 | 0 | 2077416* | --- | 37.84 | 122000 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 301774 | 208120 | 0 | 93654* | --- | 37.84 | 5500 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 219472 | 151360 | 0 | 68112* | --- | 37.84 | 4000 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 82302 | 56760 | 0 | 25542* | --- | 37.84 | 1500 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 137170 | 94600 | 0 | 42570* | --- | 37.84 | 2500 |
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 109736 | 75680 | 0 | 34056* | --- | 37.84 | 2000 |
| 15.610000 | ISOLATED PHASE BUS | LS* | ---- | ---- | 109736 | 75680 | 0 | 34056* | --- | 37.84 | 2000 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 6035480 | 4162400 | 0 | 1873080* | --- | 37.84 | 110000 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 109736 | 75680 | 0 | 34056* | --- | 37.84 | 2000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 668972 | 461362 | 0 | 207610* | --- | 41.23 | 11190 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 617262 | 425699 | 0 | 191563* | --- | 41.23 | 10325 |
| 16.110000 | STRUCTURAL STEEL | LS* | ---- | ---- | 544029 | 375193 | 0 | 168836* | --- | 41.23 | 9100 |
| 16.120000 | MISC STEEL | LS* | ---- | ---- | 73233 | 50506 | 0 | 22727* | --- | 41.23 | 1225 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 7770 | 5359 | 0 | 2411* | --- | 41.22 | 130 |
| 16.230000 | WALLS & CEILINGS | LS* | ---- | ---- | 7770 | 5359 | 0 | 2411* | --- | 41.23 | 130 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 43940 | 30304 | 0 | 13636* | --- | 41.23 | 735 |
| 16.350000 | PIPING | LS* | ---- | ---- | 43940 | 30304 | 0 | 13636* | --- | 41.23 | 735 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |
| 17.200000 | ACCESS ROADS | LS* | ---- | ---- | 1658879 | 648000 | 0 | 1010879* | --- | 43.20 | 15000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 10227851 | 4932502 | 5295349 | 0* | --- | 33.45 | 147440 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 944580 | 944580 | 0 | 0* | --- | 22.49 | 42000 |
| 71.200000 | CHPT P/R FRINGES | LS* | ---- | ---- | 696126 | 0 | 696126 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 464084 | 0 | 464084 | 0* | --- | 40.64 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 232042 | 0 | 232042 | 0* | --- | 40.64 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 56000 | 0 | 56000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 56000 | 0 | 56000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 3437558 | 1179934 | 2257624 | 0* | --- | 42.84 | 27540 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 788043 | 283043 | 505000 | 0* | --- | 41.26 | 6860 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 2649515 | 896891 | 1752624 | 0* | --- | 43.37 | 20680 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1232783 | 1211383 | 21400 | 0* | --- | 31.78 | 38120 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 18900 | 0 | 18900 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 333563 | 331063 | 2500 | 0* | --- | 23.58 | 14040 |
| 71.630000 | TESTING | LS* | ---- | ---- | 225120 | 225120 | 0 | 0* | --- | 42.00 | 5360 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 655200 | 655200 | 0 | 0* | --- | 35.00 | 18720 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 3756399 | 1497600 | 2258799 | 0* | --- | 40.00 | 37440 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 104405 | 99005 | 5400 | 0* | --- | 42.31 | 2340 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 7200000 | 0 | 7200000 | 0* | --- | 0.00 | 0 |

200 MW Coal Fired
Plant at Nenana

# 4.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
2 - 200 MW NENANA COAL - FIRED UNITS
ESTIMATE NO. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

The order of magnitude, plant investment cost estimates for the two unit facility were prepared in the Ebasco Fossil Code of Accounts. These overnight estimates have a base pricing level of January 1983 which is reflected in all detailed category costs. Neither escalation from January 1983 nor owner's costs have been addressed.

Principal references which impacted the development of the estimates include the following:

- the 8/25/84 request for estimate,
- the 6/21/84 Beluga coal-fired 200 MW initial unit estimate and basis of estimate as provided by Seattle Estimating,
- summary level, major equipment/system design descriptions written by Seattle Engineering (to solicit vendor budgetary quotations for the Beluga plant) and respondents' budgetary pricing,
- telecons between New York Estimating and Seattle Engineering and Estimating (to identify site specifics at the Nenana coal-fired plant, discuss similarities between Beluga and Nenana regarding fuel type and plant systems design, et cetera),
- drawings #APA 2592.140 M-SP-001, M-GA-002 and M-GA-003,
- the Ebasco coal-fired reference plant project estimate for 2-400MW units, and various conceptual estimating methodologies utilized to estimate balance of plant costs, especially bulk quantities.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
2 - 200 MW NENANA COAL-FIRED UNITS
ESTIMATE NO. APA 1707 M-1

The capital cost estimate for the Nenana 200 MW initial unit parallels the Beluga 200 MW initial unit estimate in both format and development of detailed category costs, wherever practicable.

Identical material supply cost at Nenana is 5% less than at Beluga due to the base pricing date difference; installation costs of that material scope are similar due to the approximation allowed whereby craft wage scales for the two sites are identical, i.e., Nenana January 1983 composite wage rates equal Beluga January 1984 composite wage rates.

Adjustments for additional freight costs at Nenana are included in the direct construction costs, while the productivity influence for colder weather at Nenana appears as a one-line adder in the indirect construction costs.

Contract other markups parallel the Beluga estimate.

However, major expense items, namely formwork, are deescalated 5% from the Beluga estimate (except for premium pay as stated in indirect construction costs).

The basis of the plant investment cost estimates for 2 - 200 MW Nenana Coal-Fired units is identical to the Beluga estimate in the following areas:

- Subcontract construction with 6-10s,
- Labor productivity (before bottom line adjustment for direct manhours),

Sufficient skilled labor availability,
Labor camp required,
Types of professional services provided by Ebasco,
Permanent town for plant operating personnel excluded,
Owner's costs excluded (land and land rights, A F U D C, administration, etc),
Operating and maintenance costs not included,
Contingency rates of 12% for material and 15% for installation,
Exclusion of sales/use taxes,
Spare parts and special tools not included,
Exclusion of startup costs, and
Exclusion of maintenance machinery,laboratory and office equipment.

The following cursory, estimating discipline descriptions refer to the initial 200 MW unit for Nenana coal. The extension unit scope and pricing methodology parallels the classification of common facilities (included with initial unit) as practised in the 400 MW CFRP Project Cost Estimate, wherever practicable.

## BASIS FOR ESTIMATE

### CIVIL

Site terrain was assumed similar to Beluga; however, the additional scope of coal and lime railroad unloading facilities necessitate a plant rail loop (and consequently larger site development). Rock subtrata and dewatering conditions were assumed similar to Beluga. An acceptable bearing stratum again requires 80 ft long H-piles; at this plant location, subsoil condiitions require permafrost-mitigative piling for nearly all equipment and structures. C.e.c.i. earth structures are sized in accordance with the site plan and recent c.f.r.p. estimate revisions.

The circulating water system is identical to Beluga, and includes a 66,000 gpm rectangular multi-cell cooling tower.

Cubic yards of reinforced concrete foundations increase for the air quality control (limestone railroad unloading) and coal handling (coal railroad unloading) systems. Yard piping will be enclosed in prefabricated vaults.

Plant island buildings are similar to Beluga. The flue gas stack was sized w/ 2-11 ft diameter steel flues at 500 ft high, i.e., approximately 2.5 x boiler building height.

Other plant buildings are basically similar to Beluga.

The Ranney wellwater system is identical to Beluga; the 10 miles of access road and railroad spur both require permafrost-mitigative construction.

MECHANICAL

The steam turbine generator is an indoor type, tandem compound, condensing turbine, two-flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000 $^{o}$F/1000 $^{o}$F. The turbine design throttle flow will be 1,590,000 lb/hr. The maximum gross turbine output will be 220,000 kW with 2520 psig, 1000/1000 $^{o}$F, 2.7/4.0 in. Hg absolute back pressure. The generator is 244,400 KVA @ 45 psig, 0.9 PF, 3-phase, 60 Hz, 24,000 V and 0.5 shortcircut ratio complete with an excitation system.

MECHANICAL (Cont'd)

The Nenana coal analysis was assumed similar to the Beluga coal analysis as advised, i.e., low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb. The pulverized, coal-fired steam generator and accessories are consequently identical to Beluga in supply scope and similar in pricing. Pricing is based on 1,590,000 lb/hr, 2650 psig and 1008 $^{o}$F main steam; 1,351,000 lb/hr, 600 psig, 630 $^{o}$F (@ inlet) reheat; and 525 $^{o}$F feedwater.

The air quality control system @ Nenana includes an incremental cost (over Beluga estimate) for railroad unloading of lime (used in lieu of truck unloading). The baghouse filters 662,000 ACFM @ 300 $^{o}$F, and includes 10 compartments @ 368 bags each, reverse gas cleaning, and auxiliary equipment. The dry $SO_2$ scrubbing system utilizes multi-cell sprayer absorbers with 85% $SO_2$ removal (70% guarantee). The system is rated @ 662,000 ACFM with a flue gas temperature of 300 $^{o}$F and 20% excess air.

Other mechanical equipment is similar to the Beluga estimate in scope and includes a 105,000 ft$^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 66,000 gpm and 27 $^{o}$F temperature rise.

The Coal Handling System @ Nenana is similar to the Beluga system scope, except for the addition of a rotary railcar dumping facility (used in lieu of truck unloading). The railcar unloading rate allows emptying a 110-car unit train in less than 4 hours. The ash handling systems are identical to Beluga.

## PIPING AND INSULATION

Large bore and small bore piping sizing and quantities are downsized based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance to insulating yard systems.

## ELECTRICAL

Estimating scope represents a scaled-down 2 x 400 MW c.f.r.p. estimate. Pricing is based on updating recent vendor quotations and discounted equipment pricing catalogs in accordance with representative historical escalation indices. As directed, the 230 KV transmission line was excluded at this juncture.

## INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60-hour week)
- Construction Management automotive equipment
- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment

INDIRECT CONSTRUCTION COSTS (Cont'd)

- Gravel air strip
- 15-mile 69 KV temporary power transmission line
- Labor camp, food service, housekeeping
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

JDF
11/01/84

# 200MW NENANA COAL PLANTS

11/01/84 Discussion w/ Szablya
2 X 10 miles of 230 KV Line (Single Circ.)

## Modifications from Beluga Estimate

1. T-Line 48 miles - 10 miles.
2. No off-site unloading / hauling at Nenana Plants.
3. 2 Unit substation including with Unit 1 rather than separately.
4. 5% Higher wage rates (Fairbanks vs. Anchorage).
5. 5% Productivity adjustment factor (5% more MH's).
6. Higher material prices to account for higher freight.
7. Railroad rather than truck deliver, add:
   a. Thaw Shed.
   b. (2) Rotary Car Dumpers [Lime, Coal].
   c. 45 AC larger site (fencing, gravel, insulation, roads).
   d. Larger coal handling system (piling, excavation, BF, Concrete conveyors).
   e. Site loop railroad, 10 mile access railroad from Alaska RR.
   f. 10 miles less access roads.
   g. Coal & lime unloading tunnels (excavation concrete backfill).
8. Utilidor for yard piping (increased concrete, yard piping).

JDF
11/01/84

# 200MW NENANA COAL PLANTS

11/01/84 Discussion w/ Szablya
2 X 10 miles of 230 KV Line (Single Circ.)

## Modifications from Beluga Estimate

1. T-Line 48 miles - 10 miles.
2. No off-site unloading / hauling at Nenana Plants.
3. 2 Unit substation including with Unit 1 rather than separately.
4. 5% Higher wage rates (Fairbanks vs. Anchorage).
5. 5% Productivity adjustment factor (5% more MH's).
6. Higher material prices to account for higher freight.
7. Railroad rather than truck deliver, add:
   a. Thaw Shed.
   b. (2) Rotary Car Dumpers [Lime, Coal].
   c. 45 Ac larger site (fencing, gravel, insulation, roads).
   d. Larger coal handling system (piling, excavation, BF, Concrete conveyors).
   e. Site loop railroad, 10 mile access railroad from Alaska RR.
   f. 10 miles less access roads.
   g. Coal & lime unloading tunnels (excavation concrete backfill).
8. Utilidor for yard piping (increased concrete, yard piping).

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

UNIT 1
RAIL DELIVERY OF COAL/LIME

DATE: 8-NOV-84 TIME: 16:22:42

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 619149489* | 223334672 | ---- * | ---- | 395814817* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 75556734* | 23928714 | ---- * | ---- | 51628020* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 543592755* | 199405958 | ---- * | ---- | 344186797* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 8119926* | 2482949 | ---- * | ---- | 5636977* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 40988717* | 16582730 | ---- * | ---- | 24405987* | 0 | 0 | 0 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7995430* | 3804180 | ---- * | ---- | 4191250* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 29956024* | 6312745 | ---- * | ---- | 23643279* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 29172149* | 10958299 | ---- * | ---- | 18213850* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 18648525* | 5781135 | ---- * | ---- | 12867390* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 18244900* | 15580000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 41700000* | 22800000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 53975335* | 29789635 | ---- * | ---- | 24185700* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 19568379* | 14203110 | ---- * | ---- | 5365269* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 26358891* | 15862965 | ---- * | ---- | 10495926* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 29158550* | 9450512 | ---- * | ---- | 19708038* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 8164700* | 800000 | ---- * | ---- | 7364700* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 61771929* | 23859998 | ---- * | ---- | 37911931* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 238 880* | 159200 | ---- * | ---- | 2227680* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 20361230* | 7103500 | ---- * | ---- | 13257730* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 10440400* | 7700000 | ---- * | ---- | 2740400* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 53788790* | 0 | ---- * | ---- | 53788790* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 56050000* | 0 | ---- * | ---- | 56050000* | 0 | 0 | 0 |

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|---|---|---|---|

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 619149489* | 223334672 | ---- * | ---- | 395814817* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 75556734* | 23928714 | ---- * | ---- | 51628020* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 543592755* | 199405958 | ---- * | ---- | 344186797* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 8119926* | 2482949 | ---- * | ---- | 5636977* | 0 | 0 | 0 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 628762* | 0 | ---- * | ---- | 628762* | 0 | 0 | 0 |
| 1.110000 | CLEARING | AC* | 150 | 4191.7 | 628762* | 0 | 0.00* | 4191.7 | 628762* | 0 | 0 | 0 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 1018115* | 336299 | ---- * | ---- | 681816* | 0 | 0 | 0 |
| 1.210000 | ROADS | LS* | ---- | ---- | 668846* | 171000 | ---- * | ---- | 497846* | 0 | 0 | 0 |
| 1.213000 | 24' WIDE ROADS | SY* | 45000 | 14.9 | 668846* | 171000 | 3.80* | 11.1 | 497846* | 0 | 0 | 0 |
| 1.240000 | FENCING | LS* | ---- | ---- | 349269* | 165299 | ---- * | ---- | 183970* | 0 | 0 | 0 |
| 1.241000 | PROPERTY FENCE | LF* | 11000 | 24.2 | 266586* | 125399 | 11.40* | 12.8 | 141187* | 0 | 0 | 0 |
| 1.242000 | SECURITY FENCE | LF* | 3000 | 24.2 | 72705* | 34200 | 11.40* | 12.8 | 38505* | 0 | 0 | 0 |
| 1.243000 | GATES | EA* | 8 | 1247.3 | 9978* | 5700 | 712.50* | 534.8 | 4278* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 1849360* | 840000 | ---- * | ---- | 1009360* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 382223* | 142500 | ---- * | ---- | 239723* | 0 | 0 | 0 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 4241466* | 1164150 | ---- * | ---- | 3077316* | 0 | 0 | 0 |
| 1.710000 | TRACK | LF* | 13000 | 230.9 | 3001050* | 926250 | 71.25* | 159.6 | 2074800* | 0 | 0 | 0 |
| 1.720000 | STACKER RECL TRCK | LF* | 600 | 2067.4 | 1240416* | 237900 | 396.50* | 1670.9 | 1002516* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 40988717* | 16582730 | ---- * | ---- | 24405987* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 18820841* | 5540000 | ---- * | ---- | 13280841* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 13261105* | 5540000 | ---- * | ---- | 7721105* | 0 | 0 | 0 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.1 | 545105* | 0 | 0.00* | 29.1 | 545105* | 0 | 0 | 0 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 12716000* | 5540000 | ---- * | ---- | 7176000* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 650000 | 16.5 | 10751000* | 4940000 | 7.60* | 8.9 | 5811000* | 0 | 0 | 0 |
| 2.214200 | INSULATION BRD | SF* | 2500000 | 0.8 | 1965000* | 600000 | 0.24* | 0.5 | 1365000* | 0 | 0 | 0 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 221516* | 0 | ---- * | ---- | 221516* | 0 | 0 | 0 |
| 2.222000 | EARTH EXCAVATION | CY* | 2300 | 23.3 | 53636* | 0 | 0.00* | 23.3 | 53636* | 0 | 0 | 0 |
| 2.223000 | ROCK EXCAVATION | CY* | 2000 | 83.9 | 167880* | 0 | 0.00* | 83.9 | 167880* | 0 | 0 | 0 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 2888870* | 0 | ---- * | ---- | 2888870* | 0 | 0 | 0 |
| 2.232000 | EARTH EXCAVATION | CY* | 58400 | 29.1 | 1702360* | 0 | 0.00* | 29.1 | 1702360* | 0 | 0 | 0 |
| 2.233000 | ROCK EXCAVATION | CY* | 16200 | 73.2 | 1186510* | 0 | 0.00* | 73.2 | 1186510* | 0 | 0 | 0 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 201135* | 0 | ---- * | ---- | 201135* | 0 | 0 | 0 |
| 2.242000 | EARTH EXCAVATION | CY* | 6900 | 29.1 | 201135* | 0 | 0.00* | 29.1 | 201135* | 0 | 0 | 0 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2248215* | 0 | ---- * | ---- | 2248215* | 0 | 0 | 0 |
| 2.252000 | EARTH EXCAVATION | CY* | 39900 | 29.1 | 1163085* | 0 | 0.00* | 29.1 | 1163085* | 0 | 0 | 0 |
| 2.253000 | ROCK EXCAVATION | CY* | 14600 | 74.3 | 1085130* | 0 | 0.00* | 74.3 | 1085130* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 2816531* | 0 | ---- * | ---- | 2816531* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529178* | 0 | ---- * | ---- | 529178* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.2 | 386091* | 0 | 0.00* | 28.2 | 386091* | 0 | 0 | 0 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.5 | 143087* | 0 | 0.00* | 79.5 | 143087* | 0 | 0 | 0 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 1334289* | 0 | ---- * | ---- | 1334289* | 0 | 0 | 0 |
| 2.322000 | EARTH EXCAVATION | CY* | 43400 | 30.7 | 1334289* | 0 | 0.00* | 30.7 | 1334289* | 0 | 0 | 0 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 953064* | 0 | ---- * | ---- | 953064* | 0 | 0 | 0 |
| 2.332000 | EARTH EXCAVATION | CY* | 31000 | 30.7 | 953064* | 0 | 0.00* | 30.7 | 953064* | 0 | 0 | 0 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.0 | 159698* | 0 | 0.00* | 29.0 | 159698* | 0 | 0 | 0 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 16159500* | 10374000 | ---- * | ---- | 5785500* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 200000 | 57.7 | 11542500* | 7410000 | 37.05* | 20.7 | 4132500* | 0 | 0 | 0 |
| 2.520000 | AQCS AREA | LF* | 80000 | 57.7 | 4617000* | 2964000 | 37.05* | 20.7 | 1653000* | 0 | 0 | 0 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 3032147* | 668730 | ---- * | ---- | 2363417* | 0 | 0 | 0 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 1203169* | 564100 | ---- * | ---- | 639069* | 0 | 0 | 0 |
| 2.711000 | PVC LINER | SF* | 400000 | 0.5 | 196919* | 170800 | 0.43* | 0.1 | 26119* | 0 | 0 | 0 |
| 2.712000 | SAND | CY* | 23000 | 23.9 | 548550* | 218500 | 9.50* | 14.4 | 330050* | 0 | 0 | 0 |
| 2.713000 | GRAVEL | CY* | 23000 | 19.9 | 457700* | 174800 | 7.60* | 12.3 | 282900* | 0 | 0 | 0 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 1095208* | 42700 | ---- * | ---- | 1052508* | 0 | 0 | 0 |
| 2.721000 | PVC LINER | SF* | 100000 | 0.5 | 49228* | 42700 | 0.43* | 0.1 | 6528* | 0 | 0 | 0 |
| 2.722000 | EXCAVATION | CY* | 45000 | 17.9 | 804600* | 0 | 0.00* | 17.9 | 804600* | 0 | 0 | 0 |
| 2.723000 | BACKFILL | CY* | 9000 | 26.8 | 241380* | 0 | 0.00* | 26.8 | 241380* | 0 | 0 | 0 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 459940* | 51240 | ---- * | ---- | 408700* | 0 | 0 | 0 |
| 2.731000 | PVC LINER | SF* | 120000 | 0.5 | 57640* | 51240 | 0.43* | 0.1 | 6400* | 0 | 0 | 0 |
| 2.732000 | EXCAVATION | CY* | 15000 | 17.9 | 268200* | 0 | 0.00* | 17.9 | 268200* | 0 | 0 | 0 |
| 2.733000 | BACKFILL | CY* | 5000 | 26.8 | 134100* | 0 | 0.00* | 26.8 | 134100* | 0 | 0 | 0 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 273830* | 10690 | ---- * | ---- | 263140* | 0 | 0 | 0 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7995430* | 3804180 | ---- * | ---- | 4191250* | 0 | 0 | 0 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 2102659* | 856235 | ---- * | ---- | 1246424* | 0 | 0 | 0 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3400 | 346.3 | 1177522* | 613700 | 180.50* | 165.8 | 563822* | 0 | 0 | 0 |
| 3.260000 | BEDDING MATERIAL | CY* | 2000 | 30.0 | 60000* | 19000 | 9.50* | 20.5 | 41000* | 0 | 0 | 0 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 816823* | 204915 | ---- * | ---- | 611908* | 0 | 0 | 0 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 428.1 | 321093* | 92625 | 123.50* | 304.6 | 228468* | 0 | 0 | 0 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 897.0 | 358817* | 79420 | 198.55* | 698.5 | 279397* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 684.6 | 136913* | 32870 | 164.35* | 520.2 | 104043* | 0 | 0 | 0 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 6902.0 | 48314* | 18620 | 2660.00* | 4242.0 | 29694* | 0 | 0 | 0 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 5892771* | 2947945 | ---- * | ---- | 2944826* | 0 | 0 | 0 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 769115* | 193800 | ---- * | ---- | 575315* | 0 | 0 | 0 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.4 | 145275* | 0 | 0.00* | 22.4 | 145275* | 0 | 0 | 0 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 415.9 | 623840* | 193800 | 129.20* | 286.7 | 430040* | 0 | 0 | 0 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 843815* | 216695 | ---- * | ---- | 627120* | 0 | 0 | 0 |
| 3.422000 | EXCAVATION | CY* | 4500 | 22.4 | 100575* | 0 | 0.00* | 22.4 | 100575* | 0 | 0 | 0 |
| 3.423000 | CONCRETE | CY* | 1500 | 463.3 | 694926* | 198075 | 132.05* | 331.2 | 496851* | 0 | 0 | 0 |
| 3.424000 | MISC STEEL | TN* | 7 | 6902.0 | 48314* | 18620 | 2660.00* | 4242.0 | 29694* | 0 | 0 | 0 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 380410* | 318250 | ---- * | ---- | 62160* | 0 | 0 | 0 |
| 3.433000 | SCREENS | SF* | 500 | 56.8 | 28390* | 14250 | 28.50* | 28.3 | 14140* | 0 | 0 | 0 |
| 3.435000 | STOP LOGS | SF* | 500 | 71.1 | 35570* | 28500 | 57.00* | 14.1 | 7070* | 0 | 0 | 0 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 316450* | 275500 | ---- * | 0.0 | 40950* | 0 | 0 | 0 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 740943* | 319200 | ---- * | ---- | 421743* | 0 | 0 | 0 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 3075.4 | 230655* | 114000 | 1520.00* | 1555.4 | 116655* | 0 | 0 | 0 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 85.0 | 510288* | 205200 | 34.20* | 50.8 | 305088* | 0 | 0 | 0 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 3158488* | 1900000 | ---- * | ---- | 1258488* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 29956024* | 6312745 | ---- * | ---- | 23643279* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4700 | 831.4 | 3907801* | 656355 | 139.65* | 691.8 | 3251446* | 0 | 0 | 0 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 732.8 | 1392361* | 265335 | 139.65* | 593.2 | 1127026* | 0 | 0 | 0 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 765.7 | 1301644* | 237404 | 139.65* | 626.0 | 1064240* | 0 | 0 | 0 |
| 4.400000 | ADCS CONCRETE | CY* | 12600 | 764.3 | 9630438* | 1759589 | 139.65* | 624.7 | 7870849* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | STACK FOUNDATION | CY* | 1200 | 368.1 | 441726* | 167580 | 139.65* | 228.5 | 274146* | 0 | 0 | 0 |
| 4.700000 | CECI CONCRETE | CY* | 400 | 522.8 | 209121* | 55859 | 139.65* | 383.2 | 153262* | 0 | 0 | 0 |
| 4.800000 | COAL HANDLG CONCRT | CY* | 11100 | 869.9 | 9655532* | 1550114 | 139.65* | 730.2 | 8105418* | 0 | 0 | 0 |
| 4.900000 | MISCELL CONCRETE | LS* | ---- | ---- | 3417401* | 1620509 | ---- * | ---- | 1796892* | 0 | 0 | 0 |
| 4.910000 | YARD PIPING VAULT | LS* | ---- | ---- | 2685000* | 1425000 | ---- * | ---- | 1260000* | 0 | 0 | 0 |
| 4.920000 | OTHER MISC CONC | CY* | 1400 | 523.1 | 732401* | 195509 | 139.65* | 383.5 | 536892* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 29172149* | 10958299 | ---- * | ---- | 18213850* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 4092895* | 1945505 | ---- * | ---- | 2147390* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 2377.5 | 2853000* | 1425000 | 1187.50* | 1190.0 | 1428000* | 0 | 0 | 0 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 363300* | 179550 | ---- * | ---- | 183750* | 0 | 0 | 0 |
| 5.121000 | WALL FRAMING | TN* | 105 | 3460.0 | 363300* | 179550 | 1710.00* | 1750.0 | 183750* | 0 | 0 | 0 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 557295* | 122455 | ---- * | ---- | 434840* | 0 | 0 | 0 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 27.6 | 331800* | 79800 | 6.65* | 21.0 | 252000* | 0 | 0 | 0 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 57.3 | 34410* | 6270 | 10.45* | 46.9 | 28140* | 0 | 0 | 0 |
| 5.133000 | HANDRAIL | LF* | 1000 | 102.2 | 102225* | 14725 | 14.73* | 87.5 | 87500* | 0 | 0 | 0 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 7405.0 | 88860* | 21660 | 1805.00* | 5600.0 | 67200* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 319300* | 218500 | ---- * | ---- | 100800* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 319300* | 218500 | ---- * | ---- | 100800* | 0 | 0 | 0 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 11849152* | 4370982 | ---- * | ---- | 7478170* | 0 | 0 | 0 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 2377.5 | 5468250* | 2731250 | 1187.50* | 1190.0 | 2737000* | 0 | 0 | 0 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1899700* | 632700 | ---- * | ---- | 1267000* | 0 | 0 | 0 |
| 5.221000 | WALL FRAMING | TN* | 330 | 5210.0 | 1719300* | 564300 | 1710.00* | 3500.0 | 1155000* | 0 | 0 | 0 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 4510.0 | 180400* | 68400 | 1710.00* | 2800.0 | 112000* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 4242752* | 888282 | ---- * | ---- | 3354470* | 0 | 0 | 0 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 27.6 | 1935500* | 465500 | 6.65* | 21.0 | 1470000* | 0 | 0 | 0 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 57.3 | 91760* | 16720 | 10.45* | 46.9 | 75040* | 0 | 0 | 0 |
| 5.233000 | HANDRAIL | LF* | 12500 | 105.7 | 1321492* | 184062 | 14.73* | 91.0 | 1137430* | 0 | 0 | 0 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 7450.0 | 894000* | 222000 | 1850.00* | 5600.0 | 672000* | 0 | 0 | 0 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 238450* | 118750 | ---- * | ---- | 119700* | 0 | 0 | 0 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 142000* | 47500 | ---- * | ---- | 94500* | 0 | 0 | 0 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 96450* | 71250 | ---- * | ---- | 25200* | 0 | 0 | 0 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 96450* | 71250 | ---- * | ---- | 25200* | 0 | 0 | 0 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 3533602* | 1767712 | ---- * | ---- | 1765890* | 0 | 0 | 0 |
| 5.310000 | MAIN STEEL | TN* | 225 | 2377.5 | 534937* | 267187 | 1187.50* | 1190.0 | 267750* | 0 | 0 | 0 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 338650* | 111150 | ---- * | ---- | 227500* | 0 | 0 | 0 |
| 5.321000 | WALL FRAMING | TN* | 65 | 5210.0 | 338650* | 111150 | 1710.00* | 3500.0 | 227500* | 0 | 0 | 0 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 337000* | 190000 | ---- * | ---- | 147000* | 0 | 0 | 0 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 74640* | 57000 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 74640* | 57000 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 741750* | 251750 | ---- * | ---- | 490000* | 0 | 0 | 0 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 7417.5 | 741750* | 251750 | 2517.50* | 4900.0 | 490000* | 0 | 0 | 0 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 1506625* | 890625 | ---- * | ---- | 616000* | 0 | 0 | 0 |
| 5.361000 | STEEL SILOS | TN* | 170 | 6742.5 | 1146225* | 670225 | 3942.50* | 2800.0 | 476000* | 0 | 0 | 0 |
| 5.362000 | SS PLATES | TN* | 40 | 9010.0 | 360400* | 220400 | 5510.00* | 3500.0 | 140000* | 0 | 0 | 0 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 8415900* | 2325000 | ---- * | ---- | 6090900* | 0 | 0 | 0 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 67600* | 36100 | ---- * | ---- | 31500* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.900000 | UNCLASS STEEL | TN* | 200 | 6065.0 | 1213000* | 513000 | 2565.00* | 3500.0 | 700000* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 18648525* | 5781135 | ---- * | ---- | 12867390* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2080184* | 826500 | ---- * | ---- | 1253684* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 956438* | 285000 | ---- * | ---- | 671438* | 0 | 0 | 0 |
| 6.170000 | HVAC | LS* | ---- | ---- | 835040* | 427500 | ---- * | ---- | 407540* | 0 | 0 | 0 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 224360* | 95000 | ---- * | ---- | 129360* | 0 | 0 | 0 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 64346* | 19000 | ---- * | ---- | 45346* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2517096* | 905500 | ---- * | ---- | 1611596* | 0 | 0 | 0 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 1246080* | 361000 | ---- * | ---- | 885080* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1106400* | 475000 | ---- * | ---- | 631400* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 72660* | 31500 | ---- * | ---- | 41160* | 0 | 0 | 0 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 91956* | 38000 | ---- * | ---- | 53956* | 0 | 0 | 0 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 764619* | 267425 | ---- * | ---- | 497194* | 0 | 0 | 0 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 259118* | 76000 | ---- * | ---- | 183118* | 0 | 0 | 0 |
| 6.370000 | HVAC | LS* | ---- | ---- | 343600* | 114000 | ---- * | ---- | 229600* | 0 | 0 | 0 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 147690* | 71250 | ---- * | ---- | 76440* | 0 | 0 | 0 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 14211* | 6175 | ---- * | ---- | 8036* | 0 | 0 | 0 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 3667112* | 904114 | ---- * | ---- | 2762998* | 0 | 0 | 0 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 135.6 | 183046* | 44887 | 33.25* | 102.3 | 138159* | 0 | 0 | 0 |
| 6.420000 | AQCS CTRL BLDG | SF* | 3600 | 171.1 | 615791* | 160740 | 44.65* | 126.4 | 455051* | 0 | 0 | 0 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 146.4 | 124461* | 28262 | 33.25* | 113.2 | 96199* | 0 | 0 | 0 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 147.4 | 2063264* | 478800 | 34.20* | 113.2 | 1584464* | 0 | 0 | 0 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 6500 | 104.7 | 680550* | 191425 | 29.45* | 75.3 | 489125* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 9619514* | 2877596 | ---- * | ---- | 6741918* | 0 | 0 | 0 |
| 6.930000 | ADMIN BUILDING | SF* | 4000 | 265.0 | 1060000* | 277400 | 69.35* | 195.6 | 782600* | 0 | 0 | 0 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 1223080* | 446500 | ---- * | ---- | 776580* | 0 | 0 | 0 |
| 6.950000 | WTR TRTMT BLDG | SF* | 3250 | 221.4 | 719680* | 191425 | 58.90* | 162.5 | 528255* | 0 | 0 | 0 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 6616754* | 1962271 | ---- * | ---- | 4654483* | 0 | 0 | 0 |
| 6.991000 | PLANT MAINT | SF* | 3500 | 148.7 | 520555* | 172900 | 49.40* | 99.3 | 347655* | 0 | 0 | 0 |
| 6.992000 | AUX BOILER | SF* | 2000 | 237.3 | 474560* | 125400 | 62.70* | 174.6 | 349160* | 0 | 0 | 0 |
| 6.993000 | YD EQP MAINT BLD | SF* | 2500 | 148.7 | 371825* | 123500 | 49.40* | 99.3 | 248325* | 0 | 0 | 0 |
| 6.994000 | CHLORINE BLDG | SF* | 2250 | 149.4 | 336052* | 85500 | 38.00* | 111.4 | 250552* | 0 | 0 | 0 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 158.1 | 126464* | 34960 | 43.70* | 114.4 | 91504* | 0 | 0 | 0 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 247.1 | 55597* | 14962 | 66.50* | 180.6 | 40635* | 0 | 0 | 0 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 61.8 | 1420710* | 589950 | 25.65* | 36.1 | 830760* | 0 | 0 | 0 |
| 6.998000 | BULK GAS STR BLD | SF* | 1200 | 147.5 | 176964* | 43320 | 36.10* | 111.4 | 133644* | 0 | 0 | 0 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 3134027* | 771779 | ---- * | ---- | 2362248* | 0 | 0 | 0 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 144.5 | 115567* | 28879 | 36.10* | 108.4 | 86688* | 0 | 0 | 0 |
| 6.999200 | CONTROL & SWGR | SF* | 2000 | 141.3 | 282580* | 77900 | 38.95* | 102.3 | 204680* | 0 | 0 | 0 |
| 6.999300 | SWER TRTMT BLDG | SF* | 3000 | 145.6 | 436710* | 102600 | 34.20* | 111.4 | 334110* | 0 | 0 | 0 |
| 6.999400 | DEWTR & FIXTN | SF* | 8000 | 133.7 | 1069520* | 250800 | 31.35* | 102.3 | 818720* | 0 | 0 | 0 |
| 6.999600 | CRSHING & SAMPL | SF* | 2000 | 147.5 | 294940* | 72200 | 36.10* | 111.4 | 222740* | 0 | 0 | 0 |
| 6.999700 | WASTEWTR TRTMT | SF* | 7000 | 133.5 | 934710* | 239400 | 34.20* | 99.3 | 695310* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | | 18244900* | 15580000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 18244900* | 15580000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 41700000* | 22800000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 41700000* | 22800000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 53975335* | 29789635 | ---- * | ---- | 24185700* | 0 | 0 | 0 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 7806800* | 3800000 | ---- * | ---- | 4006800* | 0 | 0 | 0 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 37994600* | 20297900 | ---- * | ---- | 17696700* | 0 | 0 | 0 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 37994600* | 20297900 | ---- * | ---- | 17696700* | 0 | 0 | 0 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 3341600* | 1451600 | ---- * | ---- | 1890000* | 0 | 0 | 0 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 26944500* | 14250000 | ---- * | ---- | 12694500* | 0 | 0 | 0 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 4530850* | 2514850 | ---- * | ---- | 2016000* | 0 | 0 | 0 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 3177650* | 2081450 | ---- * | ---- | 1096200* | 0 | 0 | 0 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 6015200* | 4062200 | ---- * | ---- | 1953000* | 0 | 0 | 0 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 6015200* | 4062200 | ---- * | ---- | 1953000* | 0 | 0 | 0 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 6015200* | 4062200 | ---- * | ---- | 1953000* | 0 | 0 | 0 |
| 9.400000 | FANS | LS* | ---- | ---- | 2158735* | 1629535 | ---- * | ---- | 529200* | 0 | 0 | 0 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 1345650* | 1011750 | ---- * | ---- | 333900* | 0 | 0 | 0 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 813085* | 617785 | ---- * | ---- | 195300* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 19568379* | 14203110 | ---- * | ---- | 5365269* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 3421832* | 2888285 | ---- * | ---- | 533547* | 0 | 0 | 0 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 2905950* | 2515980 | ---- * | ---- | 389970* | 0 | 0 | 0 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 384305.0 | 768610* | 612370 | ---- * | 78120.0 | 156240* | 0 | 0 | 0 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 824900.0 | 1649800* | 1523800 | ---- * | 63000.0 | 126000* | 0 | 0 | 0 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 117080.0 | 234160* | 177460 | 88730.00* | 28350.0 | 56700* | 0 | 0 | 0 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 253380* | 202350 | ---- * | ---- | 51030* | 0 | 0 | 0 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 9363* | 7410 | ---- * | ---- | 1953* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 9363* | 7410 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 69033* | 39045 | ---- * | ---- | 29988* | 0 | 0 | 0 |
| 10.131000 | SERVICE WATER | EA* | 4 | 6666.0 | 26664* | 14820 | 3705.00* | 2961.0 | 11844* | 0 | 0 | 0 |
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 18547* | 10735 | ---- * | ---- | 7812* | 0 | 0 | 0 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 11911.0 | 23822* | 13490 | 6745.00* | 5166.0 | 10332* | 0 | 0 | 0 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 56896* | 43225 | ---- * | ---- | 13671* | 0 | 0 | 0 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 6988.0 | 13976* | 10070 | 5035.00* | 1953.0 | 3906* | 0 | 0 | 0 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 9838.0 | 29514* | 23655 | 7885.00* | 1953.0 | 5859* | 0 | 0 | 0 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 6703* | 4750 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 6703* | 4750 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 19690.0 | 118140* | 110580 | 18430.00* | 1260.0 | 7560* | 0 | 0 | 0 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 262450* | 172045 | ---- * | ---- | 90405* | 0 | 0 | 0 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 72900* | 37620 | ---- * | ---- | 35280* | 0 | 0 | 0 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 23640.0 | 47280* | 29640 | 14820.00* | 8820.0 | 17640* | 0 | 0 | 0 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 37596.0 | 112788* | 81225 | 27075.00* | 10521.0 | 31563* | 0 | 0 | 0 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 14741.0 | 29482* | 23560 | 11780.00* | 2961.0 | 5922* | 0 | 0 | 0 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 2389359* | 1691760 | ---- * | ---- | 697599* | 0 | 0 | 0 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 1535900* | 950000 | ---- * | ---- | 585900* | 0 | 0 | 0 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 853459* | 741760 | ---- * | ---- | 111699* | 0 | 0 | 0 |
| 10.221000 | CW PUMPS | EA* | 2 | 142222.0 | 284444* | 251180 | ---- * | 16632.0 | 33264* | 0 | 0 | 0 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 85924.0 | 171848* | 140600 | 70300.00* | 15624.0 | 31248* | 0 | 0 | 0 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 80777.0 | 161554* | 147820 | 73910.00* | 6867.0 | 13734* | 0 | 0 | 0 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 232900* | 201400 | ---- * | ---- | 31500* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 2713* | 760 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 1902743* | 1720925 | ---- * | ---- | 181818* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 172508.0 | 1207556* | 1107890 | ---- * | 14238.0 | 99666* | 0 | 0 | 0 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 230845* | 188005 | ---- * | ---- | 42840* | 0 | 0 | 0 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 163475.0 | 326950* | 295450 | ---- * | 15750.0 | 31500* | 0 | 0 | 0 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 68696.0 | 137392* | 129580 | 64790.00* | 3906.0 | 7812* | 0 | 0 | 0 |
| 10.400000 | TANKS | LS* | ---- | ---- | 857145* | 316920 | ---- * | ---- | 540225* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 590280* | 191805 | ---- * | ---- | 398475* | 0 | 0 | 0 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 197490* | 51015 | ---- * | ---- | 146475* | 0 | 0 | 0 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 392790* | 140790 | ---- * | ---- | 252000* | 0 | 0 | 0 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 124217* | 38285 | ---- * | ---- | 85932* | 0 | 0 | 0 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 13962.0 | 41886* | 22230 | 7410.00* | 6552.0 | 19656* | 0 | 0 | 0 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 100762* | 64600 | ---- * | ---- | 36162* | 0 | 0 | 0 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 34560* | 18810 | ---- * | ---- | 15750* | 0 | 0 | 0 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 6380* | 3230 | ---- * | ---- | 3150* | 0 | 0 | 0 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 22674* | 16815 | ---- * | ---- | 5859* | 0 | 0 | 0 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 9363* | 7410 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 9610* | 6460 | ---- * | ---- | 3150* | 0 | 0 | 0 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 18175* | 11875 | ---- * | ---- | 6300* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 3336870* | 2640090 | ---- * | ---- | 696780* | 0 | 0 | 0 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 425700* | 293400 | ---- * | ---- | 132300* | 0 | 0 | 0 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 179375.0 | 358750* | 232750 | ---- * | 63000.0 | 126000* | 0 | 0 | 0 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 66950* | 60650 | ---- * | ---- | 6300* | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 2911170* | 2346690 | ---- * | ---- | 564480* | 0 | 0 | 0 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 1076345* | 841985 | ---- * | ---- | 234360* | 0 | 0 | 0 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 1046800* | 812440 | ---- * | ---- | 234360* | 0 | 0 | 0 |
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 305060* | 266000 | ---- * | ---- | 39060* | 0 | 0 | 0 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 67735* | 55765 | ---- * | ---- | 11970* | 0 | 0 | 0 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 186740* | 169100 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 228490* | 201400 | ---- * | ---- | 27090* | 0 | 0 | 0 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 704130* | 546630 | ---- * | ---- | 157500* | 0 | 0 | 0 |
| 10.700000 | CECI | LS* | ---- | ---- | 2877000* | 1995000 | ---- * | ---- | 882000* | 0 | 0 | 0 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 1294500* | 1168500 | ---- * | ---- | 126000* | 0 | 0 | 0 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 2784800* | 1235000 | ---- * | ---- | 1549800* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 26358891* | 15862965 | ---- * | ---- | 10495926* | 0 | 0 | 0 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 21648805* | 13238305 | ---- * | ---- | 8410500* | 0 | 0 | 0 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 2254710* | 1939710 | ---- * | ---- | 315000* | 0 | 0 | 0 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 3276810* | 2300310 | ---- * | ---- | 976500* | 0 | 0 | 0 |
| 11.121000 | ROTARY CAR DUMPER | LS* | ---- | ---- | 2386310* | 1882310 | ---- * | ---- | 504000* | 0 | 0 | 0 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 890500* | 418000 | ---- * | ---- | 472500* | 0 | 0 | 0 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 2469600* | 1197000 | ---- * | ---- | 1272600* | 0 | 0 | 0 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 2469600* | 1197000 | ---- * | ---- | 1272600* | 0 | 0 | 0 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 6845545* | 3897145 | ---- * | ---- | 2948400* | 0 | 0 | 0 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 4421000* | 2720000 | ---- * | ---- | 1701000* | 0 | 0 | 0 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 797320* | 381520 | ---- * | ---- | 415800* | 0 | 0 | 0 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 26565* | 13965 | ---- * | ---- | 12600* | 0 | 0 | 0 |

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 629760* | 289560 | ---- * | ---- | 340200* | 0 | 0 | 0 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 485450.0 | 970900* | 492100 | ---- * | 239400.0 | 478800* | 0 | 0 | 0 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 3594370* | 1698070 | ---- * | ---- | 1896300* | 0 | 0 | 0 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 808400.0 | 1616800* | 760000 | ---- * | 428400.0 | 856800* | 0 | 0 | 0 |
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 254875* | 97375 | ---- * | ---- | 157500* | 0 | 0 | 0 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 932870* | 428870 | ---- * | ---- | 504000* | 0 | 0 | 0 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 110600* | 66500 | ---- * | ---- | 44100* | 0 | 0 | 0 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 679225* | 345325 | ---- * | ---- | 333900* | 0 | 0 | 0 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 3207770* | 2206070 | ---- * | ---- | 1001700* | 0 | 0 | 0 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 1381600* | 751600 | ---- * | ---- | 630000* | 0 | 0 | 0 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 43410* | 11910 | ---- * | ---- | 31500* | 0 | 0 | 0 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 1048530* | 985530 | ---- * | ---- | 63000* | 0 | 0 | 0 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 734230* | 457030 | ---- * | ---- | 277200* | 0 | 0 | 0 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 3053986* | 1579660 | ---- * | ---- | 1474326* | 0 | 0 | 0 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 1117200* | 638400 | ---- * | ---- | 478800* | 0 | 0 | 0 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 111450* | 60420 | ---- * | ---- | 51030* | 0 | 0 | 0 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 307100* | 174800 | ---- * | ---- | 132300* | 0 | 0 | 0 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 1105250* | 462650 | ---- * | ---- | 642600* | 0 | 0 | 0 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 76952.0 | 230856* | 124260 | 41420.00* | 35532.0 | 106596* | 0 | 0 | 0 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 182130* | 119130 | ---- * | ---- | 63000* | 0 | 0 | 0 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 1656100* | 1045000 | ---- * | ---- | 611100* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 29158550* | 9450512 | ---- * | ---- | 19708038* | 0 | 0 | 0 |
| 12.100000 | LARGE BORE PIPING | TN* | 944 | 20494.3 | 19346594* | 8100464 | 8581.00* | 11913.3 | 11246130* | 0 | 0 | 0 |

APA
8 NENANA1 200 MW COAL
BY: WMP CHECKED: JDF ESTIMATE NO. APA 1707 M-1 DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 86100 | 114.0 | 9811956* | 1350048 | 15.68* | 98.3 | 8461908* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 8164700* | 800000 | ---- * | ---- | 7364700* | 0 | 0 | 0 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 8164700* | 800000 | ---- * | ---- | 7364700* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 61771929* | 23859998 | ---- * | ---- | 37911931* | 0 | 0 | 0 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 4201029* | 3724998 | ---- * | ---- | 476031* | 0 | 0 | 0 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 1524200* | 1400000 | ---- * | 0.0 | 124200* | 0 | 0 | 0 |
| 15.120000 | START-UP XMFR | EA* | 2 | 624150.0 | 1248300* | 1200000 | ---- * | 24150.0 | 48300* | 0 | 0 | 0 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 1428529* | 1124998 | ---- * | ---- | 303531* | 0 | 0 | 0 |
| 15.131000 | COMMON SERV XMFR | EA* | 2 | 367250.0 | 734500* | 700000 | ---- * | 17250.0 | 34500* | 0 | 0 | 0 |
| 15.132000 | STATION SRV XMFR | EA* | 6 | 52921.5 | 317529* | 289998 | 48333.00* | 4588.5 | 27531* | 0 | 0 | 0 |
| 15.133000 | LTG & MISC XMFR | EA* | 50 | 3308.0 | 165400* | 55000 | 1100.00* | 2208.0 | 110400* | 0 | 0 | 0 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 211100* | 80000 | 80000.00* | 0.0 | 131100* | 0 | 0 | 0 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 3855100* | 3310000 | ---- * | ---- | 545100* | 0 | 0 | 0 |
| 15.300000 | MOTORS | EA* | 1 | 0.0 | 2235500* | 1925000 | ---- * | 0.0 | 310500* | 0 | 0 | 0 |
| 15.400000 | AQCS ELEC SYSTEM | LS* | ---- | ---- | 4382000* | 3830000 | ---- * | ---- | 552000* | 0 | 0 | 0 |
| 15.410000 | STATION SERV XMFR | EA* | 4 | 71900.0 | 287600* | 260000 | 65000.00* | 6900.0 | 27600* | 0 | 0 | 0 |
| 15.420000 | AQCS SWITCHGEAR | LS* | ---- | ---- | 1547270* | 1490000 | ---- * | ---- | 57270* | 0 | 0 | 0 |
| 15.421000 | SWITCHGEARS | LS* | ---- | ---- | 1204150* | 1180000 | ---- * | ---- | 24150* | 0 | 0 | 0 |
| 15.422000 | POWER CENTER | ST* | 1 | 0.0 | 343120* | 310000 | ---- * | 0.0 | 33120* | 0 | 0 | 0 |
| 15.430000 | MOTORS | EA* | 1 | 0.0 | 1028800* | 1015000 | ---- * | 0.0 | 13800* | 0 | 0 | 0 |
| 15.440000 | NON-SEGREGATED BUS | LS* | ---- | ---- | 1518330* | 1065000 | ---- * | ---- | 453330* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 1072500* | 900000 | ---- * | ---- | 172500* | 0 | 0 | 0 |
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 1567500* | 1050000 | ---- * | ---- | 517500* | 0 | 0 | 0 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 36500000* | 6868000 | ---- * | ---- | 29632000* | 0 | 0 | 0 |
| 15.800000 | LIGHTING SYSTEM | LT* | 1 | 0.0 | 3810000* | 705000 | ---- * | 0.0 | 3105000* | 0 | 0 | 0 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 4148300* | 1547000 | ---- * | ---- | 2601300* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2386880* | 159200 | ---- * | ---- | 2227680* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 648100* | 47500 | ---- * | ---- | 600600* | 0 | 0 | 0 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1163250* | 71250 | ---- * | ---- | 1092000* | 0 | 0 | 0 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 117750* | 8550 | ---- * | ---- | 109200* | 0 | 0 | 0 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 457780* | 31900 | ---- * | ---- | 425880* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 20361230* | 7103500 | ---- * | ---- | 13257730* | 0 | 0 | 0 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3055200* | 541500 | ---- * | ---- | 2513700* | 0 | 0 | 0 |
| 17.200000 | ACCESS ROADS | MI* | 10 | 511715.0 | 5117150* | 2800000 | ---- * | 231715.0 | 2317150* | 0 | 0 | 0 |
| 17.300000 | ACCESS RAILROAD | LF* | 52800 | 230.9 | 12188880* | 3762000 | 71.25* | 159.6 | 8426880* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 10440400* | 7700000 | ---- * | ---- | 2740400* | 0 | 0 | 0 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 6627650* | .5600000 | ---- * | ---- | 1027650* | 0 | 0 | 0 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 10 | 381275.0 | 3812750* | 2100000 | ---- * | 171275.0 | 1712750* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 53788790* | 0 | ---- * | ---- | 53788790* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 4472325* | 0 | ---- * | ---- | 4472325* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 3600000* | 0 | ---- * | ---- | 3600000* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 2400000* | 0 | ---- * | ---- | 2400000* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1200000* | 0 | ---- * | ---- | 1200000* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 171000* | 0 | ---- * | ---- | 171000* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 171000* | 0 | ---- * | ---- | 171000* | 0 | 0 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 31416262* | 0 | ---- * | ---- | 31416262* | 0 | 0 | 0 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1588500* | 0 | ---- * | ---- | 1588500* | 0 | 0 | 0 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 29827762* | 0 | ---- * | ---- | 29827762* | 0 | 0 | 0 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 10725000* | 0 | ---- * | ---- | 10725000* | 0 | 0 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 12225000* | 0 | ---- * | ---- | 12225000* | 0 | 0 | 0 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2389868* | 0 | ---- * | ---- | 2389868* | 0 | 0 | 0 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 238986.8 | 2389868* | 0 | 0.00* | 238986.8 | 2389868* | 0 | 0 | 0 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 4487894* | 0 | ---- * | ---- | 4487894* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2056370* | 0 | ---- * | ---- | 2056370* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 147250* | 0 | ---- * | ---- | 147250* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 691070* | 0 | ---- * | ---- | 691070* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 756050* | 0 | ---- * | ---- | 756050* | 0 | 0 | 0 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000* | 0 | ---- * | ---- | 462000* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 293368* | 0 | ---- * | ---- | 293368* | 0 | 0 | 0 |
| 71.900000 | PRODUCTIVITY ADJ | LS* | ---- | ---- | 11779465* | 0 | ---- * | ---- | 11779465* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 56050000* | 0 | ---- * | ---- | 56050000* | 0 | 0 | 0 |

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UNIT 1
RAIL DELIVERY OF COAL/LIME

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 395814817 | 160880388 | 85997410 | 97308999* | --- | 41.81 | 3847970 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 51628020 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 344186797 | 160880388 | 85997410 | 97308999* | --- | 41.81 | 3847970 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 5636977 | 2985773 | 11400 | 2639804* | --- | 40.35 | 73990 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 24405987 | 10143430 | 79300 | 14183257* | --- | 42.96 | 236095 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4191250 | 2795394 | 44460 | 1351396* | --- | 44.58 | 62709 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 23643279 | 16526094 | 422750 | 6694435* | --- | 44.08 | 374889 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 18213850 | 10780850 | 256500 | 7176500* | --- | 48.66 | 221563 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 12867390 | 9190995 | 0 | 3676395* | --- | 42.84 | 214559 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 24185700 | 16123800 | 0 | 8061900* | --- | 42.00 | 383900 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 5365269 | 3576846 | 0 | 1788423* | --- | 42.00 | 85163 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 10495926 | 6997284 | 0 | 3498642* | --- | 42.00 | 166602 |
| 12.000000 | PIPING | LS* | ---- | ---- | 19708038 | 13138692 | 0 | 6569346* | --- | 42.00 | 312826 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 7364700 | 4909800 | 0 | 2454900* | --- | 42.00 | 116900 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 37911931 | 25207954 | 100000 | 12603977* | --- | 46.00 | 547999 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2227680 | 1591200 | 0 | 636480* | --- | 39.00 | 40800 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13257730 | 6173240 | 0 | 7084490* | --- | 40.56 | 152200 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 2740400 | 1612000 | 0 | 1128400* | --- | 40.30 | 40000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 53788790 | 14372436 | 29033000 | 10383354* | --- | 30.81 | 466475 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 56050000 | 0 | 56050000 | 0* | --- | 0.00 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 395814817 | 160880388 | 85997410 | 97308999* | --- | 41.81 | 3847970 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 51628020 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 344186797 | 160880388 | 85997410 | 97308999* | --- | 41.81 | 3847970 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 5636977 | 2985773 | 11400 | 2639804* | --- | 40.35 | 73990 |
| 1.100000 | SITE PREPARATION® | LS* | ---- | ---- | 628762 | 279450 | 0 | 349312* | --- | 40.50 | 6900 |
| 1.110000 | CLEARING | AC* | 150 | 4191.75 | 628762 | 279450 | 0 | 349312* | 46.00 | 40.50 | 6900 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 681816 | 312443 | 0 | 369373* | --- | 41.71 | 7490 |
| 1.210000 | ROADS | LS* | ---- | ---- | 497846 | 181035 | 0 | 316811* | --- | 44.70 | 4050 |
| 1.213000 | 24' WIDE ROADS | SY* | 45000 | 11.06 | 497846 | 181035 | 0 | 316811* | 0.09 | 44.70 | 4050 |
| 1.240000 | FENCING | LS* | ---- | ---- | 183970 | 131408 | 0 | 52562* | --- | 38.20 | 3440 |
| 1.241000 | PROPERTY FENCE | LF* | 11000 | 12.84 | 141187 | 100848 | 0 | 40339* | 0.24 | 38.20 | 2640 |
| 1.242000 | SECURITY FENCE | LF* | 3000 | 12.84 | 38505 | 27504 | 0 | 11001* | 0.24 | 38.20 | 720 |
| 1.243000 | GATES | EA* | 8 | 534.75 | 4278 | 3056 | 0 | 1222* | 10.00 | 38.20 | 80 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 1009360 | 651200 | 0 | 358160* | --- | 40.70 | 16000 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 239723 | 154660 | 0 | 85063* | --- | 40.70 | 3800 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 3077316 | 1588020 | 11400 | 1477896* | --- | 39.90 | 39800 |
| 1.710000 | TRACK | LF* | 13000 | 159.60 | 2074800 | 1037400 | 0 | 1037400* | 2.00 | 39.90 | 26000 |
| 1.720000 | STACKER RECL TRCK | LF* | 600 | 1670.86 | 1002516 | 550620 | 11400 | 440496* | 23.00 | 39.90 | 13800 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 24405987 | 10143430 | 79300 | 14183257* | --- | 42.96 | 236095 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 13280841 | 5683764 | 73600 | 7523477* | --- | 42.66 | 133235 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 7721105 | 3497620 | 0 | 4223485* | --- | 42.82 | 81675 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.15 | 545105 | 198220 | 0 | 346885* | 0.25 | 42.40 | 4675 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 7176000 | 3299400 | 0 | 3876600* | --- | 42.85 | 77000 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 650000 | 8.94 | 5811000 | 2324400 | 0 | 3486600* | 0.08 | 44.70 | 52000 |
| 2.214200 | INSULATION BRD | SF* | 2500000 | 0.55 | 1365000 | 975000 | 0 | 390000* | 0.01 | 39.00 | 25000 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 221516 | 91584 | 5700 | 124232* | --- | 42.40 | 2160 |
| 2.222000 | EARTH EXCAVATION | CY* | 2300 | 23.32 | 53636 | 19504 | 0 | 34132* | 0.20 | 42.40 | 460 |
| 2.223000 | ROCK EXCAVATION | CY* | 2000 | 83.94 | 167880 | 72080 | 5700 | 90100* | 0.85 | 42.40 | 1700 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 2888870 | 1134200 | 27400 | 1727270* | --- | 42.40 | 26750 |
| 2.232000 | EARTH EXCAVATION | CY* | 58400 | 29.15 | 1702360 | 619040 | 0 | 1083320* | 0.25 | 42.40 | 14600 |
| 2.233000 | ROCK EXCAVATION | CY* | 16200 | 73.24 | 1186510 | 515160 | 27400 | 643950* | 0.75 | 42.40 | 12150 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 201135 | 73140 | 0 | 127995* | --- | 42.40 | 1725 |
| 2.242000 | EARTH EXCAVATION | CY* | 6900 | 29.15 | 201135 | 73140 | 0 | 127995* | 0.25 | 42.40 | 1725 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2248215 | 887220 | 40500 | 1320495* | --- | 42.40 | 20925 |
| 2.252000 | EARTH EXCAVATION | CY* | 39900 | 29.15 | 1163085 | 422940 | 0 | 740145* | 0.25 | 42.40 | 9975 |
| 2.253000 | ROCK EXCAVATION | CY* | 14600 | 74.32 | 1085130 | 464280 | 40500 | 580350* | 0.75 | 42.40 | 10950 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 2816531 | 941107 | 5700 | 1869724* | --- | 42.70 | 22040 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529178 | 178656 | 5700 | 344822* | --- | 42.70 | 4184 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.18 | 386091 | 128697 | 0 | 257394* | 0.22 | 42.70 | 3014 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.49 | 143087 | 49959 | 5700 | 87428* | 0.65 | 42.70 | 1170 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 1334289 | 444763 | 0 | 889526* | --- | 42.70 | 10416 |
| 2.322000 | EARTH EXCAVATION | CY* | 43400 | 30.74 | 1334289 | 444763 | 0 | 889526* | 0.24 | 42.70 | 10416 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 953064 | 317688 | 0 | 635376* | --- | 42.70 | 7440 |
| 2.332000 | EARTH EXCAVATION | CY* | 31000 | 30.74 | 953064 | 317688 | 0 | 635376* | 0.24 | 42.70 | 7440 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.04 | 159698 | 79849 | 0 | 79849* | 0.34 | 42.70 | 1870 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 5785500 | 2314200 | 0 | 3471300* | --- | 43.50 | 53200 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 200000 | 20.66 | 4132500 | 1653000 | 0 | 2479500* | 0.19 | 43.50 | 38000 |
| 2.520000 | AQCS AREA | LF* | 80000 | 20.66 | 1653000 | 661200 | 0 | 991800* | 0.19 | 43.50 | 15200 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 2363417 | 1124510 | 0 | 1238907* | --- | 43.67 | 25750 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 639069 | 260419 | 0 | 378650* | --- | 40.82 | 6380 |
| 2.711000 | PVC LINER | SF* | 400000 | 0.07 | 26119 | 15239 | 0 | 10880* | 0.00 | 38.10 | 400 |
| 2.712000 | SAND | CY* | 23000 | 14.35 | 330050 | 132020 | 0 | 198030* | 0.14 | 41.00 | 3220 |
| 2.713000 | GRAVEL | CY* | 23000 | 12.30 | 282900 | 113160 | 0 | 169740* | 0.12 | 41.00 | 2760 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 1052508 | 526799 | 0 | 525709* | --- | 44.64 | 11800 |
| 2.721000 | PVC LINER | SF* | 100000 | 0.07 | 6528 | 3809 | 0 | 2719* | 0.00 | 38.10 | 100 |
| 2.722000 | EXCAVATION | CY* | 45000 | 17.88 | 804600 | 402300 | 0 | 402300* | 0.20 | 44.70 | 9000 |
| 2.723000 | BACKFILL | CY* | 9000 | 26.82 | 241380 | 120690 | 0 | 120690* | 0.30 | 44.70 | 2700 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 408700 | 205722 | 0 | 202978* | --- | 44.53 | 4620 |
| 2.731000 | PVC LINER | SF* | 120000 | 0.05 | 6400 | 4572 | 0 | 1828* | 0.00 | 38.10 | 120 |
| 2.732000 | EXCAVATION | CY* | 15000 | 17.88 | 268200 | 134100 | 0 | 134100* | 0.20 | 44.70 | 3000 |
| 2.733000 | BACKFILL | CY* | 5000 | 26.82 | 134100 | 67050 | 0 | 67050* | 0.30 | 44.70 | 1500 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 263140 | 131570 | 0 | 131570* | --- | 44.60 | 2950 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4191250 | 2795394 | 44460 | 1351396* | --- | 44.58 | 62709 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1246424 | 788214 | 17860 | 440350* | --- | 42.98 | 18340 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3400 | 165.83 | 563822 | 322184 | 0 | 241638* | 2.30 | 41.20 | 7820 |
| 3.260000 | BEDDING MATERIAL | CY* | 2000 | 20.50 | 41000 | 20500 | 0 | 20500* | 0.25 | 41.00 | 500 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 611908 | 424320 | 17860 | 169728* | --- | 44.20 | 9600 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 304.62 | 228468 | 159120 | 5700 | 63648* | 4.80 | 44.20 | 3600 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 698.49 | 279397 | 194480 | 7125 | 77792* | 11.00 | 44.20 | 4400 |

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APA
NENANA1 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 520.22 | 104043 | 70720 | 5035 | 28288* | 8.00 | 44.20 | 1600 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 2944826 | 2007180 | 26600 | 911046* | --- | 45.24 | 44369 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 575315 | 356460 | 12350 | 206505* | --- | 44.28 | 8050 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.35 | 145275 | 58110 | 0 | 87165* | 0.20 | 44.70 | 1300 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 286.69 | 430040 | 298350 | 12350 | 119340* | 4.50 | 44.20 | 6750 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 627120 | 406155 | 14250 | 206715* | --- | 44.54 | 9119 |
| 3.422000 | EXCAVATION | CY* | 4500 | 22.35 | 100575 | 40230 | 0 | 60345* | 0.20 | 44.70 | 900 |
| 3.423000 | CONCRETE | CY* | 1500 | 331.23 | 496851 | 344715 | 14250 | 137886* | 5.20 | 44.20 | 7799 |
| 3.424000 | MISC STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 62160 | 44400 | 0 | 17760* | --- | 46.74 | 950 |
| 3.433000 | SCREENS | SF* | 500 | 28.28 | 14140 | 10100 | 0 | 4040* | 0.40 | 50.50 | 200 |
| 3.435000 | STOP LOGS | SF* | 500 | 14.14 | 7070 | 5050 | 0 | 2020* | 0.20 | 50.50 | 100 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 40950 | 29250 | 0 | 11700* | --- | 45.00 | 650 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 421743 | 301245 | 0 | 120498* | --- | 46.70 | 6450 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 1555.40 | 116655 | 83325 | 0 | 33330* | 22.00 | 50.50 | 1650 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 50.85 | 305088 | 217920 | 0 | 87168* | 0.80 | 45.40 | 4800 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 1258488 | 898920 | 0 | 359568* | --- | 45.40 | 19800 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 23643279 | 16526094 | 422750 | 6694435* | --- | 44.08 | 374889 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4700 | 691.80 | 3251446 | 2285140 | 52250 | 914056* | 11.00 | 44.20 | 51700 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 593.17 | 1127026 | 789412 | 21850 | 315764* | 9.40 | 44.20 | 17860 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 626.02 | 1064240 | 743886 | 22800 | 297554* | 9.90 | 44.20 | 16830 |
| 4.400000 | ADCS CONCRETE | CY* | 12600 | 624.67 | 7870849 | 5513464 | 152000 | 2205385* | 9.90 | 44.20 | 124739 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | STACK FOUNDATION | CY* | 1200 | 228.46 | 274146 | 185640 | 14250 | 74256* | 3.50 | 44.20 | 4200 |
| 4.700000 | CECI CONCRETE | CY* | 400 | 383.15 | 153262 | 106080 | 4750 | 42432* | 6.00 | 44.20 | 2400 |
| 4.800000 | COAL HANDLG CONCRT | CY* | 11100 | 730.22 | 8105418 | 5691192 | 137750 | 2276476* | 11.60 | 44.20 | 128760 |
| 4.900000 | MISCELL CONCRETE | LS* | ---- | ---- | 1796892 | 1211280 | 17100 | 568512* | --- | 42.65 | 28400 |
| 4.910000 | YARD PIPING VAULT | LS* | ---- | ---- | 1260000 | 840000 | 0 | 420000* | --- | 42.00 | 20000 |
| 4.920000 | OTHER MISC CONC | CY* | 1400 | 383.49 | 536892 | 371280 | 17100 | 148512* | 6.00 | 44.20 | 8400 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 18213850 | 10780850 | 256500 | 7176500* | --- | 48.66 | 221563 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2147390 | 1533850 | 0 | 613540* | --- | 49.74 | 30837 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 1190.00 | 1428000 | 1020000 | 0 | 408000* | 17.00 | 50.00 | 20400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 183750 | 131250 | 0 | 52500* | --- | 50.00 | 2625 |
| 5.121000 | WALL FRAMING | TN* | 105 | 1750.00 | 183750 | 131250 | 0 | 52500* | 25.00 | 50.00 | 2625 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 434840 | 310600 | 0 | 124240* | --- | 50.00 | 6212 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 21.00 | 252000 | 180000 | 0 | 72000* | 0.30 | 50.00 | 3600 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 46.90 | 28140 | 20100 | 0 | 8040* | 0.67 | 50.00 | 402 |
| 5.133000 | HANDRAIL | LF* | 1000 | 87.50 | 87500 | 62500 | 0 | 25000* | 1.25 | 50.00 | 1250 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 5600.00 | 67200 | 48000 | 0 | 19200* | 80.00 | 50.00 | 960 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 7478170 | 5341550 | 0 | 2136620* | --- | 49.91 | 107021 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 1190.00 | 2737000 | 1955000 | 0 | 782000* | 17.00 | 50.00 | 39100 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1267000 | 905000 | 0 | 362000* | --- | 50.00 | 18100 |
| 5.221000 | WALL FRAMING | TN* | 330 | 3500.00 | 1155000 | 825000 | 0 | 330000* | 50.00 | 50.00 | 16500 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 2800.00 | 112000 | 80000 | 0 | 32000* | 40.00 | 50.00 | 1600 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 3354470 | 2396050 | 0 | 958420* | --- | 50.00 | 47921 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 21.00 | 1470000 | 1050000 | 0 | 420000* | 0.30 | 50.00 | 21000 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 46.90 | 75040 | 53600 | 0 | 21440* | 0.67 | 50.00 | 1072 |
| 5.233000 | HANDRAIL | LF* | 12500 | 90.99 | 1137430 | 812450 | 0 | 324980* | 1.30 | 50.00 | 16249 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 5600.00 | 672000 | 480000 | 0 | 192000* | 80.00 | 50.00 | 9600 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 119700 | 85500 | 0 | 34200* | --- | 45.00 | 1900 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 94500 | 67500 | 0 | 27000* | --- | 45.00 | 1500 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 1765890 | 1261350 | 0 | 504540* | --- | 49.94 | 25255 |
| 5.310000 | MAIN STEEL | TN* | 225 | 1190.00 | 267750 | 191250 | 0 | 76500* | 17.00 | 50.00 | 3825 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 227500 | 162500 | 0 | 65000* | --- | 50.00 | 3250 |
| 5.321000 | WALL FRAMING | TN* | 65 | 3500.00 | 227500 | 162500 | 0 | 65000* | 50.00 | 50.00 | 3250 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 147000 | 105000 | 0 | 42000* | --- | 50.00 | 2100 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 490000 | 350000 | 0 | 140000* | --- | 50.00 | 7000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 4900.00 | 490000 | 350000 | 0 | 140000* | 70.00 | 50.00 | 7000 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 616000 | 440000 | 0 | 176000* | --- | 50.00 | 8800 |
| 5.361000 | STEEL SILOS | TN* | 170 | 2800.00 | 476000 | 340000 | 0 | 136000* | 40.00 | 50.00 | 6800 |
| 5.362000 | SS PLATES | TN* | 40 | 3500.00 | 140000 | 100000 | 0 | 40000* | 50.00 | 50.00 | 2000 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 6090900 | 2121600 | 256500 | 3712800* | --- | 44.20 | 48000 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 31500 | 22500 | 0 | 9000* | --- | 50.00 | 450 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.900000 | UNCLASS STEEL | TN* | 200 | 3500.00 | 700000 | 500000 | 0 | 200000* | 50.00 | 50.00 | 10000 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 12867390 | 9190995 | 0 | 3676395* | --- | 42.84 | 214559 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1253684 | 895489 | 0 | 358195* | --- | 42.46 | 21090 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 671438 | 479599 | 0 | 191839* | --- | 43.60 | 11000 |
| 6.170000 | HVAC | LS* | ---- | ---- | 407540 | 291100 | 0 | 116440* | --- | 41.00 | 7100 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 129360 | 92400 | 0 | 36960* | --- | 42.00 | 2200 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 45346 | 32390 | 0 | 12956* | --- | 41.00 | 790 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 1611596 | 1151140 | 0 | 460456* | --- | 42.41 | 27140 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 885080 | 632200 | 0 | 252880* | --- | 43.60 | 14500 |
| 6.270000 | HVAC | LS* | ---- | ---- | 631400 | 451000 | 0 | 180400* | --- | 41.00 | 11000 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 41160 | 29400 | 0 | 11760* | --- | 42.00 | 700 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 53956 | 38540 | 0 | 15416* | --- | 41.00 | 940 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 497194 | 355139 | 0 | 142055* | --- | 42.08 | 8440 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 183118 | 130799 | 0 | 52319* | --- | 43.60 | 3000 |
| 6.370000 | HVAC | LS* | ---- | ---- | 229600 | 164000 | 0 | 65600* | --- | 41.00 | 4000 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 76440 | 54600 | 0 | 21840* | --- | 42.00 | 1300 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8036 | 5740 | 0 | 2296* | --- | 41.00 | 140 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 2762998 | 1973571 | 0 | 789427* | --- | 43.00 | 45897 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 102.34 | 138159 | 98685 | 0 | 39474* | 1.70 | 43.00 | 2295 |
| 6.420000 | AQCS CTRL BLDG | SF* | 3600 | 126.40 | 455051 | 325037 | 0 | 130014* | 2.10 | 43.00 | 7559 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 113.18 | 96199 | 68714 | 0 | 27485* | 1.88 | 43.00 | 1598 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 113.18 | 1584464 | 1131760 | 0 | 452704* | 1.88 | 43.00 | 26320 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 6500 | 75.25 | 489125 | 349375 | 0 | 139750* | 1.25 | 43.00 | 8125 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 6741918 | 4815656 | 0 | 1926262* | --- | 43.00 | 111992 |
| 6.930000 | ADMIN BUILDING | SF* | 4000 | 195.65 | 782600 | 559000 | 0 | 223600* | 3.25 | 43.00 | 13000 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 776580 | 554700 | 0 | 221880* | --- | 43.00 | 12900 |
| 6.950000 | WTR TRTMT BLDG | SF* | 3250 | 162.54 | 528255 | 377325 | 0 | 150930* | 2.70 | 43.00 | 8775 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 4654483 | 3324631 | 0 | 1329852* | --- | 43.00 | 77317 |
| 6.991000 | PLANT MAINT | SF* | 3500 | 99.33 | 347655 | 248325 | 0 | 99330* | 1.65 | 43.00 | 5775 |
| 6.992000 | AUX BOILER | SF* | 2000 | 174.58 | 349160 | 249400 | 0 | 99760* | 2.90 | 43.00 | 5800 |
| 6.993000 | YD EQP MAINT BLD | SF* | 2500 | 99.33 | 248325 | 177375 | 0 | 70950* | 1.65 | 43.00 | 4125 |
| 6.994000 | CHLORINE BLDG | SF* | 2250 | 111.36 | 250552 | 178966 | 0 | 71586* | 1.85 | 43.00 | 4162 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 114.38 | 91504 | 65360 | 0 | 26144* | 1.90 | 43.00 | 1520 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 180.60 | 40635 | 29025 | 0 | 11610* | 3.00 | 43.00 | 675 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 36.12 | 830760 | 593400 | 0 | 237360* | 0.60 | 43.00 | 13800 |
| 6.998000 | BULK GAS STR BLD | SF* | 1200 | 111.37 | 133644 | 95460 | 0 | 38184* | 1.85 | 43.00 | 2220 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 2362248 | 1687320 | 0 | 674928* | --- | 43.00 | 39240 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 108.36 | 86688 | 61920 | 0 | 24768* | 1.80 | 43.00 | 1440 |
| 6.999200 | CONTROL & SWGR | SF* | 2000 | 102.34 | 204680 | 146200 | 0 | 58480* | 1.70 | 43.00 | 3400 |
| 6.999300 | SWER TRTMT BLDG | SF* | 3000 | 111.37 | 334110 | 238650 | 0 | 95460* | 1.85 | 43.00 | 5550 |
| 6.999400 | DEWTR & FIXTN | SF* | 8000 | 102.34 | 818720 | 584800 | 0 | 233920* | 1.70 | 43.00 | 13600 |
| 6.999600 | CRSHING & SAMPL | SF* | 2000 | 111.37 | 222740 | 159100 | 0 | 63640* | 1.85 | 43.00 | 3700 |
| 6.999700 | WASTEWTR TRTMT | SF* | 7000 | 99.33 | 695310 | 496650 | 0 | 198660* | 1.65 | 43.00 | 11550 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 24185700 | 16123800 | 0 | 8061900* | --- | 42.00 | 383900 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 4006800 | 2671200 | 0 | 1335600* | --- | 42.00 | 63600 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 17696700 | 11797800 | 0 | 5898900* | --- | 42.00 | 280900 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 17696700 | 11797800 | 0 | 5898900* | --- | 42.00 | 280900 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 1890000 | 1260000 | 0 | 630000* | --- | 42.00 | 30000 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 12694500 | 8463000 | 0 | 4231500* | --- | 42.00 | 201500 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 2016000 | 1344000 | 0 | 672000* | --- | 42.00 | 32000 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 1096200 | 730800 | 0 | 365400* | --- | 42.00 | 17400 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.400000 | FANS | LS* | ---- | ---- | 529200 | 352800 | 0 | 176400* | --- | 42.00 | 8400 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 333900 | 222600 | 0 | 111300* | --- | 42.00 | 5300 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 195300 | 130200 | 0 | 65100* | --- | 42.00 | 3100 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 5365269 | 3576846 | 0 | 1788423* | --- | 42.00 | 85163 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 533547 | 355698 | 0 | 177849* | --- | 42.00 | 8469 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 389970 | 259980 | 0 | 129990* | --- | 42.00 | 6190 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 78120.0 | 156240 | 104160 | 0 | 52080* | --- | 42.00 | 2480 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 63000.0 | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 28350.0 | 56700 | 37800 | 0 | 18900* | --- | 42.00 | 900 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |

APA
NENANA1 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 29988 | 19992 | 0 | 9996* | --- | 42.00 | 476 |
| 10.131000 | SERVICE WATER | EA* | 4 | 2961.00 | 11844 | 7896 | 0 | 3948* | 47.00 | 42.00 | 188 |
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 7812 | 5208 | 0 | 2604* | --- | 42.00 | 124 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 5166.00 | 10332 | 6888 | 0 | 3444* | 82.00 | 42.00 | 164 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 13671 | 9114 | 0 | 4557* | --- | 42.00 | 217 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 1953.00 | 3906 | 2604 | 0 | 1302* | 31.00 | 42.00 | 62 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 1953.00 | 5859 | 3906 | 0 | 1953* | 31.00 | 42.00 | 93 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 1260.00 | 7560 | 5040 | 0 | 2520* | 20.00 | 42.00 | 120 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 90405 | 60270 | 0 | 30135* | --- | 42.00 | 1435 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 35280 | 23520 | 0 | 11760* | --- | 42.00 | 560 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 8820.0 | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 10521.0 | 31563 | 21042 | 0 | 10521* | --- | 42.00 | 501 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 2961.00 | 5922 | 3948 | 0 | 1974* | 47.00 | 42.00 | 94 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 697599 | 465066 | 0 | 232533* | --- | 42.00 | 11073 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 585900 | 390600 | 0 | 195300* | --- | 42.00 | 9300 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 111699 | 74466 | 0 | 37233* | --- | 42.00 | 1773 |
| 10.221000 | CW PUMPS | EA* | 2 | 16632.0 | 33264 | 22176 | 0 | 11088* | --- | 42.00 | 528 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 15624.0 | 31248 | 20832 | 0 | 10416* | --- | 42.00 | 496 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 6867.0 | 13734 | 9156 | 0 | 4578* | --- | 42.00 | 218 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |

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NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 181818 | 121212 | 0 | 60606* | --- | 42.00 | 2886 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 14238.0 | 99666 | 66444 | 0 | 33222* | --- | 42.00 | 1582 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 42840 | 28560 | 0 | 14280* | --- | 42.00 | 680 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 15750.0 | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 3906.00 | 7812 | 5208 | 0 | 2604* | 62.00 | 42.00 | 124 |
| 10.400000 | TANKS | LS* | ---- | ---- | 540225 | 360150 | 0 | 180075* | --- | 42.00 | 8575 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 398475 | 265650 | 0 | 132825* | --- | 42.00 | 6325 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 146475 | 97650 | 0 | 48825* | --- | 42.00 | 2325 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 85932 | 57288 | 0 | 28644* | --- | 42.00 | 1364 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 6552.0 | 19656 | 13104 | 0 | 6552* | --- | 42.00 | 312 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 36162 | 24108 | 0 | 12054* | --- | 42.00 | 574 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 15750 | 10500 | 0 | 5250* | --- | 42.00 | 250 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 5859 | 3906 | 0 | 1953* | --- | 42.00 | 93 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 696780 | 464520 | 0 | 232260* | --- | 42.00 | 11060 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 132300 | 88200 | 0 | 44100* | --- | 42.00 | 2100 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 63000.0 | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 564480 | 376320 | 0 | 188160* | --- | 42.00 | 8960 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 234360 | 156240 | 0 | 78120* | --- | 42.00 | 3720 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 234360 | 156240 | 0 | 78120* | --- | 42.00 | 3720 |
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 39060 | 26040 | 0 | 13020* | --- | 42.00 | 620 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 11970 | 7980 | 0 | 3990* | --- | 42.00 | 190 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 27090 | 18060 | 0 | 9030* | --- | 42.00 | 430 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 157500 | 105000 | 0 | 52500* | --- | 42.00 | 2500 |
| 10.700000 | CECI | LS* | ---- | ---- | 882000 | 588000 | 0 | 294000* | --- | 42.00 | 14000 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 1549800 | 1033200 | 0 | 516600* | --- | 42.00 | 24600 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 10495926 | 6997284 | 0 | 3498642* | --- | 42.00 | 166602 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 8410500 | 5607000 | 0 | 2803500* | --- | 42.00 | 133500 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 976500 | 651000 | 0 | 325500* | --- | 42.00 | 15500 |
| 11.121000 | ROTARY CAR DUMPER | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 472500 | 315000 | 0 | 157500* | --- | 42.00 | 7500 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 1272600 | 848400 | 0 | 424200* | --- | 42.00 | 20200 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 1272600 | 848400 | 0 | 424200* | --- | 42.00 | 20200 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 2948400 | 1965600 | 0 | 982800* | --- | 42.00 | 46800 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 1701000 | 1134000 | 0 | 567000* | --- | 42.00 | 27000 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 415800 | 277200 | 0 | 138600* | --- | 42.00 | 6600 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 340200 | 226800 | 0 | 113400* | --- | 42.00 | 5400 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 239400.0 | 478800 | 319200 | 0 | 159600* | --- | 42.00 | 7600 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 1896300 | 1264200 | 0 | 632100* | --- | 42.00 | 30100 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 428400.0 | 856800 | 571200 | 0 | 285600* | --- | 42.00 | 13600 |
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 157500 | 105000 | 0 | 52500* | --- | 42.00 | 2500 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 44100 | 29400 | 0 | 14700* | --- | 42.00 | 700 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 333900 | 222600 | 0 | 111300* | --- | 42.00 | 5300 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 1001700 | 667800 | 0 | 333900* | --- | 42.00 | 15900 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 630000 | 420000 | 0 | 210000* | --- | 42.00 | 10000 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 277200 | 184800 | 0 | 92400* | --- | 42.00 | 4400 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 1474326 | 982884 | 0 | 491442* | --- | 42.00 | 23402 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 478800 | 319200 | 0 | 159600* | --- | 42.00 | 7600 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 132300 | 88200 | 0 | 44100* | --- | 42.00 | 2100 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 642600 | 428400 | 0 | 214200* | --- | 42.00 | 10200 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 35532.0 | 106596 | 71064 | 0 | 35532* | --- | 42.00 | 1692 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 611100 | 407400 | 0 | 203700* | --- | 42.00 | 9700 |
| 12.000000 | PIPING | LS* | ---- | ---- | 19708038 | 13138692 | 0 | 6569346* | --- | 42.00 | 312826 |
| 12.100000 | LARGE BORE PIPING | TN* | 944 | 11913.3 | 11246130 | 7497420 | 0 | 3748710* | --- | 42.00 | 178510 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 86100 | 98.28 | 8461908 | 5641272 | 0 | 2820636* | 1.56 | 42.00 | 134316 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 7364700 | 4909800 | 0 | 2454900* | --- | 42.00 | 116900 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 7364700 | 4909800 | 0 | 2454900* | --- | 42.00 | 116900 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 37911931 | 25207954 | 100000 | 12603977* | --- | 46.00 | 547999 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 476031 | 317354 | 0 | 158677* | --- | 46.00 | 6899 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 124200 | 82800 | 0 | 41400* | --- | 46.00 | 1800 |
| 15.120000 | START-UP XMFR | EA* | 2 | 24150.0 | 48300 | 32200 | 0 | 16100* | --- | 46.00 | 700 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 303531 | 202354 | 0 | 101177* | --- | 46.00 | 4399 |
| 15.131000 | COMMON SERV XMFR | EA* | 2 | 17250.0 | 34500 | 23000 | 0 | 11500* | --- | 46.00 | 500 |
| 15.132000 | STATION SRV XMFR | EA* | 6 | 4588.50 | 27531 | 18354 | 0 | 9177* | 66.60 | 46.00 | 399 |
| 15.133000 | LTG & MISC XMFR | EA* | 50 | 2208.00 | 110400 | 73600 | 0 | 36800* | 32.00 | 46.00 | 1600 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 131100 | 87400 | 0 | 43700* | --- | 46.00 | 1900 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 545100 | 363400 | 0 | 181700* | --- | 46.00 | 7900 |
| 15.300000 | MOTORS | EA* | 1 | 0.0 | 310500 | 207000 | 0 | 103500* | --- | 46.00 | 4500 |
| 15.400000 | AQCS ELEC SYSTEM | LS* | ---- | ---- | 552000 | 368000 | 0 | 184000* | --- | 46.00 | 8000 |
| 15.410000 | STATION SERV XMFR | EA* | 4 | 6900.0 | 27600 | 18400 | 0 | 9200* | --- | 46.00 | 400 |
| 15.420000 | AQCS SWITCHGEAR | LS* | ---- | ---- | 57270 | 38180 | 0 | 19090* | --- | 46.00 | 830 |
| 15.421000 | SWITCHGEARS | LS* | ---- | ---- | 24150 | 16100 | 0 | 8050* | --- | 46.00 | 350 |
| 15.422000 | POWER CENTER | ST* | 1 | 0.0 | 33120 | 22080 | 0 | 11040* | --- | 46.00 | 480 |
| 15.430000 | MOTORS | EA* | 1 | 0.0 | 13800 | 9200 | 0 | 4600* | --- | 46.00 | 200 |
| 15.440000 | NON-SEGREGATED BUS | LS* | ---- | ---- | 453330 | 302220 | 0 | 151110* | --- | 46.00 | 6570 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 172500 | 115000 | 0 | 57500* | --- | 46.00 | 2500 |
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 517500 | 345000 | 0 | 172500* | --- | 46.00 | 7500 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 29632000 | 19688000 | 100000 | 9844000* | --- | 46.00 | 428000 |
| 15.800000 | LIGHTING SYSTEM | LT* | 1 | 0.0 | 3105000 | 2070000 | 0 | 1035000* | --- | 46.00 | 45000 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 2601300 | 1734200 | 0 | 867100* | --- | 46.00 | 37700 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2227680 | 1591200 | 0 | 636480* | --- | 39.00 | 40800 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 600600 | 429000 | 0 | 171600* | --- | 39.00 | 11000 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1092000 | 780000 | 0 | 312000* | --- | 39.00 | 20000 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 109200 | 78000 | 0 | 31200* | --- | 39.00 | 2000 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 425880 | 304200 | 0 | 121680* | --- | 39.00 | 7800 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13257730 | 6173240 | 0 | 7084490* | --- | 40.56 | 152200 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 17.200000 | ACCESS ROADS | MI* | 10 | 231715.0 | 2317150 | 842600 | 0 | 1474550* | --- | 42.13 | 20000 |
| 17.300000 | ACCESS RAILROAD | LF* | 52800 | 159.60 | 8426880 | 4213440 | 0 | 4213440* | 2.00 | 39.90 | 105600 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 2740400 | 1612000 | 0 | 1128400* | --- | 40.30 | 40000 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 1027650 | 604500 | 0 | 423150* | --- | 40.30 | 15000 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 10 | 171275.0 | 1712750 | 1007500 | 0 | 705250* | --- | 40.30 | 25000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 53788790 | 14372436 | 29033000 | 10383354* | --- | 30.81 | 466475 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 4472325 | 2475000 | 0 | 1997325* | --- | 16.50 | 150000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 3600000 | 0 | 3600000 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 2400000 | 0 | 2400000 | 0* | --- | 30.75 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1200000 | 0 | 1200000 | 0* | --- | 30.75 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 171000 | 0 | 171000 | 0* | --- | 0.00 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA1 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 8-NOV-84 TIME: 16:22:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 171000 | 0 | 171000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 31416262 | 2851699 | 25005500 | 3559063* | --- | 43.60 | 65400 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1588500 | 600000 | 712500 | 276000* | --- | 40.00 | 15000 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 29827762 | 2251699 | 24293000 | 3283063* | --- | 44.68 | 50400 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 10725000 | 0 | 10725000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 12225000 | 0 | 12225000 | 0* | --- | 0.00 | 0 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2389868 | 1260400 | 285000 | 844468* | --- | 46.00 | 27400 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 238986.8 | 2389868 | 1260400 | 285000 | 844468* | --- | 46.00 | 27400 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 4487894 | 991299 | 1058000 | 2438595* | --- | 43.10 | 23000 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2056370 | 1519750 | 256500 | 280120* | --- | 21.40 | 71000 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 147250 | 0 | 147250 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 691070 | 595750 | 0 | 95320* | --- | 23.83 | 25000 |
| 71.630000 | TESTING | LS* | ---- | ---- | 756050 | 462000 | 109250 | 184800* | --- | 42.00 | 11000 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000 | 462000 | 0 | 0* | --- | 13.20 | 35000 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 293368 | 209549 | 0 | 83819* | --- | 38.10 | 5500 |
| 71.900000 | PRODUCTIVITY ADJ | LS* | ---- | ---- | 11779465 | 7316438 | 0 | 4463027* | --- | 41.91 | 174575 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 56050000 | 0 | 56050000 | 0* | --- | 0.00 | 0 |

200 MW Coal Fired Plant
Extention at Nenana

5

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
2 - 200 MW NENANA COAL - FIRED UNITS
ESTIMATE NO. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

The order of magnitude, plant investment cost estimates for the two unit facility were prepared in the Ebasco Fossil Code of Accounts. These overnight estimates have a base pricing level of January 1983 which is reflected in all detailed category costs. Neither escalation from January 1983 nor owner's costs have been addressed.

Principal references which impacted the development of the estimates include the following:

- the 8/25/84 request for estimate,
- the 6/21/84 Beluga coal-fired 200 MW initial unit estimate and basis of estimate as provided by Seattle Estimating,
- summary level, major equipment/system design descriptions written by Seattle Engineering (to solicit vendor budgetary quotations for the Beluga plant) and respondents' budgetary pricing,
- telecons between New York Estimating and Seattle Engineering and Estimating (to identify site specifics at the Nenana coal-fired plant, discuss similarities between Beluga and Nenana regarding fuel type and plant systems design, et cetera),
- drawings #APA 2592.140 M-SP-001, M-GA-002 and M-GA-003,
- the Ebasco coal-fired reference plant project estimate for 2-400MW units, and various conceptual estimating methodologies utilized to estimate balance of plant costs, especially bulk quantities.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER STUDY
2 - 200 MW NENANA COAL-FIRED UNITS
ESTIMATE NO. APA 1707 M-1

The capital cost estimate for the Nenana 200 MW initial unit parallels the Beluga 200 MW initial unit estimate in both format and development of detailed category costs, wherever practicable.

Identical material supply cost at Nenana is 5% less than at Beluga due to the base pricing date difference; installation costs of that material scope are similar due to the approximation allowed whereby craft wage scales for the two sites are identical, i.e., Nenana January 1983 composite wage rates equal Beluga January 1984 composite wage rates.

Adjustments for additional freight costs at Nenana are included in the direct construction costs, while the productivity influence for colder weather at Nenana appears as a one-line adder in the indirect construction costs.

Contract other markups parallel the Beluga estimate.

However, major expense items, namely formwork, are deescalated 5% from the Beluga estimate (except for premium pay as stated in indirect construction costs).

The basis of the plant investment cost estimates for 2 - 200 MW Nenana Coal-Fired units is identical to the Beluga estimate in the following areas:

Subcontract construction with 6-10s,

Labor productivity (before bottom line adjustment for direct manhours),

Sufficient skilled labor availability,
Labor camp required,
Types of professional services provided by Ebasco,
Permanent town for plant operating personnel excluded,
Owner's costs excluded (land and land rights, A F U D C, administration, etc),
Operating and maintenance costs not included,
Contingency rates of 12% for material and 15% for installation,
Exclusion of sales/use taxes,
Spare parts and special tools not included,
Exclusion of startup costs, and
Exclusion of maintenance machinery,laboratory and office equipment.

The following cursory, estimating discipline descriptions refer to the initial 200 MW unit for Nenana coal. The extension unit scope and pricing methodology parallels the classification of common facilities (included with initial unit) as practised in the 400 MW CFRP Project Cost Estimate, wherever practicable.

## BASIS FOR ESTIMATE

### CIVIL

Site terrain was assumed similar to Beluga; however, the additional scope of coal and lime railroad unloading facilities necessitate a plant rail loop (and consequently larger site development). Rock subtrata and dewatering conditions were assumed similar to Beluga. An acceptable bearing stratum again requires 80 ft long H-piles; at this plant location, subsoil condiitions require permafrost-mitigative piling for nearly all equipment and structures. C.e.c.i. earth structures are sized in accordance with the site plan and recent c.f.r.p. estimate revisions.

The circulating water system is identical to Beluga, and includes a 66,000 gpm rectangular multi-cell cooling tower.

Cubic yards of reinforced concrete foundations increase for the air quality control (limestone railroad unloading) and coal handling (coal railroad unloading) systems. Yard piping will be enclosed in prefabricated vaults.

Plant island buildings are similar to Beluga. The flue gas stack was sized w/ 2-11 ft diameter steel flues at 500 ft high, i.e., approximately 2.5 x boiler building height.

Other plant buildings are basically similar to Beluga.

The Ranney wellwater system is identical to Beluga; the 10 miles of access road and railroad spur both require permafrost-mitigative construction.

MECHANICAL

The steam turbine generator is an indoor type, tandem compound, condensing turbine, two-flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000 $^{o}$F/1000 $^{o}$F. The turbine design throttle flow will be 1,590,000 lb/hr. The maximum gross turbine output will be 220,000 kW with 2520 psig, 1000/1000 $^{o}$F, 2.7/4.0 in. Hg absolute back pressure. The generator is 244,400 KVA @ 45 psig, 0.9 PF, 3-phase, 60 Hz, 24,000 V and 0.5 shortcircut ratio complete with an excitation system.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER SUPPLY
2 - 200 MW NENANA COAL-FIRED UNITS
ESTIMATE NO. APA 1707 M-1

MECHANICAL (Cont'd)

The Nenana coal analysis was assumed similar to the Beluga coal analysis as advised, i.e., low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb. The pulverized, coal-fired steam generator and accessories are consequently identical to Beluga in supply scope and similar in pricing. Pricing is based on 1,590,000 lb/hr, 2650 psig and 1008 $^{o}$F main steam; 1,351,000 lb/hr, 600 psig, 630 $^{o}$F (@ inlet) reheat; and 525 $^{o}$F feedwater.

The air quality control system @ Nenana includes an incremental cost (over Beluga estimate) for railroad unloading of lime (used in lieu of truck unloading). The baghouse filters 662,000 ACFM @ 300 $^{o}$F, and includes 10 compartments @ 368 bags each, reverse gas cleaning, and auxiliary equipment. The dry $SO_2$ scrubbing system utilizes multi-cell sprayer absorbers with 85% $SO_2$ removal (70% guarantee). The system is rated @ 662,000 ACFM with a flue gas temperature of 300 $^{o}$F and 20% excess air.

Other mechanical equipment is similar to the Beluga estimate in scope and includes a 105,000 $ft^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 66,000 gpm and 27 $^{o}$F temperature rise.

The Coal Handling System @ Nenana is similar to the Beluga system scope, except for the addition of a rotary railcar dumping facility (used in lieu of truck unloading). The railcar unloading rate allows emptying a 110-car unit train in less than 4 hours. The ash handling systems are identical to Beluga.

## PIPING AND INSULATION

Large bore and small bore piping sizing and quantities are downsized based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance for insulating yard systems.

## ELECTRICAL

Estimating scope represents a scaled-down 2 x 400 MW c.f.r.p. estimate. Pricing is based on updating recent vendor quotations and discounted equipment pricing catalogs in accordance with representative historical escalation indices. As directed, the 230 KV transmission line was excluded at this juncture.

## INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60-hour week)
- Construction Management automotive equipment
- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment

INDIRECT CONSTRUCTION COSTS (Cont'd)

- Gravel air strip
- 15-mile 69 KV temporary power transmission line
- Labor camp, food service, housekeeping
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

ALASKA POWER AUTHORITY
SUSITNA NEED FOR POWER SUPPLY
2 - 200 MW NENANA COAL-FIRED UNITS
ESTIMATE NO. APA 1707 M-1

INDIRECT CONSTRUCTION COSTS (Cont'd)

- Gravel air strip
- 15-mile 69 KV temporary power transmission line
- Labor camp, food service, housekeeping
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

JDF
11/01/84

# 200MW NENANA COAL PLANTS

11/01/84 Discussion w/ Szablya
2 X 10 miles of 230 KV Line (Single Circ.)

## Modifications from Beluga Estimate

1. T-Line 48 miles - 10 miles.
2. No off-site unloading / hauling at Nenana Plants.
3. 2 Unit substation including with Unit 1 rather than separately.
4. 5% Higher wage rates (Fairbanks vs. Anchorage).
5. 5% Productivity adjustment factor (5% more MH's).
6. Higher material prices to account for higher freight.
7. Railroad rather than truck deliver, add:
   a. Thaw Shed.
   b. (2) Rotary Car Dumpers [Lime, Coal].
   c. 45 AC larger site (fencing, gravel, insulation, roads).
   d. Larger coal handling system (piling, excavation, BF, Concrete conveyors).
   e. Site loop railroad, 10 mile access railroad from Alaska RR.
   f. 10 miles less access roads.
   g. Coal & lime unloading tunnels (excavation concrete backfill).
8. Utilidor for yard piping (increased concrete, yard piping).

UNIT 2
RAIL DELIVERY OF COAL/LIME

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 386860660* | 154503037 | ---- * | ---- | 232357623* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 46861414* | 16553896 | ---- * | ---- | 30307518* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 339999246* | 137949141 | ---- * | ---- | 202050105* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 446206* | 219100 | ---- * | ---- | 227106* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 16040024* | 8017050 | ---- * | ---- | 8022974* | 0 | 0 | 0 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7852357* | 3730555 | ---- * | ---- | 4121802* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 15813078* | 3518273 | ---- * | ---- | 12294805* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 19778899* | 8212449 | ---- * | ---- | 11566450* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 9493920* | 3287824 | ---- * | ---- | 6206096* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 18514900* | 15850000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42100000* | 23200000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 40251635* | 21131135 | ---- * | ---- | 19120500* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 13336497* | 9545850 | ---- * | ---- | 3790647* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 6315436* | 3496060 | ---- * | ---- | 2819376* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 26853092* | 9521792 | ---- * | ---- | 17331300* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 7231831* | 792853 | ---- * | ---- | 6438978* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 51925993* | 18837300 | ---- * | ---- | 33088693* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2281300* | 151900 | ---- * | ---- | 2129400* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 3095700* | 582000 | ---- * | ---- | 2513700* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 3050200* | 1680000 | ---- * | ---- | 1370200* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 32876178* | 0 | ---- * | ---- | 32876178* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 16000000* | 0 | ---- * | ---- | 16000000* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 386860660* | 154503037 | ---- * | ---- | 232357623* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 46861414* | 16553896 | ---- * | ---- | 30307518* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 339999246* | 137949141 | ---- * | ---- | 202050105* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 446206* | 219100 | ---- * | ---- | 227106* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 403872* | 202000 | ---- * | ---- | 201872* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 42334* | 17100 | ---- * | ---- | 25234* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 16040024* | 8017050 | ---- * | ---- | 8022974* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1701895* | 0 | ---- * | ---- | 1701895* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 545105* | 0 | ---- * | ---- | 545105* | 0 | 0 | 0 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.1 | 545105* | 0 | 0.00* | 29.1 | 545105* | 0 | 0 | 0 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 169070* | 0 | ---- * | ---- | 169070* | 0 | 0 | 0 |
| 2.242000 | EARTH EXCAVATION | CY* | 5800 | 29.1 | 169070* | 0 | 0.00* | 29.1 | 169070* | 0 | 0 | 0 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 987720* | 0 | ---- * | ---- | 987720* | 0 | 0 | 0 |
| 2.252000 | EARTH EXCAVATION | CY* | 15000 | 29.1 | 437250* | 0 | 0.00* | 29.1 | 437250* | 0 | 0 | 0 |
| 2.253000 | ROCK EXCAVATION | CY* | 7400 | 74.4 | 550470* | 0 | 0.00* | 74.4 | 550470* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 1469942* | 0 | ---- * | ---- | 1469942* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529178* | 0 | ---- * | ---- | 529178* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.2 | 386091* | 0 | 0.00* | 28.2 | 386091* | 0 | 0 | 0 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.5 | 143087* | 0 | 0.00* | 79.5 | 143087* | 0 | 0 | 0 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 848532* | 0 | ---- * | ---- | 848532* | 0 | 0 | 0 |
| 2.322000 | EARTH EXCAVATION | CY* | 27600 | 30.7 | 848532* | 0 | 0.00* | 30.7 | 848532* | 0 | 0 | 0 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 92232* | 0 | ---- * | ---- | 92232* | 0 | 0 | 0 |
| 2.332000 | EARTH EXCAVATION | CY* | 3000 | 30.7 | 92232* | 0 | 0.00* | 30.7 | 92232* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 12408187* | 7965750 | ---- * | ---- | 4442437* | 0 | 0 | 0 |
| 2.510000 | STATION AREA | LF* | 155000 | 57.7 | 8945437* | 5742750 | 37.05* | 20.7 | 3202687* | 0 | 0 | 0 |
| 2.520000 | AQCS AREA | LF* | 60000 | 57.7 | 3462750* | 2223000 | 37.05* | 20.7 | 1239750* | 0 | 0 | 0 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 460000* | 51300 | ---- * | ---- | 408700* | 0 | 0 | 0 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 460000* | 51300 | ---- * | ---- | 408700* | 0 | 0 | 0 |
| 2.731000 | PVC LINER | SF* | 120000 | 0.5 | 57700* | 51300 | 0.43* | 0.1 | 6400* | 0 | 0 | 0 |
| 2.732000 | EXCAVATION | CY* | 15000 | 17.9 | 268200* | 0 | 0.00* | 17.9 | 268200* | 0 | 0 | 0 |
| 2.733000 | BACKFILL | CY* | 5000 | 26.8 | 134100* | 0 | 0.00* | 26.8 | 134100* | 0 | 0 | 0 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7852357* | 3730555 | ---- * | ---- | 4121802* | 0 | 0 | 0 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1959586* | 782610 | ---- * | ---- | 1176976* | 0 | 0 | 0 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3000 | 346.3 | 1038990* | 541500 | 180.50* | 165.8 | 497490* | 0 | 0 | 0 |
| 3.260000 | BEDDING MATERIAL | CY* | 1850 | 30.0 | 55459* | 17575 | 9.50* | 20.5 | 37884* | 0 | 0 | 0 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 816823* | 204915 | ---- * | ---- | 611908* | 0 | 0 | 0 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 428.1 | 321093* | 92625 | 123.50* | 304.6 | 228468* | 0 | 0 | 0 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 897.0 | 358817* | 79420 | 198.55* | 698.5 | 279397* | 0 | 0 | 0 |
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 684.6 | 136913* | 32870 | 164.35* | 520.2 | 104043* | 0 | 0 | 0 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 6902.0 | 48314* | 18620 | 2660.00* | 4242.0 | 29694* | 0 | 0 | 0 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 5892771* | 2947945 | ---- * | ---- | 2944826* | 0 | 0 | 0 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 769115* | 193800 | ---- * | ---- | 575315* | 0 | 0 | 0 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.4 | 145275* | 0 | 0.00* | 22.4 | 145275* | 0 | 0 | 0 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 415.9 | 623840* | 193800 | 129.20* | 286.7 | 430040* | 0 | 0 | 0 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 843815* | 216695 | ---- * | ---- | 627120* | 0 | 0 | 0 |
| 3.422000 | EXCAVATION | CY* | 4500 | 22.4 | 100575* | 0 | 0.00* | 22.4 | 100575* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.423000 | CONCRETE | CY* | 1500 | 463.3 | 694926* | 198075 | 132.05* | 331.2 | 496851* | 0 | 0 | 0 |
| 3.424000 | MISC STEEL | TN* | 7 | 6902.0 | 48314* | 18620 | 2660.00* | 4242.0 | 29694* | 0 | 0 | 0 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 380410* | 318250 | ---- * | ---- | 62160* | 0 | 0 | 0 |
| 3.433000 | SCREENS | SF* | 500 | 56.8 | 28390* | 14250 | 28.50* | 28.3 | 14140* | 0 | 0 | 0 |
| 3.435000 | STOP LOGS | SF* | 500 | 71.1 | 35570* | 28500 | 57.00* | 14.1 | 7070* | 0 | 0 | 0 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 316450* | 275500 | ---- * | 0.0 | 40950* | 0 | 0 | 0 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 740943* | 319200 | ---- * | ---- | 421743* | 0 | 0 | 0 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 3075.4 | 230655* | 114000 | 1520.00* | 1555.4 | 116655* | 0 | 0 | 0 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 85.0 | 510288* | 205200 | 34.20* | 50.8 | 305088* | 0 | 0 | 0 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 3158488* | 1900000 | ---- * | ---- | 1258488* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 15813078* | 3518273 | ---- * | ---- | 12294805* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4500 | 831.4 | 3741485* | 628425 | 139.65* | 691.8 | 3113060* | 0 | 0 | 0 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 732.8 | 1392361* | 265335 | 139.65* | 593.2 | 1127026* | 0 | 0 | 0 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 765.7 | 1301644* | 237404 | 139.65* | 626.0 | 1064240* | 0 | 0 | 0 |
| 4.400000 | ADCS CONCRETE | CY* | 8800 | 764.3 | 6726105* | 1228920 | 139.65* | 624.7 | 5497185* | 0 | 0 | 0 |
| 4.900000 | MISCELL CONCRETE | LS* | ---- | ---- | 2651483* | 1158189 | ---- * | ---- | 1493294* | 0 | 0 | 0 |
| 4.910000 | YARD PIPING VAULT | LS* | ---- | ---- | 1708810* | 906820 | ---- * | ---- | 801990* | 0 | 0 | 0 |
| 4.920000 | OTHER MISC CONC | CY* | 1800 | 523.7 | 942673* | 251369 | 139.65* | 384.1 | 691304* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 19778899* | 8212449 | ---- * | ---- | 11566450* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 4092895* | 1945505 | ---- * | ---- | 2147390* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 2377.5 | 2853000* | 1425000 | 1187.50* | 1190.0 | 1428000* | 0 | 0 | 0 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 363300* | 179550 | ---- * | ---- | 183750* | 0 | 0 | 0 |
| 5.121000 | WALL FRAMING | TN* | 105 | 3440.0 | 363300* | 179550 | 1710.00* | 1750.0 | 183750* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 557295* | 122455 | ---- * | ---- | 434840* | 0 | 0 | 0 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 27.6 | 331800* | 79800 | 6.65* | 21.0 | 252000* | 0 | 0 | 0 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 57.3 | 34410* | 6270 | 10.45* | 46.9 | 28140* | 0 | 0 | 0 |
| 5.133000 | HANDRAIL | LF* | 1000 | 102.2 | 102225* | 14725 | 14.73* | 87.5 | 87500* | 0 | 0 | 0 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 7405.0 | 88860* | 21660 | 1805.00* | 5600.0 | 67200* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 319300* | 218500 | ---- * | ---- | 100800* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 319300* | 218500 | ---- * | ---- | 100800* | 0 | 0 | 0 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 11849152* | 4370982 | ---- * | ---- | 7478170* | 0 | 0 | 0 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 2377.5 | 5468250* | 2731250 | 1187.50* | 1190.0 | 2737000* | 0 | 0 | 0 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1899700* | 632700 | ---- * | ---- | 1267000* | 0 | 0 | 0 |
| 5.221000 | WALL FRAMING | TN* | 330 | 5210.0 | 1719300* | 564300 | 1710.00* | 3500.0 | 1155000* | 0 | 0 | 0 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 4510.0 | 180400* | 68400 | 1710.00* | 2800.0 | 112000* | 0 | 0 | 0 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 4242752* | 888282 | ---- * | ---- | 3354470* | 0 | 0 | 0 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 27.6 | 1935500* | 465500 | 6.65* | 21.0 | 1470000* | 0 | 0 | 0 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 57.3 | 91760* | 16720 | 10.45* | 46.9 | 75040* | 0 | 0 | 0 |
| 5.233000 | HANDRAIL | LF* | 12500 | 105.7 | 1321492* | 184062 | 14.73* | 91.0 | 1137430* | 0 | 0 | 0 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 7450.0 | 894000* | 222000 | 1850.00* | 5600.0 | 672000* | 0 | 0 | 0 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 238450* | 118750 | ---- * | ---- | 119700* | 0 | 0 | 0 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 142000* | 47500 | ---- * | ---- | 94500* | 0 | 0 | 0 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 96450* | 71250 | ---- * | ---- | 25200* | 0 | 0 | 0 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 96450* | 71250 | ---- * | ---- | 25200* | 0 | 0 | 0 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 3533602* | 1767712 | ---- * | ---- | 1765890* | 0 | 0 | 0 |
| 5.310000 | MAIN STEEL | TN* | 225 | 2377.5 | 534937* | 267187 | 1187.50* | 1190.0 | 267750* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.320000 | FRAMING | LS* | ---- | ---- | 338650* | 111150 | ---- * | ---- | 227500* | 0 | 0 | 0 |
| 5.321000 | WALL FRAMING | TN* | 65 | 5210.0 | 338650* | 111150 | 1710.00* | 3500.0 | 227500* | 0 | 0 | 0 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 337000* | 190000 | ---- * | ---- | 147000* | 0 | 0 | 0 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 74640* | 57000 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 74640* | 57000 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 741750* | 251750 | ---- * | ---- | 490000* | 0 | 0 | 0 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 7417.5 | 741750* | 251750 | 2517.50* | 4900.0 | 490000* | 0 | 0 | 0 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 1506625* | 890625 | ---- * | ---- | 616000* | 0 | 0 | 0 |
| 5.361000 | STEEL SILOS | TN* | 170 | 6742.5 | 1146225* | 670225 | 3942.50* | 2800.0 | 476000* | 0 | 0 | 0 |
| 5.362000 | SS PLATES | TN* | 40 | 9010.0 | 360400* | 220400 | 5510.00* | 3500.0 | 140000* | 0 | 0 | 0 |
| 5.900000 | UNCLASS STEEL | TN* | 50 | 6065.0 | 303250* | 128250 | 2565.00* | 3500.0 | 175000* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 9493920* | 3287824 | ---- * | ---- | 6206096* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2080184* | 826500 | ---- * | ---- | 1253684* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 956438* | 285000 | ---- * | ---- | 671438* | 0 | 0 | 0 |
| 6.170000 | HVAC | LS* | ---- | ---- | 835040* | 427500 | ---- * | ---- | 407540* | 0 | 0 | 0 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 224360* | 95000 | ---- * | ---- | 129360* | 0 | 0 | 0 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 64346* | 19000 | ---- * | ---- | 45346* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2857636* | 1052000 | ---- * | ---- | 1805636* | 0 | 0 | 0 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 1246080* | 361000 | ---- * | ---- | 885080* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1106400* | 475000 | ---- * | ---- | 631400* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 413200* | 178000 | ---- * | ---- | 235200* | 0 | 0 | 0 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 91[illegible]56* | 38000 | ---- * | ---- | 53956* | 0 | 0 | 0 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 764619* | 267425 | ---- * | ---- | 497194* | 0 | 0 | 0 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMF CHECKED: JDF

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 259118* | 76000 | ---- * | ---- | 183118* | 0 | 0 | 0 |
| 6.370000 | HVAC | LS* | ---- | ---- | 343600* | 114000 | ---- * | ---- | 229600* | 0 | 0 | 0 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 147690* | 71250 | ---- * | ---- | 76440* | 0 | 0 | 0 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 14211* | 6175 | ---- * | ---- | 8036* | 0 | 0 | 0 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 2370771* | 551949 | ---- * | ---- | 1818822* | 0 | 0 | 0 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 135.6 | 183046* | 44887 | 33.25* | 102.3 | 138159* | 0 | 0 | 0 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 146.4 | 124461* | 28262 | 33.25* | 113.2 | 96199* | 0 | 0 | 0 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 147.4 | 2063264* | 478800 | 34.20* | 113.2 | 1584464* | 0 | 0 | 0 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 1420710* | 589950 | ---- * | ---- | 830760* | 0 | 0 | 0 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 1420710* | 589950 | ---- * | ---- | 830760* | 0 | 0 | 0 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 61.8 | 1420710* | 589950 | 25.65* | 36.1 | 830760* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 18514900* | 15850000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 18514900* | 15850000 | ---- * | ---- | 2664900* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42100000* | 23200000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 42100000* | 23200000 | ---- * | ---- | 18900000* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 40251635* | 21131135 | ---- * | ---- | 19120500* | 0 | 0 | 0 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 7806800* | 3800000 | ---- * | ---- | 4006800* | 0 | 0 | 0 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 30286100* | 15701600 | ---- * | ---- | 14584500* | 0 | 0 | 0 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 30286100* | 15701600 | ---- * | ---- | 14584500* | 0 | 0 | 0 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 3341600* | 1451600 | ---- * | ---- | 1890000* | 0 | 0 | 0 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 26944500* | 14250000 | ---- * | ---- | 12694500* | 0 | 0 | 0 |
| 9.400000 | FANS | LS* | ---- | ---- | 2158735* | 1629535 | ---- * | ---- | 529200* | 0 | 0 | 0 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 1345650* | 1011750 | ---- * | ---- | 333900* | 0. | 0 | 0 |

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NENANA2 200 MW COAL
ESTIMATE NO. AFA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.420000 | SILENCERS | LS* | ---- | ---- | 813085* | 617785 | ---- * | ---- | 195300* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 13336497* | 9545850 | ---- * | ---- | 3790647* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 3154723* | 2689720 | ---- * | ---- | 465003* | 0 | 0 | 0 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 2956170* | 2566200 | ---- * | ---- | 389970* | 0 | 0 | 0 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 390420.0 | 780840* | 624600 | ---- * | 78120.0 | 156240* | 0 | 0 | 0 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 840100.0 | 1680200* | 1554200 | ---- * | 63000.0 | 126000* | 0 | 0 | 0 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 118850.0 | 237700* | 181000 | 90500.00* | 28350.0 | 56700* | 0 | 0 | 0 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 257430* | 206400 | ---- * | ---- | 51030* | 0 | 0 | 0 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 9513* | 7560 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 9513* | 7560 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 24092* | 13760 | ---- * | ---- | 10332* | 0 | 0 | 0 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 12046.0 | 24092* | 13760 | 6880.00* | 5166.0 | 10332* | 0 | 0 | 0 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 13606* | 9700 | ---- * | ---- | 3906* | 0 | 0 | 0 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 6803* | 4850 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 6803* | 4850 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 151342* | 92500 | ---- * | ---- | 58842* | 0 | 0 | 0 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 73580* | 38300 | ---- * | ---- | 35280* | 0 | 0 | 0 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 23920.0 | 47840* | 30200 | 15100.00* | 8820.0 | 17640* | 0 | 0 | 0 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 14961.0 | 29922* | 24000 | 12000.00* | 2961.0 | 5922* | 0 | 0 | 0 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 2423174* | 1725575 | ---- * | ---- | 697599* | 0 | 0 | 0 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 1554900* | 969000 | ---- * | ---- | 585900* | 0 | 0 | 0 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 868274* | 756575 | ---- * | ---- | 111699* | 0 | 0 | 0 |
| 10.221000 | CW PUMPS | EA* | 2 | 144732.0 | 289464* | 256200 | ---- * | 16632.0 | 33264* | 0 | 0 | 0 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 87324.0 | 174648* | 143400 | 71700.00* | 15624.0 | 31248* | 0 | 0 | 0 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 82267.0 | 164534* | 150800 | 75400.00* | 6867.0 | 13734* | 0 | 0 | 0 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 236900* | 205400 | ---- * | ---- | 31500* | 0 | 0 | 0 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 2728* | 775 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 1936978* | 1755160 | ---- * | ---- | 181818* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 175638.0 | 1229466* | 1129800 | ---- * | 14238.0 | 99666* | 0 | 0 | 0 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 234640* | 191800 | ---- * | ---- | 42840* | 0 | 0 | 0 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 166430.0 | 332860* | 301360 | ---- * | 15750.0 | 31500* | 0 | 0 | 0 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 70006.0 | 140012* | 132200 | 66100.00* | 3906.0 | 7812* | 0 | 0 | 0 |
| 10.400000 | TANKS | LS* | ---- | ---- | 661182* | 242295 | ---- * | ---- | 418887* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 594075* | 195600 | ---- * | ---- | 398475* | 0 | 0 | 0 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 198475* | 52000 | ---- * | ---- | 146475* | 0 | 0 | 0 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 395600* | 143600 | ---- * | ---- | 252000* | 0 | 0 | 0 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 67107* | 46695 | ---- * | ---- | 20412* | 0 | 0 | 0 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 6445* | 3295 | ---- * | ---- | 3150* | 0 | 0 | 0 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 23009* | 17150 | ---- * | ---- | 5859* | 0 | 0 | 0 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 9513* | 7560 | ---- * | ---- | 1953* | 0 | 0 | 0 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 9740* | 6590 | ---- * | ---- | 3150* | 0 | 0 | 0 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 18400* | 12100 | ---- * | ---- | 6300* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 2350940* | 1873400 | ---- * | ---- | 477540* | 0 | 0 | 0 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 249900* | 180600 | ---- * | ---- | 69300* | 0 | 0 | 0 |
| 10.512000 | STAT AIR COMPRESS | EA* | 1 | 0.0 | 181700* | 118700 | ---- * | 0.0 | 63000* | 0 | 0 | 0 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 68200* | 61900 | ---- * | ---- | 6300* | 0 | 0 | 0 |

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NONANAZ 200 MW COAL
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 2101040* | 1692800 | ---- * | ---- | 408240* | 0 | 0 | 0 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 546580* | 429400 | ---- * | ---- | 117180* | 0 | 0 | 0 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 1063060* | 828700 | ---- * | ---- | 234360* | 0 | 0 | 0 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 68770* | 56800 | ---- * | ---- | 11970* | 0 | 0 | 0 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 190140* | 172500 | ---- * | ---- | 17640* | 0 | 0 | 0 |
| 10.526000 | BLK GAS ST&DISTR | LS* | ---- | ---- | 232490* | 205400 | ---- * | ---- | 27090* | 0 | 0 | 0 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 2809500* | 1259700 | ---- * | ---- | 1549800* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 6315436* | 3496060 | ---- * | ---- | 2819376* | 0 | 0 | 0 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 1605350* | 871400 | ---- * | ---- | 733950* | 0 | 0 | 0 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 707650* | 370600 | ---- * | ---- | 337050* | 0 | 0 | 0 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 707650* | 370600 | ---- * | ---- | 337050* | 0 | 0 | 0 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 897700* | 500800 | ---- * | ---- | 396900* | 0 | 0 | 0 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 897700* | 500800 | ---- * | ---- | 396900* | 0 | 0 | 0 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 3053986* | 1579660 | ---- * | ---- | 1474326* | 0 | 0 | 0 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 1117200* | 638400 | ---- * | ---- | 478800* | 0 | 0 | 0 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 111450* | 60420 | ---- * | ---- | 51030* | 0 | 0 | 0 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 307100* | 174800 | ---- * | ---- | 132300* | 0 | 0 | 0 |
| 11.240000 | DCWTW BIN&SET TKS | LS* | ---- | ---- | 1105250* | 462650 | ---- * | ---- | 642600* | 0 | 0 | 0 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 76952.0 | 230856* | 124260 | 41420.00* | 35532.0 | 106596* | 0 | 0 | 0 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 182130* | 119130 | ---- * | ---- | 63000* | 0 | 0 | 0 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 1656100* | 1045000 | ---- * | ---- | 611100* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 26853092* | 9521792 | ---- * | ---- | 17331300* | 0 | 0 | 0 |
| 12.100000 | LARGE BORE PIPING | TN* | 880 | 19828.4 | 17448992* | 8190512 | 9307.40* | 10521.0 | 9258480* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 86000 | 109.3 | 9404100* | 1331280 | 15.48* | 93.9 | 8072820* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 7231831* | 792853 | ---- * | ---- | 6438978* | 0 | 0 | 0 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 7231831* | 792853 | ---- * | ---- | 6438978* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 6742000* | 6175000 | ---- * | ---- | 567000* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 51925993* | 18837300 | ---- * | ---- | 33088693* | 0 | 0 | 0 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 2583531* | 2252400 | ---- * | ---- | 331131* | 0 | 0 | 0 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 1421780* | 1310000 | ---- * | 0.0 | 111780* | 0 | 0 | 0 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 1161751* | 942400 | ---- * | ---- | 219351* | 0 | 0 | 0 |
| 15.131000 | COMMON SERV XMFR | EA* | 2 | 319760.0 | 639520* | 606400 | ---- * | 16560.0 | 33120* | 0 | 0 | 0 |
| 15.132000 | STATION SRV XMFR | EA* | 6 | 47088.5 | 282531* | 255000 | 42500.00* | 4588.5 | 27531* | 0 | 0 | 0 |
| 15.133000 | LTG & MISC XMFR | EA* | 40 | 3292.5 | 131700* | 42000 | 1050.00* | 2242.5 | 89700* | 0 | 0 | 0 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 108000* | 39000 | 39000.00* | 0.0 | 69000* | 0 | 0 | 0 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 3027080* | 2591000 | ---- * | ---- | 436080* | 0 | 0 | 0 |
| 15.300000 | MOTORS | EA* | 1 | 0.0 | 1869100* | 1600000 | ---- * | 0.0 | 269100* | 0 | 0 | 0 |
| 15.400000 | AQCS ELEC SYSTEM | LS* | ---- | ---- | 3543862* | 3067900 | ---- * | ---- | 475962* | 0 | 0 | 0 |
| 15.410000 | STATION SERV XMFR | EA* | 4 | 61133.0 | 244532* | 221900 | 55475.00* | 5658.0 | 22632* | 0 | 0 | 0 |
| 15.420000 | AQCS SWITCHGEAR | LS* | ---- | ---- | 1199570* | 1163000 | ---- * | ---- | 36570* | 0 | 0 | 0 |
| 15.421000 | SWITCHGEARS | LS* | ---- | ---- | 932270* | 916400 | ---- * | ---- | 15870* | 0 | 0 | 0 |
| 15.422000 | POWER CENTER | ST* | 1 | 0.0 | 267300* | 246600 | ---- * | 0.0 | 20700* | 0 | 0 | 0 |
| 15.430000 | MOTORS | EA* | 1 | 0.0 | 797230* | 785500 | ---- * | 0.0 | 11730* | 0 | 0 | 0 |
| 15.440000 | NON-SEGREGATED BUS | LS* | ---- | ---- | 1302530* | 897500 | ---- * | ---- | 405030* | 0 | 0 | 0 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 1005600* | 840000 | ---- * | ---- | 165600* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 1444200* | 975000 | ---- * | ---- | 469200* | 0 | 0 | 0 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 32389000* | 5586000 | ---- * | ---- | 26803000* | 0 | 0 | 0 |
| 15.800000 | LIGHTING SYSTEM | LT* | 1 | 0.0 | 2832700* | 535000 | ---- * | 0.0 | 2297700* | 0 | 0 | 0 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 3230920* | 1390000 | ---- * | ---- | 1840920* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2281300* | 151900 | ---- * | ---- | 2129400* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 648100* | 47500 | ---- * | ---- | 600600* | 0 | 0 | 0 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1163250* | 71250 | ---- * | ---- | 1092000* | 0 | 0 | 0 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 117750* | 8550 | ---- * | ---- | 109200* | 0 | 0 | 0 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 352200* | 24600 | ---- * | ---- | 327600* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 3095700* | 582000 | ---- * | ---- | 2513700* | 0 | 0 | 0 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3095700* | 582000 | ---- * | ---- | 2513700* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 3050200* | 1680000 | ---- * | ---- | 1370200* | 0 | 0 | 0 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 1 | 0.0 | 3050200* | 1680000 | ---- * | 0.0 | 1370200* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 32876178* | 0 | ---- * | ---- | 32876178* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 2683395* | 0 | ---- * | ---- | 2683395* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 2400000* | 0 | ---- * | ---- | 2400000* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 1600000* | 0 | ---- * | ---- | 1600000* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 800000* | 0 | ---- * | ---- | 800000* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 114000* | 0 | ---- * | ---- | 114000* | 0 | 0 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 114000* | 0 | ---- * | ---- | 114000* | 0 | 0 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 18833177* | 0 | ---- * | ---- | 18833177* | 0 | 0 | 0 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 386400* | 0 | ---- * | ---- | 386400* | 0 | 0 | 0 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 18446777* | 0 | ---- * | ---- | 18446777* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M 1

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 7500000* | 0 | ---- * | ---- | 7500000* | 0 | 0 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 8400000* | 0 | ---- * | ---- | 8400000* | 0 | 0 | 0 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2546777* | 0 | ---- * | ---- | 2546777* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1370424* | 0 | ---- * | ---- | 1370424* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 98170* | 0 | ---- * | ---- | 98170* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 461634* | 0 | ---- * | ---- | 461634* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 501740* | 0 | ---- * | ---- | 501740* | 0 | 0 | 0 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 308880* | 0 | ---- * | ---- | 308880* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 234696* | 0 | ---- * | ---- | 234696* | 0 | 0 | 0 |
| 71.900000 | PRODUCTIVITY ADJ | LS* | ---- | ---- | 7240486* | 0 | ---- * | ---- | 7240486* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 16000000* | 0 | ---- * | ---- | 16000000* | 0 | 0 | 0 |
| $ | | | | | | | | | | | | |

UNIT 2
RAIL DELIVERY OF COAL/LIME

BY: WMP CHECKED: JDF

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 232357623 | 108756317 | 35647680 | 57646108* | --- | 42.20 | 2577281 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 30307518 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 202050105 | 108756317 | 35647680 | 57646108* | --- | 42.20 | 2577281 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 227106 | 146520 | 0 | 80586* | --- | 40.70 | 3600 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 8022974 | 3128961 | 26700 | 4867313* | --- | 43.20 | 72423 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4121802 | 2755932 | 44460 | 1321410* | --- | 44.63 | 61751 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 12294805 | 8583922 | 223850 | 3487033* | --- | 44.06 | 194840 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 11566450 | 8261750 | 0 | 3304700* | --- | 49.89 | 165613 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 6206096 | 4432927 | 0 | 1773169* | --- | 42.63 | 103983 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 19120500 | 12747000 | 0 | 6373500* | --- | 42.00 | 303500 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 3790647 | 2527098 | 0 | 1263549* | --- | 42.00 | 60169 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 2819376 | 1879584 | 0 | 939792* | --- | 42.00 | 44752 |
| 12.000000 | PIPING | LS* | ---- | ---- | 17331300 | 11554200 | 0 | 5777100* | --- | 42.00 | 275100 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6438978 | 4292652 | 0 | 2146326* | --- | 42.00 | 102206 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 33088693 | 21992462 | 100000 | 10996231* | --- | 46.00 | 478097 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2129400 | 1521000 | 0 | 608400* | --- | 39.00 | 39000 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 1370200 | 806000 | 0 | 564200* | --- | 40.30 | 20000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 32876178 | 8254509 | 19252670 | 5368999* | --- | 30.09 | 274347 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 16000000 | 0 | 16000000 | 0* | --- | 0.00 | 0 |

BY: WMP CHECKED: JDF

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|

BY: WMP CHECKED: JDF

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 232357623 | 108756317 | 35647680 | 57646108* | --- | 42.20 | 2577281 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 30307518 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 202050105 | 108756317 | 35647680 | 57646108* | --- | 42.20 | 2577281 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 227106 | 146520 | 0 | 80586* | --- | 40.70 | 3600 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 201872 | 130240 | 0 | 71632* | --- | 40.70 | 3200 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 25234 | 16280 | 0 | 8954* | --- | 40.70 | 400 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 8022974 | 3128961 | 26700 | 4867313* | --- | 43.20 | 72423 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1701895 | 654020 | 21000 | 1026875* | --- | 42.40 | 15425 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 545105 | 198220 | 0 | 346885* | --- | 42.40 | 4675 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.15 | 545105 | 198220 | 0 | 346885* | 0.25 | 42.40 | 4675 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 169070 | 61480 | 0 | 107590* | --- | 42.40 | 1450 |
| 2.242000 | EARTH EXCAVATION | CY* | 5800 | 29.15 | 169070 | 61480 | 0 | 107590* | 0.25 | 42.40 | 1450 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 987720 | 394320 | 21000 | 572400* | --- | 42.40 | 9300 |
| 2.252000 | EARTH EXCAVATION | CY* | 15000 | 29.15 | 437250 | 159000 | 0 | 278250* | 0.25 | 42.40 | 3750 |
| 2.253000 | ROCK EXCAVATION | CY* | 7400 | 74.39 | 550470 | 235320 | 21000 | 294150* | 0.75 | 42.40 | 5550 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 1469942 | 492244 | 5700 | 971998* | --- | 42.70 | 11528 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529178 | 178656 | 5700 | 344822* | --- | 42.70 | 4184 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.18 | 386091 | 128697 | 0 | 257394* | 0.22 | 42.70 | 3014 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.49 | 143087 | 49959 | 5700 | 87428* | 0.65 | 42.70 | 1170 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 848532 | 282844 | 0 | 565688* | --- | 42.70 | 6624 |
| 2.322000 | EARTH EXCAVATION | CY* | 27600 | 30.74 | 848532 | 282844 | 0 | 565688* | 0.24 | 42.70 | 6624 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 92232 | 30744 | 0 | 61488* | --- | 42.70 | 720 |
| 2.332000 | EARTH EXCAVATION | CY* | 3000 | 30.74 | 92232 | 30744 | 0 | 61488* | 0.24 | 42.70 | 720 |

BY: WMP CHECKED: JDF

APA
NENANA2 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 4442437 | 1776975 | 0 | 2665462* | --- | 43.50 | 40850 |
| 2.510000 | STATION AREA | LF* | 155000 | 20.66 | 3202687 | 1281075 | 0 | 1921612* | 0.19 | 43.50 | 29450 |
| 2.520000 | AQCS AREA | LF* | 60000 | 20.66 | 1239750 | 495900 | 0 | 743850* | 0.19 | 43.50 | 11400 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 408700 | 205722 | 0 | 202978* | --- | 44.53 | 4620 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 408700 | 205722 | 0 | 202978* | --- | 44.53 | 4620 |
| 2.731000 | PVC LINER | SF* | 120000 | 0.05 | 6400 | 4572 | 0 | 1828* | 0.00 | 38.10 | 120 |
| 2.732000 | EXCAVATION | CY* | 15000 | 17.88 | 268200 | 134100 | 0 | 134100* | 0.20 | 44.70 | 3000 |
| 2.733000 | BACKFILL | CY* | 5000 | 26.82 | 134100 | 67050 | 0 | 67050* | 0.30 | 44.70 | 1500 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4121802 | 2755932 | 44460 | 1321410* | --- | 44.63 | 61751 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1176976 | 748752 | 17860 | 410364* | --- | 43.08 | 17382 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3000 | 165.83 | 497490 | 284280 | 0 | 213210* | 2.30 | 41.20 | 6900 |
| 3.260000 | BEDDING MATERIAL | CY* | 1850 | 20.48 | 37884 | 18942 | 0 | 18942* | 0.25 | 41.00 | 462 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 611908 | 424320 | 17860 | 169728* | --- | 44.20 | 9600 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 304.62 | 228468 | 159120 | 5700 | 63648* | 4.80 | 44.20 | 3600 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 698.49 | 279397 | 194480 | 7125 | 77792* | 11.00 | 44.20 | 4400 |
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 520.22 | 104043 | 70720 | 5035 | 28288* | 8.00 | 44.20 | 1600 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 2944826 | 2007180 | 26600 | 911046* | --- | 45.24 | 44369 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 575315 | 356460 | 12350 | 206505* | --- | 44.28 | 8050 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.35 | 145275 | 58110 | 0 | 87165* | 0.20 | 44.70 | 1300 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 286.69 | 430040 | 298350 | 12350 | 119340* | 4.50 | 44.20 | 6750 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 627120 | 406155 | 14250 | 206715* | --- | 44.54 | 9119 |
| 3.427000 | EXCAVATION | CY* | 4500 | 22.35 | 100575 | 40230 | 0 | 60345* | 0.20 | 44.70 | 900 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.423000 | CONCRETE | CY* | 1500 | 331.23 | 496851 | 344715 | 14250 | 137886* | 5.20 | 44.20 | 7799 |
| 3.424000 | MISC STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 62160 | 44400 | 0 | 17760* | --- | 46.74 | 950 |
| 3.433000 | SCREENS | SF* | 500 | 28.28 | 14140 | 10100 | 0 | 4040* | 0.40 | 50.50 | 200 |
| 3.435000 | STOP LOGS | SF* | 500 | 14.14 | 7070 | 5050 | 0 | 2020* | 0.20 | 50.50 | 100 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 40950 | 29250 | 0 | 11700* | --- | 45.00 | 650 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 421743 | 301245 | 0 | 120498* | --- | 46.70 | 6450 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 1555.40 | 116655 | 83325 | 0 | 33330* | 22.00 | 50.50 | 1650 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 50.85 | 305088 | 217920 | 0 | 87168* | 0.80 | 45.40 | 4800 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 1258488 | 898920 | 0 | 359568* | --- | 45.40 | 19800 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 12294805 | 8583922 | 223850 | 3487033* | --- | 44.06 | 194840 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4500 | 691.79 | 3113060 | 2187900 | 50000 | 875160* | 11.00 | 44.20 | 49500 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 593.17 | 1127026 | 789412 | 21850 | 315764* | 9.40 | 44.20 | 17860 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 626.02 | 1064240 | 743886 | 22800 | 297554* | 9.90 | 44.20 | 16830 |
| 4.400000 | AQCS CONCRETE | CY* | 8800 | 624.68 | 5497185 | 3850704 | 106200 | 1540281* | 9.90 | 44.20 | 87120 |
| 4.900000 | MISCELL CONCRETE | LS* | ---- | ---- | 1493294 | 1012020 | 23000 | 458274* | --- | 43.01 | 23530 |
| 4.910000 | YARD PIPING VAULT | LS* | ---- | ---- | 801990 | 534660 | 0 | 267330* | --- | 42.00 | 12730 |
| 4.920000 | OTHER MISC CONC | CY* | 1800 | 384.06 | 691304 | 477360 | 23000 | 190944* | 6.00 | 44.20 | 10800 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 11566450 | 8261750 | 0 | 3304700* | --- | 49.89 | 165613 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2147390 | 1533850 | 0 | 613540* | --- | 49.74 | 30837 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 1190.00 | 1428000 | 1020000 | 0 | 408000* | 17.00 | 50.00 | 20400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 183750 | 131250 | 0 | 52500* | --- | 50.00 | 2625 |
| 5.121000 | WALL FRAMING | TN* | 105 | 1750.00 | 183750 | 131250 | 0 | 52500* | 25.00 | 50.00 | 2625 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 434840 | 310600 | 0 | 124240* | --- | 50.00 | 6212 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 21.00 | 252000 | 180000 | 0 | 72000* | 0.30 | 50.00 | 3600 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 46.90 | 28140 | 20100 | 0 | 8040* | 0.67 | 50.00 | 402 |
| 5.133000 | HANDRAIL | LF* | 1000 | 87.50 | 87500 | 62500 | 0 | 25000* | 1.25 | 50.00 | 1250 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 5600.00 | 67200 | 48000 | 0 | 19200* | 80.00 | 50.00 | 960 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 7478170 | 5341550 | 0 | 2136620* | --- | 49.91 | 107021 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 1190.00 | 2737000 | 1955000 | 0 | 782000* | 17.00 | 50.00 | 39100 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1267000 | 905000 | 0 | 362000* | --- | 50.00 | 18100 |
| 5.221000 | WALL FRAMING | TN* | 330 | 3500.00 | 1155000 | 825000 | 0 | 330000* | 50.00 | 50.00 | 16500 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 2800.00 | 112000 | 80000 | 0 | 32000* | 40.00 | 50.00 | 1600 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 3354470 | 2396050 | 0 | 958420* | --- | 50.00 | 47921 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 21.00 | 1470000 | 1050000 | 0 | 420000* | 0.30 | 50.00 | 21000 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 46.90 | 75040 | 53600 | 0 | 21440* | 0.67 | 50.00 | 1072 |
| 5.233000 | HANDRAIL | LF* | 12500 | 90.99 | 1137430 | 812450 | 0 | 324980* | 1.30 | 50.00 | 16249 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 5600.00 | 672000 | 480000 | 0 | 192000* | 80.00 | 50.00 | 9600 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 119700 | 85500 | 0 | 34200* | --- | 45.00 | 1900 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 94500 | 67500 | 0 | 27000* | --- | 45.00 | 1500 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 1765890 | 1261350 | 0 | 504540* | --- | 49.94 | 25255 |
| 5.310000 | MAIN STEEL | TN* | 225 | 1190.00 | 267750 | 191250 | 0 | 76500* | 17.00 | 50.00 | 3825 |

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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.320000 | FRAMING | LS* | ---- | ---- | 227500 | 162500 | 0 | 65000* | --- | 50.00 | 3250 |
| 5.321000 | WALL FRAMING | TN* | 65 | 3500.00 | 227500 | 162500 | 0 | 65000* | 50.00 | 50.00 | 3250 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 147000 | 105000 | 0 | 42000* | --- | 50.00 | 2100 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 490000 | 350000 | 0 | 140000* | --- | 50.00 | 7000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 4900.00 | 490000 | 350000 | 0 | 140000* | 70.00 | 50.00 | 7000 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 616000 | 440000 | 0 | 176000* | --- | 50.00 | 8800 |
| 5.361000 | STEEL SILOS | TN* | 170 | 2800.00 | 476000 | 340000 | 0 | 136000* | 40.00 | 50.00 | 6800 |
| 5.362000 | SS PLATES | TN* | 40 | 3500.00 | 140000 | 100000 | 0 | 40000* | 50.00 | 50.00 | 2000 |
| 5.900000 | UNCLASS STEEL | TN* | 50 | 3500.00 | 175000 | 125000 | 0 | 50000* | 50.00 | 50.00 | 2500 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 6206096 | 4432927 | 0 | 1773169* | --- | 42.63 | 103983 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1253684 | 895489 | 0 | 358195* | --- | 42.46 | 21090 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 671438 | 479599 | 0 | 191839* | --- | 43.60 | 11000 |
| 6.170000 | HVAC | LS* | ---- | ---- | 407540 | 291100 | 0 | 116440* | --- | 41.00 | 7100 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 129360 | 92400 | 0 | 36960* | --- | 42.00 | 2200 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 45346 | 32390 | 0 | 12956* | --- | 41.00 | 790 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 1805636 | 1289740 | 0 | 515896* | --- | 42.37 | 30440 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 885080 | 632200 | 0 | 252880* | --- | 43.60 | 14500 |
| 6.270000 | HVAC | LS* | ---- | ---- | 631400 | 451000 | 0 | 180400* | --- | 41.00 | 11000 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 235200 | 168000 | 0 | 67200* | --- | 42.00 | 4000 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 53956 | 38540 | 0 | 15416* | --- | 41.00 | 940 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 497194 | 355139 | 0 | 142055* | --- | 42.08 | 8440 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 183118 | 130799 | 0 | 52319* | --- | 43.00 | 3000 |
| 6.370000 | HVAC | LS* | ---- | ---- | 229600 | 164000 | 0 | 65600* | --- | 41.00 | 4000 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 76440 | 54600 | 0 | 21840* | --- | 42.00 | 1300 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8036 | 5740 | 0 | 2296* | --- | 41.00 | 140 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 1818822 | 1299159 | 0 | 519663* | --- | 43.00 | 30213 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 102.34 | 138159 | 98685 | 0 | 39474* | 1.70 | 43.00 | 2295 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 113.18 | 96199 | 68714 | 0 | 27485* | 1.88 | 43.00 | 1598 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 113.18 | 1584464 | 1131760 | 0 | 452704* | 1.88 | 43.00 | 26320 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 830760 | 593400 | 0 | 237360* | --- | 43.00 | 13800 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 830760 | 593400 | 0 | 237360* | --- | 43.00 | 13800 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 36.12 | 830760 | 593400 | 0 | 237360* | 0.60 | 43.00 | 13800 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 19120500 | 12747000 | 0 | 6373500* | --- | 42.00 | 303500 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 4006800 | 2671200 | 0 | 1335600* | --- | 42.00 | 63600 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 14584500 | 9723000 | 0 | 4861500* | --- | 42.00 | 231500 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 14584500 | 9723000 | 0 | 4861500* | --- | 42.00 | 231500 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 1890000 | 1260000 | 0 | 630000* | --- | 42.00 | 30000 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 12694500 | 8463000 | 0 | 4231500* | --- | 42.00 | 201500 |
| 9.400000 | FANS | LS* | ---- | ---- | 529200 | 352800 | 0 | 176400* | --- | 42.00 | 8400 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 333900 | 222600 | 0 | 111300* | --- | 42.00 | 5300 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.420000 | SILENCERS | LS* | ---- | ---- | 195300 | 130200 | 0 | 65100* | --- | 42.00 | 3100 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 3790647 | 2527098 | 0 | 1263549* | --- | 42.00 | 60169 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 465003 | 310002 | 0 | 155001* | --- | 42.00 | 7381 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 389970 | 259980 | 0 | 129990* | --- | 42.00 | 6190 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 78120.0 | 156240 | 104160 | 0 | 52080* | --- | 42.00 | 2480 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 63000.0 | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 28350.0 | 56700 | 37800 | 0 | 18900* | --- | 42.00 | 900 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 10332 | 6888 | 0 | 3444* | --- | 42.00 | 164 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 5166.00 | 10332 | 6888 | 0 | 3444* | 82.00 | 42.00 | 164 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 3906 | 2604 | 0 | 1302* | --- | 42.00 | 62 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 58842 | 39228 | 0 | 19614* | --- | 42.00 | 934 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 35280 | 23520 | 0 | 11760* | --- | 42.00 | 560 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 8820.0 | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 2961.00 | 5922 | 3948 | 0 | 1974* | 47.00 | 42.00 | 94 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 697599 | 465066 | 0 | 232533* | --- | 42.00 | 11073 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 585900 | 390600 | 0 | 195300* | --- | 42.00 | 9300 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 111699 | 74466 | 0 | 37233* | --- | 42.00 | 1773 |
| 10.221000 | CW PUMPS | EA* | 2 | 16632.0 | 33264 | 22176 | 0 | 11088* | --- | 42.00 | 528 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 15624.0 | 31248 | 20832 | 0 | 10416* | --- | 42.00 | 496 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 6867.0 | 13734 | 9156 | 0 | 4578* | --- | 42.00 | 218 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 181818 | 121212 | 0 | 60606* | --- | 42.00 | 2886 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 14238.0 | 99666 | 66444 | 0 | 33222* | --- | 42.00 | 1582 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 42840 | 28560 | 0 | 14280* | --- | 42.00 | 680 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 15750.0 | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 3906.00 | 7812 | 5208 | 0 | 2604* | 62.00 | 42.00 | 124 |
| 10.400000 | TANKS | LS* | ---- | ---- | 418887 | 279258 | 0 | 139629* | --- | 42.00 | 6649 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 398475 | 265650 | 0 | 132825* | --- | 42.00 | 6325 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 146475 | 97650 | 0 | 48825* | --- | 42.00 | 2325 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 20412 | 13608 | 0 | 6804* | --- | 42.00 | 324 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 5859 | 3906 | 0 | 1953* | --- | 42.00 | 93 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 477540 | 318360 | 0 | 159180* | --- | 42.00 | 7580 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 69300 | 46200 | 0 | 23100* | --- | 42.00 | 1100 |
| 10.512000 | STAT AIR COMPRESS | EA* | 1 | 0.0 | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 408240 | 272160 | 0 | 136080* | --- | 42.00 | 6480 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 117180 | 78120 | 0 | 39060* | --- | 42.00 | 1860 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 234360 | 156240 | 0 | 78120* | --- | 42.00 | 3720 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 11970 | 7980 | 0 | 3990* | --- | 42.00 | 190 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 27090 | 18060 | 0 | 9030* | --- | 42.00 | 430 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 1549800 | 1033200 | 0 | 516600* | --- | 42.00 | 24600 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 2819376 | 1879584 | 0 | 939792* | --- | 42.00 | 44752 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 733950 | 489300 | 0 | 244650* | --- | 42.00 | 11650 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 337050 | 224700 | 0 | 112350* | --- | 42.00 | 5350 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 337050 | 224700 | 0 | 112350* | --- | 42.00 | 5350 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 396900 | 264600 | 0 | 132300* | --- | 42.00 | 6300 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 396900 | 264600 | 0 | 132300* | --- | 42.00 | 6300 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 1474326 | 982884 | 0 | 491442* | --- | 42.00 | 23402 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 478800 | 319200 | 0 | 159600* | --- | 42.00 | 7600 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 132300 | 88200 | 0 | 44100* | --- | 42.00 | 2100 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 642600 | 428400 | 0 | 214200* | --- | 42.00 | 10200 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 35532.0 | 106596 | 71064 | 0 | 35532* | --- | 42.00 | 1692 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 611100 | 407400 | 0 | 203700* | --- | 42.00 | 9700 |
| 12.000000 | PIPING | LS* | ---- | ---- | 17331300 | 11554200 | 0 | 5777100* | --- | 42.00 | 275100 |
| 12.100000 | LARGE BORE PIPING | TN* | 880 | 10521.0 | [illegible] | 6172320 | 0 | 3086160* | --- | 42.00 | 146960 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 86000 | 93.87 | 8072820 | 5381880 | 0 | 2690940* | 1.49 | 42.00 | 128140 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6438978 | 4292652 | 0 | 2146326* | --- | 42.00 | 102206 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 6438978 | 4292652 | 0 | 2146326* | --- | 42.00 | 102206 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 33088693 | 21992462 | 100000 | 10996231* | --- | 46.00 | 478097 |
| 15.100000 | TRANFORMERS | LS* | ---- | ---- | 331131 | 220754 | 0 | 110377* | --- | 46.00 | 4799 |
| 15.110000 | MAIN TRANSFORMER | EA* | 1 | 0.0 | 111780 | 74520 | 0 | 37260* | --- | 46.00 | 1620 |
| 15.130000 | AUXILIARY XMFR | LS* | ---- | ---- | 219351 | 146234 | 0 | 73117* | --- | 46.00 | 3179 |
| 15.131000 | COMMON SERV XMFR | EA* | 2 | 16560.0 | 33120 | 22080 | 0 | 11040* | --- | 46.00 | 480 |
| 15.132000 | STATION SRV XMFR | EA* | 6 | 4588.50 | 27531 | 18354 | 0 | 9177* | 66.60 | 46.00 | 399 |
| 15.133000 | LTG & MISC XMFR | EA* | 40 | 2242.50 | 89700 | 59800 | 0 | 29900* | 32.50 | 46.00 | 1300 |
| 15.134000 | FIRE PROTECTION | LT* | 1 | 0.0 | 69000 | 46000 | 0 | 23000* | --- | 46.00 | 1000 |
| 15.200000 | SWITCHGEARS | LS* | ---- | ---- | 436080 | 290720 | 0 | 145[illegible]* | --- | 46.00 | 6320 |
| 15.300000 | MOTORS | EA* | 1 | 0.0 | 269100 | 179400 | 0 | 89700* | --- | 46.00 | 3900 |
| 15.400000 | AQCS ELEC SYSTEM | LS* | ---- | ---- | 475962 | 317308 | 0 | 158654* | --- | 46.00 | 6898 |
| 15.410000 | STATION SERV XMFR | EA* | 4 | 5658.00 | 22632 | 15088 | 0 | 7544* | 82.00 | 46.00 | 328 |
| 15.420000 | AQCS SWITCHGEAR | LS* | ---- | ---- | 36570 | 24380 | 0 | 12190* | --- | 46.00 | 530 |
| 15.421000 | SWITCHGEARS | LS* | ---- | ---- | 15870 | 10580 | 0 | 5290* | --- | 46.00 | 230 |
| 15.422000 | POWER CENTER | ST* | 1 | 0.0 | 20700 | 13800 | 0 | 6900* | --- | 46.00 | 300 |
| 15.430000 | MOTORS | EA* | 1 | 0.0 | 11730 | 7820 | 0 | 3910* | --- | 46.00 | 170 |
| 15.440000 | NON-SEGREGATED BUS | LS* | ---- | ---- | 405030 | 270020 | 0 | 135010* | --- | 46.00 | 5870 |
| 15.500000 | SWITCHBOARDS | LS* | ---- | ---- | 165600 | 110400 | 0 | 55200* | --- | 46.00 | 2400 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.600000 | GENERATOR GEARS BUS | LS* | ---- | ---- | 469200 | 312800 | 0 | 156400* | --- | 46.00 | 6800 |
| 15.700000 | WIRING SYSTEM | LS* | ---- | ---- | 26803000 | 17802000 | 100000 | 8901000* | --- | 46.00 | 387000 |
| 15.800000 | LIGHTING SYSTEM | LT* | 1 | 0.0 | 2297700 | 1531800 | 0 | 765900* | --- | 46.00 | 33300 |
| 15.900000 | AUX ELEC EQUIPMENT | LS* | ---- | ---- | 1840920 | 1227280 | 0 | 613640* | --- | 46.00 | 26680 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2129400 | 1521000 | 0 | 608400* | --- | 39.00 | 39000 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 600600 | 429000 | 0 | 171600* | --- | 39.00 | 11000 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1092000 | 780000 | 0 | 312000* | --- | 39.00 | 20000 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 109200 | 78000 | 0 | 31200* | --- | 39.00 | 2000 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 327600 | 234000 | 0 | 93600* | --- | 39.00 | 6000 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 1370200 | 806000 | 0 | 564200* | --- | 40.30 | 20000 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 1 | 0.0 | 1370200 | 806000 | 0 | 564200* | --- | 40.30 | 20000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 32876178 | 8254509 | 19252670 | 5368999* | --- | 30.09 | 274347 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 2683395 | 1485000 | 0 | 1198395* | --- | 16.50 | 90000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 2400000 | 0 | 24[illegible]0 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 1600000 | 0 | [illegible] | 0* | --- | 0.00 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 800000 | 0 | 800000 | 0* | --- | 0.00 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 114000 | 0 | 114000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 114000 | 0 | 114000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 18833177 | 793404 | 16568000 | 1471773* | --- | 42.11 | 18840 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 386400 | 240000 | 36000 | 110400* | --- | 40.00 | 6000 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 18446777 | 553404 | 16532000 | 1361373* | --- | 43.10 | 12840 |

APA
NENANA2 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 12-NOV-84 TIME: 14:03:21

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 7500000 | 0 | 7500000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 8400000 | 0 | 8400000 | 0* | --- | 0.00 | 0 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2546777 | 553404 | 632000 | 1361373* | --- | 43.10 | 12840 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1370424 | 1013441 | 170670 | 186313* | --- | 21.38 | 47400 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 98170 | 0 | 98170 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 461634 | 397961 | 0 | 63673* | --- | 23.83 | 16700 |
| 71.630000 | TESTING | LS* | ---- | ---- | 501740 | 306600 | 72500 | 122640* | --- | 42.00 | 7300 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 308880 | 308880 | 0 | 0* | --- | 13.20 | 23400 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 234696 | 167640 | 0 | 67056* | --- | 38.10 | 4400 |
| 71.900000 | PRODUCTIVITY ADJ | LS* | ---- | ---- | 7240486 | 4795024 | 0 | 2445462* | --- | 42.17 | 113707 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 16000000 | 0 | 16000000 | 0* | --- | 0.00 | 0 |

200 MW Coal Fired
Plant at Beluga

6

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a one unit facility and excludes Owner's cost (including Land and AFUDC). This overnight estimate has a base pricing level of January, 1984, for each line item de-escalated to a January, 1983 pricing level on a summary basis.

The estimate is based on a downsized version of Ebasco's Coal Fired Reference Plant Program (CFRP), which is a combination of recommended pre-engineered plant general arrangements (GA's) in building block segments, to define the plant layout. It also contains a comprehensive set of System Design Descriptions (SDD's) which define all aspects of every plant system in a standardized format.

Site-related capital cost adjustments are made to the CFRP for sizing, logistics, civil site features, temporary and permanent power connection points, building enclosures, insulation levels, cooling requirements, and type of coal.

The estimate is based on the following:

a. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

BASIS OF ESTIMATE (continued)

GENERAL (continued)

b. A work week consisting of 6-10 hour days.

c. Sufficient craftsmen available to meet project requirements housed in labor camps.

d. Professional Services including Engineering, Design, Related Services and Construction Management based on a generic plant of comparable size using the CFRP concept.

e. Land and Land Rights not included.

f. Allowance for Funds Used During Construction (AFUDC) not included.

g. Client costs not included.

h. Permanent town for plant operating personnel and mine production personnel not included.

i. Capital cost of mine and coal export facility not included.

j. Operating and maintenance costs not included.

k. Contingency included at the rate of 12% for material and 15% for installation.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

GENERAL (continued)

l. Construction performed on a Contract basis.

m. Project being exempt from sales tax.

n. Labor productivity being "average U.S." with no Alaskan adjustment.

o. Spare parts and special tools not included.

p. Start-up costs not included.

q. Maintenance machinery, laboratory and office equipment not included.

CIVIL (Categories 1, 2, 3, 4, 5, 6, 16, 17, 18)

Clearing is assumed based on scrub brush and trees up to 25'. Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. No railroad or barge delivery of coal is assumed for this mine - mouth plant. Coal is assumed to be trucked from the mine. Twenty (20) miles of access road is assumed.

Eighty (80) foot long piles are assumed under heavily loaded foundations. A four hundred (400) foot high concrete stack with 2 - 11' diameter steel flues is assumed. No ash ponds are included; a waste processing system is included. Waste would be trucked to a

BASIS OF ESTIMATE (continued)
CIVIL (continued)

disposal area off-site. The capital cost of constructing the disposal area is not included. No asphalt or concrete paving is included.

Cooling tower pricing is based on a Zurn budgetary quotation for a Model 3-Z-460 rectangular multi-cell unit rated at 66,000 gpm. A Ranney well make-up water system is included. An equipment barge unloading facility is included.

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

Ecolaire provided a budgetary quotation for a 105,000 $ft^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 66,000 gpm and 27°F temperature rise.

Ecolaire provided a budgetary quotation for a reverse gas 662,000 ACFM Baghouse with a 300°F gas temperature. Low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb and a coal firing rate of 253,400 lb/hr is assumed. The quotation is based on design, fabrication and erection of one baghouse and auxiliary equipment with 10 compartments/ baghouse and 368 bags per compartment.

Combustion Engineering Power Systems and Foster Wheeler provided budgetary quotations for the coal-fired steam generator and

BASIS OF ESTIMATE (continued)
MECHANICAL (continued)

accessories. Pricing is based on 1,590,000 lb/hr, 2650 psig and 1008°F main steam; 1,351,000 lb/hr, 600 psig, 630°F (@ inlet) reheat; and 525°F feedwater.

The 7950 btu/lb coal analysis is as follows:

| Proximate | Weight Percent |
|---|---|
| Moisture | 26.1 |
| Ash | 6.4 |
| Volatiles | 36.3 |
| Fixed Carbon | 31.2 |

| Ultimate | |
|---|---|
| Hydrogen | 3.6 |
| Carbon | 47.2 |
| Oxygen | 15.5 |
| Nitrogen | 1.05 |
| Sulfur | 0.12 |
| Chlorine | --- |
| Moisture | 26.1 |
| Ash | 6.4 |

Combustion Engineering provided a budgetary quotation for a "dry" $SO_2$ scrubbing system utilizing multi-cell sprayer absorbers with 85% $SO_2$

BASIS OF ESTIMATE (continued)
MECHANICAL (continued)

(70% guarantee) removal. The system is rated at 662,000 ACFM with a flue gas temperature of 300°F and 20% excess air.

Westinghouse Electric, General Electric and Utility Power Corporation provided budgetary quotes for the steam turbine generators. The quotations are based on an indoor type, tandem compound condensing turbine, two flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000°F/1000°F. The turbine design throttle flow will be 1,590,000 lb/hr. The maximum gross turbine output will be 220,000 kW with 2520 psig, 1000/1000°F, 2.7/4.0 in.Hg absolute back pressure. The generator is 244,400 KVA @ 45 psig, 0.9 PF, 3 phase, 60 Hz, 24,000 V and 0.5 shortcircuit ratio complete with an excitation system.

PIPING AND INSULATION (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are downsized based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance for insulating yard systems.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

ELECTRICAL (Categories 15 and 19)

Pricing is based on estimates of Ebasco's CFRP program. Pricing is based on updating recent vendor quotations and discounted equipment pricing catalogs in accordance with representative historical inflation indices.

A 48 mile 230 KV single circuit transmission line is included with step-up facilities. The tie-in point for the Beluga-area coal-fired plant is assumed to be at Lorraine, Alaska. No land cost for right-of-way is included.

INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60 hour week)
- Construction Management automotive equipment
- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Gravel air strip
- 10 mile 69 kV temporary transmission line

BASIS OF ESTIMATE (continued)

INDIRECT CONSTRUCTION COST (continued)

- Labor camp, food service, housekeeping
- Barge freight/off-site unloading adjustment
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 554647987* | 210690570 | ---- * | ---- | 343957417******** | ******** | ******** | |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 67438000* | 22573988 | ---- * | ---- | 44864012* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -25642565* | -9900868 | ---- * | ---- | -15741697******** | -9900868 | ******** | |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 512852552* | 198017450 | ---- * | ---- | 314835102******** | -9900868 | ******** | |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 4076672* | 1184850 | ---- * | ---- | 2891822* | -203829 | -59242 | -144587 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 34210384* | 14816500 | ---- * | ---- | 19393884* | -1710508 | -740824 | -969684 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 8176240* | 3982650 | ---- * | ---- | 4193590* | -408804 | -199132 | -209672 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 20339785* | 3763000 | ---- * | ---- | 16576785* | -1016987 | -188150 | -828837 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 27330950* | 10663500 | ---- * | ---- | 16667450* | -1366545 | -533174 | -833371 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 18242737* | 5880650 | ---- * | ---- | 12362087* | -912124 | -294031 | -618093 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 19064900* | 16400000 | ---- * | ---- | 2664900* | -953245 | -820000 | -133245 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42900000* | 24000000 | ---- * | ---- | 18900000* | -2145000 | -1200000 | -945000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 53956000* | 30148300 | ---- * | ---- | 23807700* | -2697800 | -1507415 | -1190385 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 19909906* | 14724200 | ---- * | ---- | 5185706* | -995480 | -736210 | -259270 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 22802750* | 13343300 | ---- * | ---- | 9459450* | -1140136 | -667165 | -472971 |
| 12.000000 | PIPING | LS* | ---- | ---- | 28004420* | 9876800 | ---- * | ---- | 18127620* | -1400221 | -493840 | -906381 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6880000* | 580000 | ---- * | ---- | 6300000* | -344000 | -29000 | -315000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 7067000* | 6500000 | ---- * | ---- | 567000* | -353350 | -325000 | -28350 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 57570000* | 21000000 | ---- * | ---- | 36570000* | -2878500 | -1050000 | -1828500 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2224340* | 155000 | ---- * | ---- | 2069340* | -111217 | -7750 | -103467 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- * | ---- | 7430700* | -673035 | -301500 | -371535 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 7837739* | 1888700 | ---- * | ---- | 5949039* | -391884 | -94435 | -297449 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 23198950* | 13080000 | ---- * | ---- | 10118950* | -1159947 | -654000 | -505947 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 40949079* | 0 | ---- * | ---- | 40949079* | -2047453 | 0 | -2047453 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 54650000* | 0 | ---- * | ---- | 54650000* | -2732500 | 0 | -2732500 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 554647987* | 210690570 | ---- * | ---- | 343957417******** | ******** | ******** | |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 67438000* | 22573988 | ---- * | ---- | 44864012* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -25642565* | -9900868 | ---- * | ---- | -15741697******** | -9900868 | ******** | |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 512852552* | 198017450 | ---- * | ---- | 314835102******** | -9900868 | ******** | |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 4076672* | 1184850 | ---- * | ---- | 2891822* | -203829 | -59242 | -144587 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 440133* | 0 | ---- * | ---- | 440133* | -22006 | 0 | -22006 |
| 1.110000 | CLEARING | AC* | 105 | 4191.7 | 440133* | 0 | 0.00* | 4191.7 | 440133* | -22006 | 0 | -22006 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 683148* | 168850 | ---- * | ---- | 514298* | -34155 | -8442 | -25713 |
| 1.210000 | ROADS | LS* | ---- | ---- | 542530* | 100000 | ---- * | ---- | 442530* | -27126 | -5000 | -22126 |
| 1.213000 | 24' WIDE ROADS | SY* | 40000 | 13.6 | 542530* | 100000 | 2.50* | 11.1 | 442530* | -27126 | -5000 | -22126 |
| 1.240000 | FENCING | LS* | ---- | ---- | 140618* | 68850 | ---- * | ---- | 71768* | -7029 | -3442 | -3587 |
| 1.241000 | PROPERTY FENCE | LF* | 3800 | 24.8 | 94373* | 45600 | 12.00* | 12.8 | 48773* | -4718 | -2280 | -2438 |
| 1.242000 | SECURITY FENCE | LF* | 1500 | 24.8 | 37252* | 18000 | 12.00* | 12.8 | 19252* | -1862 | -900 | -962 |
| 1.243000 | GATES | EA* | 7 | 1284.7 | 8993* | 5250 | 750.00* | 534.7 | 3743* | -449 | -262 | -187 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 1326552* | 620000 | ---- * | ---- | 706552* | -66327 | -31000 | -35327 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 389723* | 150000 | ---- * | ---- | 239723* | -19486 | -7500 | -11986 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 1237116* | 246000 | ---- * | ---- | 991116* | -61855 | -12300 | -49555 |
| 1.720000 | STACKER RECL TRCK | LF* | 600 | 2061.9 | 1237116* | 246000 | 410.00* | 1651.9 | 991116* | -61855 | -12300 | -49555 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 34210384* | 14816500 | ---- * | ---- | 19393884* | -1710508 | -740824 | -969684 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 14888641* | 4580000 | ---- * | ---- | 10308641* | -744429 | -229000 | -515429 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 10774505* | 4580000 | ---- * | ---- | 6196505* | -538825 | -229000 | -309825 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.1 | 545105* | 0 | 0.00* | 29.1 | 545105* | -27255 | 0 | -27255 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 10231400* | 4580000 | ---- * | ---- | 5651400* | -511570 | -229000 | -282570 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 510000 | 16.9 | 8639400* | 4080000 | 8.00* | 8.9 | 4559400* | -431970 | -204000 | -227970 |
| 2.214200 | INSULATION BRD | SF* | 2000000 | 0.8 | 1592000* | 500000 | 0.25* | 0.5 | 1092000* | -79600 | -25000 | -54600 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 221816* | 0 | ---- * | ---- | 221816* | -11090 | 0 | -11090 |
| 2.222000 | EARTH EXCAVATION | CY* | 2300 | 23.3 | 53636* | 0 | 0.00* | 23.3 | 53636* | -2681 | 0 | -2681 |
| 2.223000 | ROCK EXCAVATION | CY* | 2000 | 84.1 | 168180* | 0 | 0.00* | 84.1 | 168180* | -8409 | 0 | -8409 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 2086470* | 0 | ---- * | ---- | 2086470* | -104323 | 0 | -104323 |
| 2.232000 | EARTH EXCAVATION | CY* | 43400 | 29.1 | 1265110* | 0 | 0.00* | 29.1 | 1265110* | -63255 | 0 | -63255 |
| 2.233000 | ROCK EXCAVATION | CY* | 11200 | 73.3 | 821360* | 0 | 0.00* | 73.3 | 821360* | -41068 | 0 | -41068 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 201135* | 0 | ---- * | ---- | 201135* | -10056 | 0 | -10056 |
| 2.242000 | EARTH EXCAVATION | CY* | 6900 | 29.1 | 201135* | 0 | 0.00* | 29.1 | 201135* | -10056 | 0 | -10056 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 1602715* | 0 | ---- * | ---- | 1602715* | -80135 | 0 | -80135 |
| 2.252000 | EARTH EXCAVATION | CY* | 27900 | 29.1 | 813285* | 0 | 0.00* | 29.1 | 813285* | -40664 | 0 | -40664 |
| 2.253000 | ROCK EXCAVATION | CY* | 10600 | 74.5 | 789430* | 0 | 0.00* | 74.5 | 789430* | -39471 | 0 | -39471 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 2816831* | 0 | ---- * | ---- | 2816831* | -140840 | 0 | -140840 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529478* | 0 | ---- * | ---- | 529478* | -26473 | 0 | -26473 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.2 | 386091* | 0 | 0.00* | 28.2 | 386091* | -19304 | 0 | -19304 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.7 | 143387* | 0 | 0.00* | 79.7 | 143387* | -7169 | 0 | -7169 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 1334289* | ( | ---- * | ---- | 1334289* | -66714 | 0 | -66714 |
| 2.322000 | EARTH EXCAVATION | CY* | 43400 | 30.7 | 1334289* | 0 | 0.00* | 30.7 | 1334289* | -66714 | 0 | -66714 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 953064* | 0 | ---- * | ---- | 953064* | -47653 | 0 | -47653 |
| 2.332000 | EARTH EXCAVATION | CY* | 31000 | 30.7 | 953064* | 0 | 0.00* | 30.7 | 953064* | -47653 | 0 | -47653 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.0 | 159698* | 0 | 0.00* | 29.0 | 159698* | -7984 | 0 | -7984 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 14779687* | 9750000 | ---- * | ---- | 5029687* | -738983 | -487500 | -251483 |

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APA
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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 180000 | 59.1 | 10641375* | 7020000 | 39.00* | 20.1 | 3621375* | -532068 | -351000 | -181068 |
| 2.520000 | AQCS AREA | LF* | 70000 | 59.1 | 4138312* | 2730000 | 39.00* | 20.1 | 1408312* | -206915 | -136500 | -70415 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 1565527* | 486500 | ---- * | ---- | 1079027* | -78272 | -24324 | -53948 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 910052* | 441000 | ---- * | ---- | 469052* | -45502 | -22050 | -23452 |
| 2.711000 | PVC LINER | SF* | 300000 | 0.5 | 151002* | 135000 | 0.45* | 0.1 | 16002* | -7550 | -6750 | -800 |
| 2.712000 | SAND | CY* | 17000 | 24.4 | 413950* | 170000 | 10.00* | 14.4 | 243950* | -20697 | -8500 | -12197 |
| 2.713000 | GRAVEL | CY* | 17000 | 20.3 | 345100* | 136000 | 8.00* | 12.3 | 209100* | -17255 | -6800 | -10455 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 463279* | 19350 | ---- * | ---- | 443929* | -23162 | -967 | -22195 |
| 2.721000 | PVC LINER | SF* | 43000 | 0.5 | 21643* | 19350 | 0.45* | 0.1 | 2293* | -1081 | -967 | -114 |
| 2.722000 | EXCAVATION | CY* | 19000 | 17.9 | 339720* | 0 | 0.00* | 17.9 | 339720* | -16986 | 0 | -16986 |
| 2.723000 | BACKFILL | CY* | 3800 | 26.8 | 101916* | 0 | 0.00* | 26.8 | 101916* | -5095 | 0 | -5095 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 166696* | 21150 | ---- * | ---- | 145546* | -8333 | -1057 | -7276 |
| 2.731000 | PVC LINER | SF* | 47000 | 0.5 | 23656* | 21150 | 0.45* | 0.1 | 2506* | -1182 | -1057 | -125 |
| 2.732000 | EXCAVATION | CY* | 5300 | 17.9 | 94764* | 0 | 0.00* | 17.9 | 94764* | -4738 | 0 | -4738 |
| 2.733000 | BACKFILL | CY* | 1800 | 26.8 | 48276* | 0 | 0.00* | 26.8 | 48276* | -2413 | 0 | -2413 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 25500* | 5000 | ---- * | ---- | 20500* | -1275 | -250 | -1025 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 8176240* | 3982650 | ---- * | ---- | 4193590* | -408804 | -199132 | -209672 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 2141914* | 894550 | ---- * | ---- | 1247364* | -107093 | -44727 | -62366 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3400 | 355.8 | 1209822* | 646000 | 190.00* | 165.8 | 563822* | -60491 | -32300 | -28191 |
| 3.260000 | BEDDING MATERIAL | CY* | 2000 | 30.5 | 61000* | 20000 | 10.00* | 20.5 | 41000* | -3050 | -1000 | -2050 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 821798* | 208950 | ---- * | ---- | 612848* | -41088 | -10447 | -30641 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 430.0 | 322518* | 93750 | 125.00* | 305.0 | 228768* | -16125 | -4687 | -11438 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 903.4 | 361372* | 81600 | 204.00* | 699.4 | 279772* | -18068 | -4080 | -13988 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 689.5 | 137908* | 33600 | 168.00* | 521.5 | 104308* | -6895 | -1680 | -5215 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 7042.0 | 49294* | 19600 | 2800.00* | 4242.0 | 29694* | -2464 | -980 | -1484 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 6034326* | 3088100 | ---- * | ---- | 2946226* | -301711 | -154405 | -147306 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 772465* | 196500 | ---- * | ---- | 575965* | -38622 | -9825 | -28797 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.4 | 145275* | 0 | 0.00* | 22.4 | 145275* | -7263 | 0 | -7263 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 418.1 | 627190* | 196500 | 131.00* | 287.1 | 430690* | -31359 | -9825 | -21534 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 848470* | 220600 | ---- * | ---- | 627870* | -42422 | -11030 | -31392 |
| 3.422000 | EXCAVATION | CY* | 4500 | 22.4 | 100575* | 0 | 0.00* | 22.4 | 100575* | -5028 | 0 | -5028 |
| 3.423000 | CONCRETE | CY* | 1500 | 465.7 | 698601* | 201000 | 134.00* | 331.7 | 497601* | -34930 | -10050 | -24880 |
| 3.424000 | MISC STEEL | TN* | 7 | 7042.0 | 49294* | 19600 | 2800.00* | 4242.0 | 29694* | -2464 | -980 | -1484 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 397160* | 335000 | ---- * | ---- | 62160* | -19857 | -16750 | -3107 |
| 3.433000 | SCREENS | SF* | 500 | 58.3 | 29140* | 15000 | 30.00* | 28.3 | 14140* | -1457 | -750 | -707 |
| 3.435000 | STOP LOGS | SF* | 500 | 74.1 | 37070* | 30000 | 60.00* | 14.1 | 7070* | -1853 | -1500 | -353 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 330950* | 290000 | ---- * | 0.0 | 40950* | -16547 | -14500 | -2047 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 757743* | 336000 | ---- * | ---- | 421743* | -37886 | -16800 | -21086 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 3155.4 | 236655* | 120000 | 1600.00* | 1555.4 | 116655* | -11832 | -6000 | -5832 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 86.8 | 521088* | 216000 | 36.00* | 50.8 | 305088* | -26054 | -10800 | -15254 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 3258488* | 2000000 | ---- * | ---- | 1258488* | -162924 | -100000 | -62924 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 20339785* | 3763000 | ---- * | ---- | 16576785* | -1016987 | -188150 | -828837 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4700 | 834.4 | 3921596* | 667400 | 142.00* | 692.4 | 3254196* | -196079 | -33370 | -162709 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 735.8 | 1397976* | 269800 | 142.00* | 593.8 | 1128176* | -69898 | -13490 | -56408 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 768.7 | 1306840* | 241400 | 142.00* | 626.7 | 1065440* | -65342 | -12070 | -53272 |
| 4.400000 | AQCS CONCRETE | CY* | 9100 | 767.4 | 6982969* | 1292200 | 142.00* | 625.4 | 5690769* | -349148 | -64610 | -284538 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | COAL HANDLG CONCRT | CY* | 5600 | 872.8 | 4887924* | 795200 | 142.00* | 730.8 | 4092724* | -244896 | -39760 | -204636 |
| 4.900000 | MISCELL CONCRETE | CY* | 3500 | 526.4 | 1842480* | 497000 | 142.00* | 384.4 | 1345480* | -92124 | -24850 | -67274 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 27330950* | 10663500 | ---- * | ---- | 16667450* | -1366545 | -533174 | -833371 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 4195290* | 2047900 | ---- * | ---- | 2147390* | -209764 | -102395 | -107369 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 2440.0 | 2928000* | 1500000 | 1250.00* | 1190.0 | 1428000* | -146400 | -75000 | -71400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 372750* | 189000 | ---- * | ---- | 183750* | -18637 | -9450 | -9187 |
| 5.121000 | WALL FRAMING | TN* | 105 | 3550.0 | 372750* | 189000 | 1800.00* | 1750.0 | 183750* | -18637 | -9450 | -9187 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 563740* | 128900 | ---- * | ---- | 434840* | -28187 | -6445 | -21742 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 28.0 | 336000* | 84000 | 7.00* | 21.0 | 252000* | -16800 | -4200 | -12600 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 57.9 | 34740* | 6600 | 11.00* | 46.9 | 28140* | -1737 | -330 | -1407 |
| 5.133000 | HANDRAIL | LF* | 1000 | 103.0 | 103000* | 15500 | 15.50* | 87.5 | 87500* | -5150 | -775 | -4375 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 7500.0 | 90000* | 22800 | 1900.00* | 5600.0 | 67200* | -4500 | -1140 | -3360 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 330800* | 230000 | ---- * | ---- | 100800* | -16540 | -11500 | -5040 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 330800* | 230000 | ---- * | ---- | 100800* | -16540 | -11500 | -5040 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 12073520* | 4595350 | ---- * | ---- | 7478170* | -603675 | -229767 | -373908 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 2440.0 | 5612000* | 2875000 | 1250.00* | 1190.0 | 2737000* | -280600 | -143750 | -136850 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1933000* | 666000 | ---- * | ---- | 1267000* | -96650 | -33300 | -63350 |
| 5.221000 | WALL FRAMING | TN* | 330 | 5300.0 | 1749000* | 594000 | 1800.00* | 3500.0 | 1155000* | -87450 | -29700 | -57750 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 4600.0 | 184000* | 72000 | 1800.00* | 2800.0 | 112000* | -9200 | -3600 | -5600 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 4283820* | 929350 | ---- * | ---- | 3354470* | -214190 | -46467 | -167723 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 28.0 | 1960000* | 490000 | 7.00* | 21.0 | 1470000* | -98000 | -24500 | -73500 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 57.9 | 92640* | 17600 | 11.00* | 46.9 | 75040* | -4632 | -880 | -3752 |
| 5.233000 | HANDRAIL | LF* | 12500 | 106.5 | 1331180* | 193750 | 15.50* | 91.0 | 1137430* | -66558 | -9687 | -56871 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.234000 | LADDERS & STRWY | TN* | 120 | 7500.0 | 900000* | 228000 | 1900.00* | 5600.0 | 672000* | -45000 | -11400 | -33600 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 244700* | 125000 | ---- * | ---- | 119700* | -12235 | -6250 | -5985 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 144500* | 50000 | ---- * | ---- | 94500* | -7225 | -2500 | -4725 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 100200* | 75000 | ---- * | ---- | 25200* | -5010 | -3750 | -1260 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 100200* | 75000 | ---- * | ---- | 25200* | -5010 | -3750 | -1260 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 3626640* | 1860750 | ---- * | ---- | 1765890* | -181331 | -93037 | -88294 |
| 5.310000 | MAIN STEEL | TN* | 225 | 2440.0 | 549000* | 281250 | 1250.00* | 1190.0 | 267750* | -27449 | -14062 | -13387 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 344500* | 117000 | ---- * | ---- | 227500* | -17225 | -5850 | -11375 |
| 5.321000 | WALL FRAMING | TN* | 65 | 5300.0 | 344500* | 117000 | 1800.00* | 3500.0 | 227500* | -17225 | -5850 | -11375 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 347000* | 200000 | ---- * | ---- | 147000* | -17350 | -10000 | -7350 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 77640* | 60000 | ---- * | ---- | 17640* | -3882 | -3000 | -882 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 77640* | 60000 | ---- * | ---- | 17640* | -3882 | -3000 | -882 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 755000* | 265000 | ---- * | ---- | 490000* | -37750 | -13250 | -24500 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 7550.0 | 755000* | 265000 | 2650.00* | 4900.0 | 490000* | -37750 | -13250 | -24500 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 1553500* | 937500 | ---- * | ---- | 616000* | -77675 | -46875 | -30800 |
| 5.361000 | STEEL SILOS | TN* | 170 | 6950.0 | 1181500* | 705500 | 4150.00* | 2800.0 | 476000* | -59075 | -35275 | -23800 |
| 5.362000 | SS PLATES | TN* | 40 | 9300.0 | 372000* | 232000 | 5800.00* | 3500.0 | 140000* | -18600 | -11600 | -7000 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 7087000* | 2000000 | ---- * | ---- | 5087000* | -354350 | -100000 | -254350 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 69500* | 38000 | ---- * | ---- | 31500* | -3475 | -1900 | -1575 |
| 5.900000 | UNCLASS STEEL | TN* | 45 | 6200.0 | 279000* | 121500 | 2700.00* | 3500.0 | 157500* | -13950 | -6075 | -7875 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 18242737* | 5880650 | ---- * | ---- | 12362087* | -912124 | -294031 | -618093 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2123684* | 870000 | ---- * | ---- | 1253684* | -106183 | -43500 | -62683 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 971438* | 300000 | ---- * | ---- | 671438* | -48571 | -15000 | -33571 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 857540* | 450000 | ---- * | ---- | 407540* | -42877 | -22500 | -20377 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 229360* | 100000 | ---- * | ---- | 129360* | -11468 | -5000 | -6468 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 65346* | 20000 | ---- * | ---- | 45346* | -3267 | -1000 | -2267 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2561596* | 950000 | ---- * | ---- | 1611596* | -128079 | -47500 | -80579 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 1265080* | 380000 | ---- * | ---- | 885080* | -63254 | -19000 | -44254 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1131400* | 500000 | ---- * | ---- | 631400* | -56570 | -25000 | -31570 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 71160* | 30000 | ---- * | ---- | 41160* | -3558 | -1500 | -2058 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 93956* | 40000 | ---- * | ---- | 53956* | -4697 | -2000 | -2697 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 778890* | 281500 | ---- * | ---- | 497390* | -38943 | -14075 | -24868 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 263118* | 80000 | ---- * | ---- | 183118* | -13155 | -4000 | -9155 |
| 6.370000 | HVAC | LS* | ---- | ---- | 349600* | 120000 | ---- * | ---- | 229600* | -17480 | -6000 | -11480 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 151440* | 75000 | ---- * | ---- | 76440* | -7572 | -3750 | -3822 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 14732* | 6500 | ---- * | ---- | 8232* | -736 | -325 | -411 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 3551873* | 886700 | ---- * | ---- | 2665173* | -177590 | -44334 | -133256 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 137.3 | 185409* | 47250 | 35.00* | 102.3 | 138159* | -9269 | -2362 | -6907 |
| 6.420000 | AQCS CTRL BLDG | SF* | 3600 | 173.4 | 624251* | 169200 | 47.00* | 126.4 | 455051* | -31212 | -8460 | -22752 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 148.2 | 125949* | 29750 | 35.00* | 113.2 | 96199* | -6296 | -1487 | -4809 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 149.2 | 2088464* | 504000 | 36.00* | 113.2 | 1584464* | -104423 | -25200 | -79223 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 6500 | 81.2 | 527800* | 136500 | 21.00* | 60.2 | 391300* | -26390 | -6825 | -19565 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 9226694* | 2892450 | ---- * | ---- | 6334244* | -461329 | -144622 | -316707 |
| 6.930000 | ADMIN BUILDING | SF* | 4000 | 268.6 | 1074600* | 292000 | 73.00* | 195.6 | 782600* | -53730 | -14600 | -39130 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 1246580* | 470000 | ---- * | ---- | 776580* | -62329 | -23500 | -38829 |
| 6.950000 | WTR TRTMT BLDG | SF* | 3250 | 224.5 | 729755* | 201500 | 62.00* | 162.5 | 528255* | -36487 | -10075 | -26412 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 6175759* | 1928950 | ---- * | ---- | 4246809* | -308783 | -96447 | -212336 |
| 6.991000 | PLANT MAINT | SF* | 3000 | 169.3 | 508020* | 201000 | 67.00* | 102.3 | 307020* | -25401 | -10050 | -15351 |
| 6.992000 | AUX BOILER | SF* | 1000 | 240.6 | 240580* | 66000 | 66.00* | 174.6 | 174580* | -12029 | -3300 | -8729 |
| 6.993000 | YD EQP MAINT BLD | SF* | 1200 | 151.3 | 181596* | 62400 | 52.00* | 99.3 | 119196* | -9079 | -3120 | -5959 |
| 6.994000 | CHLORINE BLDG | SF* | 1000 | 151.4 | 151370* | 40000 | 40.00* | 111.4 | 111370* | -7568 | -2000 | -5568 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 160.4 | 128304* | 36800 | 46.00* | 114.4 | 91504* | -6415 | -1840 | -4575 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 250.6 | 56385* | 15750 | 70.00* | 180.6 | 40635* | -2818 | -787 | -2031 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 63.1 | 1451760* | 621000 | 27.00* | 36.1 | 830760* | -72588 | -31050 | -41538 |
| 6.998000 | BULK GAS STR BLD | SF* | 1200 | 149.4 | 179244* | 45600 | 38.00* | 111.4 | 133644* | -8962 | -2280 | -6682 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 3278500* | 840400 | ---- * | ---- | 2438100* | -163923 | -42020 | -121903 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 146.4 | 117088* | 30400 | 38.00* | 108.4 | 86688* | -5854 | -1520 | -4334 |
| 6.999200 | CONTROL & SWGR | SF* | 2000 | 143.3 | 286680* | 82000 | 41.00* | 102.3 | 204680* | -14334 | -4100 | -10234 |
| 6.999300 | SWER TRTMT BLDG | SF* | 3000 | 147.4 | 442110* | 108000 | 36.00* | 111.4 | 334110* | -22105 | -5400 | -16705 |
| 6.999400 | DEWTR & FIXTN | SF* | 8000 | 135.3 | 1082720* | 264000 | 33.00* | 102.3 | 818720* | -54136 | -13200 | -40936 |
| 6.999500 | SWTCH YD CTRL | SF* | 700 | 148.4 | 103852* | 28000 | 40.00* | 108.4 | 75852* | -5192 | -1400 | -3792 |
| 6.999600 | CRSHING & SAMPL | SF* | 2000 | 149.4 | 298740* | 76000 | 38.00* | 111.4 | 222740* | -14937 | -3800 | -11137 |
| 6.999700 | WASTEWTR TRTMT | SF* | 7000 | 135.3 | 947310* | 252000 | 36.00* | 99.3 | 695310* | -47365 | -12600 | -34765 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 19064900* | 16400000 | ---- * | ---- | 2664900* | -953245 | -820000 | -133245 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 19064900* | 16400000 | ---- * | ---- | 2664900* | -953245 | -820000 | -133245 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42900000* | 24000000 | ---- * | ---- | 18900000* | -2145000 | -1200000 | -945000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 42900000* | 24000000 | ---- * | ---- | 18900000* | -2145000 | -1200000 | -945000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 53956000* | 30148300 | ---- * | ---- | 23807700* | -2697800 | -1507415 | -1190385 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 8006800* | 4000000 | ---- * | ---- | 4006800* | -400340 | -200000 | -200340 |

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SUSITNA 200 MW COAL
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 37475700* | 20157000 | ---- * | ---- | 17318700* | -1873785 | -1007850 | -865935 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 37475700* | 20157000 | ---- * | ---- | 17318700* | -1873785 | -1007850 | -865935 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 3418000* | 1528000 | ---- * | ---- | 1890000* | -170900 | -76400 | -94500 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 27694500* | 15000000 | ---- * | ---- | 12694500* | -1384725 | -750000 | -634725 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 3076000* | 1438000 | ---- * | ---- | 1638000* | -153800 | -71900 | -81900 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 3287200* | 2191000 | ---- * | ---- | 1096200* | -164360 | -109550 | -54810 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 6229000* | 4276000 | ---- * | ---- | 1953000* | -311450 | -213800 | -97650 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 6229000* | 4276000 | ---- * | ---- | 1953000* | -311450 | -213800 | -97650 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 6229000* | 4276000 | ---- * | ---- | 1953000* | -311450 | -213800 | -97650 |
| 9.400000 | FANS | LS* | ---- | ---- | 2244500* | 1715300 | ---- * | ---- | 529200* | -112225 | -85765 | -26460 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 1398900* | 1065000 | ---- * | ---- | 333900* | -69945 | -53250 | -16695 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 845600* | 650300 | ---- * | ---- | 195300* | -42280 | -32515 | -9765 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 19909906* | 14724200 | ---- * | ---- | 5185706* | -995480 | -736210 | -259270 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 3486968* | 2987000 | ---- * | ---- | 499968* | -174342 | -149350 | -24992 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 3038370* | 2648400 | ---- * | ---- | 389970* | -151918 | -132420 | -19498 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 400420.0 | 800840* | 644600 | ---- * | 78120.0 | 156240* | -40042 | -32230 | -7812 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 865000.0 | 1730000* | 1604000 | ---- * | 63000.0 | 126000* | -86500 | -80200 | -6300 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 121750.0 | 243500* | 186800 | 93400.00* | 28350.0 | 56700* | -12175 | -9340 | -2835 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 264030* | 213000 | ---- * | ---- | 51030* | -13201 | -10650 | -2551 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 9753* | 7800 | ---- * | ---- | 1953* | -487 | -390 | -97 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 9753* | 7800 | ---- * | ---- | 1953* | -487 | -390 | -97 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 68064* | 41100 | ---- * | ---- | 26964* | -3402 | -2055 | -1347 |
| 10.131000 | SERVICE WATER | EA* | 4 | 6861.0 | 27444* | 15600 | 3900.00* | 2961.0 | 11844* | -1372 | -780 | -592 |

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SUSITNA 200 MW COAL
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 19112* | 11300 | ---- * | ---- | 7812* | -955 | -565 | -390 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 10754.0 | 21508* | 14200 | 7100.00* | 3654.0 | 7308* | -1075 | -710 | -365 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 59171* | 45500 | ---- * | ---- | 13671* | -2956 | -2275 | -681 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 7253.0 | 14506* | 10600 | 5300.00* | 1953.0 | 3906* | -725 | -530 | -195 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 10253.0 | 30759* | 24900 | 8300.00* | 1953.0 | 5859* | -1537 | -1245 | -292 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 6953* | 5000 | ---- * | ---- | 1953* | -347 | -250 | -97 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 6953* | 5000 | ---- * | ---- | 1953* | -347 | -250 | -97 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 20660.0 | 123960* | 116400 | 19400.00* | 1260.0 | 7560* | -6198 | -5820 | -378 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 187650* | 127800 | ---- * | ---- | 59850* | -9381 | -6390 | -2991 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 35332* | 18700 | ---- * | ---- | 16632* | -1766 | -935 | -831 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 24420.0 | 48840* | 31200 | 15600.00* | 8820.0 | 17640* | -2442 | -1560 | -882 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 24252.0 | 72756* | 53100 | 17700.00* | 6552.0 | 19656* | -3637 | -2655 | -982 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 15361.0 | 30722* | 24800 | 12400.00* | 2961.0 | 5922* | -1536 | -1240 | -296 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 2478399* | 1780800 | ---- * | ---- | 697599* | -123918 | -89040 | -34878 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 1585900* | 1000000 | ---- * | ---- | 585900* | -79295 | -50000 | -29295 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 892499* | 780800 | ---- * | ---- | 111699* | -44623 | -39040 | -5583 |
| 10.221000 | CW PUMPS | EA* | 2 | 148832.0 | 297664* | 264400 | ---- * | 16632.0 | 33264* | -14883 | -13220 | -1663 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 89624.0 | 179248* | 148000 | 74000.00* | 15624.0 | 31248* | -8962 | -7400 | -1562 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 84667.0 | 169334* | 155600 | 77800.00* | 6867.0 | 13734* | -8466 | -7780 | -686 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 243500* | 212000 | ---- * | ---- | 31500* | -12175 | -10600 | -1575 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 2753* | 800 | ---- * | ---- | 1953* | -137 | -40 | -97 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 1993318* | 1811500 | ---- * | ---- | 181818* | -99665 | -90575 | -9090 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 180838.0 | 1265866* | 1166200 | ---- * | 14238.0 | 99666* | -63293 | -58310 | -4983 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 240740* | 197900 | ---- * | ---- | 42840* | -12037 | -9895 | -2142 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 171250.0 | 342500* | 311000 | ---- * | 15750.0 | 31500* | -17125 | -15550 | -1575 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 72106.0 | 144212* | 136400 | 68200.00* | 3906.0 | 7812* | -7210 | -6820 | -390 |
| 10.400000 | TANKS | LS* | ---- | ---- | 721815* | 277300 | ---- * | ---- | 444515* | -36086 | -13865 | -22221 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 448315* | 145600 | ---- * | ---- | 302715* | -22415 | -7280 | -15135 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 200175* | 53700 | ---- * | ---- | 146475* | -10008 | -2685 | -7323 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 248140* | 91900 | ---- * | ---- | 156240* | -12407 | -4595 | -7812 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 126232* | 40300 | ---- * | ---- | 85932* | -6311 | -2015 | -4296 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 14352.0 | 43056* | 23400 | 7800.00* | 6552.0 | 19656* | -2152 | -1170 | -982 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 104212* | 68000 | ---- * | ---- | 36212* | -5208 | -3400 | -1808 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 35600* | 19800 | ---- * | ---- | 15800* | -1780 | -990 | -790 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 6550* | 3400 | ---- * | ---- | 3150* | -327 | -170 | -157 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 23559* | 17700 | ---- * | ---- | 5859* | -1177 | -885 | -292 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 9753* | 7800 | ---- * | ---- | 1953* | -487 | -390 | -97 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 9950* | 6800 | ---- * | ---- | 3150* | -497 | -340 | -157 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 18800* | 12500 | ---- * | ---- | 6300* | -940 | -625 | -315 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 3308706* | 2662200 | ---- * | ---- | 646506* | -165434 | -133110 | -32324 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 274026* | 192000 | ---- * | ---- | 82026* | -13701 | -9600 | -4101 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 115060.0 | 230120* | 152000 | 76000.00* | 39060.0 | 78120* | -11506 | -7600 | -3906 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 43906* | 40000 | ---- * | ---- | 3906* | -2195 | -2000 | -195 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 3034680* | 2470200 | ---- * | ---- | 564480* | -151733 | -123510 | -28223 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 1120660* | 886300 | ---- * | ---- | 234360* | -56033 | -44315 | -11718 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 1089560* | 855200 | ---- * | ---- | 234360* | -54478 | -42760 | -11718 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 319060* | 280000 | ---- * | ---- | 39060* | -15953 | -14000 | -1953 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 70670* | 58700 | ---- * | ---- | 11970* | -3533 | -2935 | -598 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 195640* | 178000 | ---- * | ---- | 17640* | -9782 | -8900 | -882 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 239090* | 212000 | ---- * | ---- | 27090* | -11954 | -10600 | -1354 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 732900* | 575400 | ---- * | ---- | 157500* | -36645 | -28770 | -7875 |
| 10.700000 | CECI | LS* | ---- | ---- | 2982000* | 2100000 | ---- * | ---- | 882000* | -149100 | -105000 | -44100 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 1356000* | 1230000 | ---- * | ---- | 126000* | -67800 | -61500 | -6300 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 2849800* | 1300000 | ---- * | ---- | 1549800* | -142490 | -65000 | -77490 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 22802750* | 13343300 | ---- * | ---- | 9459450* | -1140136 | -667165 | -472971 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 18070090* | 10627900 | ---- * | ---- | 7442190* | -903504 | -531395 | -372109 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 2356800* | 2041800 | ---- * | ---- | 315000* | -117840 | -102090 | -15750 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 912500* | 440000 | ---- * | ---- | 472500* | -45625 | -22000 | -23625 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 912500* | 440000 | ---- * | ---- | 472500* | -45625 | -22000 | -23625 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 2532600* | 1260000 | ---- * | ---- | 1272600* | -126630 | -63000 | -63630 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 2532600* | 1260000 | ---- * | ---- | 1272600* | -126630 | -63000 | -63630 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 6777500* | 3829100 | ---- * | ---- | 2948400* | -338875 | -191455 | -147420 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 4291000* | 2590000 | ---- * | ---- | 1701000* | -214550 | -129500 | -85050 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 817400* | 401600 | ---- * | ---- | 415800* | -40870 | -20080 | -20790 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 27300* | 14700 | ---- * | ---- | 12600* | -1365 | -735 | -630 |
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 645000* | 304800 | ---- * | ---- | 340200* | -32250 | -15240 | -17010 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 498400.0 | 996800* | 518000 | ---- * | 239400.0 | 478800* | -49840 | -25900 | -23940 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 3323300* | 1616000 | ---- * | ---- | 1707300* | -166165 | -80800 | -85365 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 828400.0 | 1656800* | 800000 | ---- * | 428400.0 | 856800* | -82840 | -40000 | -42840 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 260000* | 102500 | ---- * | ---- | 157500* | -13000 | -5125 | -7875 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 595000* | 280000 | ---- * | ---- | 315000* | -29750 | -14000 | -15750 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 114100* | 70000 | ---- * | ---- | 44100* | -5705 | -3500 | -2205 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 697400* | 363500 | ---- * | ---- | 333900* | -34870 | -18175 | -16695 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 2167390* | 1441000 | ---- * | ---- | 726390* | -108369 | -72050 | -36319 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 881600* | 491000 | ---- * | ---- | 390600* | -44080 | -24550 | -19530 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 27330* | 7800 | ---- * | ---- | 19530* | -1366 | -390 | -976 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 682260* | 643200 | ---- * | ---- | 39060* | -34113 | -32160 | -1953 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 576200* | 299000 | ---- * | ---- | 277200* | -28810 | -14950 | -13860 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 3021560* | 1615400 | ---- * | ---- | 1406160* | -151077 | -80770 | -70307 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 1150800* | 672000 | ---- * | ---- | 478800* | -57540 | -33600 | -23940 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 114630* | 63600 | ---- * | ---- | 51030* | -5731 | -3180 | -2551 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 316300* | 184000 | ---- * | ---- | 132300* | -15815 | -9200 | -6615 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 1129600* | 487000 | ---- * | ---- | 642600* | -56480 | -24350 | -32130 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 64390.0 | 193170* | 130800 | 43600.00* | 20790.0 | 62370* | -9658 | -6540 | -3118 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 117060* | 78000 | ---- * | ---- | 39060* | -5853 | -3900 | -1953 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 1711100* | 1100000 | ---- * | ---- | 611100* | -85555 | -55000 | -30555 |
| 12.000000 | PIPING | LS* | ---- | ---- | 28004420* | 9876800 | ---- * | ---- | 10127620* | -1400221 | -493840 | -906381 |
| 12.100000 | LARGE BORE PIPING | TN* | 920 | 19711.0 | 18134120* | 8454800 | 9190.00* | 10521.0 | 9679320* | -906706 | -422740 | -483966 |
| 12.200000 | SMALL BORE PIPING | LF* | 90000 | 109.7 | 9870300* | 1422000 | 15.80* | 93.9 | 8448300* | -493515 | -71100 | -422415 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6880000* | 580000 | ---- * | ---- | 6300000* | -344000 | -29000 | -315000 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 6880000* | 580000 | ---- * | ---- | 6300000* | -344000 | -29000 | -315000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 7067000* | 6500000 | ---- * | ---- | 567000* | -353350 | -325000 | -28350 |

BY: JDF CHECKED: JDF

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 7067000* | 6500000 | ---- * | ---- | 567000* | -353350 | -325000 | -28350 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 57570000* | 21000000 | ---- * | ---- | 36570000* | -2878500 | -1050000 | -1828500 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2224340* | 155000 | ---- * | ---- | 2069340* | -111217 | -7750 | -103467 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 650600* | 50000 | ---- * | ---- | 600600* | -32530 | -2500 | -30030 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1167000* | 75000 | ---- * | ---- | 1092000* | -58350 | -3750 | -54600 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 118200* | 9000 | ---- * | ---- | 109200* | -5910 | -450 | -5460 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 288540* | 21000 | ---- * | ---- | 267540* | -14427 | -1050 | -13377 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- * | ---- | 7430700* | -673035 | -301500 | -371535 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3083700* | 570000 | ---- * | ---- | 2513700* | -154185 | -28500 | -125685 |
| 17.200000 | ACCESS ROADS | MI* | 20 | 518850.0 | 10377000* | 5460000 | ---- * | 245850.0 | 4917000* | -518850 | -273000 | -245850 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 7837739* | 1888700 | ---- * | ---- | 5949039* | -391884 | -94435 | -297449 |
| 18.100000 | BARGE UNLOADNG FAC | LS* | ---- | ---- | 577920* | 0 | ---- * | ---- | 577920* | -28896 | 0 | -28896 |
| 18.110000 | DREDGING | CY* | 32000 | 18.1 | 577920* | 0 | 0.00* | 18.1 | 577920* | -28896 | 0 | -28896 |
| 18.200000 | MOOR/DOCK FACILITY | LS* | ---- | ---- | 7259819* | 1888700 | ---- * | ---- | 5371119* | -362988 | -94435 | -268553 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.3 | 372487* | 0 | 0.00* | 8.3 | 372487* | -18624 | 0 | -18624 |
| 18.220000 | FILL | CY* | 27500 | 9.7 | 266062* | 0 | 0.00* | 9.7 | 266062* | -13303 | 0 | -13303 |
| 18.230000 | H PILES | LF* | 1800 | 58.6 | 105435* | 70200 | 39.00* | 19.6 | 35235* | -5271 | -3510 | -1761 |
| 18.240000 | SHEET PILING | TN* | 2100 | 2518.8 | 5289375* | 1470000 | 700.00* | 1818.8 | 3819375* | -264468 | -73500 | -190968 |
| 18.250000 | STRUCTURAL STEEL | TN* | 85 | 2458.0 | 208930* | 93500 | 1100.00* | 1358.0 | 115430* | -10446 | -4675 | -5771 |
| 18.260000 | CONCRETE | CY* | 1200 | 471.9 | 566280* | 180000 | 150.00* | 321.9 | 386280* | -28314 | -9000 | -19314 |
| 18.270000 | MISCELLANOUS | LS* | ---- | ---- | 451250* | 75000 | ---- * | ---- | 376250* | -22562 | -3750 | -18812 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 23198950* | 13080000 | ---- * | ---- | 10118950* | -1159947 | -654000 | -505947 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 3714550* | 3000000 | ---- * | ---- | 714550* | -185727 | -150000 | -35727 |

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APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 48 | 405925.0 | 19484400* | 10080000 | ---- * | 195925.0 | 9404400* | -974220 | -504000 | -470220 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 40949079* | 0 | ---- * | ---- | 40949079* | -2047453 | 0 | -2047453 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 4472325* | 0 | ---- * | ---- | 4472325* | -223616 | 0 | -223616 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 3000000* | 0 | ---- * | ---- | 3000000* | -150000 | 0 | -150000 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 2000000* | 0 | ---- * | ---- | 2000000* | -100000 | 0 | -100000 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1000000* | 0 | ---- * | ---- | 1000000* | -50000 | 0 | -50000 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 180000* | 0 | ---- * | ---- | 180000* | -9000 | 0 | -9000 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 180000* | 0 | ---- * | ---- | 180000* | -9000 | 0 | -9000 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 26871384* | 0 | ---- * | ---- | 26871384* | -1343569 | 0 | -1343569 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1626000* | 0 | ---- * | ---- | 1626000* | -81300 | 0 | -81300 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 25245384* | 0 | ---- * | ---- | 25245384* | -1262269 | 0 | -1262269 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 10000000* | 0 | ---- * | ---- | 10000000* | -500000 | 0 | -500000 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 11000000* | 0 | ---- * | ---- | 11000000* | -550000 | 0 | -550000 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002* | 0 | ---- * | ---- | 2205002* | -110250 | 0 | -110250 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 220500.2 | 2205002* | 0 | 0.00* | 220500.2 | 2205002* | -110250 | 0 | -110250 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2040382* | 0 | ---- * | ---- | 2040382* | -102019 | 0 | -102019 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2069870* | 0 | ---- * | ---- | 2069870* | -103493 | 0 | -103493 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 155000* | 0 | ---- * | ---- | 155000* | -7750 | 0 | -7750 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 691070* | 0 | ---- * | ---- | 691070* | -34553 | 0 | -34553 |
| 71.630000 | TESTING | LS* | ---- | ---- | 761800* | 0 | ---- * | ---- | 761800* | -38090 | 0 | -38090 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000* | 0 | ---- * | ---- | 462000* | -23100 | 0 | -23100 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 4088800* | 0 | ---- * | ---- | 4088800* | -204440 | 0 | -204440 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 266700* | 0 | ---- * | ---- | 266700* | -13335 | 0 | -13335 |

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APA
SUSITNA 200 MW COAL
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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 54650000* | 0 | ---- | * ---- | 54650000* | -2732500 | 0 | -2732500 |
| $ | | | | | | | | | | | | |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 343957417 | 138328889 | 77716523 | 83047994* | --- | 39.90 | 3466642 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 44864012 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -15741697 | -7280439 | -4090327 | -4370930* | --- | -2.10 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 314835102 | 145609328 | 81806850 | 87418924* | --- | 42.00 | 3466642 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 2891822 | 1568919 | 0 | 1322903* | --- | 40.68 | 38572 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 19393884 | 7947221 | 63000 | 11383663* | --- | 42.89 | 185295 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4193590 | 2795394 | 46800 | 1351396* | --- | 44.58 | 62709 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 16576785 | 11599848 | 337000 | 4639937* | --- | 44.20 | 262440 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 16667450 | 10039750 | 225000 | 6402700* | --- | 48.78 | 205813 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 12362087 | 8830064 | 0 | 3532023* | --- | 42.83 | 206162 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 23807700 | 15871800 | 0 | 7935900* | --- | 42.00 | 377900 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 5185706 | 3457104 | 50 | 1728552* | --- | 42.00 | 82312 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 9459450 | 6306300 | 0 | 3153150* | --- | 42.00 | 150150 |
| 12.000000 | PIPING | LS* | ---- | ---- | 18127620 | 12085080 | 0 | 6042540* | --- | 42.00 | 287740 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 36570000 | 24380000 | 0 | 12190000* | --- | 46.00 | 530000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2069340 | 1478100 | 0 | 591240* | --- | 39.00 | 37900 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 5949039 | 2494999 | 15000 | 3439040* | --- | 46.51 | 53649 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 10118950 | 5993000 | 0 | 4125950* | --- | 46.10 | 130000 |

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APA
SUSITNA 200 MW COAL
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SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 40949079 | 8901949 | 26470000 | 5577130* | --- | 26.33 | 338100 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 54650000 | 0 | 54650000 | 0* | --- | 0.00 | 0 |

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APA
SUSITNA 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 343957417 | 138328889 | 77716523 | 83047994* | --- | 39.90 | 3466642 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 44864012 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -15741697 | -7280439 | -4090327 | -4370930* | --- | -2.10 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 314835102 | 145609328 | 81806850 | 87418924* | --- | 42.00 | 3466642 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 2891822 | 1568919 | 0 | 1322903* | --- | 40.68 | 38572 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 440133 | 195615 | 0 | 244518* | --- | 40.50 | 4830 |
| 1.110000 | CLEARING | AC* | 105 | 4191.74 | 440133 | 195615 | 0 | 244518* | 46.00 | 40.50 | 4830 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 514298 | 212184 | 0 | 302114* | --- | 42.93 | 4942 |
| 1.210000 | ROADS | LS* | ---- | ---- | 442530 | 160920 | 0 | 281610* | --- | 44.70 | 3600 |
| 1.213000 | 24' WIDE ROADS | SY* | 40000 | 11.06 | 442530 | 160920 | 0 | 281610* | 0.09 | 44.70 | 3600 |
| 1.240000 | FENCING | LS* | ---- | ---- | 71768 | 51264 | 0 | 20504* | --- | 38.20 | 1342 |
| 1.241000 | PROPERTY FENCE | LF* | 3800 | 12.84 | 48773 | 34838 | 0 | 13935* | 0.24 | 38.20 | 912 |
| 1.242000 | SECURITY FENCE | LF* | 1500 | 12.83 | 19252 | 13752 | 0 | 5500* | 0.24 | 38.20 | 360 |
| 1.243000 | GATES | EA* | 7 | 534.71 | 3743 | 2674 | 0 | 1069* | 10.00 | 38.20 | 70 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 706552 | 455840 | 0 | 250712* | --- | 40.70 | 11200 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 239723 | 154660 | 0 | 85063* | --- | 40.70 | 3800 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 991116 | 550620 | 0 | 440496* | --- | 39.90 | 13800 |
| 1.720000 | STACKER RECL TRCK | LF* | 600 | 1651.86 | 991116 | 550620 | 0 | 440496* | 23.00 | 39.90 | 13800 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 19393884 | 7947221 | 63000 | 11383663* | --- | 42.89 | 185295 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 10308641 | 4415724 | 57000 | 5835917* | --- | 42.65 | 103535 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 6196505 | 2801980 | 0 | 3394525* | --- | 42.79 | 65475 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 29.15 | 545105 | 198220 | 0 | 346885* | 0.25 | 42.40 | 4675 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 5651400 | 2603760 | 0 | 3047640* | --- | 42.83 | 60800 |

APA
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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 510000 | 8.94 | 4559400 | 1823760 | 0 | 2735640* | 0.08 | 44.70 | 40800 |
| 2.214200 | INSULATION BRD | SF* | 2000000 | 0.55 | 1092000 | 780000 | 0 | 312000* | 0.01 | 39.00 | 20000 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 221816 | 91584 | 6000 | 124232* | --- | 42.40 | 2160 |
| 2.222000 | EARTH EXCAVATION | CY* | 2300 | 23.32 | 53636 | 19504 | 0 | 34132* | 0.20 | 42.40 | 460 |
| 2.223000 | ROCK EXCAVATION | CY* | 2000 | 84.09 | 168180 | 72080 | 6000 | 90100* | 0.85 | 42.40 | 1700 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 2086470 | 816200 | 20000 | 1250270* | --- | 42.40 | 19250 |
| 2.232000 | EARTH EXCAVATION | CY* | 43400 | 29.15 | 1265110 | 460040 | 0 | 805070* | 0.25 | 42.40 | 10850 |
| 2.233000 | ROCK EXCAVATION | CY* | 11200 | 73.34 | 821360 | 356160 | 20000 | 445200* | 0.75 | 42.40 | 8400 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 201135 | 73140 | 0 | 127995* | --- | 42.40 | 1725 |
| 2.242000 | EARTH EXCAVATION | CY* | 6900 | 29.15 | 201135 | 73140 | 0 | 127995* | 0.25 | 42.40 | 1725 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 1602715 | 632820 | 31000 | 938895* | --- | 42.40 | 14925 |
| 2.252000 | EARTH EXCAVATION | CY* | 27900 | 29.15 | 813285 | 295740 | 0 | 517545* | 0.25 | 42.40 | 6975 |
| 2.253000 | ROCK EXCAVATION | CY* | 10600 | 74.47 | 789430 | 337080 | 31000 | 421350* | 0.75 | 42.40 | 7950 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 2816831 | 941107 | 6000 | 1869724* | --- | 42.70 | 22040 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 529478 | 178656 | 6000 | 344822* | --- | 42.70 | 4184 |
| 2.312000 | EARTH EXCAVATION | CY* | 13700 | 28.18 | 386091 | 128697 | 0 | 257394* | 0.22 | 42.70 | 3014 |
| 2.313000 | ROCK EXCAVATION | CY* | 1800 | 79.66 | 143387 | 49959 | 6000 | 87428* | 0.65 | 42.70 | 1170 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 1334289 | 444763 | 0 | 889526* | --- | 42.70 | 10416 |
| 2.322000 | EARTH EXCAVATION | CY* | 43400 | 30.74 | 1334289 | 444763 | 0 | 889526* | 0.24 | 42.70 | 10416 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 953064 | 317688 | 0 | 635376* | --- | 42.70 | 7440 |
| 2.332000 | EARTH EXCAVATION | CY* | 31000 | 30.74 | 953064 | 317688 | 0 | 635376* | 0.24 | 42.70 | 7440 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.04 | 159698 | 79849 | 0 | 79849* | 0.34 | 42.70 | 1870 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 5029687 | 2011875 | 0 | 3017812* | --- | 43.50 | 46250 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 180000 | 20.12 | 3621375 | 1448550 | 0 | 2172825* | 0.19 | 43.50 | 33300 |
| 2.520000 | AQCS AREA | LF* | 70000 | 20.12 | 1408312 | 563325 | 0 | 844987* | 0.19 | 43.50 | 12950 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 1079027 | 498666 | 0 | 580361* | --- | 42.99 | 11600 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 469052 | 192650 | 0 | 276402* | --- | 40.82 | 4720 |
| 2.711000 | PVC LINER | SF* | 300000 | 0.05 | 16002 | 11430 | 0 | 4572* | 0.00 | 38.10 | 300 |
| 2.712000 | SAND | CY* | 17000 | 14.35 | 243950 | 97580 | 0 | 146370* | 0.14 | 41.00 | 2380 |
| 2.713000 | GRAVEL | CY* | 17000 | 12.30 | 209100 | 83640 | 0 | 125460* | 0.12 | 41.00 | 2040 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 443929 | 222456 | 0 | 221473* | --- | 44.64 | 4983 |
| 2.721000 | PVC LINER | SF* | 43000 | 0.05 | 2293 | 1638 | 0 | 655* | 0.00 | 38.10 | 43 |
| 2.722000 | EXCAVATION | CY* | 19000 | 17.88 | 339720 | 169860 | 0 | 169860* | 0.20 | 44.70 | 3800 |
| 2.723000 | BACKFILL | CY* | 3800 | 26.82 | 101916 | 50958 | 0 | 50958* | 0.30 | 44.70 | 1140 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 143546 | 73310 | 0 | 72236* | --- | 44.51 | 1647 |
| 2.731000 | PVC LINER | SF* | 47000 | 0.05 | 2506 | 1790 | 0 | 716* | 0.00 | 38.10 | 47 |
| 2.732000 | EXCAVATION | CY* | 5300 | 17.88 | 94764 | 47382 | 0 | 47382* | 0.20 | 44.70 | 1060 |
| 2.733000 | BACKFILL | CY* | 1800 | 26.82 | 48276 | 24138 | 0 | 24138* | 0.30 | 44.70 | 540 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 20500 | 10250 | 0 | 10250* | --- | 41.00 | 250 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 4193590 | 2795394 | 46800 | 1351396* | --- | 44.58 | 62709 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1247364 | 788214 | 18800 | 440350* | --- | 42.98 | 18340 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3400 | 165.83 | 563822 | 322184 | 0 | 241638* | 2.30 | 41.20 | 7820 |
| 3.260000 | BEDDING MATERIAL | CY* | 2000 | 20.50 | 41000 | 20500 | 0 | 20500* | 0.25 | 41.00 | 500 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 612848 | 424320 | 18800 | 169728* | --- | 44.20 | 9600 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 305.02 | 228768 | 159120 | 6000 | 63648* | 4.80 | 44.20 | 3600 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 699.43 | 279772 | 194480 | 7500 | 77792* | 11.00 | 44.20 | 4400 |

BY: JDF CHECKED: JDF

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 521.54 | 104308 | 70720 | 5300 | 28288* | 8.00 | 44.20 | 1600 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 2946226 | 2007180 | 28000 | 911046* | --- | 45.24 | 44369 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 575965 | 356460 | 13000 | 206505* | --- | 44.28 | 8050 |
| 3.411000 | EXCAVATION | CY* | 6500 | 22.35 | 145275 | 58110 | 0 | 87165* | 0.20 | 44.70 | 1300 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 287.13 | 430690 | 298350 | 13000 | 119340* | 4.50 | 44.20 | 6750 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 627870 | 406155 | 15000 | 206715* | --- | 44.54 | 9119 |
| 3.422000 | EXCAVATION | CY* | 4500 | 22.35 | 100575 | 40230 | 0 | 60345* | 0.20 | 44.70 | 900 |
| 3.423000 | CONCRETE | CY* | 1500 | 331.73 | 497601 | 344715 | 15000 | 137886* | 5.20 | 44.20 | 7799 |
| 3.424000 | MISC STEEL | TN* | 7 | 4242.00 | 29694 | 21210 | 0 | 8484* | 60.00 | 50.50 | 420 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 62160 | 44400 | 0 | 17760* | --- | 46.74 | 950 |
| 3.433000 | SCREENS | SF* | 500 | 28.28 | 14140 | 10100 | 0 | 4040* | 0.40 | 50.50 | 200 |
| 3.435000 | STOP LOGS | SF* | 500 | 14.14 | 7070 | 5050 | 0 | 2020* | 0.20 | 50.50 | 100 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 40950 | 29250 | 0 | 11700* | --- | 45.00 | 650 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 421743 | 301245 | 0 | 120498* | --- | 46.70 | 6450 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 1555.40 | 116655 | 83325 | 0 | 33330* | 22.00 | 50.50 | 1650 |
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 50.85 | 305088 | 217920 | 0 | 87168* | 0.80 | 45.40 | 4800 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 1258488 | 898920 | 0 | 359568* | --- | 45.40 | 19800 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 16576785 | 11599848 | 337000 | 4639937* | --- | 44.20 | 262440 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4700 | 692.38 | 3254196 | 2285140 | 55000 | 914056* | 11.00 | 44.20 | 51700 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 593.78 | 1128176 | 789412 | 23000 | 315764* | 9.40 | 44.20 | 17860 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 626.73 | 1065440 | 743886 | 24000 | 297554* | 9.90 | 44.20 | 16830 |
| 4.400000 | AQCS CONCRETE | CY* | 9100 | 625.36 | 5690769 | 3981978 | 116000 | 1592791* | 9.90 | 44.20 | 90090 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | COAL HANDLG CONCRT | CY* | 5600 | 730.84 | 4092724 | 2871232 | 73000 | 1148492* | 11.60 | 44.20 | 64960 |
| 4.200000 | MISCELL CONCRETE | CY* | 3500 | 384.42 | 1345480 | 928200 | 46000 | 371280* | 6.00 | 44.20 | 21000 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 16667450 | 10039750 | 225000 | 6402700* | --- | 48.78 | 205813 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2147390 | 1533850 | 0 | 613540* | --- | 49.74 | 30837 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 1190.00 | 1428000 | 1020000 | 0 | 408000* | 17.00 | 50.00 | 20400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 183750 | 131250 | 0 | 52500* | --- | 50.00 | 2625 |
| 5.121000 | WALL FRAMING | TN* | 105 | 1750.00 | 183750 | 131250 | 0 | 52500* | 25.00 | 50.00 | 2625 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 434840 | 310600 | 0 | 124240* | --- | 50.00 | 6212 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 21.00 | 252000 | 180000 | 0 | 72000* | 0.30 | 50.00 | 3600 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 46.90 | 28140 | 20100 | 0 | 8040* | 0.67 | 50.00 | 402 |
| 5.133000 | HANDRAIL | LF* | 1000 | 87.50 | 87500 | 62500 | 0 | 25000* | 1.25 | 50.00 | 1250 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 5600.00 | 67200 | 48000 | 0 | 19200* | 80.00 | 50.00 | 960 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 100800 | 72000 | 0 | 28800* | --- | 45.00 | 1600 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 7478170 | 5341550 | 0 | 2136620* | --- | 49.91 | 107021 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 1190.00 | 2737000 | 1955000 | 0 | 782000* | 17.00 | 50.00 | 39100 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1267000 | 905000 | 0 | 362000* | --- | 50.00 | 18100 |
| 5.221000 | WALL FRAMING | TN* | 330 | 3500.00 | 1155000 | 825000 | 0 | 330000* | 50.00 | 50.00 | 16500 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 2800.00 | 112000 | 80000 | 0 | 32000* | 40.00 | 50.00 | 1600 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 3354470 | 2396050 | 0 | 958420* | --- | 50.00 | 47921 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 21.00 | 1470000 | 1050000 | 0 | 420000* | 0.30 | 50.00 | 21000 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 46.90 | 75040 | 53600 | 0 | 21440* | 0.67 | 50.00 | 1072 |
| 5.233000 | HANDRAIL | LF* | 12500 | 90.99 | 1137430 | 812450 | 0 | 324980* | 1.30 | 50.00 | 16249 |

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INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.234000 | LADDERS & STRWY | TN* | 120 | 5600.00 | 672000 | 480000 | 0 | 192000* | 80.00 | 50.00 | 9600 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 119700 | 85500 | 0 | 34200* | --- | 45.00 | 1900 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 94500 | 67500 | 0 | 27000* | --- | 45.00 | 1500 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 25200 | 18000 | 0 | 7200* | --- | 45.00 | 400 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 1765890 | 1261350 | 0 | 504540* | --- | 49.94 | 25255 |
| 5.310000 | MAIN STEEL | TN* | 225 | 1190.00 | 267750 | 191250 | 0 | 76500* | 17.00 | 50.00 | 3825 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 227500 | 162500 | 0 | 65000* | --- | 50.00 | 3250 |
| 5.321000 | WALL FRAMING | TN* | 65 | 3500.00 | 227500 | 162500 | 0 | 65000* | 50.00 | 50.00 | 3250 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 147000 | 105000 | 0 | 42000* | --- | 50.00 | 2100 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 17640 | 12600 | 0 | 5040* | --- | 45.00 | 280 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 490000 | 350000 | 0 | 140000* | --- | 50.00 | 7000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 4900.00 | 490000 | 350000 | 0 | 140000* | 70.00 | 50.00 | 7000 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 616000 | 440000 | 0 | 176000* | --- | 50.00 | 8800 |
| 5.361000 | STEEL SILOS | TN* | 170 | 2800.00 | 476000 | 340000 | 0 | 136000* | 40.00 | 50.00 | 6800 |
| 5.362000 | SS PLATES | TN* | 40 | 3500.00 | 140000 | 100000 | 0 | 40000* | 50.00 | 50.00 | 2000 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 5087000 | 1768000 | 225000 | 3094000* | --- | 44.20 | 40000 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 31500 | 22500 | 0 | 9000* | --- | 50.00 | 450 |
| 5.900000 | UNCLASS STEEL | TN* | 45 | 3500.00 | 157500 | 112500 | 0 | 45000* | 50.00 | 50.00 | 2250 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 12362087 | 8830064 | 0 | 3532023* | --- | 42.83 | 206162 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1253684 | 895489 | 0 | 358195* | --- | 42.46 | 21090 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 671438 | 479599 | 0 | 191839* | --- | 43.60 | 11000 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 407540 | 291100 | 0 | 116440* | --- | 41.00 | 7100 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 129360 | 92400 | 0 | 36960* | --- | 42.00 | 2200 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 45346 | 32390 | 0 | 12956* | --- | 41.00 | 790 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 1611596 | 1151140 | 0 | 460456* | --- | 42.41 | 27140 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 885080 | 632200 | 0 | 252880* | --- | 43.60 | 14500 |
| 6.270000 | HVAC | LS* | ---- | ---- | 631400 | 451000 | 0 | 180400* | --- | 41.00 | 11000 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 41160 | 29400 | 0 | 11760* | --- | 42.00 | 700 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 53956 | 38540 | 0 | 15416* | --- | 41.00 | 940 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 497390 | 355279 | 0 | 142111* | --- | 42.09 | 8440 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 183118 | 130799 | 0 | 52319* | --- | 43.60 | 3000 |
| 6.370000 | HVAC | LS* | ---- | ---- | 229600 | 164000 | 0 | 65600* | --- | 41.00 | 4000 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 76440 | 54600 | 0 | 21840* | --- | 42.00 | 1300 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8232 | 5880 | 0 | 2352* | --- | 42.00 | 140 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 2665173 | 1903696 | 0 | 761477* | --- | 43.00 | 44272 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1350 | 102.34 | 138159 | 98685 | 0 | 39474* | 1.70 | 43.00 | 2295 |
| 6.420000 | AQCS CTRL BLDG | SF* | 3600 | 126.40 | 455051 | 325037 | 0 | 130014* | 2.10 | 43.00 | 7559 |
| 6.430000 | DIESEL GEN BLDG | SF* | 850 | 113.18 | 96199 | 68714 | 0 | 27485* | 1.88 | 43.00 | 1598 |
| 6.440000 | PUMP HOUSE | SF* | 14000 | 113.18 | 1584464 | 1131760 | 0 | 452704* | 1.88 | 43.00 | 26320 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 6500 | 60.20 | 391300 | 279500 | 0 | 111800* | 1.00 | 43.00 | 6500 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 6334244 | 4524460 | 0 | 1809784* | --- | 43.00 | 105220 |
| 6.930000 | ADMIN BUILDING | SF* | 4000 | 195.65 | 782600 | 559000 | 0 | 223600* | 3.25 | 43.00 | 13000 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 776580 | 554700 | 0 | 221880* | --- | 43.00 | 12900 |
| 6.950000 | WTR TRTMT BLDG | SF* | 3250 | 162.54 | 528255 | 377325 | 0 | 150930* | 2.70 | 43.00 | 8775 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 4246809 | 3033435 | 0 | 1213374* | --- | 43.00 | 70545 |
| 6.991000 | PLANT MAINT | SF* | 3000 | 102.34 | 307020 | 219300 | 0 | 87720* | 1.70 | 43.00 | 5100 |
| 6.992000 | AUX BOILER | SF* | 1000 | 174.58 | 174580 | 124700 | 0 | 49880* | 2.90 | 43.00 | 2900 |
| 6.993000 | YD EQP MAINT BLD | SF* | 1200 | 99.33 | 119196 | 85140 | 0 | 34056* | 1.65 | 43.00 | 1980 |
| 6.994000 | CHLORINE BLDG | SF* | 1000 | 111.37 | 111370 | 79550 | 0 | 31820* | 1.85 | 43.00 | 1850 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 114.38 | 91504 | 65360 | 0 | 26144* | 1.90 | 43.00 | 1520 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 180.60 | 40635 | 29025 | 0 | 11610* | 3.00 | 43.00 | 675 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 36.12 | 830760 | 593400 | 0 | 237360* | 0.60 | 43.00 | 13800 |
| 6.998000 | BULK GAS STR BLD | SF* | 1200 | 111.37 | 133644 | 95460 | 0 | 38184* | 1.85 | 43.00 | 2220 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 2438100 | 1741500 | 0 | 696600* | --- | 43.00 | 40500 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 108.36 | 86688 | 61920 | 0 | 24768* | 1.80 | 43.00 | 1440 |
| 6.999200 | CONTROL & SWGR | SF* | 2000 | 102.34 | 204680 | 146200 | 0 | 58480* | 1.70 | 43.00 | 3400 |
| 6.999300 | SWER TRTMT BLDG | SF* | 3000 | 111.37 | 334110 | 238650 | 0 | 95460* | 1.85 | 43.00 | 5550 |
| 6.999400 | DEWTR & FIXTN | SF* | 8000 | 102.34 | 818720 | 584800 | 0 | 233920* | 1.70 | 43.00 | 13600 |
| 6.999500 | SWTCH YD CTRL | SF* | 700 | 108.36 | 75852 | 54180 | 0 | 21672* | 1.80 | 43.00 | 1260 |
| 6.999600 | CRSHING & SAMPL | SF* | 2000 | 111.37 | 222740 | 159100 | 0 | 63640* | 1.85 | 43.00 | 3700 |
| 6.999700 | WASTEWTR TRTMT | SF* | 7000 | 99.33 | 695310 | 496650 | 0 | 198660* | 1.65 | 43.00 | 11550 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 2664900 | 1776600 | 0 | 888300* | --- | 42.00 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 18900000 | 12600000 | 0 | 6300000* | --- | 42.00 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 23807700 | 15871800 | 0 | 7935900* | --- | 42.00 | 377900 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 4006800 | 2671200 | 0 | 1335600* | --- | 42.00 | 63600 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 17318700 | 11545800 | 0 | 5772900* | --- | 42.00 | 274900 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 17318700 | 11545800 | 0 | 5772900* | --- | 42.00 | 274900 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 1890000 | 1260000 | 0 | 630000* | --- | 42.00 | 30000 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 12694500 | 8463000 | 0 | 4231500* | --- | 42.00 | 201500 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 1638000 | 1092000 | 0 | 546000* | --- | 42.00 | 26000 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 1096200 | 730800 | 0 | 365400* | --- | 42.00 | 17400 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 1953000 | 1302000 | 0 | 651000* | --- | 42.00 | 31000 |
| 9.400000 | FANS | LS* | ---- | ---- | 529200 | 352800 | 0 | 176400* | --- | 42.00 | 8400 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 333900 | 222600 | 0 | 111300* | --- | 42.00 | 5300 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 195300 | 130200 | 0 | 65100* | --- | 42.00 | 3100 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 5185706 | 3457104 | 50 | 1728552* | --- | 42.00 | 82312 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 499968 | 333312 | 0 | 166656* | --- | 42.00 | 7936 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 389970 | 259980 | 0 | 129990* | --- | 42.00 | 6190 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 78120.0 | 156240 | 104160 | 0 | 52080* | --- | 42.00 | 2480 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 63000.0 | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 28350.0 | 56700 | 37800 | 0 | 18900* | --- | 42.00 | 900 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 26964 | 17976 | 0 | 8988* | --- | 42.00 | 428 |
| 10.131000 | SERVICE WATER | EA* | 4 | 2961.00 | 11844 | 7896 | 0 | 3948* | 47.00 | 42.00 | 188 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 7812 | 5208 | 0 | 2604* | --- | 42.00 | 124 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 3654.00 | 7308 | 4872 | 0 | 2436* | 58.00 | 42.00 | 116 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 13671 | 9114 | 0 | 4557* | --- | 42.00 | 217 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 1953.00 | 3906 | 2604 | 0 | 1302* | 31.00 | 42.00 | 62 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 1953.00 | 5859 | 3906 | 0 | 1953* | 31.00 | 42.00 | 93 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 1260.00 | 7560 | 5040 | 0 | 2520* | 20.00 | 42.00 | 120 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 59850 | 39900 | 0 | 19950* | --- | 42.00 | 950 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 16632 | 11088 | 0 | 5544* | --- | 42.00 | 264 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 8820.0 | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 6552.0 | 19656 | 13104 | 0 | 6552* | --- | 42.00 | 312 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 2961.00 | 5922 | 3948 | 0 | 1974* | 47.00 | 42.00 | 94 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 697599 | 465066 | 0 | 232533* | --- | 42.00 | 11073 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 585900 | 390600 | 0 | 195300* | --- | 42.00 | 9300 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 111699 | 74466 | 0 | 37233* | --- | 42.00 | 1773 |
| 10.221000 | CW PUMPS | EA* | 2 | 16632.0 | 33264 | 22176 | 0 | 11088* | --- | 42.00 | 528 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 15624.0 | 31248 | 20832 | 0 | 10416* | --- | 42.00 | 496 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 6867.0 | 13734 | 9156 | 0 | 4578* | --- | 42.00 | 218 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 181818 | 121212 | 0 | 60606* | --- | 42.00 | 2886 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 14238.0 | 99666 | 66444 | 0 | 33222* | --- | 42.00 | 1582 |

BY: JDF CHECKED: JDF

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 42840 | 28560 | 0 | 14280* | --- | 42.00 | 680 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 15750.0 | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 3906.00 | 7812 | 5208 | 0 | 2604* | 62.00 | 42.00 | 124 |
| 10.400000 | TANKS | LS* | ---- | ---- | 444515 | 296310 | 50 | 148155* | --- | 42.00 | 7055 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 302715 | 201810 | 0 | 100905* | --- | 42.00 | 4805 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 146475 | 97650 | 0 | 48825* | --- | 42.00 | 2325 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 156240 | 104160 | 0 | 52080* | --- | 42.00 | 2480 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 85932 | 57288 | 0 | 28644* | --- | 42.00 | 1364 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 6552.0 | 19656 | 13104 | 0 | 6552* | --- | 42.00 | 312 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 36212 | 24108 | 50 | 12054* | --- | 42.00 | 574 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 15800 | 10500 | 50 | 5250* | --- | 42.00 | 250 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 5859 | 3906 | 0 | 1953* | --- | 42.00 | 93 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 1953 | 1302 | 0 | 651* | --- | 42.00 | 31 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 646506 | 431004 | 0 | 215502* | --- | 42.00 | 10262 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 82026 | 54684 | 0 | 27342* | --- | 42.00 | 1302 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 39060.0 | 78120 | 52080 | 0 | 26040* | --- | 42.00 | 1240 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 3906 | 2604 | 0 | 1302* | --- | 42.00 | 62 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 564480 | 376320 | 0 | 188160* | --- | 42.00 | 8960 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 234360 | 156240 | 0 | 78120* | --- | 42.00 | 3720 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 234360 | 156240 | 0 | 78120* | --- | 42.00 | 3720 |

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APA
SUSITNA 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 39060 | 26040 | 0 | 13020* | --- | 42.00 | 620 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 11970 | 7980 | 0 | 3990* | --- | 42.00 | 190 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 17640 | 11760 | 0 | 5880* | --- | 42.00 | 280 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 27090 | 18060 | 0 | 9030* | --- | 42.00 | 430 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 157500 | 105000 | 0 | 52500* | --- | 42.00 | 2500 |
| 10.700000 | CECI | LS* | ---- | ---- | 882000 | 588000 | 0 | 294000* | --- | 42.00 | 14000 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 1549800 | 1033200 | 0 | 516600* | --- | 42.00 | 24600 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 9459450 | 6306300 | 0 | 3153150* | --- | 42.00 | 150150 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 7442190 | 4961460 | 0 | 2480730* | --- | 42.00 | 118130 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 472500 | 315000 | 0 | 157500* | --- | 42.00 | 7500 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 472500 | 315000 | 0 | 157500* | --- | 42.00 | 7500 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 1272600 | 848400 | 0 | 424200* | --- | 42.00 | 20200 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 1272600 | 848400 | 0 | 424200* | --- | 42.00 | 20200 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 2948400 | 1965600 | 0 | 982800* | --- | 42.00 | 16800 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 1701000 | 1134000 | 0 | 567000* | --- | 42.00 | 27000 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 415800 | 277200 | 0 | 138600* | --- | 42.00 | 6600 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 340200 | 226800 | 0 | 113400* | --- | 42.00 | 5400 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 239400.0 | 478800 | 319200 | 0 | 159600* | --- | 42.00 | 7600 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 1707300 | 1138200 | 0 | 569100* | --- | 42.00 | 27100 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 428400.0 | 856800 | 571200 | 0 | 285600* | --- | 42.00 | 13600 |

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APA
SUSITNA 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 157500 | 105000 | 0 | 52500* | --- | 42.00 | 2500 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 44100 | 29400 | 0 | 14700* | --- | 42.00 | 700 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 333900 | 222600 | 0 | 111300* | --- | 42.00 | 5300 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 726390 | 484260 | 0 | 242130* | --- | 42.00 | 11530 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 390600 | 260400 | 0 | 130200* | --- | 42.00 | 6200 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 19530 | 13020 | 0 | 6510* | --- | 42.00 | 310 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 39060 | 26040 | 0 | 13020* | --- | 42.00 | 620 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 277200 | 184800 | 0 | 92400* | --- | 42.00 | 4400 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 1406160 | 937440 | 0 | 468720* | --- | 42.00 | 22320 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 478800 | 319200 | 0 | 159600* | --- | 42.00 | 7600 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 51030 | 34020 | 0 | 17010* | --- | 42.00 | 810 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 132300 | 88200 | 0 | 44100* | --- | 42.00 | 2100 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 642600 | 428400 | 0 | 214200* | --- | 42.00 | 10200 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 20790.0 | 62370 | 41580 | 0 | 20790* | --- | 42.00 | 990 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 39060 | 26040 | 0 | 13020* | --- | 42.00 | 620 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 611100 | 407400 | 0 | 203700* | --- | 42.00 | 9700 |
| 12.000000 | PIPING | LS* | ---- | ---- | 18127620 | 12085080 | 0 | 6042540* | --- | 42.00 | 287740 |
| 12.100000 | LARGE BORE PIPING | TN* | 920 | 10521.0 | 9679320 | 6452880 | 0 | 3226440* | --- | 42.00 | 153640 |
| 12.200000 | SMALL BORE PIPING | LF* | 90000 | 93.87 | 8448300 | 5632200 | 0 | 2816100* | 1.49 | 42.00 | 134100 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 7-JAN-85 TIME: 16:45:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 567000 | 378000 | 0 | 189000* | --- | 42.00 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 36570000 | 24380000 | 0 | 12190000* | --- | 46.00 | 530000 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2069340 | 1478100 | 0 | 591240* | --- | 39.00 | 37900 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 600600 | 429000 | 0 | 171600* | --- | 39.00 | 11000 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1092000 | 780000 | 0 | 312000* | --- | 39.00 | 20000 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 109200 | 78000 | 0 | 31200* | --- | 39.00 | 2000 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 267540 | 191100 | 0 | 76440* | --- | 39.00 | 4900 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 17.200000 | ACCESS ROADS | MI* | 20 | 245850.0 | 4917000 | 1788000 | 0 | 3129000* | --- | 44.70 | 40000 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 5949039 | 2494999 | 15000 | 3439040* | --- | 46.51 | 53649 |
| 18.100000 | BARGE UNLOADNG FAC | LS* | ---- | ---- | 577920 | 165120 | 0 | 412800* | --- | 43.00 | 3840 |
| 18.110000 | DREDGING | CY* | 32000 | 18.06 | 577920 | 165120 | 0 | 412800* | 0.12 | 43.00 | 3840 |
| 18.200000 | MOOR/DOCK FACILITY | LS* | ---- | ---- | 5371119 | 2329879 | 15000 | 3026240* | --- | 46.78 | 49809 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.28 | 372487 | 135450 | 0 | 237037* | 0.07 | 43.00 | 3150 |
| 18.220000 | FILL | CY* | 27500 | 9.67 | 266062 | 106425 | 0 | 159637* | 0.09 | 43.00 | 2475 |
| 18.230000 | H PILES | LF* | 1800 | 19.58 | 35235 | 14094 | 0 | 21141* | 0.18 | 43.50 | 324 |
| 18.240000 | SHEET PILING | TN* | 2100 | 1818.75 | 3819375 | 1527750 | 0 | 2291625* | 15.00 | 48.50 | 31500 |
| 18.250000 | STRUCTURAL STEEL | TN* | 85 | 1358.00 | 115430 | 65960 | 0 | 49470* | 16.00 | 48.50 | 1360 |
| 18.260000 | CONCRETE | CY* | 1200 | 321.90 | 386280 | 265200 | 15000 | 106080* | 5.00 | 44.20 | 6000 |
| 18.270000 | MISCELLANOUS | LS* | ---- | ---- | 376250 | 215000 | 0 | 161250* | --- | 43.00 | 5000 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 10118950 | 5993000 | 0 | 4125950* | --- | 46.10 | 130000 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 714550 | 461000 | 0 | 253550* | --- | 46.10 | 10000 |

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SUSITNA 200 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 48 | 195925.0 | 9404400 | 5532000 | 0 | 3872400* | --- | 46.10 | 120000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 40949079 | 8901949 | 26470000 | 5577130* | --- | 26.33 | 338100 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 4472325 | 2475000 | 0 | 1997325* | --- | 16.50 | 150000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 3000000 | 0 | 3000000 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 2000000 | 0 | 2000000 | 0* | --- | 30.75 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1000000 | 0 | 1000000 | 0* | --- | 30.75 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 180000 | 0 | 180000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 180000 | 0 | 180000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 26871384 | 2274699 | 22350000 | 2246685* | --- | 43.66 | 52100 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1626000 | 600000 | 750000 | 276000* | --- | 40.00 | 15000 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 25245384 | 1674699 | 21600000 | 1970685* | --- | 45.14 | 37100 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 10000000 | 0 | 10000000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 11000000 | 0 | 11000000 | 0* | --- | 0.00 | 0 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 220500.2 | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2040382 | 474099 | 400000 | 1166283* | --- | 43.10 | 11000 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2069870 | 1519750 | 270000 | 280120* | --- | 21.40 | 71000 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 155000 | 0 | 155000 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 691070 | 595750 | 0 | 95320* | --- | 23.83 | 25000 |
| 71.630000 | TESTING | LS* | ---- | ---- | 761800 | 462000 | 115000 | 184800* | --- | 42.00 | 11000 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000 | 462000 | 0 | 0* | --- | 13.20 | 35000 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 4088800 | 2442000 | 670000 | 976800* | --- | 40.70 | 60000 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 266700 | 190500 | 0 | 76200* | --- | 38.10 | 5000 |

APA
SUSITNA 200 MW COAL
ESTIMATE NO. APA 1707 M-1

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 54650000 | 0 | 54650000 | 0* | --- | 0.00 | 0 |

200 MW Coal Fired
Plant Extension at
Beluga

# 7

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for an extension unit and excludes Owner's cost (including Land and AFUDC). This overnight estimate has a base pricing level of January, 1983, for each line item.

The estimate is based on a downsized version of Ebasco's Coal Fired Reference Plant Program (CFRP), which is a combination of recommended pre-engineered plant general arrangements (GA's) in building block segments, to define the plant layout. It also contains a comprehensive set of System Design Descriptions (SDD's) which define all aspects of every plant system in a standardized format.

Site-related capital cost adjustments for the extension unit parallels the classifications of common facilities (included with the initial unit).

The estimate is based on the following:

a. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

b. A work week consisting of 6-10 hour days.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)
GENERAL (continued)

c. Sufficient craftsmen available to meet project requirements housed in labor camps.

d. Professional Services including Engineering, Design, Related Services and Construction Management based on a generic plant of comparable size using the CFRP concept.

e. Land and Land Rights not included.

f. Allowance for Funds Used During Construction (AFUDC) not included.

g. Client costs not included.

h. Permanent town for plant operating personnel and mine production personnel not included.

i. Capital cost of mine and coal export facility not included.

j. Operating and maintenance costs not included.

k. Contingency included at the rate of 12% for material and 15% for installation.

l. Construction performed on a Contract basis.

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ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

GENERAL (continued)

m. Project being exempt from sales tax.

n. Labor productivity being "average U.S." with no Alaskan adjustment.

o. Spare parts and special tools not included.

p. Start-up costs not included.

q. Maintenance machinery, laboratory and office equipment not included.

r. Construction performed on a "slide along" basis.

CIVIL (Categories 1, 2, 3, 4, 5, 6, 16, 17, 18)

Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. Coal handling is assumed to be an extension of the initial unit.

Eighty (80) foot long piles are assumed under heavily loaded foundations.

Cooling tower pricing is based on a Zurn budgetary quotation for a Model 3-Z-460 rectangular multi-cell unit rated at 66,000 gpm.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

Ecolaire provided a budgetary quotation for a 105,000 $ft^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 66,000 gpm and 27°F temperature rise.

Ecolaire provided a budgetary quotation for a reverse gas 662,000 ACFM Baghouse with a 300°F gas temperature. Low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb and a coal firing rate of 253,400 lb/hr is assumed. The quotation is based on design, fabrication and erection of one baghouse and auxiliary equipment with 10 compartments/baghouse and 368 bags per compartment.

Combustion Engineering Power Systems and Foster Wheeler provided budgetary quotations for the coal-fired steam generator and accessories. Pricing is based on 1,590,000 lb/hr, 2650 psig and 1008°F main steam; 1,351,000 lb/hr, 600 psig, 630°F (@ inlet) reheat; and 525°F feedwater.

The 7950 btu/lb coal analysis is as follows:

| Proximate | Weight Percent |
|---|---|
| Moisture | 26.1 |
| Ash | 6.4 |
| Volatiles | 36.3 |
| Fixed Carbon | 31.2 |

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ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

Ecolaire provided a budgetary quotation for a 105,000 $ft^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 66,000 gpm and 27°F temperature rise.

Ecolaire provided a budgetary quotation for a reverse gas 662,000 ACFM Baghouse with a 300°F gas temperature. Low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb and a coal firing rate of 253,400 lb/hr is assumed. The quotation is based on design, fabrication and erection of one baghouse and auxiliary equipment with 10 compartments/ baghouse and 368 bags per compartment.

Combustion Engineering Power Systems and Foster Wheeler provided budgetary quotations for the coal-fired steam generator and accessories. Pricing is based on 1,590,000 lb/hr, 2650 psig and 1008°F main steam; 1,351,000 lb/hr, 600 psig, 630°F (@ inlet) reheat; and 525°F feedwater.

The 7950 btu/lb coal analysis is as follows:

| Proximate | Weight Percent |
|---|---|
| Moisture | 26.1 |
| Ash | 6.4 |
| Volatiles | 36.3 |
| Fixed Carbon | 31.2 |

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

| Ultimate | |
|---|---|
| Hydrogen | 3.6 |
| Carbon | 47.2 |
| Oxygen | 15.5 |
| Nitrogen | 1.05 |
| Sulfur | 0.12 |
| Chlorine | --- |
| Moisture | 26.1 |
| Ash | 6.4 |

Combustion Engineering provided a budgetary quotation for a "dry" $SO_2$ scrubbing system utilizing multi-cell sprayer absorbers with 85% $SO_2$ (70% guarantee) removal. The system is rated at 662,000 ACFM with a flue gas temperature of 300°F and 20% excess air.

Westinghouse Electric, General Electric and Utility Power Corporation provided budgetary quotes for the steam turbine generators. The quotations are based on an indoor type, tandem compound condensing turbine, two flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000°F/1000°F. The turbine design throttle flow will be 1,590,000 lb/hr. The maximum gross turbine output will be 220,000 kW with 2520 psig, 1000/1000°F, 2.7/4.0 in.Hg absolute back pressure. The generator is 244,400 KVA @ 45 psig, 0.9 PF, 3 phase, 60 Hz, 24,000 V and 0.5 shortcircuit ratio complete with an excitation system.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
200 MW Coal-fired Plant Extension
Beluga Site
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BASIS OF ESTIMATE (continued)

PIPING AND INSULATION (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are downsized based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance for insulating yard systems.

Pricing is based on estimates of Ebasco's CFRP program. Pricing is based on updating recent vendor quotations and discounted equipment pricing catalogs in accordance with representative historical inflation indices.

A 48 mile 230 KV single circuit transmission line is included with step-up facilities. The tie-in point for the Beluga-area coal-fired plant is assumed to be at Lorraine, Alaska. No land cost for right-of-way is included.

INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60 hour week)
- Construction Management automotive equipment

BASIS OF ESTIMATE (continued)

INDIRECT CONSTRUCTION COST (continued)

- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Labor camp, food service, housekeeping
- Barge freight/off-site unloading adjustment
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

Truck DELIVERY of Coal/Lime

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 8-JAN-85 TIME: 16:26:42

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 372993683* | 160570971 | ---- * | ---- | 212422712* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 44911344* | 17204032 | ---- * | ---- | 27707312* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 328082339* | 143366939 | ---- * | ---- | 184715400* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 321140* | 168000 | ---- * | ---- | 153140* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 13641083* | 7410000 | ---- * | ---- | 6231083* | 0 | 0 | 0 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7404345* | 3698942 | ---- * | ---- | 3705403* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 13036040* | 2529175 | ---- * | ---- | 10506865* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 18866183* | 8220120 | ---- * | ---- | 10646063* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 9030239* | 3157732 | ---- * | ---- | 5872507* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 18264278* | 15619048 | ---- * | ---- | 2645230* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42445644* | 22857144 | ---- * | ---- | 19588500* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 39715660* | 21184103 | ---- * | ---- | 18531557* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 13762103* | 9957312 | ---- * | ---- | 3804791* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 5530266* | 3399907 | ---- * | ---- | 2130359* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 25175560* | 8926217 | ---- * | ---- | 16249343* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6774331* | 552381 | ---- * | ---- | 6221950* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6730093* | 6190476 | ---- * | ---- | 539617* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 43916857* | 17904762 | ---- * | ---- | 26012095* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2100475* | 127620 | ---- * | ---- | 1972855* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 3484604* | 542857 | ---- * | ---- | 2941747* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 17997823* | 10921143 | ---- * | ---- | 7076680* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 26285615* | 0 | ---- * | ---- | 26285615* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 13600000* | 0 | ---- * | ---- | 13600000* | 0 | 0 | 0 |

BY: WMP CHECKED: JDF

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 372993683* | 160570971 | ---- * | ---- | 212422712* | 0 | 0 | 0 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 44911344* | 17204032 | ---- * | ---- | 27707312* | 0 | 0 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 328082339* | 143366939 | ---- * | ---- | 184715400* | 0 | 0 | 0 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 321140* | 168000 | ---- * | ---- | 153140* | 0 | 0 | 0 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 279580* | 150000 | ---- * | ---- | 129580* | 0 | 0 | 0 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 41560* | 18000 | ---- * | ---- | 23560* | 0 | 0 | 0 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 13641083* | 7410000 | ---- * | ---- | 6231083* | 0 | 0 | 0 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1295429* | 0 | ---- * | ---- | 1295429* | 0 | 0 | 0 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 486736* | 0 | ---- * | ---- | 486736* | 0 | 0 | 0 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 26.0 | 486736* | 0 | 0.00* | 26.0 | 486736* | 0 | 0 | 0 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 808693* | 0 | ---- * | ---- | 808693* | 0 | 0 | 0 |
| 2.252000 | EARTH EXCAVATION | CY* | 17200 | 26.0 | 447694* | 0 | 0.00* | 26.0 | 447694* | 0 | 0 | 0 |
| 2.253000 | ROCK EXCAVATION | CY* | 5400 | 66.9 | 360999* | 0 | 0.00* | 66.9 | 360999* | 0 | 0 | 0 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 1518789* | 0 | ---- * | ---- | 1518789* | 0 | 0 | 0 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 314841* | 0 | ---- * | ---- | 314841* | 0 | 0 | 0 |
| 2.312000 | EARTH EXCAVATION | CY* | 12600 | 25.0 | 314841* | 0 | 0.00* | 25.0 | 314841* | 0 | 0 | 0 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 817776* | 0 | ---- * | ---- | 817776* | 0 | 0 | 0 |
| 2.322000 | EARTH EXCAVATION | CY* | 30000 | 27.3 | 817776* | 0 | 0.00* | 27.3 | 817776* | 0 | 0 | 0 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 386172* | 0 | ---- * | ---- | 386172* | 0 | 0 | 0 |
| 2.332000 | EARTH EXCAVATION | CY* | 10000 | 38.6 | 386172* | 0 | 0.00* | 38.6 | 386172* | 0 | 0 | 0 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 10826865* | 7410000 | ---- * | ---- | 3416865* | 0 | 0 | 0 |
| 2.510000 | STATION AREA | LF* | 140000 | 57.0 | 7977690* | 5460000 | 39.00* | 18.0 | 2517690* | 0 | 0 | 0 |
| 2.520000 | AQCS AREA | LF* | 50000 | 57.0 | 2849175* | 1950000 | 39.00* | 18.0 | 899175* | 0 | 0 | 0 |

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APA
SUSITNA 200MW UNIT2
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MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 7404345* | 3698942 | ---- * | ---- | 3705403* | 0 | 0 | 0 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1866809* | 778552 | ---- * | ---- | 1088257* | 0 | 0 | 0 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3000 | 337.4 | 1012113* | 543000 | 181.00* | 156.4 | 469113* | 0 | 0 | 0 |
| 3.260000 | BEDDING MATERIAL | CY* | 1850 | 28.9 | 53508* | 17612 | 9.52* | 19.4 | 35896* | 0 | 0 | 0 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 758840* | 199250 | ---- * | ---- | 559590* | 0 | 0 | 0 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 397.4 | 298047* | 89250 | 119.00* | 278.4 | 208797* | 0 | 0 | 0 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 833.4 | 333363* | 78000 | 195.00* | 638.4 | 255363* | 0 | 0 | 0 |
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 637.2 | 127430* | 32000 | 160.00* | 477.1 | 95430* | 0 | 0 | 0 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 6049.7 | 42348* | 18690 | 2670.00* | 3379.7 | 23658* | 0 | 0 | 0 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 5537536* | 2920390 | ---- * | ---- | 2617146* | 0 | 0 | 0 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 707003* | 187500 | ---- * | ---- | 519503* | 0 | 0 | 0 |
| 3.411000 | EXCAVATION | CY* | 6500 | 19.4 | 126260* | 0 | 0.00* | 19.4 | 126260* | 0 | 0 | 0 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 387.2 | 580743* | 187500 | 125.00* | 262.2 | 393243* | 0 | 0 | 0 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 776096* | 210690 | ---- * | ---- | 565406* | 0 | 0 | 0 |
| 3.422000 | EXCAVATION | CY* | 4500 | 19.4 | 87412* | 0 | 0.00* | 19.4 | 87412* | 0 | 0 | 0 |
| 3.423000 | CONCRETE | CY* | 1500 | 430.9 | 646336* | 192000 | 128.00* | 302.9 | 454336* | 0 | 0 | 0 |
| 3.424000 | MISC STEEL | TN* | 7 | 6049.7 | 42348* | 18690 | 2670.00* | 3379.7 | 23658* | 0 | 0 | 0 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 369911* | 316400 | ---- * | ---- | 53511* | 0 | 0 | 0 |
| 3.433000 | SCREENS | SF* | 500 | 51.5 | 25765* | 14500 | 29.00* | 22.5 | 11265* | 0 | 0 | 0 |
| 3.435000 | STOP LOGS | SF* | 500 | 68.3 | 34131* | 28500 | 57.00* | 11.3 | 5631* | 0 | 0 | 0 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 310015* | 273400 | ---- * | 0.0 | 36615* | 0 | 0 | 0 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 683443* | 320100 | ---- * | ---- | 363343* | 0 | 0 | 0 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 2763.3 | 207247* | 114300 | 1524.00* | 1239.3 | 92947* | 0 | 0 | 0 |

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SUSITNA 200MW UNIT2
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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 79.4 | 476196* | 205800 | 34.30* | 45.1 | 270396* | 0 | 0 | 0 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 3001083* | 1885700 | ---- * | ---- | 1115383* | 0 | 0 | 0 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 13036040* | 2529175 | ---- * | ---- | 10506865* | 0 | 0 | 0 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4500 | 766.2 | 3447777* | 608625 | 135.25* | 630.9 | 2839152* | 0 | 0 | 0 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 676.1 | 1284519* | 256975 | 135.25* | 540.8 | 1027544* | 0 | 0 | 0 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 706.2 | 1200535* | 229925 | 135.25* | 570.9 | 970610* | 0 | 0 | 0 |
| 4.400000 | AQCS CONCRETE | CY* | 8800 | 705.3 | 6206308* | 1190200 | 135.25* | 570.0 | 5016108* | 0 | 0 | 0 |
| 4.900000 | MISCELL CONCRETE | CY* | 1800 | 498.3 | 896901* | 243450 | 135.25* | 363.0 | 653451* | 0 | 0 | 0 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 18866183* | 8220120 | ---- * | ---- | 10646063* | 0 | 0 | 0 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 3936778* | 1951495 | ---- * | ---- | 1985283* | 0 | 0 | 0 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 2285.5 | 2742552* | 1429200 | 1191.00* | 1094.5 | 1313352* | 0 | 0 | 0 |
| 5.120000 | FRAMING | LS* | --- | ---- | 349072* | 180075 | ---- * | ---- | 168997* | 0 | 0 | 0 |
| 5.121000 | WALL FRAMING | TN* | 105 | 3324.5 | 349072* | 180075 | 1715.00* | 1609.5 | 168997* | 0 | 0 | 0 |
| 5.130000 | MISC STEEL | LS* | --- | ---- | 523096* | 123170 | ---- * | ---- | 399926* | 0 | 0 | 0 |
| 5.131000 | GRATING 1-3/4" | SF* | 1200 | 26.0 | 312168* | 80400 | 6.70* | 19.3 | 231768* | 0 | 0 | 0 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 53.6 | 32179* | 6300 | 10.50* | 43.1 | 25879* | 0 | 0 | 0 |
| 5.133000 | HANDRAIL | LF* | 1000 | 95.2 | 95225* | 14750 | 14.75* | 80.5 | 80475* | 0 | 0 | 0 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 6960.3 | 83524* | 21720 | 1810.00* | 5150.3 | 61804* | 0 | 0 | 0 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 322058* | 219050 | ---- * | ---- | 103008* | 0 | 0 | 0 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 322058* | 219050 | ---- * | ---- | 103008* | 0 | 0 | 0 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 11270284* | 4380275 | ---- * | ---- | 6890009* | 0 | 0 | 0 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 2285.5 | 5256558* | 2739300 | 1191.00* | 1094.5 | 2517258* | 0 | 0 | 0 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1799828* | 634550 | ---- * | ---- | 1165278* | 0 | 0 | 0 |

APA
SUSITNA 200MW UNIT2
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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.221000 | WALL FRAMING | TN* | 330 | 4934.0 | 1628220* | 565950 | 1715.00* | 3219.0 | 1062270* | 0 | 0 | 0 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 4290.2 | 171608* | 68600 | 1715.00* | 2575.2 | 103008* | 0 | 0 | 0 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 3972526* | 887375 | ---- * | ---- | 3085151* | 0 | 0 | 0 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 26.0 | 1820980* | 469000 | 6.70* | 19.3 | 1351980* | 0 | 0 | 0 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 53.6 | 85814* | 16800 | 10.50* | 43.1 | 69014* | 0 | 0 | 0 |
| 5.233000 | HANDRAIL | LF* | 12500 | 98.4 | 1230484* | 184375 | 14.75* | 83.7 | 1046109* | 0 | 0 | 0 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 6960.4 | 835248* | 217200 | 1810.00* | 5150.4 | 618048* | 0 | 0 | 0 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 241372* | 119050 | ---- * | ---- | 122322* | 0 | 0 | 0 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 144190* | 47620 | ---- * | ---- | 96570* | 0 | 0 | 0 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 97182* | 71430 | ---- * | ---- | 25752* | 0 | 0 | 0 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 97182* | 71430 | ---- * | ---- | 25752* | 0 | 0 | 0 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 3398526* | 1772610 | ---- * | ---- | 1625916* | 0 | 0 | 0 |
| 5.310000 | MAIN STEEL | TN* | 225 | 2285.5 | 514228* | 267975 | 1191.00* | 1094.5 | 246253* | 0 | 0 | 0 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 320710* | 111475 | ---- * | ---- | 209235* | 0 | 0 | 0 |
| 5.321000 | WALL FRAMING | TN* | 65 | 4934.0 | 320710* | 111475 | 1715.00* | 3219.0 | 209235* | 0 | 0 | 0 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 325698* | 190500 | ---- * | ---- | 135198* | 0 | 0 | 0 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 75176* | 57150 | ---- * | ---- | 18026* | 0 | 0 | 0 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 75176* | 57150 | ---- * | ---- | 18026* | 0 | 0 | 0 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 703160* | 252500 | ---- * | ---- | 450660* | 0 | 0 | 0 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 7031.6 | 703160* | 252500 | 2525.00* | 4506.6 | 450660* | 0 | 0 | 0 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 1459554* | 893010 | ---- * | ---- | 566544* | 0 | 0 | 0 |
| 5.361000 | STEEL SILOS | TN* | 170 | 6528.2 | 1109794* | 672010 | 3953.00* | 2575.2 | 437784* | 0 | 0 | 0 |
| 5.362000 | SS PLATES | TN* | 40 | 8744.0 | 349760* | 221000 | 5525.00* | 3219.0 | 128760* | 0 | 0 | 0 |

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SUSITNA 200MW UNIT2
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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.900000 | UNCLASS STEEL | TN* | 45 | 5791.0 | 260595* | 115740 | 2572.00* | 3219.0 | 144855* | 0 | 0 | 0 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 9030239* | 3157732 | ---- * | ---- | 5872507* | 0 | 0 | 0 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2067696* | 828577 | ---- * | ---- | 1239119* | 0 | 0 | 0 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 932009* | 285715 | ---- * | ---- | 646294* | 0 | 0 | 0 |
| 6.170000 | HVAC | LS* | ---- | ---- | 845725* | 428572 | ---- * | ---- | 417153* | 0 | 0 | 0 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 224498* | 95240 | ---- * | ---- | 129258* | 0 | 0 | 0 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 65464* | 19050 | ---- * | ---- | 46414* | 0 | 0 | 0 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2499343* | 904762 | ---- * | ---- | 1594581* | 0 | 0 | 0 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 1213838* | 361905 | ---- * | ---- | 851933* | 0 | 0 | 0 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1122484* | 476190 | ---- * | ---- | 646294* | 0 | 0 | 0 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 69699* | 28572 | ---- * | ---- | 41127* | 0 | 0 | 0 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 93322* | 38095 | ---- * | ---- | 55227* | 0 | 0 | 0 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 763977* | 268095 | ---- * | ---- | 495882* | 0 | 0 | 0 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 252452* | 76190 | ---- * | ---- | 176262* | 0 | 0 | 0 |
| 6.370000 | HVAC | LS* | ---- | ---- | 349302* | 114286 | ---- * | ---- | 235016* | 0 | 0 | 0 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 147809* | 71429 | ---- * | ---- | 76380* | 0 | 0 | 0 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 14414* | 6190 | ---- * | ---- | 8224* | 0 | 0 | 0 |
| 6.400000 | AQCS BU/LDINGS | LS* | ---- | ---- | 2182604* | 535088 | ---- * | ---- | 1647516* | 0 | 0 | 0 |
| 6.410000 | AQCS SWGR BLDG | SF* | 860 | 133.3 | 114622* | 28724 | 33.40* | 99.9 | 85898* | 0 | 0 | 0 |
| 6.420000 | AQCS CTRL BLDG | SF* | 2280 | 168.1 | 383343* | 102030 | 44.75* | 123.4 | 281313* | 0 | 0 | 0 |
| 6.430000 | DIESEL GEN BLDG | SF* | 540 | 143.8 | 77670* | 18036 | 33.40* | 110.4 | 59634* | 0 | 0 | 0 |
| 6.440000 | PUMP HOUSE | SF* | 8860 | 144.8 | 1282504* | 303898 | 34.30* | 110.5 | 978606* | 0 | 0 | 0 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 4120 | 78.8 | 324465* | 82400 | 20.00* | 58.8 | 242065* | 0 | 0 | 0 |

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 1516619* | 621210 | ---- * | ---- | 895409* | 0 | 0 | 0 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 1516619* | 621210 | ---- * | ---- | 895409* | 0 | 0 | 0 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 61.0 | 1403055* | 592250 | 25.75* | 35.3 | 810805* | 0 | 0 | 0 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 113564* | 28960 | ---- * | ---- | 84604* | 0 | 0 | 0 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 142.0 | 113564* | 28960 | 36.20* | 105.8 | 84604* | 0 | 0 | 0 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 18264278* | 15619048 | ---- * | ---- | 2645230* | 0 | 0 | 0 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 18264278* | 15619048 | ---- * | ---- | 2645230* | 0 | 0 | 0 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 42445644* | 22857144 | ---- * | ---- | 19588500* | 0 | 0 | 0 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 42445644* | 22857144 | ---- * | ---- | 19588500* | 0 | 0 | 0 |
| 9.000000 | AQCS | LS* | ---- | ---- | 39715660* | 21184103 | ---- * | ---- | 18531557* | 0 | 0 | 0 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 7692908* | 3809524 | ---- * | ---- | 3883384* | 0 | 0 | 0 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 29876227* | 15740953 | ---- * | ---- | 14135274* | 0 | 0 | 0 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 29876227* | 15740953 | ---- * | ---- | 14135274* | 0 | 0 | 0 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 3287023* | 1455238 | ---- * | ---- | 1831785* | 0 | 0 | 0 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 26589204* | 14285715 | ---- * | ---- | 12303489* | 0 | 0 | 0 |
| 9.400000 | FANS | LS* | ---- | ---- | 2146525* | 1633626 | ---- * | ---- | 512899* | 0 | 0 | 0 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 1337901* | 1014286 | ---- * | ---- | 323615* | 0 | 0 | 0 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 808624* | 619340 | ---- * | ---- | 189284* | 0 | 0 | 0 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 13762103* | 9957312 | ---- * | ---- | 3804791* | 0 | 0 | 0 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 3337605* | 2844768 | ---- * | ---- | 492837* | 0 | 0 | 0 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 2906706* | 2522287 | ---- * | ---- | 384419* | 0 | 0 | 0 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 383960.0 | 767920* | 613904 | ---- * | 77008.0 | 154016* | 0 | 0 | 0 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 825913.5 | 1651827* | 1527620 | ---- * | 62103.5 | 124207* | 0 | 0 | 0 |

APA
SUSITNA 200MW UNIT2
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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 116899.5 | 233799* | 177906 | 88953.00* | 27946.5 | 55893* | 0 | 0 | 0 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 253160* | 202857 | ---- * | ---- | 50303* | 0 | 0 | 0 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 9353* | 7429 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 9353* | 7429 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 65723* | 39146 | ---- * | ---- | 26577* | 0 | 0 | 0 |
| 10.131000 | SERVICE WATER | EA* | 4 | 6633.8 | 26535* | 14860 | 3715.00* | 2918.8 | 11675* | 0 | 0 | 0 |
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 18461* | 10762 | ---- * | ---- | 7699* | 0 | 0 | 0 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 10363.5 | 20727* | 13524 | 6762.00* | 3601.5 | 7203* | 0 | 0 | 0 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 56807* | 43335 | ---- * | ---- | 13472* | 0 | 0 | 0 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 6972.5 | 13945* | 10096 | 5048.00* | 1924.5 | 3849* | 0 | 0 | 0 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 9830.0 | 29490* | 23715 | 7905.00* | 1925.0 | 5775* | 0 | 0 | 0 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 6686* | 4762 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 6686* | 4762 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 19717.8 | 118307* | 110856 | 18476.00* | 1241.8 | 7451* | 0 | 0 | 0 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 180709* | 121715 | ---- * | ---- | 58994* | 0 | 0 | 0 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 34205* | 17810 | ---- * | ---- | 16395* | 0 | 0 | 0 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 23551.0 | 47102* | 29714 | 14857.00* | 8694.0 | 17388* | 0 | 0 | 0 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 23315.0 | 69945* | 50571 | 16857.00* | 6458.0 | 19374* | 0 | 0 | 0 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 14728.5 | 29457* | 23620 | 11810.00* | 2918.5 | 5837* | 0 | 0 | 0 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 2383666* | 1696000 | ---- * | ---- | 687666* | 0 | 0 | 0 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 1529943* | 952381 | ---- * | ---- | 577562* | 0 | 0 | 0 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 853723* | 743619 | ---- * | ---- | 110104* | 0 | 0 | 0 |
| 10.221000 | CW PUMPS | EA* | 2 | 142300.0 | 284600* | 251810 | ---- * | 16395.0 | 32790* | 0 | 0 | 0 |

APA
SUSITNA 200MW UNIT2
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BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 85877.0 | 171754* | 140952 | 70476.00* | 15401.0 | 30802* | 0 | 0 | 0 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 80863.5 | 161727* | 148190 | 74095.00* | 6768.5 | 13537* | 0 | 0 | 0 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 232956* | 201905 | ---- * | ---- | 31051* | 0 | 0 | 0 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 2686* | 762 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 1904467* | 1725241 | ---- * | ---- | 179226* | 0 | 0 | 0 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 172702.3 | 1208916* | 1110669 | ---- * | 14035.3 | 98247* | 0 | 0 | 0 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 230705* | 188476 | ---- * | ---- | 42229* | 0 | 0 | 0 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 163620.5 | 327241* | 296190 | ---- * | 15525.5 | 31051* | 0 | 0 | 0 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 68802.5 | 137605* | 129906 | 64953.00* | 3849.5 | 7699* | 0 | 0 | 0 |
| 10.400000 | TANKS | LS* | ---- | ---- | 503094* | 184572 | ---- * | ---- | 318522* | 0 | 0 | 0 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 437072* | 138667 | ---- * | ---- | 298405* | 0 | 0 | 0 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 195532* | 51143 | ---- * | ---- | 144389* | 0 | 0 | 0 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 241540* | 87524 | ---- * | ---- | 154016* | 0 | 0 | 0 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 66022* | 45905 | ---- * | ---- | 20117* | 0 | 0 | 0 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 6342* | 3238 | ---- * | ---- | 3104* | 0 | 0 | 0 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 22632* | 16857 | ---- * | ---- | 5775* | 0 | 0 | 0 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 9353* | 7429 | ---- * | ---- | 1924* | 0 | 0 | 0 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 9580* | 6476 | ---- * | ---- | 3104* | 0 | 0 | 0 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 18115* | 11905 | ---- * | ---- | 6210* | 0 | 0 | 0 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 2867430* | 2268636 | ---- * | ---- | 598794* | 0 | 0 | 0 |
| 10.510000 | COMPRESSED AIR EQP | LS* | ---- | ---- | 263588* | 182731 | ---- * | ---- | 80857* | 0 | 0 | 0 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 110822.0 | 221644* | 144636 | 72318.00* | 38504.0 | 77008* | 0 | 0 | 0 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 41944* | 38095 | ---- * | ---- | 3849* | 0 | 0 | 0 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 2603842* | 2085905 | ---- * | ---- | 517937* | 0 | 0 | 0 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 1075119* | 844095 | ---- * | ---- | 231024* | 0 | 0 | 0 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 1045500* | 814476 | ---- * | ---- | 231024* | 0 | 0 | 0 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 67703* | 55905 | ---- * | ---- | 11798* | 0 | 0 | 0 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 186912* | 169524 | ---- * | ---- | 17388* | 0 | 0 | 0 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 228608* | 201905 | ---- * | ---- | 26703* | 0 | 0 | 0 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 2765841* | 1238095 | ---- * | ---- | 1527746* | 0 | 0 | 0 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 5530266* | 3399907 | ---- * | ---- | 2130359* | 0 | 0 | 0 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 989049* | 813810 | ---- * | ---- | 175239* | 0 | 0 | 0 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 483574* | 346191 | ---- * | ---- | 137383* | 0 | 0 | 0 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 483574* | 346191 | ---- * | ---- | 137383* | 0 | 0 | 0 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 505475* | 467619 | ---- * | ---- | 37856* | 0 | 0 | 0 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 505475* | 467619 | ---- * | ---- | 37856* | 0 | 0 | 0 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 2901321* | 1538478 | ---- * | ---- | 1362843* | 0 | 0 | 0 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 1104052* | 640000 | ---- * | ---- | 464052* | 0 | 0 | 0 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 110030* | 60572 | ---- * | ---- | 49458* | 0 | 0 | 0 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 303462* | 175238 | ---- * | ---- | 128224* | 0 | 0 | 0 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 1086616* | 463810 | ---- * | ---- | 622806* | 0 | 0 | 0 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 61673.0 | 185019* | 124572 | 41524.00* | 20149.0 | 60447* | 0 | 0 | 0 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 112142* | 74286 | ---- * | ---- | 37856* | 0 | 0 | 0 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 1639896* | 1047619 | ---- * | ---- | 592277* | 0 | 0 | 0 |
| 12.000000 | PIPING | LS* | ---- | ---- | 25175560* | 8926217 | ---- * | ---- | 16249343* | 0 | 0 | 0 |
| 12.100000 | LARGE BORE PIPING | TN* | 873 | 18693.3 | 16319213* | 7641369 | 8753.00* | 9940.3 | 8677844* | 0 | 0 | 0 |

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SUSITNA 200MW UNIT2
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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 85372 | 103.7 | 8856347* | 1284848 | 15.05* | 88.7 | 7571499* | 0 | 0 | 0 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6774331* | 552381 | ---- * | ---- | 6221950* | 0 | 0 | 0 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 6774331* | 552381 | ---- * | ---- | 6221950* | 0 | 0 | 0 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 6730093* | 6190476 | ---- * | ---- | 539617* | 0 | 0 | 0 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 6730093* | 6190476 | ---- * | ---- | 539617* | 0 | 0 | 0 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 43916857* | 17904762 | ---- * | ---- | 26012095* | 0 | 0 | 0 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 2100475* | 127620 | ---- * | ---- | 1972855* | 0 | 0 | 0 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 705237* | 47619 | ---- * | ---- | 657618* | 0 | 0 | 0 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1267099* | 71429 | ---- * | ---- | 1195670* | 0 | 0 | 0 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 128139* | 8572 | ---- * | ---- | 119567* | 0 | 0 | 0 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 3484604* | 542857 | ---- * | ---- | 2941747* | 0 | 0 | 0 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3484604* | 542857 | ---- * | ---- | 2941747* | 0 | 0 | 0 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 17997823* | 10921143 | ---- * | ---- | 7076680* | 0 | 0 | 0 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 3356863* | 2857143 | ---- * | ---- | 499720* | 0 | 0 | 0 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 1 | 0.0 | 14640960* | 8064000 | ---- * | 0.0 | 6576960* | 0 | 0 | 0 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 26285615* | 0 | ---- * | ---- | 26285615* | 0 | 0 | 0 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 1237500* | 0 | ---- * | ---- | 1237500* | 0 | 0 | 0 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 2220000* | 0 | ---- * | ---- | 2220000* | 0 | 0 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 1480000* | 0 | ---- * | ---- | 1480000* | 0 | 0 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 740000* | 0 | ---- * | ---- | 740000* | 0 | 0 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 135000* | 0 | ---- * | ---- | 135000* | 0 | 0 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 135000* | 0 | ---- * | ---- | 135000* | 0 | 0 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 17870289* | 0 | ---- * | ---- | 17870289* | 0 | 0 | 0 |

Truck Delivery of Coal/Lime

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF

DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1220000* | 0 | ---- * | ---- | 1220000* | 0 | 0 | 0 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 16650289* | 0 | ---- * | ---- | 16650289* | 0 | 0 | 0 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 7200000* | 0 | ---- * | ---- | 7200000* | 0 | 0 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 7920000* | 0 | ---- * | ---- | 7920000* | 0 | 0 | 0 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 1530289* | 0 | ---- * | ---- | 1530289* | 0 | 0 | 0 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1556201* | 0 | ---- * | ---- | 1556201* | 0 | 0 | 0 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 120000* | 0 | ---- * | ---- | 120000* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 518301* | 0 | ---- * | ---- | 518301* | 0 | 0 | 0 |
| 71.630000 | TESTING | LS* | ---- | ---- | 571400* | 0 | ---- * | ---- | 571400* | 0 | 0 | 0 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 346500* | 0 | ---- * | ---- | 346500* | 0 | 0 | 0 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 3066600* | 0 | ---- * | ---- | 3066600* | 0 | 0 | 0 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 200025* | 0 | ---- * | ---- | 200025* | 0 | 0 | 0 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 13600000* | 0 | ---- * | ---- | 13600000* | 0 | 0 | 0 |

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APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 212422712 | 100683358 | 32973600 | 51058442* | --- | 39.76 | 2532408 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 27707312 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 184715400 | 100683358 | 32973600 | 51058442* | --- | 39.76 | 2532408 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 153140 | 98800 | 0 | 54340* | --- | 38.00 | 2600 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 6231083 | 2366135 | 16000 | 3848948* | --- | 37.86 | 62497 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 3705403 | 2399018 | 46800 | 1259585* | --- | 38.85 | 61751 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 10506865 | 7064046 | 264000 | 3178819* | --- | 38.79 | 182110 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 10646063 | 7342115 | 0 | 3303948* | --- | 44.40 | 165363 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 5872507 | 4050009 | 0 | 1822498* | --- | 40.52 | 99951 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2645230 | 1763487 | 0 | 881743* | --- | 41.69 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 19588500 | 13059000 | 0 | 6529500* | --- | 43.53 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 18531557 | 12780385 | 0 | 5751172* | --- | 42.11 | 303500 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 3804791 | 2624005 | 0 | 1180786* | --- | 42.83 | 61266 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 2130359 | 1469216 | 0 | 661143* | --- | 42.11 | 34890 |
| 12.000000 | PIPING | LS* | ---- | ---- | 16249343 | 11206444 | 0 | 5042899* | --- | 41.05 | 272995 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6221950 | 4291000 | 0 | 1930950* | --- | 42.91 | 100000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 539617 | 372150 | 0 | 167467* | --- | 41.35 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 26012095 | 17939376 | 0 | 8072719* | --- | 37.84 | 474085 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 1972855 | 1360590 | 0 | 612265* | --- | 41.23 | 33000 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 2941747 | 1149120 | 0 | 1792627* | --- | 43.20 | 26600 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 7076680 | 4191200 | 0 | 2885480* | --- | 40.30 | 104000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 24285615 | 5157262 | 19046800 | 2081553* | --- | 26.25 | 196500 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 13600000 | 0 | 13600000 | 0* | --- | 0.00 | 0 |

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 212422712 | 100683358 | 32973600 | 51058442* | --- | 39.76 | 2532408 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 27707312 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 184715400 | 100683358 | 32973600 | 51058442* | --- | 39.76 | 2532408 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 153140 | 98800 | 0 | 54340* | --- | 38.00 | 2600 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 129580 | 83600 | 0 | 45980* | --- | 38.00 | 2200 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 23560 | 15200 | 0 | 8360* | --- | 38.00 | 400 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 6231083 | 2366135 | 16000 | 3848948* | --- | 37.86 | 62497 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 1295429 | 493126 | 16000 | 786303* | --- | 37.86 | 13025 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 486736 | 176995 | 0 | 309741* | --- | 37.86 | 4675 |
| 2.212000 | EARTH EXCAVATION | CY* | 18700 | 26.03 | 486736 | 176995 | 0 | 309741* | 0.25 | 37.86 | 4675 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 808693 | 316131 | 16000 | 476562* | --- | 37.86 | 8350 |
| 2.252000 | EARTH EXCAVATION | CY* | 17200 | 26.03 | 447694 | 162798 | 0 | 284896* | 0.25 | 37.86 | 4300 |
| 2.253000 | ROCK EXCAVATION | CY* | 5400 | 66.85 | 360999 | 153333 | 16000 | 191666* | 0.75 | 37.86 | 4050 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 1518789 | 506263 | 0 | 1012526* | --- | 37.86 | 13372 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 314841 | 104947 | 0 | 209894* | --- | 37.86 | 2772 |
| 2.312000 | EARTH EXCAVATION | CY* | 12600 | 24.99 | 314841 | 104947 | 0 | 209894* | 0.22 | 37.86 | 2772 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 817776 | 272592 | 0 | 545184* | --- | 37.86 | 7200 |
| 2.322000 | EARTH EXCAVATION | CY* | 30000 | 27.26 | 817776 | 272592 | 0 | 545184* | 0.24 | 37.86 | 7200 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 386172 | 128724 | 0 | 257448* | --- | 37.86 | 3400 |
| 2.332000 | EARTH EXCAVATION | CY* | 10000 | 38.62 | 386172 | 128724 | 0 | 257448* | 0.34 | 37.86 | 3400 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 3416865 | 1366746 | 0 | 2050119* | --- | 37.86 | 36100 |
| 2.510000 | STATION AREA | LF* | 140000 | 17.98 | 2517690 | 1007076 | 0 | 1510614* | 0.19 | 37.86 | 26600 |
| 2.520000 | AQCS AREA | LF* | 50000 | 17.98 | 899175 | 359670 | 0 | 539505* | 0.19 | 37.86 | 9500 |

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (HN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 3705403 | 2399018 | 46800 | 1259585* | --- | 38.85 | 61751 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1088257 | 675288 | 18800 | 394169* | --- | 38.85 | 17382 |
| 3.210000 | CONCR PIPE: 60" | LF* | 3000 | 156.37 | 469113 | 268065 | 0 | 201048* | 2.30 | 38.85 | 6900 |
| 3.260000 | BEDDING MATERIAL | CY* | 1850 | 19.40 | 35896 | 17948 | 0 | 17948* | 0.25 | 38.85 | 462 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 559590 | 372959 | 18800 | 167831* | --- | 38.85 | 9600 |
| 3.271000 | THRST & TRNS BLK | CY* | 750 | 278.40 | 208797 | 139860 | 6000 | 62937* | 4.80 | 38.85 | 3600 |
| 3.272000 | CONDENS BLOCKS | CY* | 400 | 638.41 | 255363 | 170940 | 7500 | 76923* | 11.00 | 38.85 | 4400 |
| 3.273000 | PITOT TUBE PIT | CY* | 200 | 477.15 | 95430 | 62159 | 5300 | 27971* | 8.00 | 38.85 | 1600 |
| 3.280000 | MISCELLAN STEEL | TN* | 7 | 3379.71 | 23658 | 16316 | 0 | 7342* | 60.00 | 38.85 | 420 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 2617146 | 1723730 | 28000 | 865416* | --- | 38.85 | 44369 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 519503 | 312741 | 13000 | 193762* | --- | 38.85 | 8050 |
| 3.411000 | EXCAVATION | CY* | 6500 | 19.42 | 126260 | 50504 | 0 | 75756* | 0.20 | 38.85 | 1300 |
| 3.412000 | CONC CW COOL TWR | CY* | 1500 | 262.16 | 393243 | 262237 | 13000 | 118006* | 4.50 | 38.85 | 6750 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 565406 | 354272 | 15000 | 196134* | --- | 38.85 | 9119 |
| 3.422000 | EXCAVATION | CY* | 4500 | 19.42 | 87412 | 34965 | 0 | 52447* | 0.20 | 38.85 | 900 |
| 3.423000 | CONCRETE | CY* | 1500 | 302.89 | 454336 | 302991 | 15000 | 136345* | 5.20 | 38.85 | 7799 |
| 3.424000 | MISC STEEL | TN* | 7 | 3379.71 | 23658 | 16316 | 0 | 7342* | 60.00 | 38.85 | 420 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 53511 | 36905 | 0 | 16606* | --- | 38.85 | 950 |
| 3.433000 | SCREENS | SF* | 500 | 22.53 | 11265 | 7769 | 0 | 3496* | 0.40 | 38.85 | 200 |
| 3.435000 | STOP LOGS | SF* | 500 | 11.26 | 5631 | 3884 | 0 | 1747* | 0.20 | 38.85 | 100 |
| 3.436000 | CRANE BRIDGE 15T | EA* | 1 | 0.0 | 36615 | 25252 | 0 | 11363* | --- | 38.85 | 650 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 363343 | 250582 | 0 | 112761* | --- | 38.85 | 6450 |
| 3.441000 | CRANE & HST SUPP | TN* | 75 | 1239.29 | 92947 | 64102 | 0 | 28845* | 22.00 | 38.85 | 1650 |

APA
SUSITNA 200MW UNIT2
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.442000 | BUILDING SPRSTR | SF* | 6000 | 45.07 | 270396 | 186480 | 0 | 83916* | 0.80 | 38.85 | 4800 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 1115383 | 769230 | 0 | 346153* | --- | 38.85 | 19800 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 10506865 | 7064046 | 264000 | 3178819* | --- | 38.79 | 182110 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 4500 | 630.92 | 2839152 | 1920105 | 55000 | 864047* | 11.00 | 38.79 | 49500 |
| 4.200000 | BOILER AREA CONCRT | CY* | 1900 | 540.81 | 1027544 | 692789 | 23000 | 311755* | 9.40 | 38.79 | 17860 |
| 4.300000 | SILO AREA CONCRETE | CY* | 1700 | 570.95 | 970610 | 652835 | 24000 | 293775* | 9.90 | 38.79 | 16830 |
| 4.400000 | AQCS CONCRETE | CY* | 8800 | 570.01 | 5016108 | 3379385 | 116000 | 1520723* | 9.90 | 38.79 | 87120 |
| 4.900000 | MISCELL CONCRETE | CY* | 1800 | 363.03 | 653451 | 418932 | 46000 | 188519* | 6.00 | 38.79 | 10800 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 10646063 | 7342115 | 0 | 3303948* | --- | 44.40 | 165363 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1985283 | 1369162 | 0 | 616121* | --- | 44.40 | 30837 |
| 5.110000 | MAIN STEEL | TN* | 1200 | 1094.46 | 1313352 | 905760 | 0 | 407592* | 17.00 | 44.40 | 20400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 168997 | 116550 | 0 | 52447* | --- | 44.40 | 2625 |
| 5.121000 | WALL FRAMING | TN* | 105 | 1609.50 | 168997 | 116550 | 0 | 52447* | 25.00 | 44.40 | 2625 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 399926 | 275812 | 0 | 124114* | --- | 44.40 | 6212 |
| 5.131000 | GRATING 1-3/4" | SF* | 12000 | 19.31 | 231768 | 159840 | 0 | 71928* | 0.30 | 44.40 | 3600 |
| 5.132000 | CHECKERED PLATE | SF* | 600 | 43.13 | 25879 | 17848 | 0 | 8031* | 0.67 | 44.40 | 402 |
| 5.133000 | HANDRAIL | LF* | 1000 | 80.47 | 80475 | 55500 | 0 | 24975* | 1.25 | 44.40 | 1250 |
| 5.134000 | LADDERS & STRWYS | TN* | 12 | 5150.33 | 61804 | 42624 | 0 | 19180* | 80.00 | 44.40 | 960 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 103008 | 71040 | 0 | 31968* | --- | 44.40 | 1600 |
| 5.141000 | CRANE: 40 T CAP | LS* | ---- | ---- | 103008 | 71040 | 0 | 31968* | --- | 44.40 | 1600 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 6890009 | 4751731 | 0 | 2138278* | --- | 44.40 | 107021 |
| 5.210000 | MAIN STEEL | TN* | 2300 | 1094.46 | 2517258 | 1736040 | 0 | 781218* | 17.00 | 44.40 | 39100 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1165218 | 803640 | 0 | 361638* | --- | 44.40 | 18100 |

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SUSITNA 200MW UNIT2
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.221000 | WALL FRAMING | TN* | 330 | 3219.00 | 1062270 | 732600 | 0 | 329670* | 50.00 | 44.40 | 16500 |
| 5.222000 | ELEV FRAMING | TN* | 40 | 2575.20 | 103008 | 71040 | 0 | 31968* | 40.00 | 44.40 | 1600 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 3085151 | 2127691 | 0 | 957460* | --- | 44.40 | 47921 |
| 5.231000 | GRATING (1-3/4") | SF* | 70000 | 19.31 | 1351980 | 932400 | 0 | 419580* | 0.30 | 44.40 | 21000 |
| 5.232000 | CHECKERED PLATE | SF* | 1600 | 43.13 | 69014 | 47596 | 0 | 21418* | 0.67 | 44.40 | 1072 |
| 5.233000 | HANDRAIL | LF* | 12500 | 83.69 | 1046109 | 721455 | 0 | 324654* | 1.30 | 44.40 | 16249 |
| 5.234000 | LADDERS & STRWY | TN* | 120 | 5150.40 | 618048 | 426240 | 0 | 191808* | 80.00 | 44.40 | 9600 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 122322 | 84360 | 0 | 37962* | --- | 44.40 | 1900 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 96570 | 66600 | 0 | 29970* | --- | 44.40 | 1500 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 25752 | 17760 | 0 | 7992* | --- | 44.40 | 400 |
| 5.243100 | (3) 15 TON HST | LS* | ---- | ---- | 25752 | 17760 | 0 | 7992* | --- | 44.40 | 400 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 1625916 | 1121322 | 0 | 504594* | --- | 44.40 | 25255 |
| 5.310000 | MAIN STEEL | TN* | 225 | 1094.46 | 246253 | 169830 | 0 | 76423* | 17.00 | 44.40 | 3825 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 209235 | 144300 | 0 | 64935* | --- | 44.40 | 3250 |
| 5.321000 | WALL FRAMING | TN* | 65 | 3219.00 | 209235 | 144300 | 0 | 64935* | 50.00 | 44.40 | 3250 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 135198 | 93240 | 0 | 41958* | --- | 44.40 | 2100 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 18026 | 12432 | 0 | 5594* | --- | 44.40 | 280 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 18026 | 12432 | 0 | 5594* | --- | 44.40 | 280 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 450660 | 310800 | 0 | 139860* | --- | 44.40 | 7000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 100 | 4506.60 | 450660 | 310800 | 0 | 139860* | 70.00 | 44.40 | 7000 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 566544 | 390720 | 0 | 175824* | --- | 44.40 | 8800 |
| 5.361000 | [illegible] | TN* | 170 | 2575.20 | 437784 | [illegible] | 0 | 135864* | 40.00 | 44.40 | 6800 |
| 5.362000 | SS PLATES | TN* | 40 | 3219.00 | 128760 | 88800 | 0 | 39960* | 50.00 | 44.40 | 2000 |

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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL. INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.900000 | UNCLASS STEEL | TN* | 45 | 3219.00 | 144855 | 99900 | 0 | 44955* | 50.00 | 44.40 | 2250 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 5872507 | 4050009 | 0 | 1822498* | --- | 40.52 | 99951 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1239119 | 854566 | 0 | 384553* | --- | 40.52 | 21090 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 646294 | 445720 | 0 | 200574* | --- | 40.52 | 11000 |
| 6.170000 | HVAC | LS* | ---- | ---- | 417153 | 287692 | 0 | 129461* | --- | 40.52 | 7100 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 129258 | 89144 | 0 | 40114* | --- | 40.52 | 2200 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 46414 | 32010 | 0 | 14404* | --- | 40.52 | 790 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 1594581 | 1099712 | 0 | 494869* | --- | 40.52 | 27140 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 851933 | 587540 | 0 | 264393* | --- | 40.52 | 14500 |
| 6.270000 | HVAC | LS* | ---- | ---- | 646294 | 445720 | 0 | 200574* | --- | 40.52 | 11000 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 41127 | 28364 | 0 | 12763* | --- | 40.52 | 700 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 55227 | 38088 | 0 | 17139* | --- | 40.52 | 940 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 495882 | 341988 | 0 | 153894 | --- | 40.52 | 8440 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 176262 | 121560 | 0 | 54702* | --- | 40.52 | 3000 |
| 6.370000 | HVAC | LS* | ---- | ---- | 235016 | 162080 | 0 | 72936* | --- | 40.52 | 4000 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 76380 | 52676 | 0 | 23704* | --- | 40.52 | 1300 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8224 | 5672 | 0 | 2552* | --- | 40.52 | 140 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 1647516 | 1136219 | 0 | 511297* | --- | 40.52 | 28041 |
| 6.410000 | AQCS SWGR BLDG | SF* | 860 | 99.88 | 85898 | 59240 | 0 | 26658* | 1.70 | 40.52 | 1462 |
| 6.420000 | AQCS CTRL BLDG | SF* | 2280 | 123.38 | 281313 | 194009 | 0 | 87304* | 2.10 | 40.52 | 4788 |
| 6.430000 | DIESEL GEN BLDG | SF* | 540 | 110.43 | 59634 | 41127 | 0 | 18507* | 1.88 | 40.52 | 1015 |
| 6.440000 | PUMP HOUSE | SF* | 8860 | 110.45 | 978606 | 674901 | 0 | 303705* | 1.88 | 40.52 | 16656 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 4120 | 58.75 | 242065 | 166942 | 0 | 75123* | 1.00 | 40.52 | 4120 |

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SUSITNA 200MW UNIT2
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DETAILED
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 895409 | 617524 | 0 | 277885* | --- | 40.52 | 15240 |
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 895409 | 617524 | 0 | 277885* | --- | 40.52 | 15240 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 23000 | 35.25 | 810805 | 559176 | 0 | 251629* | 0.60 | 40.52 | 13800 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 84604 | 58348 | 0 | 26256 | --- | 40.52 | 1440 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 105.75 | 84604 | 58348 | 0 | 26256* | 1.80 | 40.52 | 1440 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 2645230 | 1763487 | 0 | 881743* | --- | 41.69 | 42300 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 2645230 | 1763487 | 0 | 881743* | --- | 41.69 | 42300 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 19588500 | 13059000 | 0 | 6529500* | --- | 43.53 | 300000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 19588500 | 13059000 | 0 | 6529500* | --- | 43.53 | 300000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 18531557 | 12780385 | 0 | 5751172* | --- | 42.11 | 303500 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 3883384 | 2678196 | 0 | 1205188* | --- | 42.11 | 63600 |
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 14135274 | 9748465 | 0 | 4386809* | --- | 42.11 | 231500 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 14135274 | 9748465 | 0 | 4386809* | --- | 42.11 | 231500 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 1831785 | 1263300 | 0 | 568485* | --- | 42.11 | 30000 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 12303489 | 8485165 | 0 | 3818324* | --- | 42.11 | 201500 |
| 9.400000 | FANS | LS* | ---- | ---- | 512899 | 353724 | 0 | 159175* | --- | 42.11 | 8400 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 323615 | 223183 | 0 | 100432* | --- | 42.11 | 5300 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 189284 | 130541 | 0 | 58743* | --- | 42.11 | 3100 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 3804791 | 2624005 | 0 | 1180786* | --- | 42.83 | 61266 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 492837 | 339892 | 0 | 152945* | --- | 42.83 | 7936 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 384419 | 265117 | 0 | 119302* | --- | 42.83 | 6190 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 77008.0 | 154016 | 106218 | 0 | 47798* | --- | 42.83 | 2480 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 62103.5 | 124207 | 85660 | 0 | 38547* | --- | 42.83 | 2000 |

APA
SUSITNA 200MW UNIT2
ESTIMATE NO. APA 1707 M-1

BY: WMP CHECKED: JDF DATE: 8-JAN-85 TIME: 16:26:42

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 27946.5 | 55893 | 38547 | 0 | 17346* | --- | 42.83 | 900 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 50303 | 34692 | 0 | 15611* | --- | 42.83 | 810 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.81 | 31 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.83 | 31 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 26577 | 18330 | 0 | 8247* | --- | 42.83 | 428 |
| 10.131000 | SERVICE WATER | EA* | 4 | 2918.75 | 11675 | 8052 | 0 | 3623* | 47.00 | 42.83 | 188 |
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 7699 | 5310 | 0 | 2389* | --- | 42.83 | 124 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 3601.50 | 7203 | 4968 | 0 | 2235* | 58.00 | 42.83 | 116 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 13472 | 9292 | 0 | 4180* | --- | 42.82 | 217 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 1924.50 | 3849 | 2655 | 0 | 1194* | 31.00 | 42.83 | 62 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 1925.00 | 5775 | 3983 | 0 | 1792* | 31.00 | 42.83 | 93 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.83 | 31 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.83 | 31 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 1241.83 | 7451 | 5139 | 0 | 2312* | 20.00 | 42.83 | 120 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 58994 | 40687 | 0 | 18307* | --- | 42.83 | 950 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 16395 | 11307 | 0 | 5088* | --- | 42.83 | 264 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 8694.0 | 17388 | 11992 | 0 | 5396* | --- | 42.83 | 280 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 6458.0 | 19374 | 13362 | 0 | 6012* | --- | 42.83 | 312 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 2918.50 | 5837 | 4026 | 0 | 1811* | 47.00 | 42.83 | 94 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 687666 | 474254 | 0 | 213412* | --- | 42.83 | 11073 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 577562 | 398319 | 0 | 179243* | --- | 42.83 | 9300 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 110104 | 75935 | 0 | 34169* | --- | 42.83 | 1773 |
| 10.221000 | CW PUMPS | EA* | 2 | 16395.0 | 32790 | 22614 | 0 | 10176* | --- | 42.83 | 528 |

APA
SUSITNA 200MW UNIT2
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 15401.0 | 30802 | 21243 | 0 | 9559* | --- | 42.83 | 496 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 6768.5 | 13537 | 9336 | 0 | 4201* | --- | 42.83 | 218 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.83 | 31 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 179226 | 123606 | 0 | 55620* | --- | 42.83 | 2886 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 14035.3 | 98247 | 67757 | 0 | 30490* | --- | 42.83 | 1582 |
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 42229 | 29124 | 0 | 13105* | --- | 42.83 | 680 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 15525.5 | 31051 | 21415 | 0 | 9636* | --- | 42.83 | 500 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 3849.50 | 7699 | 5310 | 0 | 2389* | 62.00 | 42.83 | 124 |
| 10.400000 | TANKS | LS* | ---- | ---- | 318522 | 219672 | 0 | 98850* | --- | 42.83 | 5129 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 298405 | 205797 | 0 | 92608* | --- | 42.83 | 4805 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 144389 | 99579 | 0 | 44810* | --- | 42.83 | 2325 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | [illegible] | 106218 | 0 | 47798* | --- | 42.83 | 2480 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 20117 | 13875 | 0 | 6242* | --- | 42.82 | 324 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 3104 | 2141 | 0 | 963* | --- | 42.83 | 50 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 5775 | 3983 | 0 | 1792* | --- | 42.83 | 93 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 1924 | 1327 | 0 | 597* | --- | 42.83 | 31 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 3104 | 2141 | 0 | 963* | --- | 42.83 | 50 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 6210 | 4283 | 0 | 1927* | --- | 42.83 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 598794 | 412963 | 0 | 185831* | --- | 42.83 | 9642 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 80857 | 55764 | 0 | 25093* | --- | 42.83 | 1302 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 38504.0 | 77008 | 53109 | 0 | 23899* | --- | 42.83 | 1240 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 3849 | 2655 | 0 | 1194* | --- | 42.83 | 62 |

APA
SUSITNA 200MW UNIT2
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 517937 | 357199 | 0 | 160738* | --- | 42.83 | 8340 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 231024 | 159327 | 0 | 71697* | --- | 42.83 | 3720 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 231024 | 159327 | 0 | 71697* | --- | 42.83 | 3720 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 11798 | 8137 | 0 | 3661* | --- | 42.83 | 190 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 17388 | 11992 | 0 | 5396* | --- | 42.83 | 280 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 26703 | 18416 | 0 | 8287* | --- | 42.83 | 430 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 1527746 | 1053618 | 0 | 474128* | --- | 42.83 | 24600 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 2130359 | 1469216 | 0 | 661143* | --- | 42.11 | 34890 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 175239 | 120855 | 0 | 54384* | --- | 42.11 | 2870 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 137383 | 94747 | 0 | 42636* | --- | 42.11 | 2250 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 137383 | 94747 | 0 | 42636* | --- | 42.11 | 2250 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 37856 | 26108 | 0 | 11748* | --- | 42.11 | 620 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 37856 | 26108 | 0 | 11748* | --- | 42.11 | 620 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 1362843 | 939894 | 0 | 422949* | --- | 42.11 | 22320 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 464052 | 320036 | 0 | 144016* | --- | 42.11 | 7600 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 49458 | 34109 | 0 | 15349* | --- | 42.11 | 810 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 128224 | 88431 | 0 | 39793* | --- | 42.11 | 2100 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 622806 | 429522 | 0 | 193284* | --- | 42.11 | 10200 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 20149.0 | 60447 | 41688 | 0 | 18759* | --- | 42.11 | 990 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 37856 | 26108 | 0 | 11748* | --- | 42.11 | 620 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 592277 | 408467 | 0 | 183810* | --- | 42.11 | 9700 |
| 12.000000 | PIPING | LS* | ---- | ---- | 16249343 | 11206444 | 0 | 5042899* | --- | 41.05 | 272995 |
| 12.100000 | LARGE BORE PIPING | TN* | 873 | 9940.3 | 8677844 | 5984720 | 0 | 2693124* | --- | 41.05 | 145791 |

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APA
SUSITNA 200MW UNIT2
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.200000 | SMALL BORE PIPING | LF* | 85372 | 88.69 | 7571499 | 5221724 | 0 | 2349775* | 1.49 | 41.05 | 127204 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 6221950 | 4291000 | 0 | 1930950* | --- | 42.91 | 100000 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 6221950 | 4291000 | 0 | 1930950* | --- | 42.91 | 100000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 539617 | 372150 | 0 | 167467* | --- | 41.35 | 9000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 539617 | 372150 | 0 | 167467* | --- | 41.35 | 9000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 26012095 | 17939376 | 0 | 8072719* | --- | 37.84 | 474085 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 1972855 | 1360590 | 0 | 612265* | --- | 41.23 | 33000 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 657618 | 453530 | 0 | 204088* | --- | 41.23 | 11000 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1195670 | 824600 | 0 | 371070* | --- | 41.23 | 20000 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 119567 | 82460 | 0 | 37107* | --- | 41.23 | 2000 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 2941747 | 1149120 | 0 | 1792627* | --- | 43.20 | 26600 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2941747 | 1149120 | 0 | 1792627* | --- | 43.20 | 26600 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 7076680 | 4191200 | 0 | 2885480* | --- | 40.30 | 104000 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 499720 | 322400 | 0 | 177320* | --- | 40.30 | 8000 |
| 19.200000 | 230KV T-LINE:1 CIR | MI* | 1 | 0.0 | 6576960 | 3868800 | 0 | 2708160* | --- | 40.30 | 96000 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 26285615 | 5157262 | 19046800 | 2081553* | --- | 26.25 | 196500 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 1237500 | 1237500 | 0 | 0* | --- | 16.50 | 75000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 2220000 | 0 | 2220000 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 1480000 | 0 | 1480000 | 0* | --- | 41.00 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 740000 | 0 | 740000 | 0* | --- | 41.00 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 135000 | 0 | 135000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 135000 | 0 | 135000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 17870289 | 805575 | 15983000 | 1081714* | --- | 41.31 | 19500 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1220000 | 450000 | 563000 | 207000* | --- | 40.00 | 11250 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 16650289 | 355575 | 15420000 | 874714* | --- | 43.10 | 8250 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 7200000 | 0 | 7200000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 7920000 | 0 | 7920000 | 0* | --- | 0.00 | 0 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 1530289 | 355575 | 300000 | 874714* | --- | 43.10 | 8250 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 1556201 | 1139812 | 206300 | 210089* | --- | 21.40 | 53250 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 120000 | 0 | 120000 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 518301 | 446812 | 0 | 71489* | --- | 23.83 | 18750 |
| 71.630000 | TESTING | LS* | ---- | ---- | 571400 | 346500 | 86300 | 138600* | --- | 42.00 | 8250 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 346500 | 346500 | 0 | 0* | --- | 13.20 | 26250 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 3066600 | 1831500 | 502500 | 732600* | --- | 40.70 | 45000 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 200025 | 142875 | 0 | 57150* | --- | 38.10 | 3750 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 13600000 | 0 | 13600000 | 0* | --- | 0.00 | 0 |

400 MW Coal Fired
Plant at Beluga

8

ALASKA POWER AUTHORITY
Susitna Need for Power Study
400 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a one unit facility and excludes Owner's cost (including Land and AFUDC). This overnight estimate has a base pricing level of January, 1984, for each line item de-escalated to a January, 1983 pricing level on a summary basis.

The estimate is based on Ebasco's Coal Fired Reference Plant Program (CFRP), which is a combination of recommended pre-engineered plant general arrangements (GA's) in building block segments, to define the plant layout. It also contains a comprehensive set of System Design Descriptions (SDD's) which define all aspects of every plant system in a standardized format.

Site-related capital cost adjustments are made to the CFRP for logistics, civil site features, temporary and permanent power connection points, building enclosures, insulation levels, cooling requirements, and type of coal.

The estimate is based on the following:

a. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
400 MW Coal-fired Plant
Beluga Site
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BASIS OF ESTIMATE (continued)
GENERAL (continued)

b. A work week consisting of 6-10 hour days.

c. Sufficient craftsmen available to meet project requirements housed in labor camps.

d. Professional Services including Engineering, Design, Related Services and Construction Management based on a generic plant of comparable size using the CFRP concept.

e. Land and Land Rights not included.

f. Allowance for Funds Used During Construction (AFUDC) not included.

g. Client costs not included.

h. Permanent town for plant operating personnel and mine production personnel not included.

i. Capital cost of mine and coal export facility not included.

j. Operating and maintenance costs not included.

k. Contingency included at the rate of 12% for material and 15% for installation.

7175B

ALASKA POWER AUTHORITY
Susitna Need for Power Study
400 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

GENERAL (continued)

l. Construction performed on a Contract basis.

m. Project being exempt from sales tax.

n. Labor productivity being "average U.S." with no Alaskan adjustment.

o. Spare parts and special tools not included.

p. Start-up costs not included.

q. Maintenance machinery, laboratory and office equipment not included.

CIVIL (Categories 1, 2, 3, 4, 5, 6, 16, 17, 18)

Clearing is assumed based on scrub brush and trees up to 25'. Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. No railroad or barge delivery of coal is assumed for this mine - mouth plant. Coal is assumed to be trucked from the mine. Twenty (20) miles of access road is assumed.

Eighty (80) foot long piles are assumed under heavily loaded foundations. A five hundred (500) foot high concrete stack with 2 - 12' diameter steel flues is assumed. No ash ponds are included; a waste processing system is included. Waste would be trucked to a

ALASKA POWER AUTHORITY
Susitna Need for Power Study
400 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

GENERAL (continued)

l. Construction performed on a Contract basis.

m. Project being exempt from sales tax.

n. Labor productivity being "average U.S." with no Alaskan adjustment.

o. Spare parts and special tools not included.

p. Start-up costs not included.

q. Maintenance machinery, laboratory and office equipment not included.

CIVIL (Categories 1, 2, 3, 4, 5, 6, 16, 17, 18)

Clearing is assumed based on scrub brush and trees up to 25'. Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. No railroad or barge delivery of coal is assumed for this mine - mouth plant. Coal is assumed to be trucked from the mine. Twenty (20) miles of access road is assumed.

Eighty (80) foot long piles are assumed under heavily loaded foundations. A five hundred (500) foot high concrete stack with 2 - 12' diameter steel flues is assumed. No ash ponds are included; a waste processing system is included. Waste would be trucked to a

BASIS OF ESTIMATE (continued)
CIVIL (continued)

disposal area off-site. The capital cost of constructing the disposal area is not included. No asphalt or concrete paving is included.

Cooling tower pricing is based on a Zurn budgetary quotation for a Model 7-Z-2700 round Multi-fan, counterflow unit rated at 130,100 gpm. A Ranney well make-up water system is included. An equipment barge unloading facility is included.

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

Ecolaire provided a budgetary quotation for a 207,000 $ft^2$ surface condenser. The condenser is a single-shell, single-pass, single-pressure type designed for 130,100 gpm and 28°F temperature rise.

Ecolaire provided a budgetary quotation for a reverse gas 1,324,000 ACFM Baghouse with a 300°F gas temperature. Low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb and a coal firing rate of 506,800 lb/hr is assumed. The quotation is based on design, fabrication and erection of two baghouses and auxiliary equipment with 10 compartments/baghouse and 368 bags per compartment.

Combustion Engineering Power Systems and Foster Wheeler provided budgetary quotations for the coal-fired steam generator and accessories. Pricing is based on 3,158,000 lb/hr, 2650 psig and

ALASKA POWER AUTHORITY
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BASIS OF ESTIMATE (continued)
MECHANICAL (continued)

1008°F main steam; 2,695,000 lb/hr, 600 psig, 630°F (@ inlet) reheat; and 525°F feedwater.

The 7950 btu/lb coal analysis is as follows:

| Proximate | Weight Percent |
|---|---|
| Moisture | 26.1 |
| Ash | 6.4 |
| Volatiles | 36.3 |
| Fixed Carbon | 31.2 |

| Ultimate | |
|---|---|
| Hydrogen | 3.6 |
| Carbon | 47.2 |
| Oxygen | 15.5 |
| Nitrogen | 1.05 |
| Sulfur | 0.12 |
| Chlorine | --- |
| Moisture | 26.1 |
| Ash | 6.4 |

Combustion Engineering provided a budgetary quotation for a "dry" $SO_2$ scrubbing system utilizing multi-cell sprayer absorbers with 85% $SO_2$ (70% guarantee) removal. The system is rated at 1,324,000 ACFM with a flue gas temperature of 300°F and 20% excess air.

BASIS OF ESTIMATE (continued)

MECHANICAL (continued)

Westinghouse Electric, General Electric and Utility Power Corporation provided budgetary quotes for the steam turbine generators. The quotations are based on an indoor type, tandem compound condensing turbine, four flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000°F/1000°F. The turbine design throttle flow will be 3,158,000 lb/hr. The maximum gross turbine output will be 440,024 kW with 2520 psig, 1000/1000°F, 2.7/4.0 in.Hg absolute back pressure. The generator is 490,000 KVA @ 45 psig, 0.9 PF, 3 phase, 60 Hz, 24,000 V and 0.5 shortcircuit ratio complete with an excitation system.

PIPING AND INSULATION (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance for insulating yard systems.

Pricing is based on estimates of Ebasco's CFRP program. Pricing is based on updating recent vendor quotations and discounted equipment pricing catalogs in accordance with representative historical inflation indices.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
400 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

ELECTRICAL (Categories 15 and 19)

A 48 mile 230 KV double circuit transmission line is included with step-up facilities. The tie-in point for the Beluga-area coal-fired plant is assumed to be at Lorraine, Alaska. No land cost for right-of-way is included.

INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60 hour week)
- Construction Management automotive equipment
- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Gravel air strip
- 70 mile 69 kV temporary transmission line
- Labor camp, food service, housekeeping
- Barge freight/off-site unloading adjustment
- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

BASIS OF ESTIMATE (continued)

INDIRECT CONSTRUCTION COST (continued)

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

Pricing Level: January 1984
De-Escalated to: January, 1983
Railroad Delivery
Prof.Services Based on REF.PLT.

BY: JDF CHECKED: JDF

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 828144012* | 325536937 | ---- * | ---- | 502607075******** | ******** | ******** | |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 100436404* | 34878956 | ---- * | ---- | 65557448* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -38290603* | -15297782 | ---- * | ---- | -22992821******** | ******** | ******** | |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 765998211* | 305955763 | ---- * | ---- | 460042448******** | ******** | ******** | |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 5620316* | 1711850 | ---- * | ---- | 3908466* | -281012 | -85592 | -195420 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 52560607* | 22307100 | ---- * | ---- | 30253507* | -2628020 | -1115354 | -1512666 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 12048925* | 6010350 | ---- * | ---- | 6038575* | -602440 | -300517 | -301923 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 28505441* | 5367600 | ---- * | ---- | 23137841* | -1425269 | -268380 | -1156889 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 39731375* | 15764175 | ---- * | ---- | 23967200* | -1986565 | -788207 | -1198358 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 24389231* | 7959250 | ---- * | ---- | 16429981* | -1219449 | -397961 | -821488 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 32396600* | 28100000 | ---- * | ---- | 4296600* | -1619830 | -1405000 | -214830 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 76280000* | 41000000 | ---- * | ---- | 35280000* | -3814000 | -2050000 | -1764000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 90512500* | 51087100 | ---- * | ---- | 39425400* | -4525625 | -2554355 | -1971270 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 30704616* | 22622800 | ---- * | ---- | 8081816* | -1535221 | -1131140 | -404081 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 31715120* | 18281000 | ---- * | ---- | 13434120* | -1585755 | -914050 | -671705 |
| 12.000000 | PIPING | LS* | ---- | ---- | 44333564* | 15794438 | ---- * | ---- | 28539126* | -2216676 | -789721 | -1426955 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 10650000* | 1200000 | ---- * | ---- | 9450000* | -532500 | -60000 | -472500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 8755200* | 8037000 | ---- * | ---- | 718200* | -437760 | -401850 | -35910 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 93849100* | 34654000 | ---- * | ---- | 59195100* | -4692455 | -1732700 | -2959755 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 3427100* | 233000 | ---- * | ---- | 3194100* | -171355 | -11650 | -159705 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- * | ---- | 7430700* | -673035 | -301500 | -371535 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 9083922* | 2260100 | ---- * | ---- | 6823822* | -454194 | -113005 | -341189 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 31025413* | 17536000 | ---- * | ---- | 13489413* | -1551270 | -876800 | -674470 |

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SUMMARY
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIREC. CONST COST | LS* | ---- | ---- | 65258481* | 0 | ---- * | ---- | 65258481* | -3253672 | 0 | -3253672 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 61690000* | 0 | ---- * | ---- | 61690000* | -3084500 | 0 | -3084500 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 828144012* | 325536937 | ---- * | ---- | 502607075********* | ******** | ******** |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 100436404* | 34878956 | ---- * | ---- | 65557448* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -38290603* | 15297782 | ---- * | ---- | -22992821********* | ******** | ******** |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 765998211* | 305955763 | ---- * | ---- | 460042448********* | ******** | ******** |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 5620316* | 1711850 | ---- * | ---- | 3908466* | -281012 | -85592 | -195420 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 712597* | 0 | ---- * | ---- | 712597* | -35629 | 0 | -35629 |
| 1.110000 | CLEARING | AC* | 170 | 4191.7 | 712597* | 0 | 0.00* | 4191.7 | 712597* | -35629 | 0 | -35629 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 825470* | 217350 | ---- * | ---- | 608120* | -41272 | -10867 | -30405 |
| 1.210000 | ROADS | LS* | ---- | ---- | 610346* | 112500 | ---- * | ---- | 497846* | -30517 | -5625 | -24892 |
| 1.213000 | 24' WIDE ROADS | SY* | 45000 | 13.6 | 610346* | 112500 | 2.50* | 11.1 | 497846* | -30517 | -5625 | -24892 |
| 1.240000 | FENCING | LS* | ---- | ---- | 215124* | 104850 | ---- * | ---- | 110274* | -10755 | -5242 | -5513 |
| 1.241000 | PROPERTY FENCE | LF* | 6000 | 24.8 | 149011* | 72000 | 12.00* | 12.8 | 77011* | -7450 | -3600 | -3850 |
| 1.242000 | SECURITY FENCE | LF* | 2300 | 24.8 | 57120* | 27600 | 12.00* | 12.8 | 29520* | -2856 | -1380 | -1476 |
| 1.243000 | GATES | EA* | 7 | 1284.7 | 8993* | 5250 | 750.00* | 534.7 | 3743* | -449 | -262 | -187 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 2135530* | 1000000 | ---- * | ---- | 1135530* | -106776 | -50000 | -56776 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 606510* | 228000 | ---- * | ---- | 378510* | -30325 | -11400 | -18925 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 1340209* | 266500 | ---- * | ---- | 1073709* | -67010 | -13325 | -53685 |
| 1.720000 | STACKER RECL TRCK | LF* | 650 | 2061.9 | 1340209* | 266500 | 410.00* | 1651.9 | 1073709* | -67010 | -13325 | -53685 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 52560607* | 22307100 | ---- * | ---- | 30253507* | -2628020 | -1115354 | -1512666 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 23929737* | 7360000 | ---- * | ---- | 16569737* | -1196484 | -368000 | -828484 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 17315415* | 7360000 | ---- * | ---- | 9955415* | -865770 | -368000 | -497770 |
| 2.212000 | EARTH EXCAVATION | CY* | 30100 | 29.1 | 877415* | 0 | 0.00* | 29.1 | 877415* | -43870 | 0 | -43870 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 16438000* | 7360000 | ---- * | ---- | 9078000* | -821900 | -368000 | -453900 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 820000 | 16.9 | 13990800* | 6560000 | 8.00* | 8.9 | 7330800* | -694540 | -328000 | -366540 |
| 2.214200 | INSULATION BRD | SF* | 3200000 | 0.8 | 2547200* | 800000 | 0.25* | 0.5 | 1747200* | -127360 | -40000 | -87360 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 355172* | 0 | ---- * | ---- | 355172* | -17758 | 0 | -17758 |
| 2.222000 | EARTH EXCAVATION | CY* | 3700 | 23.3 | 86284* | 0 | 0.00* | 23.3 | 86284* | -4314 | 0 | -4314 |
| 2.223000 | ROCK EXCAVATION | CY* | 3200 | 84.0 | 268888* | 0 | 0.00* | 84.0 | 268888* | -13444 | 0 | -13444 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 3360400* | 0 | ---- * | ---- | 3360400* | -168020 | 0 | -168020 |
| 2.232000 | EARTH EXCAVATION | CY* | 70000 | 29.1 | 2040500* | 0 | 0.00* | 29.1 | 2040500* | -102025 | 0 | -102025 |
| 2.233000 | ROCK EXCAVATION | CY* | 18000 | 73.3 | 1319900* | 0 | 0.00* | 73.3 | 1319900* | -65995 | 0 | -65995 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 320650* | 0 | ---- * | ---- | 320650* | -16032 | 0 | -16032 |
| 2.242000 | EARTH EXCAVATION | CY* | 11000 | 29.1 | 320650* | 0 | 0.00* | 29.1 | 320650* | -16032 | 0 | -16032 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2578100* | 0 | ---- * | ---- | 2578100* | -128904 | 0 | -128904 |
| 2.252000 | EARTH EXCAVATION | CY* | 45000 | 29.1 | 1311750* | 0 | 0.00* | 29.1 | 1311750* | -65587 | 0 | -65587 |
| 2.253000 | ROCK EXCAVATION | CY* | 17000 | 74.5 | 1266350* | 0 | 0.00* | 74.5 | 1266350* | -63317 | 0 | -63317 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 4531879* | 0 | ---- * | ---- | 4531879* | -226593 | 0 | -226593 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 842599* | 0 | ---- * | ---- | 842599* | -42129 | 0 | -42129 |
| 2.312000 | EARTH EXCAVATION | CY* | 22000 | 28.2 | 620004* | 0 | 0.00* | 28.2 | 620004* | -31000 | 0 | -31000 |
| 2.313000 | ROCK EXCAVATION | CY* | 2800 | 79.5 | 222595* | 0 | 0.00* | 79.5 | 222595* | -11129 | 0 | -11129 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 2152080* | 0 | ---- * | ---- | 2152080* | -107604 | 0 | -107604 |
| 2.322000 | EARTH EXCAVATION | CY* | 70000 | 30.7 | 2152080* | 0 | 0.00* | 30.7 | 2152080* | -107604 | 0 | -107604 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 1537200* | 0 | ---- * | ---- | 1537200* | -76860 | 0 | -76860 |
| 2.332000 | EARTH EXCAVATION | CY* | 50000 | 30.7 | 1537200* | 0 | 0.00* | 30.7 | 1537200* | -76860 | 0 | -76860 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.0 | 159698* | 0 | 0.00* | 29.0 | 159698* | -7984 | 0 | -7984 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 21519225* | 14196000 | ---- * | ---- | 7323225* | -1075960 | -709800 | -366160 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 264000 | 59.1 | 15607350* | 10296000 | 39.00* | 20.1 | 5311350* | -780367 | -514800 | -265567 |
| 2.520000 | AQCS AREA | LF* | 100000 | 59.1 | 5911875* | 3900000 | 39.00* | 20.1 | 2011875* | -295593 | -195000 | -100593 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 2420068* | 751100 | ---- * | ---- | 1668968* | -120999 | -37554 | -83445 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 1399985* | 681750 | ---- * | ---- | 718235* | -69998 | -34087 | -35911 |
| 2.711000 | PVC LINER | SF* | 475000 | 0.5 | 239085* | 213750 | 0.45* | 0.1 | 25335* | -11953 | -10687 | -1266 |
| 2.712000 | SAND | CY* | 26000 | 24.4 | 633100* | 260000 | 10.00* | 14.4 | 373100* | -31655 | -13000 | -18655 |
| 2.713000 | GRAVEL | CY* | 26000 | 20.3 | 527800* | 208000 | 8.00* | 12.3 | 319800* | -26390 | -10400 | -15990 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 731546* | 30600 | ---- * | ---- | 700946* | -36577 | -1530 | -35047 |
| 2.721000 | PVC LINER | SF* | 68000 | 0.5 | 34226* | 30600 | 0.45* | 0.1 | 3626* | -1711 | -1530 | -181 |
| 2.722000 | EXCAVATION | CY* | 30000 | 17.9 | 536400* | 0 | 0.00* | 17.9 | 536400* | -26820 | 0 | -26820 |
| 2.723000 | BACKFILL | CY* | 6000 | 26.8 | 160920* | 0 | 0.00* | 26.8 | 160920* | -8046 | 0 | -8046 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 263037* | 33750 | ---- * | ---- | 229287* | -13149 | -1687 | -11462 |
| 2.731000 | PVC LINER | SF* | 75000 | 0.5 | 37749* | 33750 | 0.45* | 0.1 | 3999* | -1886 | -1687 | -199 |
| 2.732000 | EXCAVATION | CY* | 8400 | 17.9 | 150192* | 0 | 0.00* | 17.9 | 150192* | -7509 | 0 | -7509 |
| 2.733000 | BACKFILL | CY* | 2800 | 26.8 | 75096* | 0 | 0.00* | 26.8 | 75096* | -3754 | 0 | -3754 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 25500* | 5000 | ---- * | ---- | 20500* | -1275 | -250 | -1025 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 12048925* | 6010350 | ---- * | ---- | 6038575* | -602440 | -300517 | -301923 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 2522389* | 1096750 | ---- * | ---- | 1425639* | -126116 | -54837 | -71279 |
| 3.210000 | CONCR PIPE: 72" | LF* | 3400 | 406.6 | 1382593* | 782000 | 230.00* | 176.6 | 600593* | -69129 | -39100 | -30029 |
| 3.260000 | BEDDING MATERIAL | CY* | 2400 | 30.5 | 73200* | 24000 | 10.00* | 20.5 | 49200* | -3660 | -1200 | -2460 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 996176* | 262750 | ---- * | ---- | 733426* | -49806 | -13137 | -36669 |
| 3.271000 | THRST & TRNS BLK | CY* | 950 | 411.8 | 391187* | 118750 | 125.00* | 286.8 | 272437* | -19558 | -5937 | -13621 |
| 3.272000 | CONDENS BLOCKS | CY* | 500 | 873.7 | 436870* | 102000 | 204.00* | 669.7 | 334870* | -21843 | -5100 | -16743 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 250 | 672.5 | 168119* | 42000 | 168.00* | 504.5 | 126119* | -8405 | -2100 | -6305 |
| 3.280000 | MISCELLAN STEEL | TN* | 10 | 7042.0 | 70420* | 28000 | 2800.00* | 4242.0 | 42420* | -3521 | -1400 | -2121 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 9526536* | 4913600 | ---- * | ---- | 4612936* | -476324 | -245680 | -230644 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 1235144* | 314400 | ---- * | ---- | 920744* | -61757 | -15720 | -46037 |
| 3.411000 | EXCAVATION | CY* | 10400 | 22.4 | 232440* | 0 | 0.00* | 22.4 | 232440* | -11622 | 0 | -11622 |
| 3.412000 | CONC CW COOL TWR | CY* | 2400 | 417.8 | 1002704* | 314400 | 131.00* | 286.8 | 688304* | -50135 | -15720 | -34415 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 1266220* | 336200 | ---- * | ---- | 930020* | -63311 | -16810 | -46501 |
| 3.422000 | EXCAVATION | CY* | 6800 | 22.4 | 151980* | 0 | 0.00* | 22.4 | 151980* | -7599 | 0 | -7599 |
| 3.423000 | CONCRETE | CY* | 2300 | 453.8 | 1043820* | 308200 | 134.00* | 319.8 | 735620* | -52191 | -15410 | -36781 |
| 3.424000 | MISC STEEL | TN* | 10 | 7042.0 | 70420* | 28000 | 2800.00* | 4242.0 | 42420* | -3521 | -1400 | -2121 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 499944* | 423000 | ---- * | ---- | 76944* | -24995 | -21150 | -3845 |
| 3.433000 | SCREENS | SF* | 700 | 58.3 | 40796* | 21000 | 30.00* | 28.3 | 19796* | -2039 | -1050 | -989 |
| 3.435000 | STOP LOGS | SF* | 700 | 74.1 | 51898* | 42000 | 60.00* | 14.1 | 9898* | -2594 | -2100 | -494 |
| 3.436000 | CRANE BRIDGE 20T | LS* | ---- | ---- | 407250* | 360000 | ---- * | ---- | 47250* | -20362 | -18000 | -2362 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 976900* | 440000 | ---- * | ---- | 536900* | -48845 | -22000 | -26845 |
| 3.441000 | CRANE & HST SUPP | TN* | 100 | 3155.4 | 315540* | 160000 | 1600.00* | 1555.4 | 155540* | -15777 | -8000 | -7777 |
| 3.442000 | BUILDING SPRSTR | SF* | 8000 | 82.7 | 661360* | 280000 | 35.00* | 47.7 | 381360* | -33068 | -14000 | -19068 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 5548328* | 3400000 | ---- * | ---- | 2148328* | -277416 | -170000 | -107416 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 28505441* | 5367600 | ---- * | ---- | 23137841* | -1425269 | -268380 | -1156889 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 6700 | 823.4 | 5517036* | 951400 | 142.00* | 681.4 | 4565636* | -275851 | -47570 | -228281 |
| 4.200000 | BOILER AREA CONCRT | CY* | 2700 | 724.6 | 1956499* | 383400 | 142.00* | 582.6 | 1573099* | -97824 | -19170 | -78654 |
| 4.300000 | SILO AREA CONCRETE | CY* | 2400 | 756.0 | 1814366* | 340800 | 142.00* | 614.0 | 1473566* | -90718 | -17040 | -73678 |
| 4.400000 | AQCS CONCRETE | CY* | 13000 | 754.9 | 9814068* | 1846000 | 142.00* | 612.9 | 7968068* | -490703 | -92300 | -398403 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | COAL HANDLG CONCRT | CY* | 8000 | 854.2 | 6833952* | 1136000 | 142.00* | 717.2 | 5697952* | -341697 | -56800 | -284897 |
| 4.900000 | MISCELL CONCRETE | CY* | 5000 | 513.9 | 2569520* | 710000 | 142.00* | 371.9 | 1859520* | -128476 | -35500 | -92976 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 39731375* | 15764175 | ---- * | ---- | 23967200* | -1986565 | -788207 | -1198358 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 6437500* | 3119010 | ---- * | ---- | 3318490* | -321874 | -155950 | -165924 |
| 5.110000 | MAIN STEEL | TN* | 1900 | 2390.0 | 4541000* | 2280000 | 1200.00* | 1190.0 | 2261000* | -227050 | -114000 | -113050 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 577500* | 288750 | ---- * | ---- | 288750* | -28874 | -14437 | -14437 |
| 5.121000 | WALL FRAMING | TN* | 165 | 3500.0 | 577500* | 288750 | 1750.00* | 1750.0 | 288750* | -28874 | -14437 | -14437 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 828000* | 185260 | ---- * | ---- | 642740* | -41400 | -9263 | -32137 |
| 5.131000 | GRATING 1-3/4" | SF* | 18400 | 27.8 | 511520* | 125120 | 6.80* | 21.0 | 386400* | -25576 | -6256 | -19320 |
| 5.132000 | CHECKERED PLATE | SF* | 720 | 57.6 | 41480* | 7740 | 10.75* | 46.9 | 33740* | -2074 | -387 | -1687 |
| 5.133000 | HANDRAIL | LF* | 1520 | 102.5 | 155800* | 22800 | 15.00* | 87.5 | 133000* | -7790 | -1140 | -6650 |
| 5.134000 | LADDERS & STRWYS | TN* | 16 | 7450.0 | 119200* | 29600 | 1850.00* | 5600.0 | 89600* | -5960 | -1480 | -4480 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 491000* | 365000 | ---- * | ---- | 126000* | -24550 | -18250 | -6300 |
| 5.141000 | CRANE: 60 T CAP | LS* | ---- | ---- | 491000* | 365000 | ---- * | ---- | 126000* | -24550 | -18250 | -6300 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 18634175* | 7035315 | ---- * | ---- | 11598860* | -931707 | -351765 | -579942 |
| 5.210000 | MAIN STEEL | TN* | 3820 | 2390.0 | 9129800* | 4584000 | 1200.00* | 1190.0 | 4545800* | -456490 | -229200 | -227290 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 2895600* | 977600 | ---- * | ---- | 1918000* | -144780 | -48880 | -95900 |
| 5.221000 | WALL FRAMING | TN* | 500 | 5250.0 | 2625000* | 875000 | 1750.00* | 3500.0 | 1750000* | -131250 | -43750 | -87500 |
| 5.222000 | ELEV FRAMING | TN* | 60 | 4510.0 | 270600* | 102600 | 1710.00* | 2800.0 | 168000* | -13530 | -5130 | -8400 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 6328385* | 1327515 | ---- * | ---- | 5000870* | -316418 | -66375 | -250043 |
| 5.231000 | GRATING (1-3/4") | SF* | 103800 | 27.8 | 2885640* | 705840 | 6.80* | 21.0 | 2179800* | -144282 | -35292 | -108990 |
| 5.232000 | CHECKERED PLATE | SF* | 2300 | 57.7 | 132595* | 24725 | 10.75* | 46.9 | 107870* | -6629 | -1236 | -5393 |
| 5.233000 | HANDRAIL | LF* | 19600 | 106.0 | 2077600* | 294000 | 15.00* | 91.0 | 1783600* | -103880 | -14700 | -89180 |

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APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.234000 | LADDERS & STRWY | TN* | 166 | 7425.0 | 1232550* | 302950 | 1825.00* | 5600.0 | 929600* | -41627 | -15147 | -44480 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 280390* | 146200 | ---- * | ---- | 134190* | -14019 | -7310 | -6709 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 163540* | 57700 | ---- * | ---- | 105840* | -8177 | -2885 | -5292 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 116850* | 88500 | ---- * | ---- | 28350* | -5842 | -4425 | -1417 |
| 5.243100 | (3) 20 TON HST | LS* | ---- | ---- | 116850* | 88500 | ---- * | ---- | 28350* | -5842 | -4425 | -1417 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 5184750* | 2610850 | ---- * | ---- | 2573900* | -259237 | -130542 | -128695 |
| 5.310000 | MAIN STEEL | TN* | 350 | 2390.0 | 836500* | 420000 | 1200.00* | 1190.0 | 416500* | -41825 | -21000 | -20825 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 498750* | 166250 | ---- * | ---- | 332500* | -24937 | -8312 | -16625 |
| 5.321000 | WALL FRAMING | TN* | 95 | 5250.0 | 498750* | 166250 | 1750.00* | 3500.0 | 332500* | -24937 | -8312 | -16625 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 469000* | 273000 | ---- * | ---- | 196000* | -23450 | -13650 | -9800 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 86000* | 67100 | ---- * | ---- | 18900* | -4300 | -3355 | -945 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 86000* | 67100 | ---- * | ---- | 18900* | -4300 | -3355 | -945 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 1125000* | 390000 | ---- * | ---- | 735000* | -56250 | -19500 | -36750 |
| 5.351000 | EQUIP SUPPORTS | TN* | 150 | 7500.0 | 1125000* | 390000 | 2600.00* | 4900.0 | 735000* | -56250 | -19500 | -36750 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 2169500* | 1294500 | ---- * | ---- | 875000* | -108475 | -64725 | -43750 |
| 5.361000 | STEEL SILOS | TN* | 250 | 6850.0 | 1712500* | 1012500 | 4050.00* | 2800.0 | 700000* | -85625 | -50625 | -35000 |
| 5.362000 | SS PLATES | TN* | 50 | 9140.0 | 457000* | 282000 | 5640.00* | 3500.0 | 175000* | -22850 | -14100 | -8750 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 9030950* | 2800000 | ---- * | ---- | 6230950* | -451547 | -140000 | -311547 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 78000* | 43000 | ---- * | ---- | 35000* | -3900 | -2150 | -1750 |
| 5.900000 | UNCLASS STEEL | TN* | 60 | 6100.0 | 366000* | 156000 | 2600.00* | 3500.0 | 210000* | -18300 | -7800 | -10500 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 24389231* | 7959250 | ---- * | ---- | 16429981* | -1219449 | -397961 | -821488 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 3228810* | 1319000 | ---- * | ---- | 1909810* | -161439 | -65950 | -95489 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 1465160* | 458000 | ---- * | ---- | 1007160* | -73258 | -22900 | -50358 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 1338916* | 688000 | ---- * | ---- | 650916* | -66945 | -34400 | -32545 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 359388* | 153000 | ---- * | ---- | 206388* | -17969 | -7650 | -10319 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 65346* | 20000 | ---- * | ---- | 45346* | -3267 | -1000 | -2267 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 3926845* | 1444400 | ---- * | ---- | 2482445* | -196341 | -72220 | -124121 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 2002685* | 589000 | ---- * | ---- | 1413685* | -100134 | -29450 | -70684 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1746764* | 779000 | ---- * | ---- | 967764* | -87338 | -38950 | -48388 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 83440* | 36400 | ---- * | ---- | 47040* | -4172 | -1820 | -2352 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 93956* | 40000 | ---- * | ---- | 53956* | -4697 | -2000 | -2697 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 1182044* | 420500 | ---- * | ---- | 761544* | -59100 | -21025 | -38075 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 408414* | 120000 | ---- * | ---- | 288414* | -20420 | -6000 | -14420 |
| 6.370000 | HVAC | LS* | ---- | ---- | 525122* | 179000 | ---- * | ---- | 346122* | -26256 | -8950 | -17306 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 233776* | 115000 | ---- * | ---- | 118776* | -11688 | -5750 | -5938 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 14732* | 6500 | ---- * | ---- | 8232* | -736 | -325 | -411 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 4643013* | 1183500 | ---- * | ---- | 3459513* | -232148 | -59174 | -172974 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1800 | 133.3 | 239994* | 61200 | 34.00* | 99.3 | 178794* | -11999 | -3060 | -8939 |
| 6.420000 | AQCS CTRL BLDG | SF* | 4800 | 166.4 | 798720* | 220800 | 46.00* | 120.4 | 577920* | -39936 | -11040 | -28896 |
| 6.430000 | DIESEL GEN BLDG | SF* | 1125 | 141.1 | 158770* | 38250 | 34.00* | 107.1 | 120520* | -7938 | -1912 | -6026 |
| 6.440000 | PUMP HOUSE | SF* | 19750 | 142.2 | 2807581* | 691250 | 35.00* | 107.2 | 2116331* | -140378 | -34562 | -105816 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 8600 | 74.2 | 637948* | 172000 | 20.00* | 54.2 | 465948* | -31897 | -8600 | -23297 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 11408519* | 3591850 | ---- * | ---- | 7816669* | -570421 | -179592 | -390829 |
| 6.930000 | ADMIN BUILDING | SF* | 5000 | 257.6 | 1288100* | 355000 | 71.00* | 186.6 | 933100* | -64405 | -17750 | -46655 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 1559240* | 584000 | ---- * | ---- | 975240* | -77962 | -29200 | -48762 |
| 6.950000 | WTR TRTMT BLDG | SF* | 4000 | 210.5 | 842000* | 240000 | 60.00* | 150.5 | 602000* | -42100 | -12000 | -30100 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 7719179* | 2412850 | ---- * | ---- | 5306329* | -385954 | -120642 | -265312 |
| 6.991000 | PLANT MAINT | SF* | 3500 | 162.3 | 568120* | 231000 | 66.00* | 96.3 | 337120* | -28406 | -11550 | -16856 |
| 6.992000 | AUX BOILER | SF* | 1200 | 233.6 | 280272* | 78000 | 65.00* | 168.6 | 202272* | -14013 | -3900 | -10113 |
| 6.993000 | YD EQP MAINT BLD, | SF* | 1400 | 140.3 | 196420* | 70000 | 50.00* | 90.3 | 126420* | -9821 | -3500 | -6321 |
| 6.994000 | CHLORINE BLDG | SF* | 1300 | 143.4 | 186355* | 49400 | 38.00* | 105.3 | 136955* | -9317 | -2470 | -6847 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 160.4 | 128304* | 36800 | 46.00* | 114.4 | 91504* | -6415 | -1840 | -4575 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 250.6 | 56385* | 15750 | 70.00* | 180.6 | 40635* | -2818 | -787 | -2031 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 30000 | 59.1 | 1773300* | 780000 | 26.00* | 33.1 | 993300* | -88665 | -39000 | -49665 |
| 6.998000 | BULK GAS STR BLD | SF* | 1500 | 145.4 | 218040* | 55500 | 37.00* | 108.4 | 162540* | -10902 | -2775 | -8127 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 4311983* | 1096400 | ---- * | ---- | 3215583* | -215597 | -54820 | -160777 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 146.4 | 117088* | 30400 | 38.00* | 108.4 | 86688* | -5854 | -1520 | -4334 |
| 6.999200 | CONTROL & SWGR | SF* | 2400 | 139.3 | 334392* | 96000 | 40.00* | 99.3 | 238392* | -16719 | -4800 | -11919 |
| 6.999300 | SWER TRTMT BLDG | SF* | 4000 | 139.4 | 557400* | 136000 | 34.00* | 105.3 | 421400* | -27870 | -6800 | -21070 |
| 6.999400 | DEWTR & FIXTN | SF* | 12000 | 127.3 | 1527840* | 372000 | 31.00* | 96.3 | 1155840* | -76392 | -18600 | -57792 |
| 6.999500 | SWTCH YD CTRL | SF* | 800 | 148.4 | 118688* | 32000 | 40.00* | 108.4 | 86688* | -5934 | -1600 | -4334 |
| 6.999600 | CRSHING & SAMPL | SF* | 2500 | 141.4 | 353375* | 90000 | 36.00* | 105.3 | 263375* | -17668 | -4500 | -13168 |
| 6.999700 | WASTEWTR TRTMT | SF* | 10000 | 130.3 | 1303200* | 340000 | 34.00* | 96.3 | 963200* | -65160 | -17000 | -48160 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 32396600* | 28100000 | ---- * | ---- | 4296600* | -1619830 | -1405000 | -214830 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 32396600* | 28100000 | ---- * | ---- | 4296600* | -1619830 | -1405000 | -214830 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 76280000* | 41000000 | ---- * | ---- | 35280000* | -3814000 | -2050000 | -1764000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 76280000* | 41000000 | ---- * | ---- | 35280000* | -3814000 | -2050000 | -1764000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 90512500* | 51087100 | ---- * | ---- | 39425400* | -4525625 | -2554353 | -1971270 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 15160000* | 7600000 | ---- * | ---- | 7560000* | -758000 | -380000 | -378000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 62225300* | 34316300 | ---- | * ---- | 27909000* | -3111265 | -1715815 | -1395450 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 62225300* | 34316300 | ---- | * ---- | 27909000* | -3111265 | -1715815 | -1395450 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 5486400* | 2462400 | ---- | * ---- | 3024000* | -274320 | -123120 | -151200 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 46475000* | 26000000 | ---- | * ---- | 20475000* | -2323750 | -1300000 | -1023750 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 4965900* | 2319900 | ---- | * ---- | 2646000* | -248295 | -115995 | -132300 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 5298000* | 3534000 | ---- | * ---- | 1764000* | -264900 | -176700 | -88200 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 10047000* | 6897000 | ---- | * ---- | 3150000* | -502350 | -344850 | -157500 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 10047000* | 6897000 | ---- | * ---- | 3150000* | -502350 | -344850 | -157500 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 10047000* | 6897000 | ---- | * ---- | 3150000* | -502350 | -344850 | -157500 |
| 9.400000 | FANS | LS* | ---- | ---- | 3080200* | 2273800 | ---- | * ---- | 806400* | -154010 | -113690 | -40320 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 1716400* | 1225000 | ---- | * ---- | 491400* | -85820 | -61250 | -24570 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 1363800* | 1048800 | ---- | * ---- | 315000* | -68190 | -52440 | -15750 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 30704616* | 22622800 | ---- | * ---- | 8081816* | -1535221 | -1131140 | -404081 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 5113662* | 4359300 | ---- | * ---- | 754362* | -255679 | -217965 | -37714 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 4417000* | 3824800 | ---- | * ---- | 592200* | -220850 | -191240 | -29610 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 602000.0 | 1204000* | 952000 | ---- | * 126000.0 | 252000* | -60200 | -47600 | -12600 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 1234500.0 | 2469000* | 2280000 | ---- | * 94500.0 | 189000* | -123450 | -114000 | -9450 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 169500.0 | 339000* | 250800 | ---- | * 44100.0 | 88200* | -16950 | -12540 | -4410 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 405000* | 342000 | ---- | * ---- | 63000* | -20250 | -17100 | -3150 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 14925* | 10200 | ---- | * ---- | 4725* | -746 | -510 | -236 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 14925* | 10200 | ---- | * ---- | 4725* | -746 | -510 | -236 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 101950* | 61000 | ---- | * ---- | 40950* | -5097 | -3050 | -2047 |
| 10.131000 | SERVICE WATER | EA* | 4 | 11025.0 | 44100* | 25200 | 6300.00* | 4725.0 | 18900* | -2205 | -1260 | -945 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 25600* | 13000 | ---- * | ---- | 12600* | -1280 | -650 | -630 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 16125.0 | 32250* | 22800 | 11400.00* | 4725.0 | 9450* | -1612 | -1140 | -472 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 91650* | 69600 | ---- * | ---- | 22050* | -4581 | -3480 | -1101 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 11750.0 | 23500* | 17200 | 8600.00* | 3150.0 | 6300* | -1175 | -860 | -315 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 16450.0 | 49350* | 39900 | 13300.00* | 3150.0 | 9450* | -2467 | -1995 | -472 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 9950* | 6800 | ---- * | ---- | 3150* | -497 | -340 | -157 |
| 10.145000 | LO COND PUMP | LS* | ---- | ---- | 8850* | 5700 | ---- * | ---- | 3150* | -442 | -285 | -157 |
| 10.150000 | SUMP PUMPS | EA* | 6 | 33379.0 | 200274* | 187800 | 31300.00* | 2079.0 | 12474* | -10013 | -9390 | -623 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 287863* | 205900 | ---- * | ---- | 81963* | -14392 | -10295 | -4097 |
| 10.161000 | COOLING TOWER MU | LS* | ---- | ---- | 42800* | 30200 | ---- * | ---- | 12600* | -2140 | -1510 | -630 |
| 10.162000 | OP CYC CLG WTR | EA* | 2 | 39275.0 | 78550* | 50200 | 25100.00* | 14175.0 | 28350* | -3927 | -2510 | -1417 |
| 10.163000 | FIRE PROTECT PMPS | EA* | 3 | 39021.0 | 117063* | 85500 | 28500.00* | 10521.0 | 31563* | -5853 | -4275 | -1578 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 24725.0 | 49450* | 40000 | 20000.00* | 4725.0 | 9450* | -2472 | -2000 | -472 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 4113750* | 3058500 | ---- * | ---- | 1055250* | -205686 | -152925 | -52761 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 2682000* | 1800000 | ---- * | ---- | 882000* | -134100 | -90000 | -44100 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 1431750* | 1258500 | ---- * | ---- | 173250* | -71586 | -62925 | -8661 |
| 10.221000 | CW PUMPS | EA* | 2 | 239975.0 | 479950* | 426400 | ---- * | 26775.0 | 53550* | -23997 | -21320 | -2677 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 144300.0 | 288600* | 238200 | ---- * | 25200.0 | 50400* | -14430 | -11910 | -2520 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 133275.0 | 266550* | 250800 | ---- * | 7875.0 | 15750* | -13327 | -12540 | -787 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 392400* | 342000 | ---- * | ---- | 50400* | -19620 | -17100 | -2520 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 4250* | 1100 | ---- * | ---- | 3150* | -212 | -55 | -157 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 3214524* | 2921700 | ---- * | ---- | 292824* | -160726 | -146085 | -14641 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 291632.0 | 2041424* | 1880900 | ---- * | 22932.0 | 160524* | -102071 | -94045 | -8026 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 388500* | 319200 | ---- * | ---- | 69300* | -19425 | -15960 | -3465 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 276000.0 | 552000* | 501600 | ---- * | 25200.0 | 50400* | -27600 | -25080 | -2520 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 116300.0 | 232600* | 220000 | ---- * | 6300.0 | 12600* | -11630 | -11000 | -630 |
| 10.400000 | TANKS | LS* | ---- | ---- | 1125830* | 422700 | ---- * | ---- | 703130* | -56288 | -21135 | -35153 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 723050* | 234800 | ---- * | ---- | 488250* | -36152 | -11740 | -24412 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 322850* | 86600 | ---- * | ---- | 236250* | -16142 | -4330 | -11812 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 400200* | 148200 | ---- * | ---- | 252000* | -20010 | -7410 | -12600 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 203600* | 65000 | ---- * | ---- | 138600* | -10180 | -3250 | -6930 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 23210.0 | 69630* | 37500 | 12500.00* | 10710.0 | 32130* | -3481 | -1875 | -1606 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 129550* | 85400 | ---- * | ---- | 44150* | -6475 | -4270 | -2205 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 50850* | 31900 | ---- * | ---- | 18950* | -2542 | -1595 | -947 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 6550* | 3400 | ---- * | ---- | 3150* | -327 | -170 | -157 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 28850* | 19400 | ---- * | ---- | 9450* | -1442 | -970 | -472 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 14550* | 11400 | ---- * | ---- | 3150* | -727 | -570 | -157 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 9950* | 6800 | ---- * | ---- | 3150* | -497 | -340 | -157 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 18800* | 12500 | ---- * | ---- | 6300* | -940 | -625 | -315 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 5333450* | 4290800 | ---- * | ---- | 1042650* | -266672 | -214540 | -52132 |
| 10.510000 | COMPRESSED AIR EQP | LS* | ---- | ---- | 441100* | 308800 | ---- * | ---- | 132300* | -22055 | -15440 | -6615 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 185500.0 | 371000* | 245000 | ---- * | 63000.0 | 126000* | -18550 | -12250 | -6300 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 70100* | 63800 | ---- * | ---- | 6300* | -3505 | -3190 | -315 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 4892350* | 3982000 | ---- * | ---- | 910350* | -244617 | -199100 | -45517 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 1807600* | 1429600 | ---- * | ---- | 378000* | -90380 | -71480 | -18900 |
| 10.522000 | COND POL DEMINER | LS* | ---- | | [illegible] | 1379400 | ---- * | ---- | 378000* | -87870 | -68970 | -18900 |

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M 1

BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 514400* | 451400 | ---- | * ---- | 63000* | -25720 | -22570 | -3150 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 113500* | 94600 | ---- | * ---- | 18900* | -5675 | -4730 | -945 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 313350* | 285000 | ---- | * ---- | 28350* | -15667 | -14250 | -1417 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 386100* | 342000 | ---- | * ---- | 44100* | -19305 | -17100 | -2205 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 873000* | 684000 | ---- | * ---- | 189000* | -43650 | -34200 | -9450 |
| 10.700000 | CECI | LS* | ---- | ---- | 4803300* | 3385800 | ---- | * ---- | 1417500* | -240165 | -169290 | -70875 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 1626000* | 1500000 | ---- | * ---- | 126000* | -81300 | -75000 | -6300 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 4501100* | 2000000 | ---- | * ---- | 2501100* | -225055 | -100000 | -125055 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 31715120* | 18281000 | ---- | * ---- | 13434120* | -1585755 | -914050 | -671705 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 24314050* | 14048200 | ---- | * ---- | 10265850* | -1215702 | -702410 | -513292 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 2356800* | 2041800 | ---- | * ---- | 315000* | -117840 | -102090 | -15750 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 1832700* | 843600 | ---- | * ---- | 989100* | -91635 | -42180 | -49455 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 1832700* | 843600 | ---- | * ---- | 989100* | -91635 | -42180 | -49455 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 3082500* | 1539000 | ---- | * ---- | 1543500* | -154125 | -76950 | -77175 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 3082500* | 1539000 | ---- | * ---- | 1543500* | -154125 | -76950 | -77175 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 8805750* | 4978500 | ---- | * ---- | 3827250* | -440287 | -248925 | -191362 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 5556600* | 3351600 | ---- | * ---- | 2205000* | -277830 | -167580 | -110250 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 1011900* | 501600 | ---- | * ---- | 510300* | -50595 | -25080 | -25515 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 36250* | 20500 | ---- | * ---- | 15750* | -1812 | -1025 | -787 |
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 768000* | 364800 | ---- | * ---- | 403200* | -38400 | -18240 | -20160 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 716500.0 | 1433000* | 740000 | ---- | * 346500.0 | 693000* | -71650 | -37000 | -34650 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 4748800* | 2323300 | ---- | * ---- | 2425500* | -237440 | -116165 | -121275 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 1107300.0 | 2214600* | 1105800 | ---- | * 554400.0 | 1108800* | -110730 | -55290 | -55440 |

BY: JDF CHECKED: JDF

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 417300* | 165300 | ---- * | ---- | 252000* | -20865 | -8265 | -12600 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 955400* | 451400 | ---- * | ---- | 504000* | -47770 | -22570 | -25200 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 173600* | 110600 | ---- * | ---- | 63000* | -8680 | -5530 | -3150 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 987900* | 490200 | ---- * | ---- | 497700* | -49395 | -24510 | -24885 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 3487500* | 2322000 | ---- * | ---- | 1165500* | -174375 | -116100 | -58275 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 1421000* | 791000 | ---- * | ---- | 630000* | -71050 | -39550 | -31500 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 44000* | 12500 | ---- * | ---- | 31500* | -2200 | -625 | -1575 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 1100400* | 1037400 | ---- * | ---- | 63000* | -55020 | -51870 | -3150 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 922100* | 481100 | ---- * | ---- | 441000* | -46105 | -24055 | -22050 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 4628470* | 2443000 | ---- * | ---- | 2185470* | -231423 | -122150 | -109273 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 1857900* | 1083000 | ---- * | ---- | 774900* | -92895 | -54150 | -38745 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 145100* | 82100 | ---- * | ---- | 63000* | -7255 | -4105 | -3150 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 419300* | 230300 | ---- * | ---- | 189000* | -20965 | -11515 | -9450 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 1819800* | 786600 | ---- * | ---- | 1033200* | -90990 | -39330 | -51660 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 65990.0 | 197970* | 135600 | 45200.00* | 20790.0 | 62370* | -9898 | -6780 | -3118 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 188400* | 125400 | ---- * | ---- | 63000* | -9420 | -6270 | -3150 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 2772600* | 1789800 | ---- * | ---- | 982800* | -138630 | -89490 | -49140 |
| 12.000000 | PIPING | LS* | ---- | ---- | 44333564* | 15794438 | ---- * | ---- | 28539126* | -2216676 | -789721 | -1426955 |
| 12.100000 | LARGE BORE PIPING | TN* | 1474 | 19582.0 | 28863868* | 13541638 | 9187.00* | 10395.0 | 15322230* | -1443192 | -677081 | -766111 |
| 12.200000 | SMALL BORE PIPING | LF* | 140800 | 109.9 | 15469696* | 2252800 | 16.00* | 93.9 | 13216896* | -773484 | -112640 | -660844 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 10650000* | 1200000 | ---- * | ---- | 9450000* | -532500 | -60000 | -472500 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 10650000* | 1200000 | ---- * | ---- | 9450000* | -532500 | -60000 | -472500 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 8755200* | 8037000 | ---- * | ---- | 718200* | -437760 | -401850 | -35910 |

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:02:19

DETAILED
MATERIAL & INSTALLATION RL AT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 8755200* | 8037000 | ---- * | ---- | 718200* | -437760 | -401850 | -35910 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 93849100* | 34654000 | ---- * | ---- | 59195100* | -4692455 | -1732700 | -2959755 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 3427100* | 233000 | ---- * | ---- | 3194100* | -171355 | -11650 | -159705 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 965440* | 70000 | ---- * | ---- | 895440* | -48272 | -3500 | -44772 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1807600* | 115000 | ---- * | ---- | 1692600* | -90380 | -5750 | -84630 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 188720* | 14000 | ---- * | ---- | 174720* | -9436 | -700 | -8736 |
| 16.900000 | MISCELLANEOUS | LS* | ---- | ---- | 465340* | 34000 | ---- * | ---- | 431340* | -23267 | -1700 | -21567 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- * | ---- | 7430700* | -673035 | -301500 | -371535 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3083700* | 570000 | ---- * | ---- | 2513700* | -154185 | -28500 | -125685 |
| 17.200000 | ACCESS ROADS | MI* | 20 | 518850.0 | 10377000* | 5460000 | ---- * | 245850.0 | 4917000* | -518850 | -273000 | -245850 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 9083922* | 2260100 | ---- * | ---- | 6823822* | -454194 | -113005 | -341189 |
| 18.100000 | BARGE UNLOADNG FAC | LS* | ---- | ---- | 577920* | 0 | ---- * | ---- | 577920* | -28896 | 0 | -28896 |
| 18.110000 | DREDGING | CY* | 32000 | 18.1 | 577920* | 0 | 0.00* | 18.1 | 577920* | -28896 | 0 | -28896 |
| 18.200000 | MOOR/DOCK FACILITY | LS* | ---- | ---- | 8506002* | 2260100 | ---- * | ---- | 6245902* | -425298 | -113005 | -312293 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.3 | 372487* | 0 | 0.00* | 8.3 | 372487* | -18624 | 0 | -18624 |
| 18.220000 | FILL | CY* | 27500 | 9.7 | 266062* | 0 | 0.00* | 9.7 | 266062* | -13303 | 0 | -13303 |
| 18.230000 | H PILES | LF* | 2100 | 58.6 | 123007* | 81900 | 39.00* | 19.6 | 41107* | -6150 | -4095 | -2055 |
| 18.240000 | SHEET PILING | TN* | 2480 | 2518.8 | 6246500* | 1736000 | 700.00* | 1818.8 | 4510500* | -312325 | -86800 | -225525 |
| 18.250000 | STRUCTURAL STEEL | TN* | 102 | 2458.0 | 250716* | 112200 | 1100.00* | 1358.0 | 138516* | -12535 | -5610 | -6925 |
| 18.260000 | CONCRETE | CY* | 1700 | 468.2 | 795980* | 255000 | 150.00* | 318.2 | 540980* | -39799 | -12750 | -27049 |
| 18.270000 | MISCELLANOUS | LS* | ---- | ---- | 451250* | 75000 | ---- * | ---- | 376250* | -22562 | -3750 | -18812 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 31025413* | 17536000 | ---- * | ---- | 13489413* | -1551270 | -876800 | -674470 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 5000370* | 4000000 | ---- * | ---- | 1000370* | -250018 | -200000 | -50018 |

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SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MAT) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200000 | 230KV T-LINE:2 CIR | MI* | 48 | 542188.4 | 24025043* | 13536000 | ---- * | 260188.4 | 12489043* | -1301252 | -676800 | -624452 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 65258481* | 0 | ---- * | ---- | 65258481* | -3253672 | 0 | -3253672 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 6559410* | 0 | ---- * | ---- | 6559410* | -327970 | 0 | -327970 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 4500000* | 0 | ---- * | ---- | 4500000* | -225000 | 0 | -225000 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 3000000* | 0 | ---- * | ---- | 3000000* | -150000 | 0 | -150000 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1500000* | 0 | ---- * | ---- | 1500000* | -75000 | 0 | -75000 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 200000* | 0 | ---- * | ---- | 200000* | -10000 | 0 | -10000 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 200000* | 0 | ---- * | ---- | 200000* | -10000 | 0 | -10000 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 38426292* | 0 | ---- * | ---- | 38426292* | -1921314 | 0 | -1921314 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1784400* | 0 | ---- * | ---- | 1784400* | -89220 | 0 | -89220 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 36641892* | 0 | ---- * | ---- | 36641892* | -1832094 | 0 | -1832094 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 15125000* | 0 | ---- * | ---- | 15125000* | -756250 | 0 | -756250 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 16500000* | 0 | ---- * | ---- | 16500000* | -825000 | 0 | -825000 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002* | 0 | ---- * | ---- | 2205002* | -110250 | 0 | -110250 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 220500.2 | 2205002* | 0 | 0.00* | 220500.2 | 2205002* | -110250 | 0 | -110250 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2811890* | 0 | ---- * | ---- | 2811890* | -140594 | 0 | -140594 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2279241* | 0 | ---- * | ---- | 2279241* | -104712 | 0 | -104712 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 185000* | 0 | ---- * | ---- | 185000* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 801641* | 0 | ---- * | ---- | 801641* | -40082 | 0 | -40082 |
| 71.630000 | TESTING | LS* | ---- | ---- | 830600* | 0 | ---- * | ---- | 830600* | -41530 | 0 | -41530 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000* | 0 | ---- * | ---- | 462000* | -23100 | 0 | -23100 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 12973500* | 0 | ---- * | ---- | 12973500* | -648675 | 0 | -648675 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 320038* | 0 | ---- * | ---- | 320038* | -16001 | 0 | -16001 |

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 61690000* | 0 | ---- | * ---- | 61690000* | -3084500 | 0 | -3084500 |
| $ | | | | | | | | | | | | |

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:09:19

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 502607075 | 209712233 | 104122548 | 123214844* | --- | 40.04 | 5237808 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 65557448 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -22992821 | -11032789 | -5477802 | -6482232* | --- | -2.11 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 460042448 | 220745022 | 109600350 | 129697076* | --- | 42.14 | 5237808 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 3908466 | 2149818 | 0 | 1758648* | --- | 40.65 | 52882 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 30253507 | 12390180 | 100400 | 17762927* | --- | 42.88 | 288952 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 6038575 | 4046894 | 68900 | 1922781* | --- | 44.72 | 90490 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 23137841 | 16176316 | 491000 | 6470525* | --- | 44.20 | 365980 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 23967200 | 14834550 | 275000 | 8857650* | --- | 48.99 | 302818 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 16429981 | 11735701 | 0 | 4694280* | --- | 42.81 | 274127 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 4296600 | 2864400 | 0 | 1432200* | --- | 42.00 | 68200 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 35280000 | 23520000 | 0 | 11760000* | --- | 42.00 | 560000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 39425400 | 26283600 | 0 | 13141800* | --- | 42.00 | 625800 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 8081816 | 5387844 | 50 | 2693922* | --- | 42.00 | 128282 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 13434120 | 8956080 | 0 | 4478040* | --- | 42.00 | 213240 |
| 12.000000 | PIPING | LS* | ---- | ---- | 28539126 | 19026084 | 0 | 9513042* | --- | 42.00 | 453002 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 9450000 | 6300000 | 0 | 3150000* | --- | 42.00 | 150000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 718200 | 478800 | 0 | 239400* | --- | 42.00 | 11400 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 59195100 | 39463400 | 0 | 19731700* | --- | 46.00 | 857900 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 3194100 | 2281500 | 0 | 912600* | --- | 39.00 | 58500 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 6823822 | 2897490 | 15000 | 3911332* | --- | 46.60 | 62175 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 13489413 | 7991896 | 0 | 5497517* | --- | 46.10 | 173360 |

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SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 65258481 | 11055269 | 44960000 | 7243212* | --- | 25.47 | 434100 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 61690000 | 0 | 61690000 | 0* | --- | 0.00 | 0 |

BY: JDF CHECKED: JDF

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 502607075 | 209712233 | 104122548 | 123214844* | --- | 40.04 | 5237808 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 65557448 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -22992821 | -11032789 | -5477802 | -6482232* | --- | -2.11 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 460042448 | 220745022 | 109600350 | 129697076* | --- | 42.14 | 5237808 |
| 1.000000 | IMPROVEMNTS TO SITE | LS* | ---- | ---- | 3908466 | 2149818 | 0 | 1758648* | --- | 40.65 | 52882 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 712597 | 316710 | 0 | 395887* | --- | 40.50 | 7820 |
| 1.110000 | CLEARING | AC* | 170 | 4191.75 | 712597 | 316710 | 0 | 395887* | 46.00 | 40.50 | 7820 |
| 1.200000 | ROADS,BRDG,WALKS | LS* | ---- | ---- | 608120 | 259803 | 0 | 348317* | --- | 42.51 | 6112 |
| 1.210000 | ROADS | LS* | ---- | ---- | 497846 | 181035 | 0 | 316811* | --- | 44.70 | 4050 |
| 1.213000 | 24' WIDE ROADS | SY* | 45000 | 11.06 | 497846 | 181035 | 0 | 316811* | 0.09 | 44.70 | 4050 |
| 1.240000 | FENCING | LS* | ---- | ---- | 110274 | 78768 | 0 | 31506* | --- | 38.20 | 2062 |
| 1.241000 | PROPERTY FENCE | LF* | 6000 | 12.84 | 77011 | 55008 | 0 | 22003* | 0.24 | 38.20 | 1440 |
| 1.242000 | SECURITY FENCE | LF* | 2300 | 12.83 | 29520 | 21086 | 0 | 8434* | 0.24 | 38.20 | 552 |
| 1.243000 | GATES | EA* | 7 | 534.71 | 3743 | 2674 | 0 | 1069* | 10.00 | 38.20 | 70 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 1135530 | 732600 | 0 | 402930* | --- | 40.70 | 18000 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 378510 | 244200 | 0 | 134310* | --- | 40.70 | 6000 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 1073709 | 596505 | 0 | 477204* | --- | 39.90 | 14950 |
| 1.720000 | STACKER RECL TRCK | LF* | 650 | 1651.86 | 1073709 | 596505 | 0 | 477204* | 23.00 | 39.90 | 14950 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 30253507 | 12390180 | 100400 | 17762927* | --- | 42.88 | 288952 |
| 2.200000 | STRCTR & EQUIP EXC | LS* | ---- | ---- | 16569737 | 7094684 | 91400 | 9383653* | --- | 42.65 | 166335 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 9955415 | 4499380 | 0 | 5456035* | --- | 42.80 | 105125 |
| 2.212000 | EARTH EXCAVATION | CY* | 30100 | 29.15 | 877415 | 319060 | 0 | 558355* | 0.25 | 42.40 | 7525 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 9078000 | 4180320 | 0 | 4897680* | --- | 42.83 | 97600 |

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APA
SUSITNA 400 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 820000 | 8.94 | 7330800 | 2932320 | 0 | 4398480* | 0.08 | 44.70 | 65600 |
| 2.214200 | INSULATION BRD | SF* | 3200000 | 0.55 | 1747200 | 1248000 | 0 | 499200* | 0.01 | 39.00 | 32000 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 355172 | 146704 | 9400 | 199068* | --- | 42.40 | 3460 |
| 2.222000 | EARTH EXCAVATION | CY* | 3700 | 23.32 | 86284 | 31376 | 0 | 54908* | 0.20 | 42.40 | 740 |
| 2.223000 | ROCK EXCAVATION | CY* | 3200 | 84.03 | 268888 | 115328 | 9400 | 144160* | 0.85 | 42.40 | 2720 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 3360400 | 1314400 | 32000 | 2014000* | --- | 42.40 | 31000 |
| 2.232000 | EARTH EXCAVATION | CY* | 70000 | 29.15 | 2040500 | 742000 | 0 | 1298500* | 0.25 | 42.40 | 17500 |
| 2.233000 | ROCK EXCAVATION | CY* | 18000 | 73.33 | 1319900 | 572400 | 32000 | 715500* | 0.75 | 42.40 | 13500 |
| 2.240000 | OUTLY TKS EQP/STR | LS* | ---- | ---- | 320650 | 116600 | 0 | 204050* | --- | 42.40 | 2750 |
| 2.242000 | EARTH EXCAVATION | CY* | 11000 | 29.15 | 320650 | 116600 | 0 | 204050* | 0.25 | 42.40 | 2750 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2578100 | 1017600 | 50000 | 1510500* | --- | 42.40 | 24000 |
| 2.252000 | EARTH EXCAVATION | CY* | 45000 | 29.15 | 1311750 | 477000 | 0 | 834750* | 0.25 | 42.40 | 11250 |
| 2.253000 | ROCK EXCAVATION | CY* | 17000 | 74.49 | 1266350 | 540600 | 50000 | 675750* | 0.75 | 42.40 | 12750 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 4531879 | 1514099 | 9000 | 3008780* | --- | 42.70 | 35459 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 842599 | 284339 | 9000 | 549260* | --- | 42.70 | 6659 |
| 2.312000 | EARTH EXCAVATION | CY* | 22000 | 28.18 | 620004 | 206668 | 0 | 413336* | 0.22 | 42.70 | 4840 |
| 2.313000 | ROCK EXCAVATION | CY* | 2800 | 79.50 | 222595 | 77671 | 9000 | 135924* | 0.65 | 42.70 | 1819 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 2152080 | 717360 | 0 | 1434720* | --- | 42.70 | 16800 |
| 2.322000 | EARTH EXCAVATION | CY* | 70000 | 30.74 | 2152080 | 717360 | 0 | 1434720* | 0.24 | 42.70 | 16800 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 1537200 | 512400 | 0 | 1024800* | --- | 42.70 | 12000 |
| 2.332000 | EARTH EXCAVATION | CY* | 50000 | 30.74 | 1537200 | 512400 | 0 | 1024800* | 0.24 | 42.70 | 12000 |
| 2.400000 | EARTH STRUCTURES | CY* | 5500 | 29.04 | 159698 | 79849 | 0 | 79849* | 0.34 | 42.70 | 1870 |
| 2.500000 | PILES (H PILES) | LS* | ---- | ---- | 7323225 | 2929290 | 0 | 4393935* | --- | 43.50 | 67340 |

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APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M 1

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 264000 | 20.12 | 5311350 | 2124540 | 0 | 3186810* | 0.19 | 43.50 | 48840 |
| 2.520000 | AOCS AREA | LF* | 100000 | 20.12 | 2011875 | 804750 | 0 | 1207125* | 0.19 | 43.50 | 18500 |
| 2.700000 | CECI-EXCV-ERTH STR | LS* | ---- | ---- | 1668968 | 772258 | 0 | 896710* | --- | 43.03 | 17948 |
| 2.710000 | CL PL SEEP&RO CTR | LS* | ---- | ---- | 718235 | 295257 | 0 | 422978* | --- | 40.81 | 7235 |
| 2.711000 | PVC LINER | SF* | 475000 | 0.05 | 25335 | 18097 | 0 | 7238* | 0.00 | 38.10 | 475 |
| 2.712000 | SAND | CY* | 26000 | 14.35 | 373100 | 149240 | 0 | 223860* | 0.14 | 41.00 | 3640 |
| 2.713000 | GRAVEL | CY* | 26000 | 12.30 | 319800 | 127920 | 0 | 191880* | 0.12 | 41.00 | 3120 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 700946 | 351250 | 0 | 349696* | --- | 44.64 | 7868 |
| 2.721000 | PVC LINER | SF* | 68000 | 0.05 | 3626 | 2590 | 0 | 1036* | 0.00 | 38.10 | 68 |
| 2.722000 | EXCAVATION | CY* | 30000 | 17.88 | 536400 | 268200 | 0 | 268200* | 0.20 | 44.70 | 6000 |
| 2.723000 | BACKFILL | CY* | 6000 | 26.82 | 160920 | 80460 | 0 | 80460* | 0.30 | 44.70 | 1800 |
| 2.730000 | SLD WST STK PILE | LS* | ---- | ---- | 229287 | 115501 | 0 | 113786* | --- | 44.51 | 2595 |
| 2.731000 | PVC LINER | SF* | 75000 | 0.05 | 3999 | 2857 | 0 | 1142* | 0.00 | 38.10 | 75 |
| 2.732000 | EXCAVATION | CY* | 8400 | 17.88 | 150192 | 75096 | 0 | 75096* | 0.20 | 44.70 | 1680 |
| 2.733000 | BACKFILL | CY* | 2800 | 26.82 | 75096 | 37548 | 0 | 37548* | 0.30 | 44.70 | 840 |
| 2.740000 | EMER WST BASIN | LS* | ---- | ---- | 20500 | 10250 | 0 | 10250* | --- | 41.00 | 250 |
| 3.000000 | CIRC WATER SYSTEM | LS* | ---- | ---- | 6038575 | 4046894 | 68900 | 1922781* | --- | 44.72 | 90490 |
| 3.200000 | INTK & DISC PIPING | LS* | ---- | ---- | 1425639 | 904186 | 24900 | 496553* | --- | 43.10 | 20980 |
| 3.210000 | CONCR PIPE: 72" | LF* | 3400 | 176.65 | 600593 | 343196 | 0 | 257397* | 2.45 | 41.20 | 8330 |
| 3.260000 | BEDDING MATERIAL | CY* | 2400 | 20.50 | 49200 | 24600 | 0 | 24600* | 0.25 | 41.00 | 600 |
| 3.270000 | CONCRET STRUCTURE | LS* | ---- | ---- | 733426 | 506090 | 24900 | 202436* | --- | 44.20 | 11450 |
| 3.271000 | THRST & TRNS BLK | CY* | 950 | 286.78 | 272437 | 188955 | 7900 | 75582* | 4.50 | 44.20 | 4275 |
| 3.272000 | CONDENS BLOCKS | CY* | 500 | 669.74 | 334870 | 232050 | 10000 | 92820* | 10.50 | 44.20 | 5250 |

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APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-J

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 250 | 504.48 | 126119 | 85085 | 7000 | 34034* | 7.70 | 44.20 | 1925 |
| 3.280000 | MISCELLAN STEEL | TN* | 10 | 4242.00 | 42420 | 30300 | 0 | 12120* | 60.00 | 50.50 | 600 |
| 3.400000 | COOL TOWER FACIL | LS* | ---- | ---- | 4612936 | 3142708 | 44000 | 1426228* | --- | 45.21 | 69510 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 920744 | 570336 | 20000 | 330408* | --- | 44.28 | 12880 |
| 3.411000 | EXCAVATION | CY* | 10400 | 22.35 | 232440 | 92976 | 0 | 139464* | 0.20 | 44.70 | 2080 |
| 3.412000 | CONC CW COOL TWR | CY* | 2400 | 286.79 | 688304 | 477360 | 20000 | 190944* | 4.50 | 44.20 | 10800 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 930020 | 599392 | 24000 | 306628* | --- | 44.53 | 13460 |
| 3.422000 | EXCAVATION | CY* | 6800 | 22.35 | 151980 | 60792 | 0 | 91188* | 0.20 | 44.70 | 1360 |
| 3.423000 | CONCRETE | CY* | 2300 | 319.83 | 735620 | 508300 | 24000 | 203320* | 5.00 | 44.20 | 11500 |
| 3.424000 | MISC STEEL | TN* | 10 | 4242.00 | 42420 | 30300 | 0 | 12120* | 60.00 | 50.50 | 600 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 76944 | 54960 | 0 | 21984* | --- | 46.97 | 1170 |
| 3.433000 | SCREENS | SF* | 700 | 28.28 | 19796 | 14140 | 0 | 5656* | 0.40 | 50.50 | 280 |
| 3.435000 | STOP LOGS | SF* | 700 | 14.14 | 9898 | 7070 | 0 | 2828* | 0.20 | 50.50 | 140 |
| 3.436000 | CRANE BRIDGE 20T | LS* | ---- | ---- | 47250 | 33750 | 0 | 13500* | --- | 45.00 | 750 |
| 3.440000 | PMP HS SPR STRUCT | LS* | ---- | ---- | 536900 | 383500 | 0 | 153400* | --- | 46.77 | 8200 |
| 3.441000 | CRANE & HST SUPP | TN* | 100 | 1555.40 | 155540 | 111100 | 0 | 44440* | 22.00 | 50.50 | 2200 |
| 3.442000 | BUILDING SPRSTR | SF* | 8000 | 47.67 | 381360 | 272400 | 0 | 108960* | 0.75 | 45.40 | 6000 |
| 3.450000 | TOWER SPR STRUCT | LS* | ---- | ---- | 2148328 | 1534520 | 0 | 613808* | --- | 45.40 | 33800 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 23137841 | 16176316 | 491000 | 6470525* | --- | 44.20 | 365980 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 6700 | 681.44 | 4565636 | 3198312 | 88000 | 1279324* | 10.80 | 44.20 | 72360 |
| 4.200000 | BOILER AREA CONCRT | CY* | 2700 | 582.63 | 1573099 | 1097928 | 36000 | 439171* | 9.20 | 44.20 | 24840 |
| 4.300000 | SILO AREA CONCRETE | CY* | 2400 | 613.99 | 1473566 | 1028976 | 33000 | 411590* | 9.70 | 44.20 | 23280 |
| 4.400000 | ABCS CONCRETE | CY* | 13000 | 612.93 | 7968068 | 5573620 | 165000 | 2229448* | 9.70 | 44.20 | 126100 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.500000 | COAL HANDLG CONCRT | CY* | 8000 | 712.24 | 5697952 | 3995680 | 104000 | 1598272* | 11.30 | 44.20 | 90400 |
| 4.900000 | MISCELL CONCRETE | CY* | 5000 | 371.90 | 1859520 | 1281800 | 65000 | 512720* | 5.80 | 44.20 | 29000 |
| 5.000000 | STRCT STL/LFT EQP | LS* | ---- | ---- | 23967200 | 14834550 | 275000 | 8857650* | --- | 48.99 | 302818 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 3318490 | 2370350 | 0 | 948140* | --- | 49.79 | 47607 |
| 5.110000 | MAIN STEEL | TN* | 1900 | 1190.00 | 2261000 | 1615000 | 0 | 646000* | 17.00 | 50.00 | 32300 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 288750 | 206250 | 0 | 82500* | --- | 50.00 | 4125 |
| 5.121000 | WALL FRAMING | TN* | 165 | 1750.00 | 288750 | 206250 | 0 | 82500* | 25.00 | 50.00 | 4125 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 642740 | 459100 | 0 | 183640* | --- | 50.00 | 9182 |
| 5.131000 | GRATING 1-3/4" | SF* | 18400 | 21.00 | 386400 | 276000 | 0 | 110400* | 0.30 | 50.00 | 5520 |
| 5.132000 | CHECKERED PLATE | SF* | 720 | 46.86 | 33740 | 24100 | 0 | 9640* | 0.67 | 50.00 | 482 |
| 5.133000 | HANDRAIL | LF* | 1520 | 87.50 | 133000 | 95000 | 0 | 38000* | 1.25 | 50.00 | 1900 |
| 5.134000 | LADDERS & STRWYS | TN* | 16 | 5600.00 | 89600 | 64000 | 0 | 25600* | 80.00 | 50.00 | 1280 |
| 5.140000 | LIFTING EQUIP | LS* | ---- | ---- | 126000 | 90000 | 0 | 36000* | --- | 45.00 | 2000 |
| 5.141000 | CRANE: 60 T CAP | LS* | ---- | ---- | 126000 | 90000 | 0 | 36000* | --- | 45.00 | 2000 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 11598860 | 8284900 | 0 | 3313960* | --- | 49.94 | 165911 |
| 5.210000 | MAIN STEEL | TN* | 3820 | 1190.00 | 4545800 | 3247000 | 0 | 1298800* | 17.00 | 50.00 | 64940 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 1918000 | 1370000 | 0 | 548000* | --- | 50.00 | 27400 |
| 5.221000 | WALL FRAMING | TN* | 500 | 3500.00 | 1750000 | 1250000 | 0 | 500000* | 50.00 | 50.00 | 25000 |
| 5.222000 | ELEV FRAMING | TN* | 60 | 2800.00 | 168000 | 120000 | 0 | 48000* | 40.00 | 50.00 | 2400 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 5000870 | 3572050 | 0 | 1428820* | --- | 50.00 | 71441 |
| 5.231000 | GRATING (1-3/4") | SF* | 103800 | 21.00 | 2179800 | 1557000 | 0 | 622800* | 0.30 | 50.00 | 31140 |
| 5.232000 | CHECKERED PLATE | SF* | 2300 | 46.90 | 107870 | 77050 | 0 | 30820* | 0.67 | 50.00 | 1541 |
| 5.233000 | HANDRAIL | LF* | 19600 | 91.00 | 1783600 | 1274000 | 0 | 509600* | 1.30 | 50.00 | 25480 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.234000 | LADDERS & STRWY | TN* | 166 | 5600.00 | 929600 | 664000 | 0 | 265600* | 80.00 | 50.00 | 13280 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 134190 | 95850 | 0 | 38340* | --- | 45.00 | 2130 |
| 5.242000 | ELEV EQUIPMENT | LS* | ---- | ---- | 105840 | 75600 | 0 | 30240* | --- | 45.00 | 1680 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 28350 | 20250 | 0 | 8100* | --- | 45.00 | 450 |
| 5.243100 | (3) 20 TON HST | LS* | ---- | ---- | 28350 | 20250 | 0 | 8100* | --- | 45.00 | 450 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 2573900 | 1838500 | 0 | 735400* | --- | 49.96 | 36800 |
| 5.310000 | MAIN STEEL | TN* | 350 | 1190.00 | 416500 | 297500 | 0 | 119000* | 17.00 | 50.00 | 5950 |
| 5.320000 | FRAMING | LS* | ---- | ---- | 332500 | 237500 | 0 | 95000* | --- | 50.00 | 4750 |
| 5.321000 | WALL FRAMING | TN* | 95 | 3500.00 | 332500 | 237500 | 0 | 95000* | 50.00 | 50.00 | 4750 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 196000 | 140000 | 0 | 56000* | --- | 50.00 | 2800 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 18900 | 13500 | 0 | 5400* | --- | 45.00 | 300 |
| 5.343000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 18900 | 13500 | 0 | 5400* | --- | 45.00 | 300 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 735000 | 525000 | 0 | 210000* | --- | 50.00 | 10500 |
| 5.351000 | EQUIP SUPPORTS | TN* | 150 | 4900.00 | 735000 | 525000 | 0 | 210000* | 70.00 | 50.00 | 10500 |
| 5.360000 | STL SILO & CVR PL | LS* | ---- | ---- | 875000 | 625000 | 0 | 250000* | --- | 50.00 | 12500 |
| 5.361000 | STEEL SILOS | TN* | 250 | 2800.00 | 700000 | 500000 | 0 | 200000* | 40.00 | 50.00 | 10000 |
| 5.362000 | SS PLATES | TN* | 50 | 3500.00 | 175000 | 125000 | 0 | 50000* | 50.00 | 50.00 | 2500 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 6230950 | 2165800 | 275000 | 3790150* | --- | 44.20 | 49000 |
| 5.700000 | CECI STEEL | LS* | ---- | ---- | 35000 | 25000 | 0 | 10000* | --- | 50.00 | 500 |
| 5.900000 | UNCLASS STEEL | TN* | 60 | 3500.00 | 210000 | 150000 | 0 | 60000* | 50.00 | 50.00 | 3000 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 16429981 | 11735701 | 0 | 4694280* | --- | 42.81 | 274127 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1909810 | 1364150 | 0 | 545660* | --- | 42.44 | 32140 |
| 6.110000 | ARCHITECT FEATURE | LS* | ---- | ---- | 1007160 | 719400 | 0 | 287760* | --- | 43.60 | 16500 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 650916 | 464940 | 0 | 185976* | --- | 41.00 | 11340 |
| 6.180000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 206388 | 147420 | 0 | 58968* | --- | 42.00 | 3510 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 45346 | 32390 | 0 | 12956* | --- | 41.00 | 790 |
| 6.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2482445 | 1773175 | 0 | 709270* | --- | 42.46 | 41760 |
| 6.210000 | ARCHTITECT FEATRS | LS* | ---- | ---- | 1413685 | 1009775 | 0 | 403910* | --- | 43.60 | 23160 |
| 6.270000 | HVAC | LS* | ---- | ---- | 967764 | 691260 | 0 | 276504* | --- | 41.00 | 16860 |
| 6.280000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 47040 | 33600 | 0 | 13440* | --- | 42.00 | 800 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 53956 | 38540 | 0 | 15416* | --- | 41.00 | 940 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 761544 | 543960 | 0 | 217584* | --- | 42.12 | 12915 |
| 6.310000 | ARCHITECT FEATRS | LS* | ---- | ---- | 288414 | 206010 | 0 | 82404* | --- | 43.60 | 4725 |
| 6.370000 | HVAC | LS* | ---- | ---- | 346122 | 247230 | 0 | 98892* | --- | 41.00 | 6030 |
| 6.380000 | PLUMB & DRAINAGE | LS* | ---- | ---- | 118776 | 84840 | 0 | 33936* | --- | 42.00 | 2020 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8232 | 5880 | 0 | 2352* | --- | 42.00 | 140 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 3459513 | 2471081 | 0 | 988432* | --- | 43.00 | 57467 |
| 6.410000 | AQCS SWGR BLDG | SF* | 1800 | 99.33 | 178794 | 127710 | 0 | 51084* | 1.65 | 43.00 | 2970 |
| 6.420000 | AQCS CTRL BLDG | SF* | 4800 | 120.40 | 577920 | 412800 | 0 | 165120* | 2.00 | 43.00 | 9600 |
| 6.430000 | DIESEL GEN BLDG | SF* | 1125 | 107.13 | 120520 | 86086 | 0 | 34434* | 1.78 | 43.00 | 2002 |
| 6.440000 | PUMP HOUSE | SF* | 19750 | 107.16 | 2116331 | 1511665 | 0 | 604666* | 1.78 | 43.00 | 35155 |
| 6.450000 | LIMESTN PREP BLDG | SF* | 8600 | 54.18 | 465948 | 332820 | 0 | 133128* | 0.90 | 43.00 | 7740 |
| 6.900000 | MISC BUILDINGS | LS* | ---- | ---- | 7816669 | 5583335 | 0 | 2233334* | --- | 43.00 | 129845 |
| 6.930000 | ADMIN BUILDING | SF* | 5000 | 186.62 | 933100 | 666500 | 0 | 266600* | 3.10 | 43.00 | 15500 |
| 6.940000 | CONTROL BUILDING | LS* | ---- | ---- | 975240 | 696600 | 0 | 278640* | --- | 43.00 | 16200 |
| 6.950000 | WTR TRTMT BLDG | SF* | 4000 | 150.50 | 602000 | 430000 | 0 | 172000* | 2.50 | 43.00 | 10000 |

BY: JDF CHECKED: JDF

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.990000 | ALL OTHER | LS* | ---- | ---- | 5306329 | 3790235 | 0 | 1516094* | --- | 43.00 | 88145 |
| 6.991000 | PLANT MAINT | SF* | 3500 | 96.32 | 337120 | 240800 | 0 | 96320* | 1.60 | 43.00 | 5600 |
| 6.992000 | AUX BOILER | SF* | 1200 | 168.56 | 202272 | 144480 | 0 | 57792* | 2.80 | 43.00 | 3360 |
| 6.993000 | YD EQP MAINT BLD | SF* | 1400 | 90.30 | 126420 | 90300 | 0 | 36120* | 1.50 | 43.00 | 2100 |
| 6.994000 | CHLORINE BLDG | SF* | 1300 | 105.35 | 136955 | 97825 | 0 | 39130* | 1.75 | 43.00 | 2275 |
| 6.995000 | FIRE/SRV PUMP HS | SF* | 800 | 114.38 | 91504 | 65360 | 0 | 26144* | 1.90 | 43.00 | 1520 |
| 6.996000 | GUARD HOUSE | SF* | 225 | 180.60 | 40635 | 29025 | 0 | 11610* | 3.00 | 43.00 | 675 |
| 6.997000 | WAREHOUSE NO. 1 | SF* | 30000 | 33.11 | 993300 | 709500 | 0 | 283800* | 0.55 | 43.00 | 16500 |
| 6.998000 | BULK GAS STR BLD | SF* | 1500 | 108.36 | 162540 | 116100 | 0 | 46440* | 1.80 | 43.00 | 2700 |
| 6.999000 | OTHER BUILDINGS | LS* | ---- | ---- | 3215583 | 2296845 | 0 | 918738* | --- | 43.00 | 53415 |
| 6.999100 | SWTH YD CTRL BL | SF* | 800 | 108.36 | 86688 | 61920 | 0 | 24768* | 1.80 | 43.00 | 1440 |
| 6.999200 | CONTROL & SWGR | SF* | 2400 | 99.33 | 238392 | 170280 | 0 | 68112* | 1.65 | 43.00 | 3960 |
| 6.999300 | SWER TRTMT BLDG | SF* | 4000 | 105.35 | 421400 | 301000 | 0 | 120400* | 1.75 | 43.00 | 7000 |
| 6.999400 | DEWTR & FIXTN | SF* | 12000 | 96.32 | 1155840 | 825600 | 0 | 330240* | 1.60 | 43.00 | 19200 |
| 6.999500 | SWTCH YD CTRL | SF* | 800 | 108.36 | 86688 | 61920 | 0 | 24768* | 1.80 | 43.00 | 1440 |
| 6.999600 | CRSHING & SAMPL | SF* | 2500 | 105.35 | 263375 | 188125 | 0 | 75250* | 1.75 | 43.00 | 4375 |
| 6.999700 | WASTEWTR TRTMT | SF* | 10000 | 96.32 | 963200 | 688000 | 0 | 275200* | 1.60 | 43.00 | 16000 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 4296600 | 2864400 | 0 | 1432200* | --- | 42.00 | 68200 |
| 7.100000 | TURBINE GENERATOR | LS* | ---- | ---- | 4296600 | 2864400 | 0 | 1432200* | --- | 42.00 | 68200 |
| 8.000000 | STM GENER & ACCESS | LS* | ---- | ---- | 35280000 | 23520000 | 0 | 11760000* | --- | 42.00 | 560000 |
| 8.100000 | STEAM GENERATOR | LS* | ---- | ---- | 35280000 | 23520000 | 0 | 11760000* | --- | 42.00 | 560000 |
| 9.000000 | ADCS | LS* | ---- | ---- | 39425400 | 26283600 | 0 | 13141800* | --- | 42.00 | 625800 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 7560000 | 5040000 | 0 | 2520000* | --- | 42.00 | 120000 |

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 N-1

BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAT EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESULFUR | LS* | ---- | ---- | 27909000 | 18606000 | 0 | 9303000* | --- | 42.00 | 443000 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 27909000 | 18606000 | 0 | 9303000* | --- | 42.00 | 443000 |
| 9.211000 | DUCTWORK FOR FGD | LS* | ---- | ---- | 3024000 | 2016000 | 0 | 1008000* | --- | 42.00 | 48000 |
| 9.213000 | SO2 ABSORB MODULE | LS* | ---- | ---- | 20475000 | 13650000 | 0 | 6825000* | --- | 42.00 | 325000 |
| 9.215000 | LMST ULD,STR&RECL | LS* | ---- | ---- | 2646000 | 1764000 | 0 | 882000* | --- | 42.00 | 42000 |
| 9.216000 | LIMESTN PREGENER | LS* | ---- | ---- | 1764000 | 1176000 | 0 | 588000* | --- | 42.00 | 28000 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 3150000 | 2100000 | 0 | 1050000* | --- | 42.00 | 50000 |
| 9.310000 | WASTE DISPOS SYS | LS* | ---- | ---- | 3150000 | 2100000 | 0 | 1050000* | --- | 42.00 | 50000 |
| 9.311000 | WASTE PROCESS EQ | LS* | ---- | ---- | 3150000 | 2100000 | 0 | 1050000* | --- | 42.00 | 50000 |
| 9.400000 | FANS | LS* | ---- | ---- | 806400 | 537600 | 0 | 268800* | --- | 42.00 | 12800 |
| 9.410000 | I.D. FANS | LS* | ---- | ---- | 491400 | 327600 | 0 | 163800* | --- | 42.00 | 7800 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 10.000000 | OTHER MECHAN EQUIP | LS* | ---- | ---- | 8081816 | 5387844 | 50 | 2693922* | --- | 42.00 | 128282 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 754362 | 502908 | 0 | 251454* | --- | 42.00 | 11974 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 592200 | 394800 | 0 | 197400* | --- | 42.00 | 9400 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 126000.0 | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 94500.0 | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 44100.0 | 88200 | 58800 | 0 | 29400* | --- | 42.00 | 1400 |
| 10.114000 | BF STRT UP/STD BY | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.120000 | FEEDWTR SYS PUMPS | LS* | ---- | ---- | 4725 | 3150 | 0 | 1575* | --- | 42.00 | 75 |
| 10.121000 | CONDEN TRANSFER | LS* | ---- | ---- | 4725 | 3150 | 0 | 1575* | --- | 42.00 | 75 |
| 10.130000 | SRV & COOL WTR PMP | LS* | ---- | ---- | 40950 | 27300 | 0 | 13650* | --- | 42.00 | 650 |
| 10.131000 | SERVICE WATER | EA* | 4 | 4725.00 | 18900 | 12600 | 0 | 6300* | 75.00 | 42.00 | 300 |

APA
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ESTIMATE NO. APA 1707 M-1

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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PMPS | LS* | ---- | ---- | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| 10.133000 | CLSD CYC COOL WSP | EA* | 2 | 4725.00 | 9450 | 6300 | 0 | 3150* | 75.00 | 42.00 | 150 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 22050 | 14700 | 0 | 7350* | --- | 42.00 | 350 |
| 10.141000 | LGT OIL UNLD PMPS | EA* | 2 | 3150.00 | 6300 | 4200 | 0 | 2100* | 50.00 | 42.00 | 100 |
| 10.142000 | IGNITER OIL PUMPS | EA* | 3 | 3150.00 | 9450 | 6300 | 0 | 3150* | 50.00 | 42.00 | 150 |
| 10.143000 | TURB LO TRANS PMP | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.1[illegible] | LO COND PUMP | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| [illegible] | SUMP PUMPS | EA* | 6 | 2079.00 | 12474 | 8316 | 0 | 4158* | 33.00 | 42.00 | 198 |
| [illegible] | OTHER PUMPS | LS* | ---- | ---- | 81963 | 54642 | 0 | 27321* | --- | 42.00 | 1301 |
| [illegible]00 | COOLING TOWER MU | LS* | ---- | ---- | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| [illegible]2000 | GP CYC CLG WTR | EA* | 2 | 14175.0 | 28350 | 18900 | 0 | 9450* | --- | 42.00 | 450 |
| [illegible]3000 | FIRE PROTECT PMPS | EA* | 3 | 10521.0 | 31563 | 21042 | 0 | 10521* | --- | 42.00 | 501 |
| [illegible].164000 | AIR PREHTR GLY | EA* | 2 | 4725.00 | 9450 | 6300 | 0 | 3150* | 75.00 | 42.00 | 150 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 1055250 | 703500 | 0 | 351750* | --- | 42.00 | 16750 |
| 10.210000 | CONDENSER & AUXIL | LS* | ---- | ---- | 882000 | 588000 | 0 | 294000* | --- | 42.00 | 14000 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 173250 | 115500 | 0 | 57750* | --- | 42.00 | 2750 |
| 10.221000 | CW PUMPS | EA* | 2 | 26775.0 | 53550 | 35700 | 0 | 17850* | --- | 42.00 | 850 |
| 10.222000 | CONDENSATE PUMPS | EA* | 2 | 25200.0 | 50400 | 33600 | 0 | 16800* | --- | 42.00 | 800 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 7875.0 | 15750 | 10500 | 0 | 5250* | --- | 42.00 | 250 |
| 10.226000 | COND CLEAN SYS | LS* | ---- | ---- | 50400 | 33600 | 0 | 16800* | --- | 42.00 | 800 |
| 10.227000 | COND COLL PUMP | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 292824 | 195216 | 0 | 97608* | --- | 42.00 | 4648 |
| 10.310000 | FEEDWATER HEATERS | EA* | 7 | 22932.0 | 160524 | 107016 | 0 | 53508* | --- | 42.00 | 2548 |

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APA
SUSITNA 400 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PA. OLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER/ VENT CONDEN | LS* | ---- | ---- | 69300 | 46200 | 0 | 23100* | --- | 42.00 | 1100 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 25200.0 | 50400 | 33600 | 0 | 16800* | --- | 42.00 | 800 |
| 10.340000 | AIR PRHTR GLY HE | EA* | 2 | 6300.0 | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| 10.400000 | TANKS | LS* | ---- | ---- | 703130 | 468720 | 50 | 234360* | --- | 42.00 | 11160 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 488250 | 325500 | 0 | 162750* | --- | 42.00 | 7750 |
| 10.412000 | CONDEN STRG TANK | LS* | ---- | ---- | 236250 | 157500 | 0 | 78750* | --- | 42.00 | 3750 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.430000 | LGT OIL STRG TANK | LS* | ---- | ---- | 138600 | 92400 | 0 | 46200* | --- | 42.00 | 2200 |
| 10.440000 | OTHER FL OIL STRG | EA* | 3 | 10710.0 | 32130 | 21420 | 0 | 10710* | --- | 42.00 | 510 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 44150 | 29400 | 50 | 14700* | --- | 42.00 | 700 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 18950 | 12600 | 50 | 6300* | --- | 42.00 | 300 |
| 10.453000 | CONT BLWDWN FL TK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.454000 | INT BLWDWN FLH TK | LS* | ---- | ---- | 9450 | 6300 | 0 | 3150* | --- | 42.00 | 150 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.456000 | CLSD CYC CL WHT | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.457000 | AIR PREHT CL EX | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 1042650 | 695100 | 0 | 347550* | --- | 42.00 | 16550 |
| 10.510000 | CONPRESSED AIR EQP | LS* | ---- | ---- | 132300 | 88200 | 0 | 44100* | --- | 42.00 | 2100 |
| 10.512000 | STAT AIR COMPRESS | EA* | 2 | 63000.0 | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 910350 | 606900 | 0 | 303450* | --- | 42.00 | 14450 |
| 10.521000 | MKUP WTR TRTMT | LS* | ---- | ---- | 378000 | 252000 | 0 | 126000* | --- | 42.00 | 6000 |
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 378000 | 252000 | 0 | 126000* | --- | 42.00 | 6000 |

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SUSITNA 400 MW COAL
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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.523000 | CHLORINAT EQUIP | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 18900 | 12600 | 0 | 6300* | --- | 42.00 | 300 |
| 10.525000 | SAMPLING SYSTEM | LS* | ---- | ---- | 28350 | 18900 | 0 | 9450* | --- | 42.00 | 450 |
| 10.526000 | BLK GAS STR&DISTR | LS* | ---- | ---- | 44100 | 29400 | 0 | 14700* | --- | 42.00 | 700 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 10.700000 | CECI | LS* | ---- | ---- | 1417500 | 945000 | 0 | 472500* | --- | 42.00 | 22500 |
| 10.800000 | EQUIP UNLOAD FACIL | LS* | ---- | ---- | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 2501100 | 1667400 | 0 | 833700* | --- | 42.00 | 39700 |
| 11.000000 | COAL&ASH HNDL EQUIP | LS* | ---- | ---- | 13434120 | 8956080 | 0 | 4478040* | --- | 42.00 | 213240 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 10265850 | 6843900 | 0 | 3421950* | --- | 42.00 | 162950 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 989100 | 659400 | 0 | 329700* | --- | 42.00 | 15700 |
| 11.122000 | CONVEYOR NO 1 | LS* | ---- | ---- | 989100 | 659400 | 0 | 329700* | --- | 42.00 | 15700 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 1543500 | 1029000 | 0 | 514500* | --- | 42.00 | 24500 |
| 11.131000 | CONVEYOR NO 2 | LS* | ---- | ---- | 1543500 | 1029000 | 0 | 514500* | --- | 42.00 | 24500 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 3827250 | 2551500 | 0 | 1275750* | --- | 42.00 | 60750 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 2205000 | 1470000 | 0 | 735000* | --- | 42.00 | 35000 |
| 11.142000 | CONVEYOR NO 5 | LS* | ---- | ---- | 510300 | 340200 | 0 | 170100* | --- | 42.00 | 8100 |
| 11.143000 | EMER RECLM HOPPER | LS* | ---- | ---- | 15750 | 10500 | 0 | 5250* | --- | 42.00 | 250 |
| 11.144000 | CONVEYOR NO 6 | LS* | ---- | ---- | 403200 | 268800 | 0 | 134400* | --- | 42.00 | 6400 |
| 11.145000 | CONVEYOR NO 7A&7B | EA* | 2 | 346500.0 | 693000 | 462000 | 0 | 231000* | --- | 42.00 | 11000 |
| 11.160000 | CRUSH & TRANSF SYS | LS* | ---- | ---- | 2425500 | 1617000 | 0 | 808500* | --- | 42.00 | 38500 |
| 11.161000 | CONVEYOR NO 8A&8B | EA* | 2 | 554400.0 | 1108800 | 739200 | 0 | 369600* | --- | 42.00 | 17600 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.165000 | CONVEYOR NO 9A | LS* | ---- | ---- | 497700 | 331800 | 0 | 165900* | --- | 42.00 | 7900 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 1165500 | 777000 | 0 | 388500* | --- | 42.00 | 18500 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 630000 | 420000 | 0 | 210000* | --- | 42.00 | 10000 |
| 11.173000 | TUNNEL VENT | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 11.174000 | INSTRUM & CONTROL | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 441000 | 294000 | 0 | 147000* | --- | 42.00 | 7000 |
| 11.200000 | BTM ASH HNDL SYSTEM | LS* | ---- | ---- | 2185470 | 1456980 | 0 | 728490* | --- | 42.00 | 34690 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 774900 | 516600 | 0 | 258300* | --- | 42.00 | 12300 |
| 11.220000 | PYRITE HNDL SYSTEM | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.230000 | ECONOMIZER ASH SYS | LS* | ---- | ---- | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 11.240000 | DEWTW BIN&SET TKS | LS* | ---- | ---- | 1033200 | 688800 | 0 | 344400* | --- | 42.00 | 16400 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 20790.0 | 62370 | 41580 | 0 | 20790* | --- | 42.00 | 990 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.400000 | FLY ASH INST & CTL | LS* | ---- | ---- | 982800 | 655200 | 0 | 327600* | --- | 42.00 | 15600 |
| 12.000000 | PIPING | LS* | ---- | ---- | 28539126 | 19026084 | 0 | 9513042* | --- | 42.00 | 453002 |
| 12.100000 | LARGE BORE PIPING | TN* | 1474 | 10395.0 | 15322230 | 10214820 | 0 | 5107410* | --- | 42.00 | 243210 |
| 12.200000 | SMALL BORE PIPING | LF* | 140800 | 93.87 | 13216896 | 8811264 | 0 | 4405632* | 1.49 | 42.00 | 209792 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 9450000 | 6300000 | 0 | 3150000* | --- | 42.00 | 150000 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 9450000 | 6300000 | 0 | 3150000* | --- | 42.00 | 150000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 718200 | 478800 | 0 | 239400* | --- | 42.00 | 11400 |

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APA
SUSITNA 400 MW COAL
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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 718200 | 478800 | 0 | 239400* | --- | 42.00 | 11400 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 59195100 | 39463400 | 0 | 19731700* | --- | 46.00 | 857900 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 3194100 | 2281500 | 0 | 912600* | --- | 39.00 | 58500 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 895440 | 639600 | 0 | 255840* | --- | 39.00 | 16400 |
| 16.200000 | STEAM GEN BLDG | LS* | ---- | ---- | 1692600 | 1209000 | 0 | 483600* | --- | 39.00 | 31000 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 174720 | 124800 | 0 | 49920* | --- | 39.00 | 3200 |
| [illegible] | MISCELLANEOUS | LS* | ---- | ---- | 431340 | 308100 | 0 | 123240* | --- | 39.00 | 7900 |
| [illegible] | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| [illegible] | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| [illegible] | ACCESS ROADS | MI* | 20 | 245850.0 | 4917000 | 1788000 | 0 | 3129000* | --- | 44.70 | 40000 |
| [illegible] | WATERFRONT FACILITY | LS* | ---- | ---- | 6823822 | 2897490 | 15000 | 3911332* | --- | 46.60 | 62175 |
| 18.100000 | BARGE UNLOADNG FAC | LS* | ---- | ---- | 577920 | 165120 | 0 | 412800* | --- | 43.00 | 3840 |
| 18.110000 | DREDGING | CY* | 32000 | 18.06 | 577920 | 165120 | 0 | 412800* | 0.12 | 43.00 | 3840 |
| 18.200000 | MOOR/DOCK FACILITY | LS* | ---- | ---- | 6245902 | 2732370 | 15000 | 3498532* | --- | 46.64 | 58335 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.28 | 372487 | 135450 | 0 | 237037* | 0.07 | 43.00 | 3150 |
| 18.220000 | FILL | CY* | 27500 | 9.67 | 266062 | 106425 | 0 | 159637* | 0.09 | 43.00 | 2475 |
| 18.230000 | H PILES | LF* | 2100 | 19.57 | 41107 | 16443 | 0 | 24664* | 0.18 | 43.50 | 378 |
| 18.240000 | SHEET PILING | TN* | 2480 | 1818.75 | 4510500 | 1804200 | 0 | 2706300* | 15.00 | 48.50 | 37200 |
| 18.250000 | STRUCTURAL STEEL | TN* | 102 | 1358.00 | 138516 | 79152 | 0 | 59364* | 16.00 | 48.50 | 1632 |
| 18.260000 | CONCRETE | CY* | 1700 | 318.22 | 540980 | 375700 | 15000 | 150280* | 5.00 | 44.20 | 8500 |
| 18.270000 | MISCELLANOUS | LS* | ---- | ---- | 376250 | 215000 | 0 | 161250* | --- | 43.00 | 5000 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 13489413 | 7991896 | 0 | 5497517* | --- | 46.10 | 173360 |
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 1000370 | 645400 | 0 | 354970* | --- | 46.10 | 14000 |

BY: JDF CHECKED: JDF

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200000 | 230KV T-LINE:2 CIR | MI* | 48 | 260188.4 | 12489043 | 7346496 | 0 | 5142547* | --- | 46.10 | 159360 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 65258481 | 11055269 | 46960000 | 7243212* | --- | 25.47 | 434100 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 6559410 | 3630000 | 0 | 2929410* | --- | 16.50 | 220000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 4500000 | 0 | 4500000 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 3000000 | 0 | 3000000 | 0* | --- | 30.75 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1500000 | 0 | 1500000 | 0* | --- | 30.75 | 0 |
| 71.300000 | CONSTR EQUIPT | LS* | ---- | ---- | 200000 | 0 | 200000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 200000 | 0 | 200000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 38426292 | 2487100 | 33250000 | 2689192* | --- | 43.56 | 57100 |
| 71.410000 | CONSTRUCTN BLDGS | LS* | ---- | ---- | 1784400 | 640000 | 850000 | 294400* | --- | 40.00 | 16000 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 36641892 | 1847100 | 32400000 | 2394792* | --- | 44.94 | 41100 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 15125000 | 0 | 15125000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 16500000 | 0 | 16500000 | 0* | --- | 0.00 | 0 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.423100 | 69KV T-LINE | MI* | 10 | 220500.2 | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 2811890 | 646500 | 575000 | 1590390* | --- | 43.10 | 15000 |
| 71.600000 | OFFICE/LABOR EXP | LS* | ---- | ---- | 2279241 | 1657070 | 310000 | 312171* | --- | 21.80 | 76000 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 185000 | 0 | 185000 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 801641 | 691070 | 0 | 110571* | --- | 23.83 | 29000 |
| 71.630000 | TESTING | LS* | ---- | ---- | 830600 | 504000 | 125000 | 201600* | --- | 42.00 | 12000 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 462000 | 462000 | 0 | 0* | --- | 13.20 | 35000 |
| 71.700000 | OFF-SITE UNLDG/HLG | LS* | ---- | ---- | 12973500 | 3052500 | 8700000 | 1221000* | --- | 40.70 | 75000 |
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 320038 | 228599 | 0 | 91439* | --- | 38.10 | 6000 |

APA
SUSITNA 400 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:09:19

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAT EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 61690000 | 0 | 61690000 | 0* | --- | 0.00 | 0 |

600 MW Coal Fired
Plant at Beluga

9

ALASKA POWER AUTHORITY
Susitna Need for Power Study
600 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

## BASIS OF ESTIMATE

### GENERAL

This conceptual estimate is prepared in the Ebasco Code of Accounts. The estimate is for a one unit facility and excludes Owner's cost (including Land and AFUDC). This overnight estimate has a base pricing level of January, 1984, for each line item de-escalated to a January, 1983 pricing level on a summary basis.

The estimate is based on Ebasco's Coal Fired Reference Plant Program (CFRP), which is a combination of recommended pre-engineered plant general arrangements (GA's) in building block segments, to define the plant layout. It also contains a comprehensive set of System Design Descriptions (SDD's) which define all aspects of every plant system in a standardized format.

Site-related capital cost adjustments are made to the CFRP for logistics, civil site features, temporary and permanent power connection points, building enclosures, insulation levels, cooling requirements, and type of coal.

The estimate is based on the following:

a. Wage rates applicable to Anchorage Union Agreements south of 63° latitude including Workmen's Compensation, FICA, and Public Liability Property Damage insurance rates as calculated by Ebasco.

ALASKA POWER AUTHORITY
Susitna Need for Power Study
600 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)

GENERAL (continued)

b. A work week consisting of 6-10 hour days.

c. Sufficient craftsmen available to meet project requirements housed in labor camps.

d. Professional Services including Engineering, Design, Related Services and Construction Management based on a generic plant of comparable size using the CFRP concept.

e. Land and Land Rights not included.

f. Allowance for Funds Used During Construction (AFUDC) not included.

g. Client costs not included.

h. Permanent town for plant operating personnel and mine production personnel not included.

i. Capital cost of mine and coal export facility not included.

j. Operating and maintenance costs not included.

k. Contingency included at the rate of 12% for material and 15% for installation.

7172B

ALASKA POWER AUTHORITY
Susitna Need for Power Study
600 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)
GENERAL (continued)

l. Construction performed on a Contract basis.

m. Project being exempt from sales tax.

n. Labor productivity being "average U.S." with no Alaskan adjustment.

o. Spare parts and special tools not included.

p. Start-up costs not included.

q. Maintenance machinery, laboratory and office equipment not included.

CIVIL (Categories 1, 2, 3, 4, 5, 6, 16, 17, 18)

Clearing is assumed based on scrub brush and trees up to 25'. Some rock excavation is assumed in deep cuts. No dewatering of excavated areas is assumed. No railroad or barge delivery of coal is assumed for this mine - mouth plant. Coal is assumed to be trucked from the mine. Twenty (20) miles of access road is assumed.

Eighty (80) foot long piles are assumed under heavily loaded foundations. A six hundred (600) foot high concrete stack with 2 - 13' diameter steel flues is assumed. No ash ponds are included; a waste processing system is included. Waste would be trucked to a disposal

BASIS OF ESTIMATE (continued)

CIVIL (continued)

area off-site. The capital cost of constructing the disposal area is not included. No asphalt or concrete paving is included.

Cooling tower pricing is based on a Zurn budgetary quotation for a Model 12-Z-3600 round Multi-fan, counterflow unit rated at 193,000 gpm. A Ranney well make-up water system is included. An equipment barge unloading facility is included.

MECHANICAL (Categories 7, 8, 9, 10, 11, 14)

Ecolaire provided a budgetary quotation for a 469,000 $ft^2$ surface condenser. The condenser is a double-shell, single-pass, multi-pressure type designed for 193,000 gpm and 28°F temperature rise.

Ecolaire provided a budgetary quotation for a reverse gas 1,982,000 ACFM Baghouse with a 300°F gas temperature. Low sulfur, sub-bituminous coal with a heating value of 7,950 btu/lb and a coal firing rate of 760,000 lb/hr is assumed. The quotation is based on design, fabrication and erection of two baghouses and auxiliary equipment with 12 compartments/baghouse and 450 bags per compartment which is identical to the Moon Lake Station.

Combustion Engineering Power Systems and Foster Wheeler provided budgetary quotations for the coal-fired steam generator and

ALASKA POWER AUTHORITY
Susitna Need for Power Study
600 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)
MECHANICAL (continued)

accessories. Pricing is based on 4,703,500 lb/hr, 2650 psig and 1008°F main steam; 4,032,000 lb/hr, 600 psig, 630°F (@ inlet) reheat; and 525°F feedwater.

The 7950 btu/lb coal analysis is as follows:

| Proximate | Weight Percent |
|---|---|
| Moisture | 26.1 |
| Ash | 6.4 |
| Volatiles | 36.3 |
| Fixed Carbon | 31.2 |
| **Ultimate** | |
| Hydrogen | 3.6 |
| Carbon | 47.2 |
| Oxygen | 15.5 |
| Nitrogen | 1.05 |
| Sulfur | 0.12 |
| Chlorine | --- |
| Moisture | 26.1 |
| Ash | 6.4 |

Combustion Engineering provided a budgetary quotation for a "dry" $SO_2$ scrubbing system utilizing multi-cell sprayer absorbers with 85% $SO_2$

BASIS OF ESTIMATE (continued)
MECHANICAL (continued)

(70% guarantee) removal. The system is rated at 1,982,000 ACFM with a flue gas temperature of 300°F and 20% excess air.

Westinghouse Electric, General Electric and Utility Power Corporation provided budgetary quotes for the steam turbine generators. The quotations are based on an indoor type, tandem compound condensing turbine, four flow, single reheat, regenerative designed for operating steam conditions of 2400 psig and 1000°F/1000°F. The turbine design throttle flow will be 4,703,500 lb/hr. The maximum gross turbine output will be 660,000 kW with 2520 psig, 1000/1000°F, 2.7/4.0 in.Hg absolute back pressure. The generator is 733,300 KVA @ 60 psig, 0.9 PF, 3 phase, 60 Hz, 24,000 V and 0.5 shortcircuit ratio complete with an excitation system.

PIPING AND INSULATION (Categories 12 and 13)

Large bore and small bore piping sizing and quantities are based on Ebasco's CFRP estimates. Pricing is based on recent quotations and historical pricing data from similar units. Insulation prices are based on Ebasco's CFRP estimates with an additional allowance for insulating yard systems.

Pricing is based on estimates of Ebasco's CFRP program. Pricing is based on updating recent vendor quotations and discounted equipment

BASIS OF ESTIMATE (continued)
ELECTRICAL (Categories 15 and 19)

pricing catalogs in accordance with representative historical inflation indices.

A 48 mile 230 KV double circuit transmission line is included with step-up facilities. The tie-in point for the Beluga-area coal-fired plant is assumed to be at Lorraine, Alaska. No land cost for right-of-way is included.

INDIRECT CONSTRUCTION COST

Indirect Construction Cost is priced in accordance with Ebasco experience based on a Contract job which does not include contractors' indirect costs. Included in Indirect Construction Costs are:

- Construction Management local hire personnel
- Casual premium pay (other than scheduled 60 hour week)
- Construction Management automotive equipment
- Construction Management office and expenses
- Temporary warehouse for prepurchased equipment
- Road maintenance equipment
- Gravel air strip
- 10 mile 69 kV temporary transmission line
- Labor camp, food service, housekeeping
- Barge freight/off-site unloading adjustment

ALASKA POWER AUTHORITY
Susitna Need for Power Study
600 MW Coal-fired Plant
Beluga Site
Estimate No. APA 1707 M-1

BASIS OF ESTIMATE (continued)
INDIRECT CONSTRUCTION COST (continued)

- Security guard service
- Craft transportation to and from labor camp
- Final construction clean-up

Testing is assumed to be the contractors' responsibility and witnessed by Construction Management personnel. Temporary power is assumed to be furnished without cost to contractors.

PROFESSIONAL SERVICES

The Professional Services estimate is based on a standardized workday package for engineering, design, related services, consulting engineering, ESSE engineering and design and construction management services.

Pricing Level: January, 1984
De-Escalated to: January, 1983
Railroad Delivery
Prof.Services Based on REF.PLT.

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 1028746375* | 422267492 | ---- | * ---- | 606478883********* | ******** | ******** | |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 124348888* | 45242944 | ---- | * ---- | 79105944* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -47588184* | -19843392 | ---- | * ---- | -27744792********* | ******** | ******** | |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 951985671* | 396867940 | ---- | * ---- | 555117731********* | ******** | ******** | |
| 1.000000 | IMPROVEMENTS TO SITE | LS* | ---- | ---- | 6171794* | 1867950 | ---- | * ---- | 4303844* | -308586 | -93397 | -215189 |
| 2.000000 | EARTHWORK & FILING | LS* | ---- | ---- | 66906584* | 29935305 | ---- | * ---- | 36971279* | -3345324 | -1496765 | -1848559 |
| 3.000000 | CIRCULATING WTR SYS | LS* | ---- | ---- | 14752387* | 7260000 | ---- | * ---- | 7492387* | -737615 | -363000 | -374615 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 33603874* | 6446800 | ---- | * ---- | 27157074* | -1680192 | -322340 | -1357852 |
| 5.000000 | STR STEEL/LIFT/STACK | LS* | ---- | ---- | 50584880* | 20123090 | ---- | * ---- | 30461790* | -2529238 | -1006152 | -1523086 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 30169024* | 10126225 | ---- | * ---- | 20042799* | -1508438 | -506310 | -1002128 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 44800000* | 38500000 | ---- | * ---- | 6300000* | -2240000 | -1925000 | -315000 |
| 8.000000 | STEAM GENERATOR | LS* | ---- | ---- | 99675000* | 54000000 | ---- | * ---- | 45675000* | -4983750 | -2700000 | -2283750 |
| 9.000000 | AQCS | LS* | ---- | ---- | 140751000* | 81531000 | ---- | * ---- | 59220000* | -7037550 | -4076550 | -2961000 |
| 10.000000 | OTH MECHANICAL EQUIP | LS* | ---- | ---- | 38835085* | 28890800 | ---- | * ---- | 9944285* | -1941746 | -1444540 | -497206 |
| 11.000000 | COAL AND ASH HANDLG | LS* | ---- | ---- | 35278270* | 19843900 | ---- | * ---- | 15434370* | -1763913 | -992195 | -771718 |
| 12.000000 | PIPING | LS* | ---- | ---- | 57895488* | 22036770 | ---- | * ---- | 35858718* | -2894773 | -1101838 | -1792935 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 12525000* | 1500000 | ---- | * ---- | 11025000* | -626250 | -75000 | -551250 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 8876000* | 8120000 | ---- | * ---- | 756000* | -443800 | -406000 | -37800 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 105727200* | 40536000 | ---- | * ---- | 65191200* | -5286360 | -2026800 | -3259560 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 4484520* | 324000 | ---- | * ---- | 4160520* | -224226 | -16200 | -208026 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- | * ---- | 7430700* | -673035 | -301500 | -371535 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 9083922* | 2260100 | ---- | * ---- | 6823822* | -454194 | -113005 | -341189 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 31025413* | 17536000 | ---- | * ---- | 13489413* | -1551270 | -876800 | -674470 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

SUMMARY
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 78654530* | 0 | ---- * | ---- | 78654530* | -3921674 | 0 | -3921674 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 68725000* | 0 | ---- * | ---- | 68725000* | -3436250 | 0 | -3436250 |

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APA
SUSITNA 600 MW COAL
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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 1028746375* | 422267492 | ---- * | ---- | 606478883* | ******** | ******** | ******** |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 124348888* | 45242944 | ---- * | ---- | 79105944* | 0 | 0 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -47588184* | -19843392 | ---- * | ---- | -27744792* | ******** | ******** | ******** |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 951985671* | 396867940 | ---- * | ---- | 555117731* | ******** | ******** | ******** |
| 1.000000 | IMPROVEMENTS TO SITE | LS* | ---- | ---- | 6171794* | 1867950 | ---- * | ---- | 4303844* | -308586 | -93397 | -215189 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 922639* | 0 | ---- * | ---- | 922639* | -46131 | 0 | -46131 |
| 1.110000 | CLEARING | AC* | 225 | 4100.6 | 922639* | 0 | 0.00* | 4100.6 | 922639* | -46131 | 0 | -46131 |
| 1.200000 | ROADS BRIDGES WALKS | LS* | ---- | ---- | 900736* | 233450 | ---- * | ---- | 667286* | -45035 | -11672 | -33363 |
| 1.210000 | ROADS | LS* | ---- | ---- | 678162* | 125000 | ---- * | ---- | 553162* | -33908 | -6250 | -27658 |
| 1.213000 | 24' WIDE ROADS | SY* | 50000 | 13.6 | 678162* | 125000 | 2.50* | 11.1 | 553162* | -33908 | -6250 | -27658 |
| 1.260000 | FENCING | LS* | ---- | ---- | 222574* | 108450 | ---- * | ---- | 114124* | -11127 | -5422 | -5705 |
| 1.261000 | PROPERTY FENCE | LF* | 6200 | 24.8 | 153977* | 74400 | 12.00* | 12.8 | 79577* | -7698 | -3720 | -3978 |
| 1.262000 | SECURITY FENCE | LF* | 2400 | 24.8 | 59604* | 28800 | 12.00* | 12.8 | 30804* | -2980 | -1440 | -1540 |
| 1.263000 | GATES | EA* | 7 | 1284.7 | 8993* | 5250 | 750.00* | 534.7 | 3743* | -449 | -262 | -187 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 2401700* | 1140000 | ---- * | ---- | 1261700* | -120085 | -57000 | -63085 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 606510* | 228000 | ---- * | ---- | 378510* | -30325 | -11400 | -18925 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 1340209* | 266500 | ---- * | ---- | 1073709* | -67010 | -13325 | -53685 |
| 1.720000 | STACKER RCLM TRACK | LF* | 650 | 2061.9 | 1340209* | 266500 | 410.00* | 1651.9 | 1073709* | -67010 | -13325 | -53685 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 66906584* | 29935305 | ---- * | ---- | 36971279* | -3345324 | -1496765 | -1848559 |
| 2.200000 | STRUCT & EQUIP EXCA | LS* | ---- | ---- | 31051961* | 10300000 | ---- * | ---- | 20751961* | -1552597 | -515000 | -1037597 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 23881220* | 10300000 | ---- * | ---- | 13581220* | -1194061 | -515000 | -679061 |
| 2.212000 | EARTH EXCAVATION | CY* | 30800 | 29.1 | 897820* | 0 | 0.00* | 29.1 | 897820* | -44891 | 0 | -44891 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 22983400* | 10300000 | ---- * | ---- | 12683400* | -1149170 | -515000 | -634170 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 1150000 | 16.9 | 19481000* | 9200000 | 8.00* | 8.9 | 10281000* | -974050 | -460000 | -514050 |
| 2.214200 | INSULATION BOARD | SF* | 4400000 | 0.8 | 3502400* | 1100000 | 0.25* | 0.5 | 2402400* | -175120 | -55000 | -120120 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 378386* | 0 | ---- * | ---- | 378386* | -18919 | 0 | -18919 |
| 2.222000 | EARTH EXCAVATION | CY* | 4000 | 23.3 | 93280* | 0 | 0.00* | 23.3 | 93280* | -4664 | 0 | -4664 |
| 2.223000 | ROCK EXCAVATION | CY* | 3400 | 83.9 | 285106* | 0 | 0.00* | 83.9 | 285106* | -14255 | 0 | -14255 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 3561800* | 0 | ---- * | ---- | 3561800* | -178090 | 0 | -178090 |
| 2.232000 | EARTH EXCAVATION | CY* | 72000 | 29.1 | 2098800* | 0 | 0.00* | 29.1 | 2098800* | -104940 | 0 | -104940 |
| 2.233000 | ROCK EXCAVATION | CY* | 20000 | 73.2 | 1463000* | 0 | 0.00* | 73.2 | 1463000* | -73150 | 0 | -73150 |
| 2.240000 | OUTLYING TANKS | LS* | ---- | ---- | 338140* | 0 | ---- * | ---- | 338140* | -16907 | 0 | -16907 |
| 2.242000 | EARTH EXCAVATION | CY* | 11600 | 29.1 | 338140* | 0 | 0.00* | 29.1 | 338140* | -16907 | 0 | -16907 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2892415* | 0 | ---- * | ---- | 2892415* | -144620 | 0 | -144620 |
| 2.252000 | EARTH EXCAVATION | CY* | 50000 | 29.1 | 1457500* | 0 | 0.00* | 29.1 | 1457500* | -72875 | 0 | -72875 |
| 2.253000 | ROCK EXCAVATION | CY* | 19300 | 74.3 | 1434915* | 0 | 0.00* | 74.3 | 1434915* | -71745 | 0 | -71745 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 4729046* | 0 | ---- * | ---- | 4729046* | -236452 | 0 | -236452 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 886046* | 0 | ---- * | ---- | 886046* | -44302 | 0 | -44302 |
| 2.312000 | EARTH EXCAVATION | CY* | 23000 | 28.2 | 648186* | 0 | 0.00* | 28.2 | 648186* | -32409 | 0 | -32409 |
| 2.313000 | ROCK EXCAVATION | CY* | 3000 | 79.3 | 237860* | 0 | 0.00* | 79.3 | 237860* | -11893 | 0 | -11893 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 2305800* | 0 | ---- * | ---- | 2305800* | -115290 | 0 | -115290 |
| 2.322000 | EARTH EXCAVATION | CY* | 75000 | 30.7 | 2305800* | 0 | 0.00* | 30.7 | 2305800* | -115290 | 0 | -115290 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 1537200* | 0 | ---- * | ---- | 1537200* | -76860 | 0 | -76860 |
| 2.332000 | EARTH EXCAVATION | CY* | 50000 | 30.7 | 1537200* | 0 | 0.00* | 30.7 | 1537200* | -76860 | 0 | -76860 |
| 2.400000 | EARTH STRUCTURES | LS* | ---- | ---- | 267729* | 0 | ---- * | ---- | 267729* | -13386 | 0 | -13386 |
| 2.500000 | PILING (H PILES) | LS* | ---- | ---- | 28271725* | 18807000 | ---- * | ---- | 9454725* | -1414586 | -941850 | -472736 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 352000 | 58.6 | 20618400* | 13728000 | 39.00* | 19.6 | 6890400* | -1030920 | -686400 | -344520 |
| 2.520000 | ADCS AREA | LF* | 131000 | 58.6 | 7673325* | 5109000 | 39.00* | 19.6 | 2564325* | -383666 | -255450 | -128216 |
| 2.700000 | CECI EARTHWORK | LS* | ---- | ---- | 2566123* | 798305 | ---- * | ---- | 1767818* | -128303 | -39915 | -88388 |
| 2.710000 | FL PILE SPG & CTRL | LS* | ---- | ---- | 1493165* | 725625 | ---- * | ---- | 767540* | -74657 | -36281 | -38376 |
| 2.711000 | PVC LINER | SF* | 500500 | 0.5 | 251895* | 225225 | 0.45* | 0.1 | 26670* | -12594 | -11261 | -1333 |
| 2.712000 | SAND | CY* | 27800 | 24.4 | 676930* | 278000 | 10.00* | 14.4 | 398930* | -33846 | -13900 | -19946 |
| 2.713000 | GRAVEL | CY* | 27800 | 20.3 | 564340* | 222400 | 8.00* | 12.3 | 341940* | -28217 | -11120 | -17097 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 767599* | 31680 | ---- * | ---- | 735919* | -38379 | -1584 | -36795 |
| 2.721000 | PVC LINER | SF* | 70400 | 0.5 | 35413* | 31680 | 0.45* | 0.1 | 3733* | -1770 | -1584 | -186 |
| 2.722000 | EXCAVATION | CY* | 31500 | 17.9 | 563220* | 0 | 0.00* | 17.9 | 563220* | -28161 | 0 | -28161 |
| 2.723000 | BACKFILL | CY* | 6300 | 26.8 | 168966* | 0 | 0.00* | 26.8 | 168966* | -8448 | 0 | -8448 |
| 2.730000 | SOLID WST STOCKPL | LS* | ---- | ---- | 279859* | 36000 | ---- * | ---- | 243859* | -13992 | -1800 | -12192 |
| 2.731000 | PVC LINER | SF* | 80000 | 0.5 | 40267* | 36000 | 0.45* | 0.1 | 4267* | -2013 | -1800 | -213 |
| 2.732000 | EXCAVATION | CY* | 8900 | 17.9 | 159132* | 0 | 0.00* | 17.9 | 159132* | -7956 | 0 | -7956 |
| 2.733000 | BACKFILL | CY* | 3000 | 26.8 | 80460* | 0 | 0.00* | 26.8 | 80460* | -4023 | 0 | -4023 |
| 2.740000 | EMER WST WTR BASIN | LS* | ---- | ---- | 25500* | 5000 | ---- * | ---- | 20500* | -1275 | -250 | -1025 |
| 3.000000 | CIRCULATING WTR SYS | LS* | ---- | ---- | 14752387* | 7260000 | ---- * | ---- | 7492387* | -737615 | -363000 | -374615 |
| 3.200000 | INTAKE & DSCHG PIPE | LS* | ---- | ---- | 2755216* | 1203800 | ---- * | ---- | 1551416* | -137760 | -60190 | -77570 |
| 3.210000 | 84" CW CNCRT PIPE | LF* | 3400 | 430.3 | 1462850* | 850000 | 250.00* | 180.3 | 612850* | -73142 | -42500 | -30642 |
| 3.260000 | BEDDING MATERIAL | CY* | 2800 | 30.5 | 85400* | 28000 | 10.00* | 20.5 | 57400* | -4270 | -1400 | -2870 |
| 3.270000 | CONCRETE STRUCTURE | LS* | ---- | ---- | 1136546* | 297800 | ---- * | ---- | 838746* | -56827 | -14890 | -41937 |
| 3.271000 | THRUST/TRANS BLKS | CY* | 1000 | 411.5 | 411460* | 125000 | 125.00* | 286.5 | 286460* | -20573 | -6250 | -14323 |
| 3.272000 | CONDENSER BLOCKS | CY* | 600 | 872.7 | 523644* | 122400 | 204.00* | 668.7 | 401244* | -26182 | -6120 | -20062 |

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APA
SPRINA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 300 | 671.5 | 201442* | 50400 | 168.00* | 503.5 | 151042* | -10072 | -2520 | -7552 |
| 3.280000 | MISC STEEL | LB* | 10 | 7042.0 | 70420* | 28000 | 2800.00* | 4242.0 | 42420* | -3521 | -1400 | -2121 |
| 3.400000 | COOLING TOWER FACIL | LS* | ---- | ---- | 11997171* | 6056200 | ---- * | ---- | 5940971* | -599855 | -302810 | -297045 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 1571922* | 419200 | ---- * | ---- | 1152722* | -78596 | -20960 | -57636 |
| 3.412000 | EXCAVATION | CY* | 16000 | 22.4 | 357600* | 0 | 0.00* | 22.4 | 357600* | -17880 | 0 | -17880 |
| 3.413000 | BACKFILL | CY* | 1000 | 10.4 | 10421* | 0 | 0.00* | 10.4 | 10421* | -521 | 0 | -521 |
| 3.417000 | CONCRETE | CY* | 3200 | 376.2 | 1203901* | 419200 | 131.00* | 245.2 | 784701* | -60195 | -20960 | -39235 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 1952325* | 511000 | ---- * | ---- | 1441325* | -97615 | -25550 | -72065 |
| 3.422000 | EXCAVATION | CY* | 10300 | 22.4 | 230205* | 0 | 0.00* | 22.4 | 230205* | -11510 | 0 | -11510 |
| 3.423000 | BACKFILL | CY* | 2000 | 13.9 | 27790* | 0 | 0.00* | 13.9 | 27790* | -1389 | 0 | -1389 |
| 3.428000 | CONCRETE | CY* | 3500 | 453.9 | 1588700* | 469000 | 134.00* | 319.9 | 1119700* | -79435 | -23450 | -55985 |
| 3.429000 | MISC STEEL | LB* | 15 | 7042.0 | 105630* | 42000 | 2800.00* | 4242.0 | 63630* | -5281 | -2100 | -3181 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 499944* | 423000 | ---- * | ---- | 76944* | -24995 | -21150 | -3845 |
| 3.433000 | SCREENS | SF* | 700 | 58.3 | 40796* | 21000 | 30.00* | 28.3 | 19796* | -2039 | -1050 | -989 |
| 3.435000 | STOP LOGS | SF* | 700 | 74.1 | 51898* | 42000 | 60.00* | 14.1 | 9898* | -2594 | -2100 | -494 |
| 3.436000 | CRANE(BRIDGE) 20T | LS* | ---- | ---- | 407250* | 360000 | ---- * | ---- | 47250* | -20362 | -18000 | -2362 |
| 3.440000 | PUMP HS SUPERSTRUC | LS* | ---- | ---- | 976900* | 440000 | ---- * | ---- | 536900* | -48845 | -22000 | -26845 |
| 3.441000 | CRN & HST SUPPORT | TN* | 100 | 3155.4 | 315540* | 160000 | 1600.00* | 1555.4 | 155540* | -15777 | -8000 | -7777 |
| 3.442000 | BUILDING | SF* | 8000 | 47.7 | 661360* | 280000 | 35.00* | 47.7 | 381360* | -33068 | -14000 | -19068 |
| 3.450000 | TOWER SUPERSTRUCT | LS* | ---- | ---- | 6996080* | 4263000 | ---- * | ---- | 2733080* | -349804 | -213150 | -136654 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 33603874* | 6446800 | ---- * | ---- | 27157074* | -1680192 | -322340 | -1357852 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 2000 | 304.0 | 7238860* | 1278000 | 1420.00* | 662.0 | 5957860* | -361794 | -63900 | -297893 |
| 4.200000 | BOILER AREA CONCRT | CY* | 3500 | 711.2 | 2489120* | 497000 | 1420.00* | 569.2 | 1992120* | -124456 | -24850 | -99606 |

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APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.300000 | SILO AREA CONCRETE | CY* | 3300 | 742.1 | 2448938* | 468600 | 142.00* | 600.1 | 1980338* | -122446 | -23430 | -99016 |
| 4.400000 | ADCS CONCRETE | CY* | 14500 | 742.1 | 10760570* | 2059000 | 142.00* | 600.1 | 8701570* | -538028 | -102950 | -435078 |
| 4.500000 | COAL HANDLG CONCRT | CY* | 9300 | 834.9 | 7764824* | 1320600 | 142.00* | 692.9 | 6444224* | -388241 | -66030 | -322211 |
| 4.900000 | MISCELLAN CONCRETE | CY* | 5800 | 500.8 | 2904562* | 823600 | 142.00* | 358.8 | 2080962* | -145238 | -41180 | -104048 |
| 5.000000 | STR STEEL/LIFT/STACK | LS* | ---- | ---- | 50584880* | 20123090 | ---- * | ---- | 30461790* | -2529238 | -1006152 | -1523086 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 7447940* | 3599480 | ---- * | ---- | 3848460* | -372395 | -179973 | -192422 |
| 5.110000 | MAIN STEEL | TN* | 2200 | 2360.0 | 5192000* | 2574000 | 1170.00* | 1190.0 | 2618000* | -259600 | -128700 | -130900 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 692000* | 342000 | ---- * | ---- | 350000* | -34600 | -17100 | -17500 |
| 5.121000 | WALL FRAMING | TN* | 200 | 3460.0 | 692000* | 342000 | 1710.00* | 1750.0 | 350000* | -34600 | -17100 | -17500 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 950440* | 227480 | ---- * | ---- | 722960* | -47520 | -11373 | -36147 |
| 5.131000 | GRATING 1-3/4" | SF* | 23000 | 24.2 | 556600* | 154100 | 6.70* | 17.5 | 402500* | -27830 | -7705 | -20125 |
| 5.132000 | CHECKERED PLATE | SF* | 900 | 57.4 | 51660* | 9450 | 10.50* | 46.9 | 42210* | -2582 | -472 | -2110 |
| 5.133000 | HANDRAIL | LF* | 1900 | 102.2 | 194180* | 27930 | 14.70* | 87.5 | 166250* | -9708 | -1396 | -8312 |
| 5.134000 | LADDERS & STAIRS | TN* | 20 | 7400.0 | 148000* | 36000 | 1800.00* | 5600.0 | 112000* | -7400 | -1800 | -5600 |
| 5.140000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 613500* | 456000 | ---- * | ---- | 157500* | -30675 | -22800 | -7875 |
| 5.141000 | CRN BRDG 100T CAP | LS* | ---- | ---- | 613500* | 456000 | ---- * | ---- | 157500* | -30675 | -22800 | -7875 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 25005690* | 9646360 | ---- * | ---- | 15359330* | -1250282 | -482317 | -767965 |
| 5.210000 | MAIN STEEL | TN* | 5920 | 2360.0 | 13971200* | 6926400 | 1170.00* | 1190.0 | 7044800* | -698560 | -346320 | -352240 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 3188200* | 1060200 | ---- * | ---- | 2128000* | -159410 | -53010 | -106400 |
| 5.221000 | WALL FRAMING | TN* | 560 | 5210.0 | 2917600* | 957600 | 1710.00* | 3500.0 | 1960000* | -145880 | -47880 | -98000 |
| 5.222000 | ELEVATOR FRAMING | TN* | 60 | 4510.0 | 270600* | 102600 | 1710.00* | 2800.0 | 168000* | -13530 | -5130 | -8400 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 7646500* | 1575260 | ---- * | ---- | 6071240* | -382323 | -78762 | -303561 |
| 5.231000 | GRATING (1-3/4") | SF* | 13300 | 27.7 | 368460* | 92660 | 6.70* | 21.0 | 275800* | -17977 | -4848 | -13129 |

BY: JDF CHECKED: JDF

APA
SUPSTING 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:08:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.232000 | CHECKERED PLATE | SF* | 2900 | 57.4 | 166460* | 30450 | 10.50* | 46.9 | 136010* | -8322 | -1522 | -6800 |
| 5.233000 | HANDRAIL | LF* | 24500 | 105.7 | 2589580* | 360150 | 14.70* | 91.0 | 2229430* | -129478 | -18007 | -111471 |
| 5.234000 | LADDERS & STAIRS | TN* | 175 | 7400.0 | 1295000* | 315000 | 1800.00* | 5600.0 | 980000* | -64750 | -15750 | -49000 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 199790* | 84500 | ---- * | ---- | 115290* | -9989 | -4225 | -5764 |
| 5.242000 | ELEVATOR EQUIP | LS* | ---- | ---- | 163540* | 57700 | ---- * | ---- | 105840* | -8177 | -2885 | -5292 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 36250* | 26800 | ---- * | ---- | 9450* | -1812 | -1340 | -472 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 6233501 | 3224500 | ---- * | ---- | 3398850* | -331167 | -161225 | -169942 |
| 5.310000 | MAIN STEEL | TN* | 500 | 2360.0 | 1180000* | 585000 | 1170.00* | 1190.0 | 595000* | -59000 | -29250 | -29750 |
| 5.320000 | FRAMING | TN* | 0 | 0.0 | 521000* | 171000 | 0.00* | 0.0 | 350000* | -26050 | -8550 | -17500 |
| 5.321000 | WALL FRAMING | TN* | 100 | 5210.0 | 521000* | 171000 | 1710.00* | 3500.0 | 350000* | -26050 | -8550 | -17500 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 263500* | 43000 | ---- * | ---- | 220500* | -13175 | -2150 | -11025 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 119550* | 91200 | ---- * | ---- | 28350* | -5977 | -4560 | -1417 |
| 5.343000 | OTHER LIFTING EQP | LS* | ---- | ---- | 119550* | 91200 | ---- * | ---- | 28350* | -5977 | -4560 | -1417 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 1502000* | 522000 | ---- * | ---- | 980000* | -75100 | -26100 | -49000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 200 | 7510.0 | 1502000* | 522000 | 2610.00* | 4900.0 | 980000* | -75100 | -26100 | -49000 |
| 5.360000 | STEEL SILO & GENER | LS* | ---- | ---- | 3037300* | 1812300 | ---- * | ---- | 1225000* | -151865 | -90615 | -61250 |
| 5.361000 | STEEL SILOS | TN* | 350 | 6850.0 | 2397500* | 1417500 | 4050.00* | 2800.0 | 980000* | -117375 | -70875 | -49000 |
| 5.362000 | SS PLATES | TN* | 70 | 9140.0 | 639800* | 394800 | 5640.00* | 3500.0 | 245000* | -31990 | -19740 | -12250 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 11041000* | 3448000 | ---- * | ---- | 7593000* | -552050 | -172400 | -379650 |
| 5.900000 | UNCLASS. STEEL | TN* | 175 | 2668.0 | 466900* | 204750 | 1170.00* | 1498.0 | 262150* | -23344 | -10237 | -13107 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 30169024* | 10126225 | ---- * | ---- | 20042799* | -1508438 | -506310 | -1002128 |
| 6.100000 | TURBINE BUILDING | LS* | | | [illegible] | 1404300 | ---- * | ---- | 2316626* | -196045 | -80215 | -115830 |
| 6.110000 | GRANIT FEATURES | LS* | ---- | ---- | 1826360* | 572600 | ---- * | ---- | 1253760* | -91318 | -28630 | -62688 |

APA
SUSITNA 600 MW FINAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 1563066* | 811700 | ---- * | ---- | 751366* | -78153 | -40585 | -37568 |
| 6.180000 | PLUMBING & DRAIN | LS* | ---- | ---- | 447544* | 190000 | ---- * | ---- | 257544* | -22377 | -9500 | -12877 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 83956* | 30000 | ---- * | ---- | 53956* | -4197 | -1500 | -2697 |
| 6.200000 | BOILER AREA | LS* | ---- | ---- | 5049352* | 2003400 | ---- * | ---- | 3045952* | -252466 | -100170 | -152296 |
| 6.210000 | ARCHIT FEATURES | LS* | ---- | ---- | 2616908* | 849800 | ---- * | ---- | 1767108* | -130845 | -42490 | -88355 |
| 6.270000 | HVAC | LS* | ---- | ---- | 2292116* | 1067200 | ---- * | ---- | 1224916* | -114605 | -53360 | -61245 |
| 6.280000 | PLUMBING & DRAIN | LS* | ---- | ---- | 83440* | 36400 | ---- * | ---- | 47040* | -4172 | -1820 | -2352 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 56888* | 50000 | ---- * | ---- | 6888* | -2844 | -2500 | -344 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 1411277* | 500300 | ---- * | ---- | 910977* | -70563 | -25015 | -45548 |
| 6.310000 | ARCHIT FEATURES | LS* | ---- | ---- | 453148* | 133300 | ---- * | ---- | 319848* | -22657 | -6665 | -15992 |
| 6.370000 | HVAC | LS* | ---- | ---- | 680303* | 230000 | ---- * | ---- | 450303* | -34015 | -11500 | -22515 |
| 6.380000 | PLUMBING & DRAIN | LS* | ---- | ---- | 262006* | 130000 | ---- * | ---- | 132006* | -13100 | -6500 | -6600 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 15820* | 7000 | ---- * | ---- | 8820* | -791 | -350 | -441 |
| 6.391000 | FIRE PROT STATION | EA* | 5 | 3164.0 | 15820* | 7000 | 1400.00* | 1764.0 | 8820* | -791 | -350 | -441 |
| 6.400000 | AOCS BUILDINGS | LS* | ---- | ---- | 5747689* | 1455550 | ---- * | ---- | 4292139* | -287382 | -72777 | -214605 |
| 6.410000 | FGDS SWGR BUILDING | SF* | 1800 | 133.3 | 239994* | 61200 | 34.00* | 9.3 | 178794* | -11999 | -3060 | -8939 |
| 6.420000 | AOCS CTRL BUILDING | SF* | 4800 | 166.4 | 798720* | 220800 | 46.00* | 120.4 | 577920* | -39936 | -11040 | -28896 |
| 6.430000 | DIESEL GEN BUILD | SF* | 1125 | 141.1 | 158770* | 38250 | 34.00* | 107.1 | 120520* | -7938 | -1912 | -6026 |
| 6.440000 | PUMP HOUSE | SF* | 27500 | 142.2 | 3909290* | 962500 | 35.00* | 107.2 | 2946790* | -195464 | -48125 | -147339 |
| 6.450000 | LIMESTONE PREP BLD | SF* | 8640 | 74.2 | 640915* | 172800 | 20.00* | 54.2 | 468115* | -32045 | -8640 | -23405 |
| 6.700000 | PLANT BUILDINGS | LS* | ---- | ---- | 14039780* | 4562675 | ---- * | ---- | 9477105* | -701982 | -228133 | -473849 |
| 6.730000 | ADMINISTRATION BLD | SF* | 9500 | 249.6 | 2371200* | 655500 | 69.00* | 180.6 | 1715700* | -118560 | -32775 | -85785 |
| 6.740000 | CONTROL BUILDING | LS* | ---- | ---- | 1867880* | 700000 | ---- * | ---- | 1167880* | -93394 | -35000 | -58394 |

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.750000 | WTR TREATMENT BLDG | SF* | 4250 | 210.5 | 894625* | 255000 | 60.00* | 150.5 | 639625* | -44731 | -12750 | -31981 |
| 6.790000 | ALL OTHER | LS* | ---- | ---- | 7034389* | 2250175 | ---- * | ---- | 4784214* | -351713 | -112508 | -239205 |
| 6.791000 | PLANT MAINTENANCE | SF* | 4000 | 162.3 | 649280* | 264000 | 66.00* | 96.3 | 385280* | -32464 | -13200 | -19264 |
| 6.792000 | AUX BOILER | SF* | 1200 | 233.6 | 280272* | 78000 | 65.00* | 168.6 | 202272* | -14013 | -3900 | -10113 |
| 6.793000 | YD EQUIP MNTN BLD | SF* | 1500 | 160.3 | 240480* | 96000 | 64.00* | 96.3 | 144480* | -12024 | -4800 | -7224 |
| 6.794000 | CHLORINE | SF* | 2700 | 141.4 | 381645* | 97200 | 36.00* | 105.3 | 284445* | -19082 | -4860 | -14222 |
| 6.795000 | FIRE/SER-PUMPHS | SF* | 800 | 160.4 | 128304* | 36800 | 46.00* | 114.4 | 91504* | -6415 | -1840 | -4575 |
| 6.796000 | GUARDHOUSE | SF* | 225 | 250.6 | 56385* | 15750 | 70.00* | 180.6 | 40635* | -2818 | -787 | -2031 |
| 6.797000 | WAREHOUSE NO. 1 | SF* | 30000 | 59.1 | 1773300* | 780000 | 26.00* | 33.1 | 993300* | -88665 | -39000 | -49665 |
| 6.798000 | CRASHING & SAMPLE | SF* | 2500 | 141.4 | 353375* | 90000 | 36.00* | 105.3 | 263375* | -17668 | -4500 | -13168 |
| 6.799000 | OTHER BUILDINGS | LS* | ---- | ---- | 3171348* | 792425 | ---- * | ---- | 2378923* | -158564 | -39621 | -118943 |
| 6.799100 | BULK GAS STORAGE | SF* | 1500 | 121.3 | 181950* | 46500 | 31.00* | 90.3 | 135450* | -9097 | -2325 | -6772 |
| 6.799200 | CTRL & SNGE BLDG | SF* | 2400 | 139.3 | 334392* | 96000 | 40.00* | 99.3 | 238392* | -16719 | -4800 | -11919 |
| 6.799300 | SWG TREAT BLDG | SF* | 5250 | 139.3 | 731557* | 178500 | 34.00* | 105.3 | 553057* | -36577 | -8925 | -27652 |
| 6.799400 | DEWAT & FIXATION | SF* | 14175 | 127.3 | 1804761* | 439425 | 31.00* | 96.3 | 1365336* | -90237 | -21971 | -68266 |
| 6.799500 | SWITCHYARD CTRL | SF* | 800 | 148.4 | 118688* | 32000 | 40.00* | 108.4 | 86688* | -5934 | -1600 | -4334 |
| 6.940000 | WASTEWATER TREATMT | LS* | ---- | ---- | 1871686* | 702000 | ---- * | ---- | 1169686* | -93584 | -35100 | -58484 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 44800000* | 38500000 | ---- * | ---- | 6300000* | -2240000 | -1925000 | -315000 |
| 7.100000 | TURB GEN & ACCESS | LS* | ---- | ---- | 44800000* | 38500000 | ---- * | ---- | 6300000* | -2240000 | -1925000 | -315000 |
| 8.000000 | STEAM GENERATOR | LS* | ---- | ---- | 99675000* | 54000000 | ---- * | ---- | 45675000* | -4983750 | -2700000 | -2283750 |
| 8.100000 | STEAM GEN & ACCESS | LS* | ---- | ---- | 99675000* | 54000000 | ---- * | ---- | 45675000* | -4983750 | -2700000 | -2283750 |
| 9.000000 | ADCS | LS* | ---- | ---- | 140751000* | 81531000 | ---- * | ---- | 59220000* | -7037550 | -4076550 | -2961000 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 20170000* | 8830000 | ---- * | ---- | 11340000* | -1008500 | -441500 | -567000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESUL | LS* | ---- | ---- | 100808000* | 58850000 | ---- * | ---- | 41958000* | -5040400 | -2942500 | -2097900 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 100808000* | 58850000 | ---- * | ---- | 41958000* | -5040400 | -2942500 | -2097900 |
| 9.211000 | BREECHING | LS* | ---- | ---- | 7087000* | 2740000 | ---- * | ---- | 4347000* | -354350 | -137000 | -217350 |
| 9.213000 | SO2 ABSORBER | LS* | ---- | ---- | 73350000* | 45000000 | ---- * | ---- | 28350000* | -3667500 | -2250000 | -1417500 |
| 9.215000 | LIMESTN UNLDING | LS* | ---- | ---- | 9181000* | 3700000 | ---- * | ---- | 5481000* | -459050 | -185000 | -274050 |
| 9.216000 | LIMESTN PREPERAT | LS* | ---- | ---- | 11190000* | 7410000 | ---- * | ---- | 3780000* | -559500 | -370500 | -189000 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 16212000* | 11172000 | ---- * | ---- | 5040000* | -810600 | -558600 | -252000 |
| 9.310000 | WASTE DISP SYS | LS* | ---- | ---- | 16212000* | 11172000 | ---- * | ---- | 5040000* | -810600 | -558600 | -252000 |
| 9.311000 | WASTE PROCESS EQP | LS* | ---- | ---- | 16212000* | 11172000 | ---- * | ---- | 5040000* | -810600 | -558600 | -252000 |
| 9.400000 | FANS | LS* | ---- | ---- | 3561000* | 2679000 | ---- * | ---- | 882000* | -178050 | -133950 | -44100 |
| 9.410000 | I D FANS | LS* | ---- | ---- | 1929000* | 1425000 | ---- * | ---- | 504000* | -96450 | -71250 | -25200 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 1632000* | 1254000 | ---- * | ---- | 378000* | -81600 | -62700 | -18900 |
| 10.000000 | OTH MECHANICAL EQUIP | LS* | ---- | ---- | 38835085* | 28890800 | ---- * | ---- | 9944285* | -1941746 | -1444540 | -497206 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 5208725* | 4441700 | ---- * | ---- | 767025* | -260433 | -222085 | -38348 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 4423300* | 3824800 | ---- * | ---- | 598500* | -221165 | -191240 | -29925 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 602000.0 | 1204000* | 952000 | ---- * | 126000.0 | 252000* | -60200 | -47600 | -12600 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 1234500.0 | 2469000* | 2280000 | ---- * | 94500.0 | 189000* | -123450 | -114000 | -9450 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 172650.0 | 345300* | 250800 | ---- * | 47250.0 | 94500* | -17265 | -12540 | -4725 |
| 10.114000 | BF STR UP/STD BY | LS* | ---- | ---- | 405000* | 342000 | ---- * | ---- | 63000* | -20250 | -17100 | -3150 |
| 10.120000 | FEEDWATER SYS PMPS | LS* | ---- | ---- | 14925* | 10200 | ---- * | ---- | 4725* | -746 | -510 | -236 |
| 10.121000 | CONDENS TRANSFER | LS* | ---- | ---- | 14925* | 10200 | ---- * | ---- | 4725* | -746 | -510 | -236 |
| 10.130000 | SRV/CLNG WTR PMPS | LS* | ---- | ---- | 105950* | 65000 | ---- * | ---- | 40950* | -5297 | -3250 | -2047 |
| 10.131000 | SERVICE WATER | EA* | 2 | 19750.0 | 39500* | 20600 | 10300.00* | 9450.0 | 18900* | -1975 | -1030 | -945 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PUMP | EA* | 2 | 13700.0 | 27400* | 14800 | 7400.00* | 6300.0 | 12600* | -1370 | -740 | -630 |
| 10.133000 | CLSD CYC CLNG WTR | EA* | 2 | 19525.0 | 39050* | 29600 | 14800.00* | 4725.0 | 9450* | -1952 | -1480 | -472 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 89500* | 70600 | ---- * | ---- | 18900* | -4473 | -3530 | -943 |
| 10.141000 | L O UNLOADING PMPS | EA* | 2 | 12975.0 | 25950* | 22800 | 11400.00* | 1575.0 | 3150* | -1297 | -1140 | -157 |
| 10.142000 | IGNITER OIL PUMPS | LS* | ---- | ---- | 44750* | 35300 | ---- * | ---- | 9450* | -2237 | -1765 | -472 |
| 10.143000 | TURB LO TRAN PMPS | LS* | ---- | ---- | 9950* | 6800 | ---- * | ---- | 3150* | -497 | -340 | -157 |
| 10.145000 | L O COND PUMP | LS* | ---- | ---- | 8850* | 5700 | ---- * | ---- | 3150* | -442 | -285 | -157 |
| 10.150000 | SUMP PUMPS | LS* | ---- | ---- | 182600* | 170000 | ---- * | ---- | 12600* | -9130 | -8500 | -630 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 392450* | 301100 | ---- * | ---- | 91350* | -19622 | -15055 | -4567 |
| 10.161000 | COOLING TOWER M U | LS* | ---- | ---- | 93000* | 74100 | ---- * | ---- | 18900* | -4650 | -3705 | -945 |
| 10.162000 | OPN CYC COOL WTR | EA* | 2 | 47150.0 | 94300* | 62800 | 31400.00* | 15750.0 | 31500* | -4715 | -3140 | -1575 |
| 10.163000 | FIRE PROT PUMPS | EA* | 2 | 55650.0 | 111300* | 79800 | 39900.00* | 15750.0 | 31500* | -5565 | -3990 | -1575 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 46925.0 | 93850* | 84400 | 42200.00* | 4725.0 | 9450* | -4692 | -4220 | -472 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 6506900* | 5291000 | ---- * | ---- | 1215900* | -325344 | -264550 | -60794 |
| 10.210000 | CONDENS & AUXILIAR | LS* | ---- | ---- | 4445000* | 3500000 | ---- * | ---- | 945000* | -222250 | -175000 | -47250 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 2061900* | 1791000 | ---- * | ---- | 270900* | -103094 | -89550 | -13544 |
| 10.221000 | CW PUMPS | EA* | 2 | 360750.0 | 721500* | 627000 | ---- * | 47250.0 | 94500* | -36075 | -31350 | -4725 |
| 10.222000 | CONDENSATE PUMPS | EA* | 3 | 156900.0 | 470700* | 376200 | ---- * | 31500.0 | 94500* | -23535 | -18810 | -4725 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 150375.0 | 300750* | 285000 | ---- * | 7875.0 | 15750* | -15037 | -14250 | -787 |
| 10.224000 | CONDENS CLEAN SYS | LS* | ---- | ---- | 564600* | 501600 | ---- * | ---- | 63000* | -28230 | -25080 | -3150 |
| 10.227000 | CONDENS COLL PUMP | LS* | ---- | ---- | 4350* | 1200 | ---- * | ---- | 3150* | -217 | -60 | -157 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 3903830* | 3556700 | ---- * | ---- | 347130* | -195190 | -177835 | -17355 |
| 10.310000 | FEED HEATERS | EA* | 7 | 352790.0 | 2469530* | 2279900 | ---- * | 27090.0 | 189630* | -123476 | -113995 | -9481 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER & VNT CONDEN | LS* | ---- | ---- | 454950* | 376200 | ---- * | ---- | 78750* | -22747 | -18810 | -3937 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 345000.0 | 690000* | 627000 | ---- * | 31500.0 | 630[illegible] | -34500 | -31350 | -3150 |
| 10.340000 | AIR PRHT GLY HT EX | EA* | 2 | 144675.0 | 289350* | 273600 | ---- * | 7875.0 | 15750* | -14467 | -13680 | -787 |
| 10.400000 | TANKS | LS* | ---- | ---- | 1302580* | 545900 | ---- * | ---- | 756680* | -65127 | -27295 | -37832 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 871800* | 336300 | ---- * | ---- | 535500* | -43590 | -16815 | -26775 |
| 10.412000 | CONDENS STRG TNK | LS* | ---- | ---- | 471600* | 188100 | ---- * | ---- | 283500* | -23580 | -9405 | -14175 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 400200* | 148200 | ---- * | ---- | 252000* | -20010 | -7410 | -12600 |
| 10.430000 | L O STORAGE TANK | LS* | ---- | ---- | 203600* | 65000 | ---- * | ---- | 138600* | -10180 | -3250 | -6930 |
| 10.440000 | OTH FL OIL STRG TK | EA* | 3 | 23210.0 | 69630* | 37500 | 12500.00* | 10710.0 | 32130* | -3481 | -1875 | -1606 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 157550* | 107100 | ---- * | ---- | 50450* | -7876 | -5355 | -2521 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 72550* | 53600 | ---- * | ---- | 18950* | -3627 | -2680 | -947 |
| 10.453000 | CONT BD FLASH TNK | LS* | ---- | ---- | 6550* | 3400 | ---- * | - | 3150* | -327 | -170 | -157 |
| 10.454000 | INT BD FLASH TANK | LS* | ---- | ---- | 28850* | 19400 | ---- * | ---- | 9450* | -1442 | -970 | -472 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 17700* | 11400 | ---- * | - | 6300* | -885 | -570 | -315 |
| 10.456000 | CLSD CYC COOL WHT | LS* | ---- | ---- | 13100* | 6800 | ---- * | ---- | 6300* | -655 | -340 | -315 |
| 10.457000 | AIR PREHT COR EXT | LS* | ---- | ---- | 18800* | 12500 | ---- * | ---- | 6300* | -940 | -625 | -315 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 7896550* | 6551500 | ---- * | ---- | 1345050* | -394827 | -327575 | -67252 |
| 10.510000 | COMPRESS AIR EQUIP | LS* | ---- | ---- | 2032400* | 1723700 | ---- * | ---- | 308700* | -101620 | -86185 | -15435 |
| 10.512000 | STAT AIR COMPRES | EA* | 2 | 238700.0 | 477400* | 313600 | ---- * | 81900.0 | 163800* | -23870 | -15680 | -8190 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 88400* | 82100 | ---- * | ---- | 6300* | -4420 | -4105 | -315 |
| 10.514000 | SOOT BLW AIR COMP | LS* | ---- | ---- | 1466600* | 1328000 | ---- * | ---- | 138600* | -73330 | -66400 | -6930 |
| 10.520000 | WTR TRFAT EQUIP | LS* | ---- | ---- | 5864150* | 4827800 | ---- * | ---- | 1036350* | -293207 | -241390 | -51817 |
| 10.521000 | MKUP WTR TRTMT SY | LS* | ---- | ---- | 2265000* | 1824000 | ---- * | ---- | 441000* | -113250 | -91200 | -22050 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 2119000* | 1678000 | ---- * | ---- | 441000* | -105950 | -83900 | -22050 |
| 10.523000 | CHLORIN EQUIP | LS* | ---- | ---- | 633000* | 570000 | ---- * | ---- | 63000* | -31650 | -28500 | -3150 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 113500* | 94600 | ---- * | ---- | 18900* | -5675 | -4730 | -945 |
| 10.525000 | SHALING SYSTEM | LS* | ---- | ---- | 313350* | 285000 | ---- * | ---- | 28350* | -15667 | -14250 | -1417 |
| 10.526000 | BLK GAS STORAGE | LS* | ---- | ---- | 420300* | 376200 | ---- * | ---- | 44100* | -21015 | -18810 | -2205 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 873000* | 684000 | ---- * | ---- | 189000* | -43650 | -34200 | -9450 |
| 10.700000 | CECI SYSTEM | LS* | ---- | ---- | 4995000* | 3420000 | ---- * | ---- | 1575000* | -249750 | -171000 | -78750 |
| 10.800000 | EQUIP UNLOAD FAC | LS* | ---- | ---- | 1626000* | 1500000 | ---- * | ---- | 126000* | -81300 | -75000 | -6300 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 6522500* | 2900000 | ---- * | ---- | 3622500* | -326125 | -145000 | -181125 |
| 11.000000 | COAL AND ASH HANDLG | LS* | ---- | ---- | 35278270* | 19843900 | ---- * | ---- | 15434370* | -1763913 | -992195 | -771718 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 26135400* | 14921400 | ---- * | ---- | 11214000* | -1306770 | -746070 | -560700 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 2356800* | 2041800 | ---- * | ---- | 315000* | -117840 | -102090 | -15750 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 1917300* | 877800 | ---- * | ---- | 1039500* | -95865 | -43890 | -51975 |
| 11.122000 | CONVEYOR NO. 1 | LS* | ---- | ---- | 1917300* | 877800 | ---- * | ---- | 1039500* | -95865 | -43890 | -51975 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 3460700* | 1728200 | ---- * | ---- | 1732500* | -173035 | -86410 | -86625 |
| 11.131000 | CONVEYOR NO. 2 | LS* | ---- | ---- | 3460700* | 1728200 | ---- * | ---- | 1732500* | -173035 | -86410 | -86625 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 9778100* | 5431100 | ---- * | ---- | 4347000* | -488905 | -271555 | -217350 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 5556600* | 3351600 | ---- * | ---- | 2205000* | -277830 | -167580 | -110250 |
| 11.142000 | CONVEYOR NO. 5 | LS* | ---- | ---- | 1356500* | 663500 | ---- * | ---- | 693000* | -67825 | -33175 | -34650 |
| 11.143000 | EMER REC HPR FDR | LS* | ---- | ---- | 55500* | 24000 | ---- * | ---- | 31500* | -2775 | -1200 | -1575 |
| 11.144000 | CONVEYOR NO. 6 | LS* | ---- | ---- | 1376500* | 652000 | ---- * | ---- | 724500* | -68825 | -32600 | -36225 |
| 11.145000 | CONVEYOR NO. 7A&B | EA* | 2 | 716500.0 | 1434000* | 740000 | ---- * | 346500.0 | 693000* | -71650 | -37000 | -34650 |
| 11.160000 | CRUSH & TRSF SYST | LS* | ---- | ---- | 5135000* | 2520500 | ---- * | ---- | 2614500* | -256750 | -126025 | -130725 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.161000 | CONVEYOR NO. 8A&B | EA* | 2 | 1257000.0 | 2514000* | 1254000 | ---- * | 630000.0 | 1260000* | -125700 | -62700 | -63000 |
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 461300* | 177800 | ---- * | ---- | 283500* | -23065 | -8890 | -14175 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 955400* | 451400 | ---- * | ---- | 504000* | -47770 | -22570 | -25200 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 173600* | 110600 | ---- * | ---- | 63000* | -8680 | -5530 | -3150 |
| 11.165000 | CONVEYOR NO. 9A | LS* | ---- | ---- | 1030700* | 526700 | ---- * | ---- | 504000* | -51535 | -26335 | -25200 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 3487500* | 2322000 | ---- * | ---- | 1165500* | -174375 | -116100 | -58275 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 1421000* | 791000 | ---- * | ---- | 630000* | -71050 | -39550 | -31500 |
| 11.173000 | TUNNEL VENTILAT | LS* | ---- | ---- | 44000* | 12500 | ---- * | ---- | 31500* | -2200 | -625 | -1575 |
| 11.174000 | INSTRUM & CTRL | LS* | ---- | ---- | 1100400* | 1037400 | ---- * | ---- | 63000* | -55020 | -51870 | -3150 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 922100* | 481100 | ---- * | ---- | 441000* | -46105 | -24055 | -22050 |
| 11.200000 | BTM ASH HNDG SYS | LS* | ---- | ---- | 5098870* | 2642500 | ---- * | ---- | 2456370* | -254943 | -132125 | -122818 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 2027700* | 1145700 | ---- * | ---- | 882000* | -101385 | -57285 | -44100 |
| 11.220000 | PYRITE HNDG SYS | LS* | ---- | ---- | 145100* | 82100 | ---- * | ---- | 63000* | -7255 | -4105 | -3150 |
| 11.230000 | ECON ASH SYSTEM | LS* | ---- | ---- | 419300* | 230300 | ---- * | ---- | 189000* | -20965 | -11515 | -9450 |
| 11.240000 | DEWTR BIN&SET TNKS | LS* | ---- | ---- | 2120400* | 923400 | ---- * | ---- | 1197000* | -106020 | -46170 | -59850 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 65990.0 | 197970* | 135600 | 45200.00* | 20790.0 | 62370* | -9898 | -6780 | -3118 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 188400* | 125400 | ---- * | ---- | 63000* | -9420 | -6270 | -3150 |
| 11.400000 | FLY ASH SYSTEM | LS* | ---- | ---- | 4044000* | 2280000 | ---- * | ---- | 1764000* | -202200 | -114000 | -88200 |
| 12.000000 | PIPING | LS* | ---- | ---- | 57895488* | 22036770 | ---- * | ---- | 35858718* | -2894773 | -1101838 | -1792935 |
| 12.100000 | LARGE BORE PIPING | TN* | 2102 | 19944.0 | 41922288* | 19674720 | 9360.00* | 10584.0 | 22247568* | -2096114 | -983736 | -1112378 |
| 12.200000 | SMALL BORE PIPING | LF* | 145000 | 110.2 | 15973200* | 2362050 | 16.29* | 93.9 | 13611150* | -798659 | -118102 | -680557 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 12525000* | 1500000 | ---- * | ---- | 11025000* | -626250 | -75000 | -551250 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 12525000* | 1500000 | ---- * | ---- | 11025000* | -626250 | -75000 | -551250 |

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 8876000* | 8120000 | ---- * | ---- | 756000* | -443800 | -406000 | -37800 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 8876000* | 8120000 | ---- * | ---- | 756000* | -443800 | -406000 | -37800 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 105727200* | 40536000 | ---- * | ---- | 65191200* | -5286360 | -2026800 | -3259560 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 4484520* | 324000 | ---- * | ---- | 4160520* | -224226 | -16200 | -208026 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1187460* | 90000 | ---- * | ---- | 1097460* | -59373 | -4500 | -54873 |
| 16.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2435900* | 170000 | ---- * | ---- | 2265900* | -121795 | -8500 | -113295 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 395820* | 30000 | ---- * | ---- | 365820* | -19791 | -1500 | -18291 |
| 16.900000 | MISC PAINTING | LS* | ---- | ---- | 465340* | 34000 | ---- * | ---- | 431340* | -23267 | -1700 | -21567 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 13460700* | 6030000 | ---- * | ---- | 7430700* | -673035 | -301500 | -371535 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 3083700* | 570000 | ---- * | ---- | 2513700* | -154185 | -28500 | -125685 |
| 17.200000 | ACCESS ROADS | MI* | 20 | 518850.0 | 10377000* | 5460000 | ---- * | 245850.0 | 4917000* | -518850 | -273000 | -245850 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 9083922* | 2260100 | ---- * | ---- | 6823822* | -454194 | -113005 | -341189 |
| 18.100000 | BARGE UNLOADING FAC | LS* | ---- | ---- | 577920* | 0 | ---- * | ---- | 577920* | -28896 | 0 | -28896 |
| 18.110000 | DREDGING | CY* | 32000 | 18.1 | 577920* | 0 | 0.00* | 18.1 | 577920* | -28896 | 0 | -28896 |
| 18.200000 | MOOR/DOCK FACILITY | LS* | ---- | ---- | 8506002* | 2260100 | ---- * | ---- | 6245902* | -425298 | -113005 | -312293 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.3 | 372487* | 0 | 0.00* | 8.3 | 372487* | -18624 | 0 | -18624 |
| 18.220000 | FILL | CY* | 27500 | 9.7 | 266062* | 0 | 0.00* | 9.7 | 266062* | -13303 | 0 | -13303 |
| 18.230000 | H PILES | LF* | 2100 | 58.6 | 123007* | 81900 | 39.00* | 19.6 | 41107* | -6150 | -4095 | -2055 |
| 18.240000 | SHEET PILING | TN* | 2480 | 2518.8 | 6246500* | 1736000 | 700.00* | 1818.8 | 4510500* | -312325 | -86800 | -225525 |
| 18.250000 | STRUCTURAL STEEL | TN* | 102 | 2458.0 | 250716* | 112200 | 1100.00* | 1358.0 | 138516* | -12535 | -5610 | -6925 |
| 18.260000 | CONCRETE | CY* | 1700 | 468.2 | 795980* | 255000 | 150.00* | 318.2 | 540980* | -39799 | -12750 | -27049 |
| 18.270000 | MISCELLANEOUS | LS* | ---- | ---- | 451250* | 75000 | ---- * | ---- | 376250* | -22562 | -3750 | -18812 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 31025413* | 17536000 | ---- * | ---- | 13489413* | -1551270 | -876800 | -674470 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 5000370* | 4000000 | ---- * | ---- | 1000370* | -250018 | -200000 | -50018 |
| 19.200000 | 230KV T-LINE:2 CIR | MI* | 48 | 542188.4 | 26025043* | 13536000 | ---- * | 260188.4 | 12489043* | -1301252 | -676800 | -624452 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 78654530* | 0 | ---- * | ---- | 78654530* | -3921674 | 0 | -3921674 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 8229078* | 0 | ---- * | ---- | 8229078* | -411453 | 0 | -411453 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 5535000* | 0 | ---- * | ---- | 5535000* | -276750 | 0 | -276750 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 3690000* | 0 | ---- * | ---- | 3690000* | -184500 | 0 | -184500 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1845000* | 0 | ---- * | ---- | 1845000* | -92250 | 0 | -92250 |
| 71.300000 | CONSTRUCTION EQUIPT | LS* | ---- | ---- | 222000* | 0 | ---- * | ---- | 222000* | -11100 | 0 | -11100 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 222000* | 0 | ---- * | ---- | 222000* | -11100 | 0 | -11100 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 45801284* | 0 | ---- * | ---- | 45801284* | -2290063 | 0 | -2290063 |
| 71.410000 | CONSTRUCTION BLDGS | LS* | ---- | ---- | 2112784* | 0 | ---- * | ---- | 2112784* | -105639 | 0 | -105639 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 43688500* | 0 | ---- * | ---- | 43688500* | -2184424 | 0 | -2184424 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 18150000* | 0 | ---- * | ---- | 18150000* | -907500 | 0 | -907500 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 19800000* | 0 | ---- * | ---- | 19800000* | -990000 | 0 | -990000 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002* | 0 | ---- * | ---- | 2205002* | -110250 | 0 | -110250 |
| 71.423100 | TEMP 69 KV T-LIN | MI* | 10 | 220500.2 | 2205002* | 0 | 0.00* | 220500.2 | 2205002* | -110250 | 0 | -110250 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 3533498* | 0 | ---- * | ---- | 3533498* | -176674 | 0 | -176674 |
| 71.600000 | OFFICE/LABOR EXPENS | LS* | ---- | ---- | 2692260* | 0 | ---- * | ---- | 2692260* | -123563 | 0 | -123563 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 221000* | 0 | ---- * | ---- | 221000* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 995140* | 0 | ---- * | ---- | 995140* | -49757 | 0 | -49757 |
| 71.630000 | TESTING | LS* | ---- | ---- | 973200* | 0 | ---- * | ---- | 973200* | -48660 | 0 | -48660 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 502920* | 0 | ---- * | ---- | 502920* | -25146 | 0 | -25146 |
| 71.700000 | OFF-SITE UNLDG/HAUL | LS* | ---- | ---- | 15828200* | 0 | ---- * | ---- | 15828200* | -791410 | 0 | -791410 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 5000370* | 4000000 | ---- * | -- - | 1000370* | -250018 | -200000 | -50018 |
| 19.200000 | 230KV T-LINE:2 CIR | MI* | 48 | 542188.4 | 26025043* | 13536000 | ---- * | 260188.4 | 12489043* | -1301252 | -676800 | -624452 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 78654530* | 0 | ---- * | ---- | 78654530* | -3921674 | 0 | -3921674 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 8229078* | 0 | ---- * | ---- | 8229078* | -411453 | 0 | -411453 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 5535000* | 0 | ---- * | ---- | 5535000* | -276750 | 0 | -276750 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 3690000* | 0 | ---- * | ---- | 3690000* | -184500 | 0 | -184500 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1845000* | 0 | ---- * | ---- | 1845000* | -92250 | 0 | -92250 |
| 71.300000 | CONSTRUCTION EQUIPT | LS* | ---- | ---- | 222000* | 0 | ---- * | ---- | 222000* | -11100 | 0 | -11100 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 222000* | 0 | ---- * | ---- | 222000* | -11100 | 0 | -11100 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 45801284* | 0 | ---- * | ---- | 45801284* | -2290063 | 0 | -2290063 |
| 71.410000 | CONSTRUCTION BLDGS | LS* | ---- | ---- | 2112784* | 0 | ---- * | ---- | 2112784* | -105639 | 0 | -105639 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 43688500* | 0 | ---- * | ---- | 43688500* | -2184424 | 0 | -2184424 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 18150000* | 0 | ---- * | ---- | 18150000* | -907500 | 0 | -907500 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 19800000* | 0 | ---- * | ---- | 19800000* | -990000 | 0 | -990000 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002* | 0 | ---- * | ---- | 2205002* | -110250 | 0 | -110250 |
| 71.423100 | TEMP 69 KV T-LIN | MI* | 10 | 220500.2 | 2205002* | 0 | 0.00* | 220500.2 | 2205002* | -110250 | 0 | -110250 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 3533498* | 0 | ---- * | ---- | 3533498* | -176674 | 0 | -176674 |
| 71.600000 | OFFICE/LABOR EXPENS | LS* | ---- | ---- | 2692260* | 0 | ---- * | ---- | 2692260* | -123563 | 0 | -123563 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 221000* | 0 | ---- * | ---- | 221000* | 0 | 0 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 995140* | 0 | ---- * | ---- | 995140* | -49757 | 0 | -49757 |
| 71.630000 | TESTING | LS* | ---- | ---- | 973200* | 0 | ---- * | ---- | 973200* | -48660 | 0 | -48660 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 502920* | 0 | ---- * | ---- | 502920* | -25146 | 0 | -25146 |
| 71.700000 | OFF-SITE UNLDG/HAUL | LS* | ---- | ---- | 15828200* | 0 | ---- * | ---- | 15828200* | -791410 | 0 | -791410 |

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

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DETAILED
MATERIAL & INSTALLATION REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ TOT) | (TOTAL AMT)* | (TOT MATL) | (UN $MAT)* | (U $ INS) | (TOT INST)* | (TOT ESC) | (MAT ESC) | (INS ESC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 346708* | 0 | ---- * | ---- | 346708* | -17335 | 0 | -17335 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 68725000* | 0 | ---- * | ---- | 68725000* | -3436250 | 0 | -3436250 |

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APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:38:22

SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAT EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 606478883 | 257577363 | 120153921 | 149641658* | --- | 39.95 | 6448173 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 79105944 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -27744792 | -13550998 | -6321229 | -7872562* | --- | -2.10 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 555117731 | 271128361 | 126475150 | 157514220* | --- | 42.05 | 6448173 |
| 1.000000 | IMPROVEMENTS TO SITE | LS* | ---- | ---- | 4308844 | 2347435 | 0 | 1956409* | --- | 40.68 | 57709 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 36971279 | 15245905 | 104400 | 21620974* | --- | 42.91 | 355302 |
| 3.000000 | CIRCULATING WTR SYS | LS* | ---- | ---- | 7492387 | 4996944 | 90600 | 2404843* | --- | 44.72 | 111746 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 27157074 | 19000696 | 554100 | 7600278* | --- | 44.20 | 429880 |
| 5.000000 | STR STEEL/LIFT/STACK | LS* | ---- | ---- | 30461790 | 18986850 | 300000 | 11174940* | --- | 49.04 | 387175 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 20042799 | 14316286 | 0 | 5726513* | --- | 42.82 | 334365 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 8.000000 | STEAM GENERATOR | LS* | ---- | ---- | 45675000 | 30450000 | 0 | 15225000* | --- | 42.00 | 725000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 59220000 | 39480000 | 0 | 19740000* | --- | 42.00 | 940000 |
| 10.000000 | OTH MECHANICAL EQUIP | LS* | ---- | ---- | 9944285 | 6629490 | 50 | 3314745* | --- | 42.00 | 157845 |
| 11.000000 | COAL AND ASH HANDLG | LS* | ---- | ---- | 15434370 | 10289580 | 0 | 5144790* | --- | 42.00 | 244990 |
| 12.000000 | PIPING | LS* | ---- | ---- | 35858718 | 23905812 | 0 | 11952906* | --- | 42.00 | 569186 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 11025000 | 7350000 | 0 | 3675000* | --- | 42.00 | 175000 |
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 756000 | 504000 | 0 | 252000* | --- | 42.00 | 12000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 65191200 | 43460800 | 0 | 21730400* | --- | 46.00 | 944800 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 4160520 | 2971800 | 0 | 1188720* | --- | 39.00 | 76200 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 6808832 | 2897470 | 15000 | 3911362* | --- | 46.60 | 62175 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 13489413 | 7991896 | 0 | 5497517* | --- | 46.10 | 173360 |

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

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SUMMARY
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 78454530 | 13198177 | 56484000 | 8772353* | --- | 25.15 | 524840 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 68725000 | 0 | 68725000 | 0* | --- | 0.00 | 0 |

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APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

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DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99.000000 | TOTAL PROJECT COST | LS* | ---- | ---- | 606478883 | 257577363 | 120153921 | 149641658* | --- | 39.95 | 6448173 |
| 100.000000 | CONTINGENCY | LS* | ---- | ---- | 79105944 | 0 | 0 | 0* | --- | 0.00 | 0 |
| 200.000000 | ESCALATION | LS* | ---- | ---- | -27744792 | -13550998 | -6321229 | -7872562* | --- | -2.10 | 0 |
| 300.000000 | TOTAL COST W/O CONT | LS* | ---- | ---- | 555117731 | 271128361 | 126475150 | 157514220* | --- | 42.05 | 6448173 |
| 1.000000 | IMPROVEMENTS TO SITE | LS* | ---- | ---- | 4303844 | 2347435 | 0 | 1956409* | --- | 40.68 | 57709 |
| 1.100000 | SITE PREPARATION | LS* | ---- | ---- | 922639 | 410062 | 0 | 512577* | --- | 40.50 | 10125 |
| 1.110000 | CLEARING | AC* | 225 | 4100.62 | 922639 | 410062 | 0 | 512577* | 45.00 | 40.50 | 10125 |
| 1.200000 | ROADS BRIDGES WALKS | LS* | ---- | ---- | 667286 | 282668 | 0 | 384618* | --- | 42.61 | 6634 |
| 1.210000 | ROADS | LS* | ---- | ---- | 553162 | 201150 | 0 | 352012* | --- | 44.70 | 4500 |
| 1.213000 | 24' WIDE ROADS | SY* | 50000 | 11.06 | 553162 | 201150 | 0 | 352012* | 0.09 | 44.70 | 4500 |
| 1.260000 | FENCING | LS* | ---- | ---- | 114124 | 81518 | 0 | 32606* | --- | 38.20 | 2134 |
| 1.261000 | PROPERTY FENCE | LF* | 6200 | 12.84 | 79577 | 56841 | 0 | 22736* | 0.24 | 38.20 | 1488 |
| 1.262000 | SECURITY FENCE | LF* | 2400 | 12.84 | 30804 | 22003 | 0 | 8801* | 0.24 | 38.20 | 576 |
| 1.263000 | GATES | EA* | 7 | 534.71 | 3743 | 2674 | 0 | 1069* | 10.00 | 38.20 | 70 |
| 1.300000 | SITE DRAINAGE | LS* | ---- | ---- | 1261700 | 814000 | 0 | 447700* | --- | 40.70 | 20000 |
| 1.500000 | SEWAGE FACILITIES | LS* | ---- | ---- | 378510 | 244200 | 0 | 134310* | --- | 40.70 | 6000 |
| 1.700000 | RAILROAD | LS* | ---- | ---- | 1073709 | 596505 | 0 | 477204* | --- | 39.90 | 14950 |
| 1.720000 | STACKER RCLM TRACK | LF* | 650 | 1651.86 | 1073709 | 596505 | 0 | 477204* | 23.00 | 39.90 | 14950 |
| 2.000000 | EARTHWORK & PILING | LS* | ---- | ---- | 36971279 | 15245905 | 104400 | 21620974* | --- | 42.91 | 355302 |
| 2.200000 | STRUCT & EQUIP EXCA | LS* | ---- | ---- | 20751961 | 8977236 | 95400 | 11679325* | -- | 42.69 | 210265 |
| 2.210000 | STATION AREA | LS* | ---- | ---- | 13581920 | 6154880 | 0 | 7426340* | --- | 42.83 | 143700 |
| 2.212000 | EARTH EXCAVATION | CY* | 30800 | 29.15 | 897820 | 326480 | 0 | 571340* | 0.25 | 42.40 | 7700 |
| 2.214000 | SELECT BACKFILL | LS* | ---- | ---- | 12683400 | 5828400 | 0 | 6855000* | --- | 42.86 | 136000 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 17(7 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 1150000 | 8.94 | 10281000 | 4112400 | 0 | 6168600* | 0.08 | 44.70 | 92000 |
| 2.214200 | INSULATION BOARD | SF* | 4400000 | 0.55 | 2402400 | 1716000 | 0 | 686400* | 0.01 | 39.00 | 44000 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 378386 | 156456 | 9400 | 212530* | --- | 42.40 | 3690 |
| 2.222000 | EARTH EXCAVATION | CY* | 4000 | 23.32 | 93280 | 33920 | 0 | 59360* | 0.20 | 42.40 | 800 |
| 2.223000 | ROCK EXCAVATION | CY* | 3400 | 83.85 | 285106 | 122536 | 9400 | 153170* | 0.85 | 42.40 | 2890 |
| 2.230000 | COAL [illegible] FDN | LS* | ---- | ---- | 3561800 | 1399200 | 32000 | 2130600* | --- | 42.40 | 33000 |
| 2.232000 | EARTH EXCAVATION | CY* | 72000 | 29.15 | 2098800 | 763200 | 0 | 1335600* | 0.25 | 42.40 | 18000 |
| 2.233000 | ROCK EXCAVATION | CY* | 20000 | 73.15 | 1463000 | 636000 | 32000 | 795000* | 0.75 | 42.40 | 15000 |
| 2.240000 | OUTLYING TANKS | LS* | ---- | ---- | 338140 | 122960 | 0 | 215180* | --- | 42.40 | 2900 |
| 2.242000 | EARTH EXCAVATION | CY* | 11600 | 29.15 | 338140 | 122960 | 0 | 215180* | 0.25 | 42.40 | 2900 |
| 2.25[illegible] | AQCS FDNS | LS* | ---- | ---- | 2892415 | 1143740 | 54000 | 1694675* | --- | 42.40 | 26975 |
| 2.251000 | EARTH EXCAVATION | CY* | 50000 | 29.15 | 1457500 | 530000 | 0 | 927500* | 0.25 | 42.40 | 12500 |
| 2.253000 | ROCK EXCAVATION | CY* | 19300 | 74.35 | 1434915 | 613740 | 54000 | 767175* | 0.75 | 42.40 | 14475 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 4729046 | 1580284 | 9000 | 3139762* | --- | 42.70 | 37009 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 886046 | 299284 | 9000 | 577762* | --- | 42.70 | 7009 |
| 2.312000 | EARTH EXCAVATION | CY* | 23000 | 28.18 | 648186 | 216062 | 0 | 432124* | 0.22 | 42.70 | 5060 |
| 2.313000 | ROCK EXCAVATION | CY* | 3000 | 79.29 | 237860 | 83222 | 9000 | 145638* | 0.65 | 42.70 | 1949 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 2305800 | 768600 | 0 | 1537200* | --- | 42.70 | 18000 |
| 2.322000 | EARTH EXCAVATION | CY* | 75000 | 30.74 | 2305800 | 768600 | 0 | 1537200* | 0.[illegible]4 | 42.70 | 18000 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 1537200 | 512400 | 0 | 1024800* | --- | 42.70 | 12000 |
| 2.332000 | EARTH EXCAVATION | CY* | 50000 | 30.74 | 1537200 | 512400 | 0 | 1024800* | 0.24 | 42.70 | 12000 |
| 2.400000 | EARTH STRUCTURES | LS* | ---- | ---- | 267729 | 89243 | 0 | 178486* | --- | 42.70 | 2090 |
| 2.500000 | PILING (H PILES) | LS* | ---- | ---- | 9454725 | 3781890 | 0 | 5672835* | --- | 43.50 | 86940 |

BY: JDF CHECKED: JDF

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.214100 | 7' GRAVEL PAD | CY* | 1150000 | 8.94 | 10281000 | 4112400 | 0 | 6168600* | 0.08 | 44.70 | 92000 |
| 2.214200 | INSULATION BOARD | SF* | 4400000 | 0.55 | 2402400 | 1716000 | 0 | 686400* | 0.01 | 39.00 | 44000 |
| 2.220000 | STACK FOUNDATIONS | LS* | ---- | ---- | 378386 | 156456 | 9400 | 212530* | --- | 42.40 | 3690 |
| 2.222000 | EARTH EXCAVATION | CY* | 4000 | 23.32 | 93280 | 33920 | 0 | 59360* | 0.20 | 42.40 | 800 |
| 2.223000 | ROCK EXCAVATION | CY* | 3400 | 83.85 | 285106 | 122536 | 9400 | 153170* | 0.85 | 42.40 | 2890 |
| 2.230000 | COAL HAND FDN | LS* | ---- | ---- | 3561800 | 1399200 | 32000 | 2130600* | --- | 42.40 | 33000 |
| 2.232000 | EARTH EXCAVATION | CY* | 72000 | 29.15 | 2098800 | 763200 | 0 | 1335600* | 0.25 | 42.40 | 18000 |
| 2.233000 | ROCK EXCAVATION | CY* | 20000 | 73.15 | 1463000 | 636000 | 32000 | 795000* | 0.75 | 42.40 | 15000 |
| 2.240000 | OUTLYING TANKS | LS* | ---- | ---- | 338140 | 122960 | 0 | 215180* | --- | 42.40 | 2900 |
| 2.242000 | EARTH EXCAVATION | CY* | 11600 | 29.15 | 338140 | 122960 | 0 | 215180* | 0.25 | 42.40 | 2900 |
| 2.250000 | AQCS FDNS | LS* | ---- | ---- | 2892415 | 1143740 | 54000 | 1694675* | --- | 42.40 | 26975 |
| 2.252000 | EARTH EXCAVATION | CY* | 50000 | 29.15 | 1457500 | 530000 | 0 | 927500* | 0.25 | 42.40 | 12500 |
| 2.253000 | ROCK EXCAVATION | CY* | 19300 | 74.35 | 1434915 | 613740 | 54000 | 767175* | 0.75 | 42.40 | 14475 |
| 2.300000 | TRENCHING | LS* | ---- | ---- | 4729046 | 1580284 | 9000 | 3139762* | --- | 42.70 | 37009 |
| 2.310000 | CIRC WATER COND | LS* | ---- | ---- | 886046 | 299284 | 9000 | 577762* | --- | 42.70 | 7009 |
| 2.312000 | EARTH EXCAVATION | CY* | 23000 | 28.18 | 648186 | 216062 | 0 | 432124* | 0.22 | 42.70 | 5060 |
| 2.313000 | ROCK EXCAVATION | CY* | 3000 | 79.29 | 237860 | 83222 | 9000 | 145638* | 0.65 | 42.70 | 1949 |
| 2.320000 | YARD PIPING | LS* | ---- | ---- | 2305800 | 768600 | 0 | 1537200* | --- | 42.70 | 18000 |
| 2.322000 | EARTH EXCAVATION | CY* | 75000 | 30.74 | 2305800 | 768600 | 0 | 1537200* | 0.24 | 42.70 | 18000 |
| 2.330000 | SEWERS & DRAINS | LS* | ---- | ---- | 1537200 | 512400 | 0 | 1024800* | --- | 42.70 | 12000 |
| 2.332000 | EARTH EXCAVATION | CY* | 50000 | 30.74 | 1537200 | 512400 | 0 | 1024800* | 0.24 | 42.70 | 12000 |
| 2.400000 | EARTH STRUCTURES | LS* | ---- | ---- | 267729 | 89243 | 0 | 178486* | --- | 42.70 | 2090 |
| 2.500000 | PILING (H PILES) | LS* | ---- | ---- | 9454725 | 3781890 | 0 | 5672835* | --- | 43.50 | 86940 |

APA
SUSITNA 600 MW COAL
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BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.510000 | STATION AREA | LF* | 352000 | 19.58 | 6890400 | 2756160 | 0 | 4134240* | 0.18 | 43.50 | 63360 |
| 2.520000 | AQCS AREA | LF* | 131000 | 19.58 | 2564325 | 1025730 | 0 | 1538595* | 0.18 | 43.50 | 23580 |
| 2.700000 | CECI EARTHWORK | LS* | ---- | ---- | 1767818 | 817252 | 0 | 950566* | --- | 43.02 | 18998 |
| 2.710000 | CL PILE SPG & CTRL | LS* | ---- | ---- | 767540 | 315398 | 0 | 452142* | --- | 40.81 | 7728 |
| 2.711000 | PVC LINER | SF* | 500500 | 0.05 | 26670 | 19050 | 0 | 7620* | 0.00 | 38.10 | 500 |
| 2.712000 | SAND | CY* | 27800 | 14.35 | 398930 | 159572 | 0 | 239358* | 0.14 | 41.00 | 3892 |
| 2.713000 | GRAVEL | CY* | 27800 | 12.30 | 341940 | 136776 | 0 | 205164* | 0.12 | 41.00 | 3336 |
| 2.720000 | WST WTR TRMT AREA | LS* | ---- | ---- | 735919 | 368760 | 0 | 367159* | --- | 44.64 | 8260 |
| 2.721000 | PVC LINER | SF* | 70400 | 0.05 | 3733 | 2667 | 0 | 1066* | 0.00 | 38.10 | 70 |
| 2.722000 | EXCAVATION | CY* | 31500 | 17.88 | 563220 | 281610 | 0 | 281610* | 0.20 | 44.70 | 6300 |
| 2.723000 | BACKFILL | CY* | 6300 | 26.82 | 168966 | 84483 | 0 | 84483* | 0.30 | 44.70 | 1890 |
| 2.730000 | SOLID WST STOCKPL | LS* | ---- | ---- | 243859 | 122844 | 0 | 121015* | --- | 44.51 | 2760 |
| 2.731000 | PVC LINER | SF* | 80000 | 0.05 | 4267 | 3048 | 0 | 1219* | 0.00 | 38.10 | 80 |
| 2.732000 | EXCAVATION | CY* | 8900 | 17.88 | 159132 | 79566 | 0 | 79566* | 0.20 | 44.70 | 1780 |
| 2.733000 | BACKFILL | CY* | 3000 | 26.82 | 80460 | 40230 | 0 | 40230* | 0.30 | 44.70 | 900 |
| 2.740000 | EMER WST WTR BASIN | LS* | ---- | ---- | 20500 | 10250 | 0 | 10250* | --- | 41.00 | 250 |
| 3.000000 | CIRCULATING WTR SYS | LS* | ---- | ---- | 7492387 | 4996944 | 90600 | 2404843* | --- | 44.72 | 111746 |
| 3.200000 | INTAKE & DSCHG PIPE | LS* | ---- | ---- | 1551416 | 988662 | 27500 | 535254* | --- | 43.15 | 22910 |
| 3.210000 | 84" CW CNCRT PIPE | LF* | 3400 | 180.25 | 612850 | 350200 | 0 | 262650* | 2.50 | 41.20 | 8500 |
| 3.260000 | BEDDING MATERIAL | CY* | 2800 | 20.50 | 57400 | 28700 | 0 | 28700* | 0.25 | 41.00 | 700 |
| 3.270000 | CONCRETE STRUCTURE | LS* | ---- | ---- | 838746 | 579462 | 27500 | 231784* | --- | 44.20 | 13110 |
| 3.271000 | THRUST/TRANS BLKS | CY* | 1000 | 286.46 | 286460 | 198900 | 8000 | 79560* | 4.50 | 44.20 | 4500 |
| 3.272000 | CONDENSER BLOCKS | CY* | 600 | 668.74 | 401244 | 278460 | 11400 | 111384* | 10.50 | 44.20 | 6300 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.273000 | PITOT TUBE PIT | CY* | 300 | 503.47 | 151042 | 102102 | 8100 | 40840* | 7.70 | 44.20 | 2310 |
| 3.280000 | MISC STEEL | LB* | 10 | 4242.00 | 42420 | 30300 | 0 | 12120* | 60.00 | 50.50 | 600 |
| 3.400000 | COOLING TOWER FACIL | LS* | ---- | ---- | 5940971 | 4008282 | 63100 | 1869589* | --- | 45.12 | 88836 |
| 3.410000 | TOWER BASIN | LS* | ---- | ---- | 1152722 | 690710 | 26300 | 435712* | --- | 44.26 | 15606 |
| 3.412000 | EXCAVATION | CY* | 16000 | 22.35 | 357600 | 143040 | 0 | 214560* | 0.20 | 44.70 | 3200 |
| 3.413000 | BACKFILL | CY* | 1000 | 10.42 | 10421 | 5955 | 0 | 4466* | 0.15 | 39.70 | 150 |
| 3.417000 | CONCRETE | CY* | 3200 | 245.22 | 784701 | 541715 | 26300 | 216686* | 3.83 | 44.20 | 12256 |
| 3.420000 | PUMP CHAMBER | LS* | ---- | ---- | 1441325 | 926912 | 36800 | 477613* | --- | 44.43 | 20860 |
| 3.422000 | EXCAVATION | CY* | 10300 | 22.35 | 230205 | 92082 | 0 | 138123* | 0.20 | 44.70 | 2060 |
| 3.423000 | BACKFILL | CY* | 2000 | 13.90 | 27790 | 15880 | 0 | 11910* | 0.20 | 39.70 | 400 |
| 3.428000 | CONCRETE | CY* | 3500 | 319.91 | 1119700 | 773500 | 36800 | 309400* | 5.00 | 44.20 | 17500 |
| 3.429000 | MISC STEEL | LB* | 15 | 4242.00 | 63630 | 45450 | 0 | 18180* | 60.00 | 50.50 | 900 |
| 3.430000 | INTAKE EQUIPMENT | LS* | ---- | ---- | 76944 | 54960 | 0 | 21984* | --- | 46.97 | 1170 |
| 3.433000 | SCREENS | SF* | 700 | 28.28 | 19796 | 14140 | 0 | 5656* | 0.40 | 50.50 | 280 |
| 3.435000 | STOP LOGS | SF* | 700 | 14.14 | 9898 | 7070 | 0 | 2828* | 0.20 | 50.50 | 140 |
| 3.436000 | CRANE(BRIDGE) 20T | LS* | ---- | ---- | 47250 | 33750 | 0 | 13500* | --- | 45.00 | 750 |
| 3.440000 | PUMP HS SUPERSTRUC | LS* | ---- | ---- | 536900 | 383500 | 0 | 153400* | --- | 46.77 | 8200 |
| 3.441000 | CRN & HST SUPPORT | TN* | 100 | 1555.40 | 155540 | 111100 | 0 | 44440* | 22.00 | 50.50 | 2200 |
| 3.442000 | BUILDING | SF* | 8000 | 47.67 | 381360 | 272400 | 0 | 108960* | 0.75 | 45.40 | 6000 |
| 3.450000 | TOWER SUPERSTRUCT | LS* | ---- | ---- | 2733080 | 1952200 | 0 | 780880* | --- | 45.40 | 43000 |
| 4.000000 | CONCRETE | LS* | ---- | ---- | 27157074 | 19000696 | 556100 | 7600278* | --- | 44.20 | 429880 |
| 4.100000 | TURBINE BLDG CONCR | CY* | 9000 | 661.98 | 5957860 | 4176900 | 110200 | 1670760* | 10.50 | 44.20 | 94500 |
| 4.200000 | BOILER AREA CONCRT | CY* | 3500 | 569.18 | 1992120 | 1392300 | 42900 | 556920* | 9.00 | 44.20 | 31500 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.300000 | SILO AREA CONCRETE | CY* | 3300 | 600.10 | 1980338 | 1385670 | 40400 | 554268* | 9.50 | 44.20 | 31350 |
| 4.400000 | AQCS CONCRETE | CY* | 14500 | 600.11 | 8701570 | 6088550 | 177600 | 2435420* | 9.50 | 44.20 | 137750 |
| 4.500000 | COAL HANDLG CONCRT | CY* | 9300 | 692.93 | 6444224 | 4521660 | 113900 | 1808664* | 11.00 | 44.20 | 102300 |
| 4.900000 | MISCELLAN CONCRETE | CY* | 5800 | 358.79 | 2080962 | 1435616 | 71100 | 574246* | 5.60 | 44.20 | 32480 |
| 5.000000 | STR STEEL/LIFT/STACK | LS* | ---- | ---- | 30461790 | 18986850 | 300000 | 11174940* | --- | 49.04 | 387175 |
| 5.100000 | TURBINE BUILDING | LS* | ---- | ---- | 3848460 | 2748900 | 0 | 1099560* | --- | 49.77 | 55228 |
| 5.110000 | MAIN STEEL | TN* | 2200 | 1190.00 | 2618000 | 1870000 | 0 | 748000* | 17.00 | 50.00 | 37400 |
| 5.120000 | FRAMING | LS* | ---- | ---- | 350000 | 250000 | 0 | 100000* | --- | 50.00 | 5000 |
| 5.121000 | WALL FRAMING | TN* | 200 | 1750.00 | 350000 | 250000 | 0 | 100000* | 25.00 | 50.00 | 5000 |
| 5.130000 | MISC STEEL | LS* | ---- | ---- | 722960 | 516400 | 0 | 206560* | --- | 50.00 | 10328 |
| 5.131000 | GRATING 1-3/4" | SF* | 23000 | 17.50 | 402500 | 287500 | 0 | 115000* | 0.25 | 50.00 | 5750 |
| 5.132000 | CHECKERED PLATE | SF* | 900 | 46.90 | 42210 | 30150 | 0 | 12060* | 0.67 | 50.00 | 603 |
| 5.133000 | HANDRAIL | LF* | 1900 | 87.50 | 166250 | 118750 | 0 | 47500* | 1.25 | 50.00 | 2375 |
| 5.134000 | LADDERS & STAIRS | TN* | 20 | 5600.00 | 112000 | 80000 | 0 | 32000* | 80.00 | 50.00 | 1600 |
| 5.140000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 157500 | 112500 | 0 | 45000* | --- | 45.00 | 2500 |
| 5.141000 | CRN BRDG 100T CAP | LS* | ---- | ---- | 157500 | 112500 | 0 | 45000* | --- | 45.00 | 2500 |
| 5.200000 | STEAM GENERATOR | LS* | ---- | ---- | 15359330 | 10970950 | 0 | 4388380* | --- | 49.96 | 219602 |
| 5.210000 | MAIN STEEL | TN* | 5920 | 1190.00 | 7044800 | 5032000 | 0 | 2012800* | 17.00 | 50.00 | 100640 |
| 5.220000 | FRAMING | LS* | ---- | ---- | 2128000 | 1520000 | 0 | 608000* | --- | 50.00 | 30400 |
| 5.221000 | WALL FRAMING | TN* | 560 | 3500.00 | 1960000 | 1400000 | 0 | 560000* | 50.00 | 50.00 | 28000 |
| 5.222000 | ELEVATOR FRAMING | TN* | 60 | 2800.00 | 168000 | 120000 | 0 | 48000* | 40.00 | 50.00 | 2400 |
| 5.230000 | MISC STEEL | LS* | ---- | ---- | 6071240 | 4336600 | 0 | 1734640* | --- | 50.00 | 86732 |
| 5.231000 | GRATING (1-3/4") | SF* | 129800 | 21.00 | 2725800 | 1947000 | 0 | 778800* | 0.30 | 50.00 | 38940 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.232000 | CHECKERED PLATE | SF* | 2900 | 46.90 | 136010 | 97150 | 0 | 38860* | 0.67 | 50.00 | 1943 |
| 5.233000 | HANDRAIL | LF* | 24500 | 91.00 | 2229430 | 1592450 | 0 | 636980* | 1.30 | 50.00 | 31849 |
| 5.234000 | LADDERS & STAIRS | TN* | 175 | 5600.00 | 980000 | 700000 | 0 | 280000* | 80.00 | 50.00 | 14000 |
| 5.240000 | LIFTING EQUIP | LS* | ---- | ---- | 115290 | 82350 | 0 | 32940* | --- | 45.00 | 1830 |
| 5.242000 | ELEVATOR EQUIP | LS* | ---- | ---- | 105840 | 75600 | 0 | 30240* | --- | 45.00 | 1680 |
| 5.243000 | OTHER LIFT EQUIP | LS* | ---- | ---- | 9450 | 6750 | 0 | 2700* | --- | 45.00 | 150 |
| 5.300000 | SILO BAY | LS* | ---- | ---- | 3398850 | 2427750 | 0 | 971100* | --- | 49.95 | 48600 |
| 5.310000 | MAIN STEEL | TN* | 500 | 1190.00 | 595000 | 425000 | 0 | 170000* | 17.00 | 50.00 | 8500 |
| 5.320000 | FRAMING | TN* | 0 | 0.00 | 350000 | 250000 | 0 | 100000* | 0.00 | 50.00 | 5000 |
| 5.321000 | WALL FRAMING | TN* | 100 | 3500.00 | 350000 | 250000 | 0 | 100000* | 50.00 | 50.00 | 5000 |
| 5.330000 | MISC STEEL | LS* | ---- | ---- | 220500 | 157500 | 0 | 63000* | --- | 50.00 | 3150 |
| 5.340000 | LIFTING EQUIPMENT | LS* | ---- | ---- | 28350 | 20250 | 0 | 8100* | --- | 45.00 | 450 |
| 5.343000 | OTHER LIFTING EQP | LS* | ---- | ---- | 28350 | 20250 | 0 | 8100* | --- | 45.00 | 450 |
| 5.350000 | SUPPORT STEEL | LS* | ---- | ---- | 980000 | 700000 | 0 | 280000* | --- | 50.00 | 14000 |
| 5.351000 | EQUIP SUPPORTS | TN* | 200 | 4900.00 | 980000 | 700000 | 0 | 280000* | 70.00 | 50.00 | 14000 |
| 5.360000 | STEEL SILO & GENER | LS* | ---- | ---- | 1225000 | 875000 | 0 | 350000* | --- | 50.00 | 17500 |
| 5.361000 | STEEL SILOS | TN* | 350 | 2800.00 | 980000 | 700000 | 0 | 280000* | 40.00 | 50.00 | 14000 |
| 5.362000 | SS PLATES | TN* | 70 | 3500.00 | 245000 | 175000 | 0 | 70000* | 50.00 | 50.00 | 3500 |
| 5.500000 | CONCRETE STACKS | LS* | ---- | ---- | 7593000 | 2652000 | 300000 | 4641000* | --- | 44.20 | 60000 |
| 5.900000 | UNCLASS. STEEL | TN* | 175 | 1498.00 | 262150 | 187250 | 0 | 74900* | 21.40 | 50.00 | 3745 |
| 6.000000 | BUILDINGS | LS* | ---- | ---- | 20042799 | 14316286 | 0 | 5726513* | --- | 42.82 | 334365 |
| 6.100000 | TURBINE BUILDING | LS* | ---- | ---- | 2316626 | 1654733 | 0 | 661893* | --- | 42.48 | 38950 |
| 6.110000 | ARCHIT FEATURES | LS* | ---- | ---- | 1253760 | 895543 | 0 | 358217* | --- | 43.60 | 20540 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.170000 | HVAC | LS* | ---- | ---- | 751366 | 536690 | 0 | 214676* | --- | 41.00 | 13090 |
| 6.180000 | PLUMBING & DRAIN | LS* | ---- | ---- | 257544 | 183960 | 0 | 73584* | --- | 42.00 | 4380 |
| 6.190000 | MISCELLANEOUS | LS* | ---- | ---- | 53956 | 38540 | 0 | 15416* | --- | 41.00 | 940 |
| 6.200000 | BOILER AREA | LS* | ---- | ---- | 3045952 | 2175680 | 0 | 870272* | --- | 42.49 | 51210 |
| 6.210000 | ARCHIT FEATURES | LS* | ---- | ---- | 1767108 | 1262220 | 0 | 504888* | --- | 43.60 | 28950 |
| 6.270000 | HVAC | LS* | ---- | ---- | 1224916 | 874940 | 0 | 349976* | --- | 41.00 | 21340 |
| 6.280000 | PLUMBING & DRAIN | LS* | ---- | ---- | 47040 | 33600 | 0 | 13440* | --- | 42.00 | 800 |
| 6.290000 | MISCELLANEOUS | LS* | ---- | ---- | 6888 | 4920 | 0 | 1968* | --- | 41.00 | 120 |
| 6.300000 | SILO BAY | LS* | ---- | ---- | 910977 | 650698 | 0 | 260279* | --- | 42.03 | 15480 |
| 6.310000 | ARCHIT FEATURES | LS* | ---- | ---- | 319848 | 228463 | 0 | 91385* | --- | 43.60 | 5240 |
| 6.370000 | HVAC | LS* | ---- | ---- | 450303 | 321645 | 0 | 128658* | --- | 41.00 | 7845 |
| 6.380000 | PLUMBING & DRAIN | LS* | ---- | ---- | 132006 | 94290 | 0 | 37716* | --- | 42.00 | 2245 |
| 6.390000 | MISCELLANEOUS | LS* | ---- | ---- | 8820 | 6300 | 0 | 2520* | --- | 42.00 | 150 |
| 6.391000 | FIRE PROT STATION | EA* | 5 | 1764.00 | 8820 | 6300 | 0 | 2520* | 30.00 | 42.00 | 150 |
| 6.400000 | AQCS BUILDINGS | LS* | ---- | ---- | 4292139 | 3065814 | 0 | 1226325* | --- | 43.00 | 71298 |
| 6.410000 | FGDS SWGR BUILDING | SF* | 1800 | 99.33 | 178794 | 127710 | 0 | 51084* | 1.65 | 43.00 | 2970 |
| 6.420000 | AQCS CTRL BUILDING | SF* | 4800 | 120.40 | 577920 | 412800 | 0 | 165120* | 2.00 | 43.00 | 9600 |
| 6.430000 | DIESEL GEN BUILD | SF* | 1125 | 107.13 | 120520 | 86086 | 0 | 34434* | 1.78 | 43.00 | 2002 |
| 6.440000 | PUMP HOUSE | SF* | 27500 | 107.16 | 2946790 | 2104850 | 0 | 841940* | 1.78 | 43.00 | 48950 |
| 6.450000 | LIMESTONE PREP BLD | SF* | 8640 | 54.18 | 468115 | 334368 | 0 | 133747* | 0.90 | 43.00 | 7776 |
| 6.700000 | PLANT BUILDINGS | LS* | ---- | ---- | 9477105 | 6769361 | 0 | 2707744* | --- | 43.00 | 157427 |
| 6.730000 | ADMINISTRATION BLD | SF* | 9500 | 180.60 | 1715700 | 1225500 | 0 | 490200* | 3.00 | 43.00 | 28500 |
| 6.740000 | CONTROL BUILDING | LS* | ---- | ---- | 1167880 | 834200 | 0 | 333680* | --- | 43.00 | 19400 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.750000 | WTR TREATMENT BLDG | SF* | 4250 | 150.50 | 639625 | 456875 | 0 | 182750* | 2.50 | 43.00 | 10625 |
| 6.790000 | ALL OTHER | LS* | ---- | ---- | 4784214 | 3417296 | 0 | 1366918* | --- | 43.00 | 79472 |
| 6.791000 | PLANT MAINTENANCE | SF* | 4000 | 96.32 | 385280 | 275200 | 0 | 110080* | 1.60 | 43.00 | 6400 |
| 6.792000 | AUX BOILER | SF* | 1200 | 168.56 | 202272 | 144480 | 0 | 57792* | 2.80 | 43.00 | 3360 |
| 6.793000 | YD EQUIP MNTN BLD | SF* | 1500 | 96.32 | 144480 | 103200 | 0 | 41280* | 1.60 | 43.00 | 2400 |
| 6.794000 | CHLORINE | SF* | 2700 | 105.35 | 284445 | 203175 | 0 | 81270* | 1.75 | 43.00 | 4725 |
| 6.795000 | FIRE/SER-PUMPHS | SF* | 800 | 114.38 | 91504 | 65360 | 0 | 26144* | 1.90 | 43.00 | 1520 |
| 6.796000 | GUARDHOUSE | SF* | 225 | 180.60 | 40635 | 29025 | 0 | 11610* | 3.00 | 43.00 | 675 |
| 6.797000 | WAREHOUSE NO. 1 | SF* | 30000 | 33.11 | 993300 | 709500 | 0 | 283800* | 0.55 | 43.00 | 16500 |
| 6.798000 | CRASHING & SAMPLE | SF* | 2500 | 105.35 | 263375 | 188125 | 0 | 75250* | 1.75 | 43.00 | 4375 |
| 6.799000 | OTHER BUILDINGS | LS* | ---- | ---- | 2378923 | 1699231 | 0 | 679692* | --- | 43.00 | 39517 |
| 6.799100 | BULK GAS STORAGE | SF* | 1500 | 90.30 | 135450 | 96750 | 0 | 38700* | 1.50 | 43.00 | 2250 |
| 6.799200 | CTRL & SNGE BLDG | SF* | 2400 | 99.33 | 238392 | 170280 | 0 | 68112* | 1.65 | 43.00 | 3960 |
| 6.799300 | SWG TREAT BLDG | SF* | 5250 | 105.34 | 553057 | 395041 | 0 | 158016* | 1.75 | 43.00 | 9187 |
| 6.799400 | DEWAT & FIXATION | SF* | 14175 | 96.32 | 1365336 | 975240 | 0 | 390096* | 1.60 | 43.00 | 22680 |
| 6.799500 | SWITCHYARD CTRL | SF* | 800 | 108.36 | 86688 | 61920 | 0 | 24768* | 1.80 | 43.00 | 1440 |
| 6.940000 | WASTEWATER TREATMT | LS* | ---- | ---- | 1169686 | 835490 | 0 | 334196* | --- | 43.00 | 19430 |
| 7.000000 | TURBINE GENERATOR | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 7.100000 | TURB GEN & ACCESS | LS* | ---- | ---- | 6300000 | 4200000 | 0 | 2100000* | --- | 42.00 | 100000 |
| 8.000000 | STEAM GENERATOR | LS* | ---- | ---- | 45675000 | 30450000 | 0 | 15225000* | --- | 42.00 | 725000 |
| 8.100000 | STEAM GEN & ACCESS | LS* | ---- | ---- | 45675000 | 30450000 | 0 | 15225000* | --- | 42.00 | 725000 |
| 9.000000 | AQCS | LS* | ---- | ---- | 59220000 | 39480000 | 0 | 19740000* | --- | 42.00 | 940000 |
| 9.100000 | BAGHOUSE | LS* | ---- | ---- | 11340000 | 7560000 | 0 | 3780000* | --- | 42.00 | 180000 |

APA
SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.200000 | FLUE GAS DESUL | LS* | ---- | ---- | 41958000 | 27972000 | 0 | 13986000* | --- | 42.00 | 666000 |
| 9.210000 | COMPONENTS | LS* | ---- | ---- | 41958000 | 27972000 | 0 | 13986000* | --- | 42.00 | 666000 |
| 9.211000 | BREECHING | LS* | ---- | ---- | 4347000 | 2898000 | 0 | 1449000* | --- | 42.00 | 69000 |
| 9.213000 | SO2 ABSORBER | LS* | ---- | ---- | 28350000 | 18900000 | 0 | 9450000* | --- | 42.00 | 450000 |
| 9.215000 | LIMESTN UNLDING | LS* | ---- | ---- | 5481000 | 3654000 | 0 | 1827000* | --- | 42.00 | 87000 |
| 9.216000 | LIMESTN PREPERAT | LS* | ---- | ---- | 3780000 | 2520000 | 0 | 1260000* | --- | 42.00 | 60000 |
| 9.300000 | WASTE DISPOSAL | LS* | ---- | ---- | 5040000 | 3360000 | 0 | 1680000* | --- | 42.00 | 80000 |
| 9.310000 | WASTE DISP SYS | LS* | ---- | ---- | 5040000 | 3360000 | 0 | 1680000* | --- | 42.00 | 80000 |
| 9.311000 | WASTE PROCESS EQP | LS* | ---- | ---- | 5040000 | 3360000 | 0 | 1680000* | --- | 42.00 | 80000 |
| 9.400000 | FANS | LS* | ---- | ---- | 882000 | 588000 | 0 | 294000* | --- | 42.00 | 14000 |
| 9.410000 | I D FANS | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 9.420000 | SILENCERS | LS* | ---- | ---- | 378000 | 252000 | 0 | 126000* | --- | 42.00 | 6000 |
| 10.000000 | OTH MECHANICAL EQUIP | LS* | ---- | ---- | 9944285 | 6629490 | 50 | 3314745* | --- | 42.00 | 157845 |
| 10.100000 | PUMPS | LS* | ---- | ---- | 767025 | 511350 | 0 | 255675* | --- | 42.00 | 12175 |
| 10.110000 | BOILER PUMPS | LS* | ---- | ---- | 598500 | 399000 | 0 | 199500* | --- | 42.00 | 9500 |
| 10.111000 | BOILER FEED PUMPS | EA* | 2 | 126000.0 | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.112000 | BF PUMP TURBINES | EA* | 2 | 94500.0 | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 10.113000 | BF BOOSTER PUMPS | EA* | 2 | 47250.0 | 94500 | 63000 | 0 | 31500* | --- | 42.00 | 1500 |
| 10.114000 | BF STR UP/STD BY | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.120000 | FEEDWATER SYS PMPS | LS* | ---- | ---- | 4725 | 3150 | 0 | 1575* | --- | 42.00 | 75 |
| 10.121000 | CONDENS TRANSFER | LS* | ---- | ---- | 4725 | 3150 | 0 | 1575* | --- | 42.00 | 75 |
| 10.130000 | SRV/CLNG WTR PMPS | LS* | ---- | ---- | 40950 | 27300 | 0 | 13650* | --- | 42.00 | 650 |
| 10.131000 | SERVICE WATER | EA* | 2 | 9450.0 | 18900 | 12600 | 0 | 6300* | --- | 42.00 | 300 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.132000 | AIR HTR WASH PUMP | EA* | 2 | 6300.0 | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| 10.133000 | CLSD CYC CLNG WTR | EA* | 2 | 4725.00 | 9450 | 6300 | 0 | 3150* | 75.00 | 42.00 | 150 |
| 10.140000 | OIL PUMPS | LS* | ---- | ---- | 18900 | 12600 | 0 | 6300* | --- | 42.00 | 300 |
| 10.141000 | L O UNLOADNG PMPS | EA* | 2 | 1575.00 | 3150 | 2100 | 0 | 1050* | 25.00 | 42.00 | 50 |
| 10.142000 | IGNITER OIL PUMPS | LS* | ---- | ---- | 9450 | 6300 | 0 | 3150* | --- | 42.00 | 150 |
| 10.143000 | TURB LO TRAN PMPS | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.145000 | L O COND PUMP | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.150000 | SUMP PUMPS | LS* | ---- | ---- | 12600 | 8400 | 0 | 4200* | --- | 42.00 | 200 |
| 10.160000 | OTHER PUMPS | LS* | ---- | ---- | 91350 | 60900 | 0 | 30450* | --- | 42.00 | 1450 |
| 10.161000 | COOLING TOWER M U | LS* | ---- | ---- | 18900 | 12600 | 0 | 6300* | --- | 42.00 | 300 |
| 10.162000 | OPN CYC COOL WTR | EA* | 2 | 15750.0 | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.163000 | FIRE PROT PUMPS | EA* | 2 | 15750.0 | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 10.164000 | AIR PREHTR GLY | EA* | 2 | 4725.00 | 9450 | 6300 | 0 | 3150* | 75.00 | 42.00 | 150 |
| 10.200000 | CONDENSING PLANT | LS* | ---- | ---- | 1215900 | 810600 | 0 | 405300* | --- | 42.00 | 19300 |
| 10.210000 | CONDENS & AUXILIAR | LS* | ---- | ---- | 945000 | 630000 | 0 | 315000* | --- | 42.00 | 15000 |
| 10.220000 | EQUIPMENT | LS* | ---- | ---- | 270900 | 180600 | 0 | 90300* | --- | 42.00 | 4300 |
| 10.221000 | CW PUMPS | EA* | 2 | 47250.0 | 94500 | 63000 | 0 | 31500* | --- | 42.00 | 1500 |
| 10.222000 | CONDENSATE PUMPS | EA* | 3 | 31500.0 | 94500 | 63000 | 0 | 31500* | --- | 42.00 | 1500 |
| 10.223000 | VACUUM PUMPS | EA* | 2 | 7875.0 | 15750 | 10500 | 0 | 5250* | --- | 42.00 | 250 |
| 10.226000 | CONDENS CLEAN SYS | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.227000 | CONDENS COLL PUMP | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.300000 | HEAT EXCHANGERS | LS* | ---- | ---- | 347130 | 231420 | 0 | 115710* | --- | 42.00 | 5510 |
| 10.310000 | FEED HEATERS | EA* | 7 | 27090.0 | 189630 | 126420 | 0 | 63210* | --- | 42.00 | 3010 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.320000 | DEAER & VNT CONDEN | LS* | ---- | ---- | 78750 | 52500 | 0 | 26250* | --- | 42.00 | 1250 |
| 10.330000 | CLSD CYC COOL WHE | EA* | 2 | 31500.0 | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.340000 | AIR PRHT GLY HT EX | EA* | 2 | 7875.0 | 15750 | 10500 | 0 | 5250* | --- | 42.00 | 250 |
| 10.400000 | TANKS | LS* | ---- | ---- | 756680 | 504420 | 50 | 252210* | --- | 42.00 | 12010 |
| 10.410000 | WATER TANKS | LS* | ---- | ---- | 535500 | 357000 | 0 | 178500* | --- | 42.00 | 8500 |
| 10.412000 | CONDENS STRG TNK | LS* | ---- | ---- | 283500 | 189000 | 0 | 94500* | --- | 42.00 | 4500 |
| 10.414000 | FIRE&SRV WTR STRG | LS* | ---- | ---- | 252000 | 168000 | 0 | 84000* | --- | 42.00 | 4000 |
| 10.430000 | L O STORAGE TANK | LS* | ---- | ---- | 138600 | 92400 | 0 | 46200* | --- | 42.00 | 2200 |
| 10.440000 | OTH FL OIL STRG TK | EA* | 3 | 10710.0 | 32130 | 21420 | 0 | 10710* | --- | 42.00 | 510 |
| 10.450000 | OTHER OIL TANKS | LS* | ---- | ---- | 50450 | 33600 | 50 | 16800* | --- | 42.00 | 800 |
| 10.452000 | BATCH OIL TANK | LS* | ---- | ---- | 18950 | 12600 | 50 | 6300* | --- | 42.00 | 300 |
| 10.453000 | CONT BD FLASH TNK | LS* | ---- | ---- | 3150 | 2100 | 0 | 1050* | --- | 42.00 | 50 |
| 10.454000 | INT BD FLASH TANK | LS* | ---- | ---- | 9450 | 6300 | 0 | 3150* | --- | 42.00 | 150 |
| 10.455000 | COND COLL TANK | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.456000 | CLSD CYC COOL WHT | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.457000 | AIR PREHT COR EXT | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.500000 | MISCELLANEOUS EQUIP | LS* | ---- | ---- | 1345050 | 896700 | 0 | 448350* | --- | 42.00 | 21350 |
| 10.510000 | COMPRESS AIR EQUIP | LS* | ---- | ---- | 308700 | 205800 | 0 | 102900* | --- | 42.00 | 4900 |
| 10.512000 | STAT AIR COMPRES | EA* | 2 | 81900.0 | 163800 | 109200 | 0 | 54600* | --- | 42.00 | 2600 |
| 10.513000 | AIR DRYERS | LS* | ---- | ---- | 6300 | 4200 | 0 | 2100* | --- | 42.00 | 100 |
| 10.514000 | SOOT BLW AIR COMP | LS* | ---- | ---- | 138600 | 92400 | 0 | 46200* | --- | 42.00 | 2200 |
| 10.520000 | WTR TREAT EQUIP | LS* | ---- | ---- | 1036350 | 690900 | 0 | 345450* | --- | 42.00 | 16450 |
| 10.521000 | MKUP WTR TRTMT SY | LS* | ---- | ---- | 441000 | 294000 | 0 | 147000* | --- | 42.00 | 7000 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.522000 | COND POL DEMINER | LS* | ---- | ---- | 441000 | 294000 | 0 | 147000* | --- | 42.00 | 7000 |
| 10.523000 | CHLORIN EQUIP | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 10.524000 | BOILER CHEM FEED | LS* | ---- | ---- | 18900 | 12600 | 0 | 6300* | --- | 42.00 | 300 |
| 10.525000 | SHALING SYSTEM | LS* | ---- | ---- | 28350 | 18900 | 0 | 9450* | --- | 42.00 | 450 |
| 10.526000 | BLK GAS STORAGE | LS* | ---- | ---- | 44100 | 29400 | 0 | 14700* | --- | 42.00 | 700 |
| 10.600000 | AUXILIARY BOILER | LS* | ---- | ---- | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 10.700000 | CECI SYSTEM | LS* | ---- | ---- | 1575000 | 1050000 | 0 | 525000* | --- | 42.00 | 25000 |
| 10.800000 | EQUIP UNLOAD FAC | LS* | ---- | ---- | 126000 | 84000 | 0 | 42000* | --- | 42.00 | 2000 |
| 10.900000 | TURBINE BYPASS | LS* | ---- | ---- | 3622500 | 2415000 | 0 | 1207500* | --- | 42.00 | 57500 |
| 11.000000 | COAL AND ASH HANDLG | LS* | ---- | ---- | 15434370 | 10289580 | 0 | 5144790* | --- | 42.00 | 244990 |
| 11.100000 | COAL HANDLING | LS* | ---- | ---- | 11214000 | 7476000 | 0 | 3738000* | --- | 42.00 | 178000 |
| 11.110000 | THAWING FACILITY | LS* | ---- | ---- | 315000 | 210000 | 0 | 105000* | --- | 42.00 | 5000 |
| 11.120000 | UNLOADING FACILITY | LS* | ---- | ---- | 1039500 | 693000 | 0 | 346500* | --- | 42.00 | 16500 |
| 11.122000 | CONVEYOR NO. 1 | LS* | ---- | ---- | 1039500 | 693000 | 0 | 346500* | --- | 42.00 | 16500 |
| 11.130000 | STACKOUT SYSTEM | LS* | ---- | ---- | 1732500 | 1155000 | 0 | 577500* | --- | 42.00 | 27500 |
| 11.131000 | CONVEYOR NO. 2 | LS* | ---- | ---- | 1732500 | 1155000 | 0 | 577500* | --- | 42.00 | 27500 |
| 11.140000 | RECLAIM SYSTEM | LS* | ---- | ---- | 4347000 | 2898000 | 0 | 1449000* | --- | 42.00 | 69000 |
| 11.141000 | STACKER RECLAIMER | LS* | ---- | ---- | 2205000 | 1470000 | 0 | 735000* | --- | 42.00 | 35000 |
| 11.142000 | CONVEYOR NO. 5 | LS* | ---- | ---- | 693000 | 462000 | 0 | 231000* | --- | 42.00 | 11000 |
| 11.143000 | EMER REC HPR FDR | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 11.144000 | CONVEYOR NO. 6 | LS* | ---- | ---- | 724500 | 483000 | 0 | 241500* | --- | 42.00 | 11500 |
| 11.145000 | CONVEYOR NO. 7A&B | EA* | 2 | 346500.0 | 693000 | 462000 | 0 | 231000* | --- | 42.00 | 11000 |
| 11.160000 | CRUSH & TRSF SYST | LS* | ---- | ---- | 2614500 | 1743000 | 0 | 871500* | --- | 42.00 | 41500 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.161000 | CONVEYOR NO. 8A&B | EA* | 2 | 630000.0 | 1260000 | 840000 | 0 | 420000* | --- | 42.00 | 20000 |
| 11.162000 | SURGE BIN | LS* | ---- | ---- | 283500 | 189000 | 0 | 94500* | --- | 42.00 | 4500 |
| 11.163000 | SAMPLING SYSTEM | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 11.164000 | COAL CRUSHERS | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.165000 | CONVEYOR NO. 9A | LS* | ---- | ---- | 504000 | 336000 | 0 | 168000* | --- | 42.00 | 8000 |
| 11.170000 | MISC SYSTEMS | LS* | ---- | ---- | 1165500 | 777000 | 0 | 388500* | --- | 42.00 | 18500 |
| 11.172000 | FIRE PROTECTION | LS* | ---- | ---- | 630000 | 420000 | 0 | 210000* | --- | 42.00 | 10000 |
| 11.173000 | TUNNEL VENTILAT | LS* | ---- | ---- | 31500 | 21000 | 0 | 10500* | --- | 42.00 | 500 |
| 11.174000 | INSTRUM & CTRL | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.176000 | MISC EQUIPMENT | LS* | ---- | ---- | 441000 | 294000 | 0 | 147000* | --- | 42.00 | 7000 |
| 11.200000 | BTM ASH HNDG SYS | LS* | ---- | ---- | 2456370 | 1637580 | 0 | 818790* | --- | 42.00 | 38990 |
| 11.210000 | FURN BTM ASH SYS | LS* | ---- | ---- | 882000 | 588000 | 0 | 294000* | --- | 42.00 | 14000 |
| 11.220000 | PYRITE HNDG SYS | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.230000 | ECON ASH SYSTEM | LS* | ---- | ---- | 189000 | 126000 | 0 | 63000* | --- | 42.00 | 3000 |
| 11.240000 | DEWTR BIN&SET TNKS | LS* | ---- | ---- | 1197000 | 798000 | 0 | 399000* | --- | 42.00 | 19000 |
| 11.250000 | MAJOR PUMPS | EA* | 3 | 20790.0 | 62370 | 41580 | 0 | 20790* | --- | 42.00 | 990 |
| 11.260000 | BTM ASH INSTRUM | LS* | ---- | ---- | 63000 | 42000 | 0 | 21000* | --- | 42.00 | 1000 |
| 11.400000 | FLY ASH SYSTEM | LS* | ---- | ---- | 1764000 | 1176000 | 0 | 588000* | --- | 42.00 | 28000 |
| 12.000000 | PIPING | LS* | ---- | ---- | 35858718 | 23905812 | 0 | 11952906* | --- | 42.00 | 569186 |
| 12.100000 | LARGE BORE PIPING | TN* | 2102 | 10584.0 | 22247568 | 14831712 | 0 | 7415856* | --- | 42.00 | 353136 |
| 12.200000 | SMALL BORE PIPING | LF* | 145000 | 93.87 | 13611150 | 9074100 | 0 | 4537050* | 1.49 | 42.00 | 216050 |
| 13.000000 | INSULATION | LS* | ---- | ---- | 11025000 | 7350000 | 0 | 3675000* | --- | 42.00 | 175000 |
| 13.100000 | INSULATION | LS* | ---- | ---- | 11025000 | 7350000 | 0 | 3675000* | --- | 42.00 | 175000 |

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| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.000000 | INSTRUMENTATION | LS* | ---- | ---- | 756000 | 504000 | 0 | 252000* | --- | 42.00 | 12000 |
| 14.100000 | INSTRUMENTATION | LS* | ---- | ---- | 756000 | 504000 | 0 | 252000* | --- | 42.00 | 12000 |
| 15.000000 | ELECTRICAL EQUIPMENT | LS* | ---- | ---- | 65191200 | 43460800 | 0 | 21730400* | --- | 46.00 | 944800 |
| 16.000000 | PAINTING | LS* | ---- | ---- | 4160520 | 2971800 | 0 | 1188720* | --- | 39.00 | 76200 |
| 16.100000 | TURBINE BUILDING | LS* | ---- | ---- | 1097460 | 783900 | 0 | 313560* | --- | 39.00 | 20100 |
| 16.200000 | STEAM GEN BUILDING | LS* | ---- | ---- | 2265900 | 1618500 | 0 | 647400* | --- | 39.00 | 41500 |
| 16.300000 | SILO BAY | LS* | ---- | ---- | 365820 | 261300 | 0 | 104520* | --- | 39.00 | 6700 |
| 16.900000 | MISC PAINTING | LS* | ---- | ---- | 431340 | 308100 | 0 | 123240* | --- | 39.00 | 7900 |
| 17.000000 | OFF-SITE FACILITIES | LS* | ---- | ---- | 7430700 | 2905200 | 0 | 4525500* | --- | 43.62 | 66600 |
| 17.100000 | RANNEY WELL SYSTEM | LS* | ---- | ---- | 2513700 | 1117200 | 0 | 1396500* | --- | 42.00 | 26600 |
| 17.200000 | ACCESS ROADS | MI* | 20 | 245850.0 | 4917000 | 1788000 | 0 | 3129000* | --- | 44.70 | 40000 |
| 18.000000 | WATERFRONT FACILITY | LS* | ---- | ---- | 6823822 | 2897490 | 15000 | 3911332* | --- | 46.60 | 62175 |
| 18.100000 | BARGE UNLOADING FAC | LS* | ---- | ---- | 577920 | 165120 | 0 | 412800* | --- | 43.00 | 3840 |
| 18.110000 | DREDGING | CY* | 32000 | 18.06 | 577920 | 165120 | 0 | 412800* | 0.12 | 43.00 | 3840 |
| 18.200000 | MOOR/DOCK FACILITY. | LS* | ---- | ---- | 6245902 | 2732370 | 15000 | 3498532* | --- | 46.84 | 58335 |
| 18.210000 | EXCAVATION | CY* | 45000 | 8.28 | 372487 | 135450 | 0 | 237037* | 0.07 | 43.00 | 3150 |
| 18.220000 | FILL | CY* | 27500 | 9.67 | 266062 | 106425 | 0 | 159637* | 0.09 | 43.00 | 2475 |
| 18.230000 | H PILES | LF* | 2100 | 19.57 | 41107 | 16443 | 0 | 24664* | 0.18 | 43.50 | 378 |
| 18.240000 | SHEET PILING | TN* | 2480 | 1818.75 | 4510500 | 1804200 | 0 | 2706300* | 15.00 | 48.50 | 37200 |
| 18.250000 | STRUCTURAL STEEL | TN* | 102 | 1358.00 | 138516 | 79152 | 0 | 59364* | 16.00 | 48.50 | 1632 |
| 18.260000 | CONCRETE | CY* | 1700 | 318.22 | 540980 | 375700 | 15000 | 150280* | 5.00 | 44.20 | 8500 |
| 18.270000 | MISCELLANEOUS | LS* | ---- | ---- | 376250 | 215000 | 0 | 161250* | --- | 43.00 | 5000 |
| 19.000000 | SUBSTATION/T-LINE | LS* | ---- | ---- | 13489413 | 7991896 | 0 | 5497517* | --- | 46.10 | 173360 |

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SUSITNA 600 MW COAL
ESTIMATE NO. APA 1707 M-1

BY: JDF CHECKED: JDF

DATE: 21-JUN-84 TIME: 17:38:22

DETAILED
INSTALLATION BREAKOUT REPORT

| ACCT NO | DESCRIPTION | UN* | (QTY) | (UN $ INS) | (TOTL INS) | (PAYROLL) | (MAJ EXP) | (CONT OTH)* | (MH/UN) | ($/MH) | (TOT MH) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.100000 | SUBSTATION | LS* | ---- | ---- | 1000370 | 645400 | 0 | 354970* | --- | 46.10 | 14000 |
| 19.200000 | 230KV T-LINE:2 CIR | MI* | 48 | 260188.4 | 12489043 | 7346496 | 0 | 5142547* | --- | 46.10 | 159360 |
| 71.000000 | INDIRECT CONST COST | LS* | ---- | ---- | 78654530 | 13198177 | 56684000 | 8772353* | --- | 25.15 | 524840 |
| 71.100000 | FIELD LOCAL HIRES | LS* | ---- | ---- | 8229078 | 4554000 | 0 | 3675078* | --- | 16.50 | 276000 |
| 71.200000 | CRAFT P/R FRINGES | LS* | ---- | ---- | 5535000 | 0 | 5535000 | 0* | --- | 0.00 | 0 |
| 71.210000 | PREM PAY-CASUAL | LS* | ---- | ---- | 3690000 | 0 | 3690000 | 0* | --- | 30.75 | 0 |
| 71.220000 | PREM PAY-SCHED | LS* | ---- | ---- | 1845000 | 0 | 1845000 | 0* | --- | 30.75 | 0 |
| 71.300000 | CONSTRUCTION EQUIPT | LS* | ---- | ---- | 222000 | 0 | 222000 | 0* | --- | 0.00 | 0 |
| 71.310000 | AUTOMOTIVE(C/M) | LS* | ---- | ---- | 222000 | 0 | 222000 | 0* | --- | 0.00 | 0 |
| 71.400000 | CONSTRUCTION PLANT | LS* | ---- | ---- | 45801284 | 2784728 | 39856000 | 3160556* | --- | 43.35 | 64240 |
| 71.410000 | CONSTRUCTION BLDGS | LS* | ---- | ---- | 2112784 | 770400 | 988000 | 354384* | --- | 40.00 | 19260 |
| 71.420000 | TEMP FACILITIES | LS* | ---- | ---- | 43688500 | 2014328 | 38868000 | 2806172* | --- | 44.78 | 44980 |
| 71.421000 | LABOR CAMP | LS* | ---- | ---- | 18150000 | 0 | 18150000 | 0* | --- | 0.00 | 0 |
| 71.422000 | FOOD SERVICE | LS* | ---- | ---- | 19800000 | 0 | 19800000 | 0* | --- | 0.00 | 0 |
| 71.423000 | TEMPORARY POWER | LS* | ---- | ---- | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.423100 | TEMP 69 KV T-LIN | MI* | 10 | 220500.2 | 2205002 | 1200600 | 200000 | 804402* | --- | 46.00 | 26100 |
| 71.424000 | OTHER TEMP FACIL | LS* | ---- | ---- | 3533498 | 813728 | 718000 | 2001770* | --- | 43.10 | 18880 |
| 71.600000 | OFFICE/LABOR EXPENS | LS* | ---- | ---- | 2692260 | 1948800 | 371000 | 372460* | --- | 22.12 | 88100 |
| 71.610000 | OFFICE EXPENSE | LS* | ---- | ---- | 221000 | 0 | 221000 | 0* | --- | 0.00 | 0 |
| 71.620000 | LABOR EXPENSE | LS* | ---- | ---- | 995140 | 857880 | 0 | 137260* | --- | 23.83 | 36000 |
| 71.630000 | TESTING | LS* | ---- | ---- | 973200 | 588000 | 150000 | 235200* | --- | 42.00 | 14000 |
| 71.640000 | SECURITY GUARDS | LS* | ---- | ---- | 502920 | 502920 | 0 | 0* | --- | 13.20 | 38100 |
| 71.700000 | OFF-SITE UNLDG/HAUL | LS* | ---- | ---- | 15828200 | 3663000 | 10700000 | 1465200* | --- | 40.70 | 90000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 71.800000 | CONSTRUCTN CLEANUP | LS* | ---- | ---- | 346708 | 247649 | 0 | 99059* | --- | 38.10 | 6500 |
| 72.000000 | PROFESSIONAL SERVCS | LS* | ---- | ---- | 68725000 | 0 | 68725000 | 0* | --- | 0.00 | 0 |