FLUOR FERNALD CLOSURE PLAN
BASIS OF ESTIMATE

PBS-03
ON-SITE DISPOSAL FACILITY PROJECT

SEPTEMBER 2001

20100-PL-0023
REVISION 1

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- 1.2 Assumptions/Exclusions
  - 1.2.1 Assumptions
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  - 1.2.3 Government-Furnished Equipment/Services
- 1.3 Drivers
- 1.4 Project Physical Description
  - 1.4.1 CECP1 - OSDF Management and Oversight
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  - 1.4.3 CECP3 - OSDF Construction Management

2.0 Manpower Plans
- 2.1 OSDF Project Management and Oversight
- 2.2 OSDF Engineering Staff
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3.0 Estimate

4.0 Risk Plan

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  - 1.1.3 CAEN5 – OSDF CQC Services
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- 1.2 Assumptions/Exclusions
  - 1.2.1 Assumptions
  - 1.2.2 Exclusions
  - 1.2.3 Government-Furnished Equipment/Services
- 1.3 Drivers
- 1.4 Project Physical Description
- 1.5 Project Plan/Technical Scope and Quantification
  - 1.5.1 CAEN1 - OSDF Design
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      - 1.1) Subtask #1 – Procurement
        - 1.1)1 Plan/Scope – Procurement
        - 1.1)2 Quantification – Procurement
      - 1.2) Subtask #2 – Preparation of OSDF CFC Package
        - 1.2)1 Plan/Scope – Preparation of OSDF CFC Package
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    - 2) Task #2 – Support for Procurement of OSDF Construction Subcontractor
      - 2.1) Plan/Scope
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    - 3) Task #3 – OSDF Infrastructure CFC Packages
      - 3.1) Subtask #1 – Access Control Facility CFC Package
        - 3.1)1 Plan/Scope
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      - 3.2) Subtask #2 – Removal of Temporary and Interim Leachate Line CFC Package
        - 3.2)1 Plan/Scope
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        - 3.3)1 Plan/Scope
        - 3.3)2 Quantification
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        - 3.4)1 Plan/Scope
        - 3.4)2 Quantification
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        - 3.5)1 Plan/Scope
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Section 2: CAEN – OSDF Engineering (Continued)

4) Task #4 – Other OSDF Activities in FY2001
   4.1) Subtask #1 – Provide Title III Services
      4.1)1 Plan/Scope
      4.1)2 Quantification
   4.2) Subtask #2 – Provide Support for Review of OSDF Monitoring Data
      4.2)1 Plan/Scope
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1.5.2 CAEN2-CAEN4 – Not Used

1.5.3 CAEN5 – OSDF CQC Services
1) Task #1 – Selection of CQC Subcontractor
   1.1) Plan/Scope
   1.2) Quantification
2) Task #2 – CQC Services
   2.1) Subtask #1 – CQC Services for Borrow Area Development
      2.1)1 Plan/Scope
      2.1)2 Quantification
   2.2) Subtask #2 – CQC Services for OSDF Liners, Final Cover and Infrastructure Construction
      2.2)1 Plan/Scope
      2.2)2 Quantification
   2.3) Subtask #3 – CQC Services for Impacted Material Placement
      2.3)1 Plan/Scope
      2.3)2 Quantification

1.5.4 CAEN6 - OSDF Title III Services
1) Task #1 – Selection of OSDF Title III Subcontractor
   1.1) Plan/Scope
   1.2) Quantification
2) Task #2 – Title III Services
   2.1) Plan/Scope
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1.5.5 CAEN7 - OSDF Monitoring and Data Management
1) Plan/Scope
2) Quantification

2.0 Schedule
3.0 Manpower Plans
   3.1 OSDF Design
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5.0 Risk Plan

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  - 1.1.2 Enhanced Permanent LTS Design
  - 1.1.3 Enhanced Permanent LTS Construction
- 1.2 Assumptions/Exclusions
  - 1.2.1 Assumptions
  - 1.2.2 Exclusions
  - 1.2.3 Government-Furnished Equipment/Services
- 1.3 Drivers
- 1.4 Project Physical Description
- 1.5 Project Plan/Technical Scope and Quantification
  - 1.5.1 CBSP1 - OSDF Miscellaneous Infrastructure Projects
    - 1) Task #1 – Submittals and Procurement
      - 1.1) Subtask #1 - Submittals
        - 1.1)1 Plan/Scope - Submittals
        - 1.1)2 Quantification – Submittals
      - 1.2) Subtask #2 - Procurement
        - 1.2)1 Plan/Scope – Procurement
        - 1.2)2 Quantification – Procurement
    - 2) Task #2 – Relocation of Access Control Facility
      - 2.1) Plan/Scope
      - 2.2) Quantification
    - 3) Task #3 – Phase II Temporary Leachate Removal
      - 3.1) Plan/Scope
      - 3.2) Quantification
    - 4) Task #4 – Equipment Wash Certification
      - 4.1) Plan/Scope
      - 4.2) Quantification
    - 5) Task #5 – Relocate Existing Stockpiles
      - 5.1) Plan/Scope
      - 5.2) Quantification
    - 6) Task #6 – Permanent Power for Air Monitors and Relocation of Air Monitors
    - 7) Task #7 – OMTA Container Area Expansion
      - 7.1) Plan/Scope
      - 7.2) Quantification
    - 8) Task #8 – Construction of New Laydown Area
      - 8.1) Plan/Scope
      - 8.2) Quantification
    - 9) Task #9 – Removal of Temporary Leachate Line – Phase III
      - 9.1) Plan/Scope
      - 9.2) Quantification
    - 10) Task #10 – Construction Water Well

Section 3: CBSP – OSDF Infrastructure Construction (Continued)

- 10.1) Plan/Scope
- 10.2) Quantification
- 11) Task #11 – Demolish Existing North Wheel Wash at Impacted Material Haul Road
  - 11.1) Plan/Scope
  - 11.2) Quantification
- 12) Task #12 – Remove Underground/Above-Ground Interim Leachate Line
  - 12.1) Plan/Scope
  - 12.2) Quantification
- 13) Task #13 – Demobilization – D&D of OSDF Infrastructure Facility
  - 13.1) Plan/Scope
  - 13.2) Quantification
- 14) Task #14 – Phase I Temporary Leachate Removal
  - 14.1) Plan/Scope
  - 14.2) Quantification
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  - 15.1) Plan/Scope
  - 15.2) Quantification

2.0 Schedule
3.0 Manpower Plans
  3.1 OSDF Miscellaneous Infrastructure Projects
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5.0 Risk Plan

Section 4: CCPL – OSDF Construction

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  - 1.1.2 CCPL2 – OSDF Borrow Area Development
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  - 1.1.5 CCPLA – OSDF Cell #2 Cap
  - 1.1.6 CCPLB – OSDF Cell #3 Cap
  - 1.1.7 CCPLC – OSDF Cell #4 Liner
  - 1.1.8 CCPLD – OSDF Cell #4 Cap
  - 1.1.9 CCPLE – OSDF Cell #5 Liner
  - 1.1.10 CCPLF – OSDF Cell #5 Cap
  - 1.1.11 CCPLG – OSDF Cell #6 Liner
  - 1.1.12 CCPLH – OSDF Cell #6 Cap
  - 1.1.13 CCPLJ – OSDF Cell #7 Liner
  - 1.1.14 CCPLK – OSDF Cell #7 Cap
- 1.2 Assumptions/Exclusions
  - 1.2.1 Assumptions
    - 1.2.1.1 General Assumptions
    - 1.2.1.2 Specific Assumptions
  - 1.2.2 Exclusions
  - 1.2.3 Government-Furnished Equipment/Services
- 1.3 Drivers
- 1.4 Project Physical Description
- 1.5 Project Plan/Technical Scope and Quantification
  - 1.5.1 CCPL1 - OSDF Construction Matrixed Labor
    - 1) Task #1 – Matrixed Labor
      - 1.1) Plan/Scope
      - 1.2) Quantification
  - 1.5.2 CCPL2 - OSDF Borrow Area Development
    - 1) Task #1 – Submittals and Procurement
      - 1.1) Subtask #1 – Submittals
        - 1.1)1 Plan/Scope
        - 1.1)2 Quantification
      - 1.2) Subtask #2 – Procurement
        - 1.2)1 Plan/Scope
        - 1.2)2 Quantification
    - 2) Task #2 – Site Preparation
      - 2.1) Plan/Scope
      - 2.2) Quantification
    - 3) Task #3 – Excavate and Screen Clay Material
      - 3.1) Plan/Scope
      - 3.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

4) Task #4 – Excavate and Stockpile Contouring Layer, Vegetative Layer and Topsoil Layer
   - 4.1) Plan/Scope
   - 4.2) Quantification
5) Task #5 – Interim Restoration
   - 5.1) Plan/Scope
   - 5.2) Quantification
6) Task #6 – Closeout
   - 6.1) Plan/Scope
   - 6.2) Quantification

1.5.3 CCPL3 - OSDF Placement

1) Task #1 - Submittals
   - 1.1) Plan/Scope
   - 1.2) Quantification
2) Task #2 – Site Preparation
   - 2.1) Plan/Scope
   - 2.2) Quantification
3) Task #3 – Receive Impacted Material at the OMTA
   - 3.1) Plan/Scope
   - 3.2) Quantification
4) Task #4 – Removal of Impacted Portion of the OSDF Haul Road
   - 4.1) Plan/Scope
   - 4.2) Quantification
5) Task #5 – Placement of the 12-Inch Protection Layer (Cell Liner)
   - 5.1) Plan/Scope
   - 5.2) Quantification
6) Task #6 - Placement of 24 Inches of Select Impacted Material (Cell Liner)
   - 6.1) Plan/Scope
   - 6.2) Quantification
7) Task #7 – Place of 36 Inches Select Impacted Material (Cell Cap)
   - 7.1) Plan/Scope
   - 7.2) Quantification
8) Task #8 – Placement of Impacted Material
   - 8.1) Plan/Scope
   - 8.2) Quantification
9) Task #9 – Closeout
   - 9.1) Plan/Scope
   - 9.2) Quantification

1.5.4 CCPL4 - OSDF Phase III Construction, Materials, Services

1) Task #1 – Submittals and Procurement
   - 1.1) Subtask #1 – Submittals
     - 1.1)1 Plan/Scope
     - 1.1)2 Quantification

Section 4: CCPL – OSDF Construction (Continued)

1.2) Subtask #2 – Procurement
1.2)1 Plan/Scope
1.2)2 Quantification

2) Task #2 – OSDF Phase III Construction
2.1) Plan/Scope
2.2) Quantification

3) Task #3 – Application of ConCover 180 in Cell #2 and Cell #3
3.1) Plan/Scope
3.2) Quantification

4) Task #4 – FY01 Impacted Material Placement
4.1) Plan/Scope
4.2) Quantification

5) Task #5 – OMTA Expansion/Transite Transfer Area
5.1) Plan/Scope
5.2) Quantification

6) Task #6 – OMTA Operations/Bulk Debris
6.1) Plan/Scope
6.2) Quantification

1.5.5 CCPLA - OSDF Cell #2 Cap

1) Task #1 – Submittals and Procurement
1.1) Subtask #1 – Submittals
1.1)1 Plan/Scope
1.1)2 Quantification
1.2) Subtask #2 – Procurement
1.2)1 Plan/Scope
1.2)2 Quantification

2) Task #2 – Site Preparation
2.1) Plan/Scope
2.2) Quantification

3) Task #3 – Contouring Layer
3.1) Plan/Scope
3.2) Quantification

4) Task #4 – Clay Cap
4.1) Plan/Scope
4.2) Quantification

5) Task #5 – Geosynthetic Cap
5.1) Plan/Scope
5.2) Quantification

6) Task #6 – Drainage Layer
6.1) Plan/Scope
6.2) Quantification

7) Task #7 – Biointrusion Barrier
7.1) Plan/Scope
7.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

8) Task #8 – Filter Layer
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Vegetative Layer
   9.1) Plan/Scope
   9.2) Quantification
10) Task #10 – Topsoil Layer
   10.1) Plan/Scope
   10.2) Quantification
11) Task #11 – Permanent Vegetation
   11.1) Plan/Scope
   11.2) Quantification
12) Task #12 – Closeout
   12.1) Plan/Scope
   12.2) Quantification

1.5.6 CCPLB - OSDF Cell #3 Cap

1) Task #1 – Submittals and Procurement
   1.1) Subtask #1 – Submittals
      1.1)1 Plan/Scope
      1.1)2 Quantification
   1.2) Subtask #2 – Procurement
      1.2)1 Plan/Scope
      1.2)2 Quantification
2) Task #2 – Site Preparation
   2.1) Plan/Scope
   2.2) Quantification
3) Task #3 – Contouring Layer
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Clay Cap
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Geosynthetic Cap
   5.1) Plan/Scope
   5.2) Quantification
6) Task #6 – Drainage Layer
   6.1) Plan/Scope
   6.2) Quantification
7) Task #7 – Biointrusion Barrier
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Filter Layer
   8.1) Plan/Scope
   8.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

9) Task #9 – Vegetative Layer
   9.1) Plan/Scope
   9.2) Quantification
10) Task #10 – Topsoil Layer
   10.1) Plan/Scope
   10.2) Quantification
11) Task #11 – Permanent Vegetation
   11.1) Plan/Scope
   11.2) Quantification
12) Task #12 – Closeout
   12.1) Plan/Scope
   12.2) Quantification

1.5.7 CCPLC - OSDF Cell #4 Liner

1) Task #1 – Submittals and Procurement
   1.1) Subtask #1 – Submittals
      1.1)1 Plan/Scope
      1.1)2 Quantification
   1.2) Subtask #2 – Procurement
      1.2)1 Plan/Scope
      1.2)2 Quantification
2) Task #2 – Site Preparation
   2.1) Plan/Scope
   2.2) Quantification
3) Task #3 – Clay Liner
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Primary and Secondary Geosynthetic Liners
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Primary and Secondary Drainage Layers
   5.1) Plan/Scope
   5.2) Quantification
6) Task #6 – Construction of Perimeter Clay Wedges and Access Ramp
   6.1) Plan/Scope
   6.2) Quantification
7) Task #7 – Catchment Area
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Video Inspection of HDPE Pipe
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Horizontal Monitoring Wells (HMW) #4 and #5
   9.1) Plan/Scope
   9.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

10) Task #10 – Closeout
    10.1) Plan/Scope
    10.2) Quantification

1.5.8 CCPLD - OSDF Cell #4 Cap

1) Task #1 – Submittals and Procurement
    1.1) Subtask #1 – Submittals
        1.1)1 Plan/Scope
        1.1)2 Quantification
    1.2) Subtask #2 – Procurement
        1.2)1 Plan/Scope
        1.2)2 Quantification
2) Task #2 – Site Preparation
    2.1) Plan/Scope
    2.2) Quantification
3) Task #3 – Contouring Layer
    3.1) Plan/Scope
    3.2) Quantification
4) Task #4 – Clay Cap
    4.1) Plan/Scope
    4.2) Quantification
5) Task #5 – Geosynthetic Cap
    5.1) Plan/Scope
    5.2) Quantification
6) Task #6 – Drainage Layer
    6.1) Plan/Scope
    6.2) Quantification
7) Task #7 – Biointrusion Barrier
    7.1) Plan/Scope
    7.2) Quantification
8) Task #8 – Filter Layer
    8.1) Plan/Scope
    8.2) Quantification
9) Task #9 – Vegetative Layer
    9.10 Plan/Scope
    9.11 Quantification
10) Task #10 – Topsoil Layer
    10.1) Plan/Scope
    10.2) Quantification
11) Task #11 – Permanent Vegetation
    11.1) Plan/Scope
    11.2) Quantification
12) Task #12 – Closeout
    12.1) Plan/Scope
    12.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

1.5.9 CCPLE - OSDF Cell #5 Liner
- 1) Task #1 – Submittals and Procurement
  - 1.1) Subtask #1 – Submittals
    - 1.1)1 Plan/Scope
    - 1.1)2 Quantification
  - 1.2) Subtask #2 – Procurement
    - 1.2)1 Plan/Scope
    - 1.2)2 Quantification
- 2) Task #2 – Site Preparation
  - 2.1) Plan/Scope
  - 2.2) Quantification
- 3) Task #3 – Clay Liner
  - 3.1) Plan/Scope
  - 3.2) Quantification
- 4) Task #4 – Primary and Secondary Geosynthetic Liners
  - 4.1) Plan/Scope
  - 4.2) Quantification
- 5) Task #5 – Primary and Secondary Drainage Layers
  - 5.1) Plan/Scope
  - 5.2) Quantification
- 6) Task #6 – Construction of Perimeter Clay Wedges and Access Ramp
  - 6.1) Plan/Scope
  - 6.2) Quantification
- 7) Task #7 – Catchment Area
  - 7.1) Plan/Scope
  - 7.2) Quantification
- 8) Task #8 – Video Inspection of HDPE Pipe
  - 8.1) Plan/Scope
  - 8.2) Quantification
- 9) Task #9 – Horizontal Monitoring Well #6
  - 9.1) Plan/Scope
  - 9.2) Quantification
- 10) Task #10 – Closeout
  - 10.1) Plan/Scope
  - 10.2) Quantification

1.5.10 CCPLF - OSDF Cell #5 Cap
- 1) Task #1 – Submittals and Procurement
  - 1.1) Subtask #1 – Submittals
    - 1.1)1 Plan/Scope
    - 1.1)2 Quantification
  - 1.2) Subtask #2 – Procurement
    - 1.2)1 Plan/Scope
    - 1.2)2 Quantification

Section 4: CCPL – OSDF Construction (Continued)

2) Task #2 – Site Preparation
   - 2.1) Plan/Scope
   - 2.2) Quantification
3) Task #3 – Contouring Layer
   - 3.1) Plan/Scope
   - 3.2) Quantification
4) Task #4 – Clay Cap
   - 4.1) Plan/Scope
   - 4.2) Quantification
5) Task #5 – Geosynthetic Cap
   - 5.1) Plan/Scope
   - 5.2) Quantification
6) Task #6 – Drainage Layer
   - 6.1) Plan/Scope
   - 6.2) Quantification
7) Task #7 – Biointrusion Barrier
   - 7.1) Plan/Scope
   - 7.2) Quantification
8) Task #8 – Filter Layer
   - 8.1) Plan/Scope
   - 8.2) Quantification
9) Task #9 – Vegetative Layer
   - 9.1) Plan/Scope
   - 9.2) Quantification
10) Task #10 – Topsoil Layer
    - 10.1) Plan/Scope
    - 10.2) Quantification
11) Task #11 – Permanent Vegetation
    - 11.1) Plan/Scope
    - 11.2) Quantification
12) Task #12 – Closeout
    - 12.1) Plan/Scope
    - 12.2) Quantification

1.5.11 CCPLG - OSDF Cell #6 Liner

1) Task #1 – Submittals and Procurement
   - 1.1) Subtask #1 – Submittals
     - 1.1)1 Plan/Scope
     - 1.1)2 Quantification
   - 1.2) Subtask #2 – Procurement
     - 1.2)1 Plan/Scope
     - 1.2)2 Quantification
2) Task #2 – Site Preparation
   - 2.1) Plan/Scope
   - 2.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

3) Task #3 – Clay Liner
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Primary and Secondary Geosynthetic Liners
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Primary and Secondary Drainage Layers
   5.1) Plan/Scope
   5.2) Quantification
6) Task #6 – Construction of Perimeter Clay Wedges and Access Ramp
   6.1) Plan/Scope
   6.2) Quantification
7) Task #7 – Catchment Area
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Video Inspection of HDPE Pipe
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Horizontal Monitoring Well (HMW) #7
   9.1) Plan/Scope
   9.2) Quantification
10) Task #10 – Closeout
   10.1) Plan/Scope
   10.2) Quantification

1.5.12 CCPLH - OSDF Cell #6 Cap

1) Task #1 – Submittals and Procurement
   1.1) Subtask #1 – Submittals
      1.1)1 Plan/Scope
      1.1)2 Quantification
   1.2) Subtask #2 – Procurement
      1.2)1 Plan/Scope
      1.2)2 Quantification
2) Task #2 – Site Preparation
   2.1) Plan/Scope
   2.2) Quantification
3) Task #3 – Contouring Layer
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Clay Cap
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Geosynthetic Cap
   5.1) Plan/Scope
   5.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

6) Task #6 – Drainage Layer
   6.1) Plan/Scope
   6.2) Quantification
7) Task #7 – Biointrusion Barrier
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Filter Layer
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Vegetative Layer
   9.1) Plan/Scope
   9.2) Quantification
10) Task #10 – Topsoil Layer
   10.1) Plan/Scope
   10.2) Quantification
11) Task #11 – Permanent Vegetation
   11.1) Plan/Scope
   11.2) Quantification
12) Task #12 – Closeout
   12.1) Plan/Scope
   12.2) Quantification

1.5.13 CCPLJ - OSDF Cell #7 Liner
1) Task #1 – Submittals and Procurement
   1.1) Subtask #1 – Submittals
      1.1)1 Plan/Scope
      1.1)2 Quantification
   1.2) Subtask #2 – Procurement
      1.2)1 Plan/Scope
      1.2)2 Quantification
2) Task #2 – Site Preparation
   2.1) Plan/Scope
   2.2) Quantification
3) Task #3 – Clay Liner
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Primary and Secondary Geosynthetic Liners
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Primary and Secondary Drainage Layers
   5.1) Plan/Scope
   5.2) Quantification
6) Task #6 – Construction of Perimeter Clay Wedges and Access Ramp
   6.1) Plan/Scope
   6.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

7) Task #7 – Catchment Area
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Video Inspection of HDPE Pipe
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Closeout
   9.1) Plan/Scope
   9.2) Quantification

1.5.14 CCPLK – OSDF Cell #7 Cap

1) Task #1 – Submittals and Procurement
   1.1) Subtask #1 – Submittals
      1.1)1 Plan/Scope
      1.1)2 Quantification
   1.2) Subtask #2 – Procurement
      1.2)1 Plan/Scope
      1.2)2 Quantification
2) Task #2 – Site Preparation
   2.1) Plan/Scope
   2.2) Quantification
3) Task #3 – Contouring Layer
   3.1) Plan/Scope
   3.2) Quantification
4) Task #4 – Clay Cap
   4.1) Plan/Scope
   4.2) Quantification
5) Task #5 – Geosynthetic Cap
   5.1) Plan/Scope
   5.2) Quantification
6) Task #6 – Drainage Layer
   6.1) Plan/Scope
   6.2) Quantification
7) Task #7 – Biointrusion Barrier
   7.1) Plan/Scope
   7.2) Quantification
8) Task #8 – Filter Layer
   8.1) Plan/Scope
   8.2) Quantification
9) Task #9 – Vegetative Layer
   9.1) Plan/Scope
   9.2) Quantification
10) Task #10 – Topsoil Layer
   10.1) Plan/Scope
   10.2) Quantification

Section 4: CCPL – OSDF Construction (Continued)

11) Task #11 – Permanent Vegetation
    11.1) Plan/Scope
    11.2) Quantification
12) Task #12 – Closeout
    12.1) Plan/Scope
    12.2) Quantification

2.0 Schedule
3.0 Manpower Plans
    3.1 OSDF Construction Matrixed Labor
4.0 Estimate
5.0 Risk Plan

Section 5: CDG1 – OSDF Controls and Management

1.0 Narrative
- 1.1 Overview
- 1.2 Assumptions/Exclusions
  - 1.2.1 Assumptions
  - 1.2.2 Exclusions
  - 1.2.3 Government-Furnished Equipment/Services
- 1.3 Drivers
- 1.4 Project Physical Description
- 1.5 Project Plan/Technical Scope and Quantification
  - 1.5.1 CDG11 - OSDF Controls and Management
    - 1) Task #1 – Submittals and Procurement
      - 1.1) Subtask #1 - Submittals
        - 1.1)1 Plan/Scope
        - 1.1)2 Quantification
      - 1.2) Subtask #2 - Procurement
        - 1.2)1 Plan/Scope
        - 1.2)2 Quantification
    - 2) Task #2 – Stormwater Management and Erosion Control
      - 2.1) Plan/Scope
      - 2.2) Quantification
    - 3) Task #3 – Catchment Area Control and Management
      - 3.1) Plan/Scope
      - 3.2) Quantification
    - 4) Task #4 – Winterization of Access Control Trailers
      - 4.1) Plan/Scope
      - 4.2) Quantification
    - 5) Task #5 – Installation and Repair Project Signs, Construction Signs, Barricades, Temporary Rad Fencing and Construction Fencing
      - 5.1) Plan/Scope
      - 5.2) Quantification
    - 6) Task #6 – Repair of Paved and Unpaved Road and Pads Related to OSDF (Including Haul Roads, Borrow Area Haul Roads and Access Roads)
      - 6.1) Plan/Scope
      - 6.2) Quantification
    - 7) Task #7 – Maintenance/Repair of Construction Water Wells and Temporary Water Lines
      - 7.1) Plan/Scope
      - 7.2) Quantification
    - 8) Task #8 – Repair of Seeded Areas on Permanent Cap and In Borrow Area
      - 8.1) Plan/Scope
      - 8.2) Quantification

Section 5: CDG1 – OSDF Controls and Management (Continued)

2.0 Schedule
3.0 Manpower Plans
    3.1 OSDF Controls and Management (Includes subcontractor staff/craft)
4.0 Estimate
5.0 Risk Plan

ACRONYM LIST

LIST OF ACRONYMS AND ABBREVIATIONS

ASTM	American Society of Testing and Materials
CQA	construction quality assurance
CQC	construction quality control
D&D	decontamination and dismantlement
DOE	US Department of Energy
EPA	US Environmental Protection Agency
EPLTS	enhanced permanent leachate transfer system
ESH&Q	Environmental Safety, Health and Quality
FEMP	Fernald Environmental Management Project
FTE	full-time equivalent
FY	fiscal year
GCL	geotextile cushion layer
GML	geomembrane liner
HDPE	high-density polyethylene
HWMU	hazardous waste management unit
ICY	in-place cubic yard
LCS	leachate collection system
OEPA	State of Ohio Environmental Protection Agency
OMTA	OSDF material transfer area
OSDF	On-Site Disposal Facility
PCN	Page Change Notice
RCI	request for clarification of information
RCRA	Resource Conservation and Recovery Act
RFP	Request For Proposal
SMTA	Special Material Transfer Area
SOW	Statement of Work
SP	soil pile
SSC	structure, system and component
SSR	Standard Start-up Review
STP	Sewage Treatment Plant
SVOC	semi-volatile organic compound
SWM&EC	stormwater management and erosion control
SWU	Southern Waste Unit
WAC	waste acceptance criteria
WAO	Waste Acceptance Organization
WGS	Waste Generator Services

USDP Project
Management

WBS DICTIONARY
CONTROL ACCOUNT/CHARGE NUMBER

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
DE-AC24-01OH20115		27
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C	PBS 03 ON-SITE DISPOSAL FACILITY	
7. APPROVED CP NO.		8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00		12/01/2000
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCL/ACA	EW05H3030	

11. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
Subcontracts
Other Direct Costs (ODCs)

b. TECHNICAL CONTENT:

Consistent with the Amended Consent Agreement (ACA), Consent Decree, National Contingency Plan (NCP), appropriate United States Environmental Protection Agency (USEPA) guidance and Department of Energy (DOE) Orders, a Remedial Investigation/Feasibility Study (RI/FS) was conducted for Operable Unit 2 (OU2). Based on the OU2 RI/FS, a Record of Decision was issued which requires the Fernald Environmental Management Project (FEMP) to design and construct an On-Site Disposal Facility (OSDF) for disposal of impacted materials and waste generated during site remediation.

This element provides for the construction and maintenance of an OSDF and support facilities, receipt and placement of wastes and impacted materials, facility closure, post-closure monitoring and maintenance, decontamination/ control access roads, and run-on/run-off stormwater controls. This element also covers the design and construction of the borrow area(s).

The OSDF will be constructed with a composite liner of soil and geosynthetics. Impacted materials and remediation wastes, that meet the waste acceptance criteria established in the Records of Decision for the ACA-designated Operable Units at the FEMP, will be placed on the liner system. A composite cap of soil and geosynthetic will be constructed above the impacted materials and waste and tied-in with the liner system.

OSDF will complete the design and construction of the permanent leachate conveyance and leak detection system. This includes the Enhanced Permanent Leachate Transmission System through Valve House No. 6 (EPLTS). In addition, construction of air monitors and groundwater monitoring wells as well as

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
DE-AC24-01OH20115		27
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C	PBS 03 ON-SITE DISPOSAL FACILITY	
7. APPROVED CP NO.		8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00		12/01/2000
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCL/ACA	EW05H3030	

11. ELEMENT TASK DESCRIPTION

maintenance performed on the leachate system during FY01 are also included.

c. SCOPE OF WORK:

The scope is further defined in these subordinate elements:

1.1.C.A OSDF Management and Oversight
1.1.C.B OSDF Engineering
1.1.C.C OSDF Infrastructure Construction
1.1.C.D OSDF Construction
1.1.C.E OSDF Controls and Management

Work specifically excluded:

- Phase II of the main phone line trunk relocation in the OSDF footprint. These phone lines will be relocated by D&D as part of their utility relocation
- Design and construction of the EPLTS, Phase II (Valve House No. 7), by PBS 04
- Groundwater/leak detection monitoring by PBS 04
- Leachate system maintenance by PBS 04
- Any alterations to the tie between the Bio-Surge Lagoon and AWWT are the responsibility of Aquifer
- OSDF maintenance and stewardship monitoring performed by others during the Soils/OSDF shutdown period
- Centralized services

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
DE-AC24-01OH20115		28
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C.A	MANAGMENT	
7. APPROVED CP NO.		8. DATE OF CHANGES
CHANGE PER CP# FY01-0115-0003-00		12/01/2000
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCLA/ACA	EW05H3030	

11. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
ODCs
Subcontracts

b. TECHNICAL CONTENT:

Project staff assigned to manage the work of PBS-03 consists of all project management, administration, clerical support, project compliance, enegineering, surveying, construction, certain discipline leads (i.e., Safety and Health, Rad Engineering, Project Controls and Procurement), and other as needed/matrixed general discipline support staff (e.g., QC schedulers and cost analysts). In general, this is a level of effort account. To the extent necessary, a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills and sufficient project support. Due to reduced workloads, a lower level of staff will be maintained before FY2005 and after FY2009 through project completion.

c. SCOPE OF WORK:

Staff labor covers Fluor Fernald, teaming partner and staff augmentation (BOA) personnel. The baseline assumes all staff will be covered under labor. It may be necessary, however, to hire subcontract personnel with specific skills for some tasks. When this occurs, a budget transfer will be made to shift labor to subcontract.

The folowing scope and/or costs are not included in this control account:

-matrixed labor required to support specific engineering and construction tasks;

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
DE-AC24-01OH20115		28
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C.A	MANAGMENT	
7. APPROVED CP NO.		8. DATE OF CHANGES
CHANGE PER CP# FY01-0115-0003-00		12/01/2000
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCLA/ACA	EW05H3030	

11. ELEMENT TASK DESCRIPTION

-training of matrixed labor;
-engineering and construction subcontractor costs;
-surveying equipment and supplies;
-costs for travel, equipment, materials, PPE, trailers, utilities, shipping/transportation, computer hardware and software directly associated with specific engineering and construction tasks; and
-all centralized services provided by other PBSs.

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU /648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP#FY01-0115-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CECP	OSDF MANAGEMENT AND OVERSIGHT

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontractors
Other Direct Costs (ODCs)
Materials

b. TECHNICAL CONTENT:

This work package covers the staff and expenses required to manage the OSDF project. This is a level of effort account. To the extend necessary, a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills an sufficient project support. Lower levels of staffing will be maintained before and after this period consistent with the ramp up and ramp down of the project. Please refer to the work scope definition below for specific types of resources covered in this account.

c. SCOPE OF WORK:

- Covers the following staff resources
  * Project Management
  * Project Controls
  * Procurement
  * Administrative support
  * Discipline leads, other than engineering & construction (includes Health & Safety, QA/QC

- Office supplies & expenses for the entire soils project including:
  * Specialized CADD equipment
  * Professional dues & licenses

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.A	MANAGMENT	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU /648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP#FY01-0115-0003-00		12/00 - 12/09
12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)	
CECP	OSDF MANAGEMENT AND OVERSIGHT	

14. ELEMENT TASK DESCRIPTION

* Relocation expenses

- Travel and training expenses for those project staff charging this account.

d. WORK SPECIFICALLY EXCLUDED:

Matrixed labor and training/relocation of matrixed labor

OSDF staff charging other charge numbers in control account CECP (engineering, construction)

Cost for travel, equipment, materials, trailers, utilities, shipping/transportation directly associated with specific area remediation or natural resources restorations accounts.

All centralized services provided by other PBSs.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP# FY01-0015-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CECP1	OSDF MANAGEMENT AND OVERSIGHT

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontractors
Other Direct Costs (ODCs)
Materials

b. TECHNICAL CONTENT:

This work package covers the staff and expenses required to manage the OSDF project. This is a level of effort account. To the extend necessary, a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills an sufficient project support. Lower levels of staffing will be maintained before and after this period consistent with the ramp up and ramp down of the project. Please refer to the work scope definition below for specific types of resources covered in this account.

c. SCOPE OF WORK:

Covers the following staff resources
* Project Management
* Project Controls
* Procurement
* Administrative support
* Discipline leads, other than engineering & construction (includes Health & Safety, QA/QC

Office supplies & expenses for the entire OSDF project including:
* Specialized CADD equipment
* Professional dues & licenses

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP# FY01-0015-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CECP1	OSDF MANAGEMENT AND OVERSIGHT

14. ELEMENT TASK DESCRIPTION

* Relocation expenses

Travel and training expenses for those project staff charging this account.

d. WORK SPECIFICALLY EXCLUDED:

Matrixed labor and training/relocation of matrixed labor

OSDF staff charging other charge numbers in control account CECP (engineering, construction)

Cost for travel, equipment, materials, trailers, utilities, shipping/ transportation directly associated with specific area remediation or natural resources restorations accounts.

All centralized services provided by other PBSs.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.A	MANAGMENT	
5. PERFORMING DIV/DEPARTMENT CODE	**6. ORIGINATOR NAME/PHONE**	**7. WBS ELEMENT MANAGER**
49	JD CHIOU (3726)	JD CHIOU
8. BUDGET AND REPORTING NUMBER	**9. BUDGET TITLE**	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
NEW PER CP# FY01-0015-0003-00		12/00 - 12/09
12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CECP2	OSDF ENGINEERING STAFF	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
ODCs

b. TECHNICAL CONTENT:

This work package covers the engineering staff and expenses required for the OSDF project. This is a level of effort account. To the extent necessary, a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills an sufficient project support. Lower levels of staffing will be maintained before and after this period consistent with the ramp up and ramp down of the project. Please refer to the work scope definition below for specific types of resources covered in this account.

c. SCOPE OF WORK:

Covers the following staff resources
* Engineering Manager,
* Project engineers
* Other engineering staff as necessary

Travel and training expenses for those project staff charging this account.

d. WORK SPECIFICALLY EXCLUDED:

Matrixed labor and training/relocation of matrixed labor

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CECP2	OSDF ENGINEERING STAFF

14. ELEMENT TASK DESCRIPTION

Soils staff charging other charge numbers in control account CECP (Mgmt & Oversight, construction)

Cost for travel, equipment, materials, trailers, utilities, shipping/ transportation directly associated with specific area remediation or natural resources restorations accounts.

All centralized services provided by other PBSs.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CECP3	OSDF CONSTRUCTION MANAGEMENT

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontracts
ODCs

b. TECHNICAL CONTENT:

This work package covers the construction management staff and expenses required for the OSDF project. This is a level of effort account. To the extent necessary, a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills an sufficient project support. Lower levels of staffing will be maintained before and after this period consistent with the ramp up and ramp down of the project. Please refer to the work scope definition below for specific types of resources covered in this account.

c. SCOPE OF WORK:

Includes charges cross walked from charge number CCC21 for CM support performed during FY01 after December 1, 2000.

Covers the following staff resources
* Construction Manager,
* Construction Contracts Managers
* Construction Engineers
* Construction Coordinators
* Other projectized construction staff as necessary to complete the OSDF

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.A	MANAGMENT

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CECP3	OSDF CONSTRUCTION MANAGEMENT

14. ELEMENT TASK DESCRIPTION

construction projects.

Fluor furnished construction materials not specific to one of the OSDF construction accounts.

Travel and training expenses for those project staff charging this account.

d. WORK SPECIFICALLY EXCLUDED:

Matrixed labor and training/relocation of matrixed labor

OSDF staff charging other charge numbers in control account CECP (Mgmt & Oversight, engineering)

Cost for travel, equipment, materials, trailers, utilities, shipping/ transportation directly associated with specific area remediation or natural resources restorations accounts.

All centralized services provided by other PBSs.

SECTION 1

1.0 NARRATIVE

1. PROJECT TITLE: ON-SITE DISPOSAL FACILITY PROJECT	2. DATE: 09/10/01	3. PBS#: 03
4. WBS ELEMENT CODE: 1.1.C.A.	5. WBS ELEMENT TITLE: OSDF PROJECT MANAGEMENT	
6. CAM NAME/ PHONE: JYH-DONG CHIOU/ 3726	7. CAM SIGNATURE:	
8. ORIGINAL/ CHANGE SCOPE/ PER CP#:	9.CONTROL ACCOUNT: CECP	

SECTION 1: CECP – OSDF PROJECT MANAGEMENT

1.0 NARRATIVE

1.1 OVERVIEW

OSDF Project Management covers all the projectized technical staff, projectized/matrixed project support staff, and associated other direct management costs necessary to plan, conduct, support, manage and complete the scopes of the OSDF engineering, infrastructure, construction, and operation. This control account also includes the purchase of all office supplies and project specific office equipment, software, mail, training expenses, fees and licences, and relocation expenses for projectized staff. Work scope-related travel by matrixed personnel will be covered in the appropriate engineering or construction account.

The levels of FTEs and other direct costs are consistent with the scheduled workloads and activities as specified in the other four control accounts in PBS-03. The estimated numbers of on-site subcontractor employees are also identified in this control account but only for the training and medical services planning purposes. These services are to be budgeted by centralized organizations. All the other centralized services to be provided by other PBSs are not included in this or any other control accounts of PBS-03.

R1-D-612

OSDF Project Management has adopted a concept that safety is every employee's responsibility and continuos safety coverage at the job site can only be achieved by training and employee responsibility for safety functions. Training is part of the annual work load for every employee, and training costs are budgeted as part of the management account. Therefore, all OSDF field personnel will be trained to carry increased Health and Safety responsibilities, and Fluor Fernald Health and Safety professionals, will only need to support the projects on special occasions and perform audits, as indicated in the manpower planning. All subcontractor's will be required by contract to train their personnel in the same manner as well as to provide their own Health and Safety professionals. Fluor Fernald believes that this is a better and more efficient way to ensure safe operations and comply with all safety requirements.

1.2 ASSUMPTIONS/EXCLUSIONS

1.2.1 Assumptions

Project staff assigned to manage the work of PBS-03 consists of all project management, administration, clerical support, project compliance, engineering, surveying, construction, certain discipline leads (i.e., Safety and Health, Rad Engineering, Project Controls, and Procurement), and other as needed/matrixed general discipline support staff (e.g., QC, schedulers, and cost analysts). In general this is a level of effort account. To the extent necessary a constant level of staff will be maintained between FY2005 through FY2009 to ensure availability of critical skills and sufficient project support. Due to reduced workloads, a lower level of staff will be maintained before FY2005 and after FY2009 through project completion.

Staff labor covers Fluor Fernald, teaming partner and staff augmentation (BOA) personnel. For FY2001, the baseline includes subcontract costs for CQC services performed by the A&E contractor. These services beyond FY2001 are covered in control account CAEN. Also covered in FY2001 are subcontractor costs for Rad Tech support at the OSDF. These services are covered in control account CCPL beyond FY2001. The baseline assumes all future staff beyond FY2001will be covered under labor. It may be necessary, however, to hire subcontract personnel with specific skills for some tasks. When this occurs, a budget transfer will be made to shift budget from labor to subcontract.

1.2.2 Exclusions

The following scope and/or costs are not included in this control account:

- Matrixed labor required to support specific engineering and construction tasks;
- Training or relocation of matrixed labor;
- Engineering and construction subcontractor costs;
- Surveying equipment and supplies;
- Costs for travel, equipment, materials, trailers, utilities, shipping/transportation, computer hardware and software directly associated with specific engineering and construction tasks; and
- All centralized services provided by other PBSs.

1.2.3 Government-Furnished Equipment/Services

See other PBS-03 accounts for government-furnished equipment and services.

1.3 DRIVERS

See other PBS-03 accounts for drivers.

1.4 PROJECT PHYSICAL DESCRIPTION

Specific scope of the OSDF Project Management is further defined in the following three charge numbers.

1.4.1 CECP1 – OSDF Management and Oversight

- Project director, project compliance staff, discipline leads (i.e., Safety and Health, Rad Engineering, QC, Project Controls, and Procurement), other as needed project controls staff, and administrative and clerical staff necessary to manage and support the overall OSDF project. See attached manpower sheet 1CA01 for details.

- Materials:

  - Routine office supplies and equipment (Fluor Fernald "stores" and vendor supplied),

  - Specialized computer equipment (CADD) including hardware, software (one replacement CADD computer systems and software licenses upgrades in FY05),

  - Annual renewal of professional licenses for five people during the period FY2003 through FY2010; and

  - Special paper and cartridges.

- ODCs:

  - One trip during FY2001 (two people) to perform QA inspections on OSDF Cap materials.

  - Two trips annually to visit US EPA between FY2004 through FY2010.

  - The following ODC allowances cover only costs incurred by project staff charging this account:

  - Two projectized people annually between FY2005 through FY2009 to travel for professional development and/or training, including fees, car rental, airfare, and lodging up to three days each.

  - Relocation expenses for one professional staff in FY2004 and one additional person in FY2005 to support the remobilization of the project following the shutdown; and

- Routine local mileage for use of personal vehicles to conduct business in the general area of the FEMP in FY2001 and FY2003 through FY2010.

1.4.2 CECP2 – OSDF Engineering Staff

- Staff:
  - Engineering Manager, Project Engineers, other engineering staff, and projectized surveying and CADD staff necessary to manage and/or conduct all the OSDF engineering tasks as defined in the OSDF Engineering Control Account. See attached manpower sheet 1CA02 for details.
- Materials:
  - No materials are expected to be charged to this account.
- ODCs:
  - The following ODC allowances only cover costs incurred by project staff charging this account:
  - One projectized person annually between FY2005 and FY2009 to travel for professional development and/or training including fees, car rental, airfare, and lodging up to three days.
  - Routine local mileage for use of personal vehicles to conduct business in the general area of the FEMP in FY2001 and FY2003 through FY2010.
  - Domestic travel to occur in FY2002 for three projectized people to oversee Geosyntec work on cell design, including car rental, airfare and lodging up to three days.
  - Domestic travel to occur in FY2004 through FY2009 for two projectized people to inspect and audit geocomposite clay liner/cap manufacturing plant, including car rental, airfare and lodging up to two days.
  - Domestic travel to occur in FY2004 through FY2009 for two projectized people to inspect and audit geomembrane clay liner/cap manufacturing plant, including car rental, airfare and lodging up to two days.

- Domestic travel to occur in FY2004 through FY2009 for one projectized person to conduct a quality audit of geosynthetic testing lab, including car rental, airfare and lodging up to two days.

1.4.3 CECP3 – OSDF Construction Management

- Staff:

  - Construction Manager, Construction Contract Managers, Construction Engineers, Construction Coordinators and other projectized construction support staff necessary to manage all the OSDF construction tasks as defined in the OSDF Infrastructure, OSDF Construction, and OSDF Operation Control Accounts. See attached manpower sheet 1CA03 for details.

- Materials:

  - For FY2001 through FY2010, allow for miscellaneous maintenance and construction materials and supplies per the following list:

  - Miscellaneous maintenance materials, hand tools, and supplies,

  - Project-specific vehicle procurement, replacement, repair, preventive maintenance,

  - Gasoline, garage materials and expense,

  - Fencing, rad rope, field signs, and postings not specific to an area project,

  - Project–specific PPE (e.g., hard hats, anti-Cs, respirator cartridges, gloves/with liners, ear plugs, duct tape),

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  - Other non-standard PPE and field clothes (e.g., safety classes, safety vests, rain gear, sweat bandanas, Carharts, hats, wool/cotton gloves, extra tall field boots, water-resistant field boots, bug sprays, ~~flush~~ flash lights), and

  - Safety monitoring equipment (e.g. BZ monitors, PID).

- ODCs:

  - For FY2001, one trip to Weldon Spring to investigate design criteria for the Cell 1 cap.

  - The following ODC allowances cover only costs incurred by project staff charging to this account.

- Allowance for one projectized person annually between FY2005 and FY2009 to travel for professional development and/or training, including fees, car rental, airfare, and lodging up to three days.
- Routine local mileage for use of personal vehicles to conduct business in the general area of the FEMP in FY2001 and FY2003 through FY2010.

- Allowance for three trips between FY2004 and FY2009 to review related construction activity at other DOE sites.

• Subcontract:

- For FY2001, covers CQC services from the OSDF A&E contractor and Rad Tech support. For FY2003 through FY2010, no further subcontract costs are planned for this account.

2.0 MANPOWER PLANS

2.1 CECP1 – OSDF Management

The actual OSDF management and support manpower levels have decreased significantly since the third quarter of FY1999 when PBS-03 was merged with PBS-06, due to sharing of resources between the two PBSs. The OSDF management and support manpower requirements included in this account are further decreased in this baseline to reflect the incorporation of centralized services to be provided and budgeted by other PBSs. Most of the necessary matrixed support personnel (i.e., project control, QA/QC, Safety and Health, procurement) are also budgeted for less than full time in this and other accounts under PBS-03 to allow more efficient utilization of manpower site wide. See attached manpower sheet 1CA01 for details.

Several actions have been taken to optimize FTE levels for PBS03. To that end, the man power plan fully reflects the impacts of centralized services which lowers the FTEs across the project. It was also anticipated that the Rad-Con requirements would be reduced and/or simplified to maximize efficiency and utilization of personnel. This would include the cross-training of project personnel to satisfy the minor rad-con requirements which would relieve the need for dedicated rad personnel. In addition, where applicable, rad personnel would cover several smaller projects that are occurring in the same vicinity, including projects at different stages of completion (i.e. access control, sampling, and excavation).

PBS06 and PBS03 construction groups will be integrated into one group. This combined group results in lowered SDFP FTE levels. In the off-season some of the construction personnel will also provide service to other projects.

In general, while maintaining safety and quality of work, other actions are anticipated that will streamline not only SDFP work processes but the site as a whole as well. These include the simplification or the elimination of time-consuming, non-technical, and low value-added requirements and practices such as PEPs, DQOs, Project Reviews, TRB, CRB, and SSRs. Cost/Schedule Impact Evaluations would be conducted on any new requirements or procedures prior to implementation. It is expected that the construction subcontractors will be required and given incentive to perform many of the functions that we currently perform for them. This would include safe work plans, travelers, penetration permits, lock and tag, QA/QC, and placement planning/coordination/tracking. However, as identified above, rad-con tasks as well as limited QA/QC, S&H and IH tasks will be performed by cross-trained and qualified Fluor Fernald project personnel.

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A major improvement in CAM responsibility is planned for. The CAM is expected to have full control on the number, type, and frequency of matrix charges. This is in effort to have the service organizations justify the requirements for the task(s) that they are providing. This will reduce the ad-hoc and non-required tasks being performed and charged to project accounts.

The results of these actions are realized throughout the duration of the project. The effects are applicable and proportional to each of the control accounts within PBS03.

2.2 CECP2 – OSDF Engineering Staff

The OSDF Engineering manpower projection included in this account is generally consistent with the historical levels required to conduct all the engineering design and oversight tasks for OSDF. However, the OSDF Engineering will also support self-performing soil remedial design work for PBS-06 and all construction works for PBS-03 and PBS-06 under this baseline, which will significantly increase the in-house engineering workloads for both PBSs. See attached manpower sheet 1CA02 for details.

2.3 CECP3 – OSDF Construction Management

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The OSDF Construction Management manpower projection included in this account is generally less than the historical levels budgeted to conduct all the construction oversight tasks for OSDF. Higher efficiency and less redundancy in managing the OSDF subcontractors, as well as better integration wih the PBS06 construction function, will allow these reduced manpower projections. See attached manpower sheet ~~1CA02~~ 1CA03 for details.

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Table 1.5.A
Procurement Quantities for Geosynthetic Materials (SF)

Type of Material	Fiscal Year					
	FY04	FY05	FY06	FY07	FY08	FY09
Cell Activity	Liner 4	Liner 5 Cover 2	Liner 6 Cover 3	Liner 7 Cover 4	Cover 5	Cover 6 Cover 7
1. 80 mil geomembrane (textured)	770,000	770,000	770,000	770,000	0	0
2. 60 mil geomembrane (textured)	0	410,000	410,000	410,000	410,000	820,000
3. 80 mil geomembrane (smooth)	4,000	4,000	4,000	4,000	0	0
4. 60 mil geomembrane (smooth)	0	4,000	4,000	4,000	4,000	4,000
5. 30 mil geomembrane (smooth)	28,000	28,000	28,000	56,000	0	0
6. Geosynthetic Clay Liner	770,000	1,180,000	1,180,000	1,180,000	410,000	820,000
7. Geotextile Cushion (8 oz.)	0	430,000	430,000	430,000	430,000	860,000
8. Geotextile Cushion (10 oz.)	790,000	790,000	790,000	790,000	0	0
9. Geotextile Cushion (16 oz.)	74,500	147,500	147,500	147,500	73,000	146,000
10. Geotextile Filter (7 oz.)	460,000	460,000	460,000	400,000	0	0

NOTE: 60 and 80 mil geomembrane (smooth) is not placed as liner or cover, it is material used for trial welds.

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Table 1.5.B
Installed Quantities for Geosynthetic Materials (SF)

Type of Material	Fiscal Year					
	FY04	FY05	FY06	FY07	FY08	FY09
Cell Activity	Liner 4	Liner 5 Cover 2	Liner 6 Cover 3	Liner 7 Cover 4	Cover 5	Cover 6 Cover 7
1. 80 mil geomembrane (textured)	650,000	650,000	650,000	650,000	0	0
2. 60 mil geomembrane (textured)	0	310,000	310,000	310,000	310,000	620,000
3. 30 mil geomembrane (smooth)	23,000	23,000	23,000	46,000	0	0
4. Geosynthetic Clay Liner	650,000	960,000	960,000	960,000	310,000	620,000
5. Geotextile Cushion (8 oz.)	0	310,000	310,000	310,000	310,000	620,000
6. Geotextile Cushion (10 oz.)	650,000	650,000	650,000	650,000	0	0
7. Geotextile Cushion (16 oz.)	50,000	95,000	95,000	95,000	45,000	90,000
8. Geotextile Filter (7 oz.)	375,000	375,000	375,000	330,000	0	0

Table 1.5.C
Excavation/Placement Quantities for Soil/Stone Layers in Liners and Caps

Type of Material	Fiscal Year						
Cell Activity	FY03	FY04	FY05	FY06	FY07	FY08	FY09
1. Excavate, screen stockpile material for clay liner (liner) CY	55,000 Liner 4	55,000 Liner 5	55,000 Liner 6	55,000 Liner 7			
2. Place clay liner (liner) ICY		40,000 Liner 4	40,000 Liner 5	40,000 Liner 6	40,000 Liner 7		
3. Place material for secondary drainage layer (liner) TONS		11,500 Liner 4	11,500 Liner 5	11,500 Liner 6	11,500 Liner 7		
4. Place material for primary drainage layer (liner) TONS		11,500 Liner 4	11,500 Liner 5	11,500 Liner 6	11,500 Liner 7		
5. Place material for 12" impacted protective layer (liner) ICY			11,000 Liner 4	11,000 Liner 5	11,000 Liner 6	11,000 Liner 7	
6. Place material for 24" select impacted material layer (liner) ICY			22,000 Liner 4	22,000 Liner 5	22,000 Liner 6	22,000 Liner 7	
7. Place material for 36" select impacted material layer (IMP) ICY			33,000 IMP	33,000 IMP	33,000 IMP	33,000 IMP	66,000 IMP
8. Excavate material for contouring layer (cap) CY		13,000 Cap 2	13,000 Cap 3	13,000 Cap 4	13,000 Cap 5	26,000 Caps 6 & 7	
9. Place material for contouring layer (cap) ICY			10,500 Cap 2	10,500 Cap 3	10,500 Cap 4	10,500 Cap 5	21,000 Caps 6 & 7

Table 1.5.C
Excavation/Placement Quantities for Soil/Stone Layers in Liners and Caps

Type of Material	Fiscal Year						
Cell Activity	FY03	FY04	FY05	FY06	FY07	FY08	FY09
10. Excavate, screen stockpile material for clay cap (cap) CY		30,000 Cap 2	30,000 Cap 3	30,000 Cap 4	30,000 Cap 5	30,000 Caps 6 &7	
11. Place material for clay cap (cap) ICY			22,000 Cap 2	22,000 Cap 3	22,000 Cap 4	22,000 Cap 5	44,000 Caps 6 & 7
12. Place material for drainage layer (cap) TONS			24,000 Cap 2	24,000 Cap 3	24,000 Cap 4	24,000 Cap 5	50,000 Caps 6 & 7
13. Place material for biointrusion barrier (cap) TONS			50,000 Cap 2	50,000 Cap 3	50,000 Cap 4	50,000 Cap 5	100,000 Caps 6 & 7
14. Place material for choke stone (cap) TONS			4,500 Cap 2	4,500 Cap 3	4,500 Cap 4	4,500 Cap 5	9,500 Caps 6 & 7
15. Place material for filter layer (cap) TONS			10,000 Cap 2	10,000 Cap 3	10,000 Cap 4	10,000 Cap 5	20,000 Caps 6 & 7
16. Excavate material for vegetative layer (cap) CY			31,000 Cap 2	31,000 Cap 3	31,000 Cap 4	31,000 Cap 5	65,000 Caps 6 & 7
17. Place material for vegetative layer (cap) ICY			26,000 Cap 2	26,000 Cap 3	26,000 Cap 4	26,000 Cap 5	54,000 Caps 6 & 7
18. Excavate material for topsoil layer (cap) CY			9,000 Cap 2	9,000 Cap 3	9,000 Cap 4	9,000 Cap 5	17,000 Caps 6 & 7
19. Place material for topsoil layer (cap) ICY			7,000 Cap 2	7,000 Cap 3	7,000 Cap 4	7,000 Cap 5	14,000 Caps 6 & 7

SECTION 1

2.0 MANPOWER PLANS

Manpower Planning Sheet (CR2)

MPS # 1CA01 OSDF MANAGEMENT & OVERSIGHT

DRIVERS	START DATE	END DATE	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009															xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																			
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																		x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																						x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004												xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																								
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																								
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																				xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																								
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001					xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																								xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																								
321 OSDF Cell Placement	10/01/2003	06/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

		TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Project Management	Program Mgr.	17.50	0.5	0.5	0.5	0.5	1	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Project Controls	Project Controls Mgr.	12.80	0.5	0.5	0.5	0.5	1	0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Environmental Safety & H	Safety & Health Mgr.	15.70	0.5	0.5	0.5	0.5	1	0	0	0	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Environmental Safety & H	Rad Engineer	13.40	0.5	0.5	0.5	0.5	1	0	0	0	0	0	0.1	0.1	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
QA/QC	QA/QC Tech.	9.70	1.2	1.2	1.5	1.5	1	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Procurement	Procur. & Contracting Mgr.	16.20	0.6	0.8	1	0.5	1	0	0	0	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Environmental	Environmental Protection Rep.	11.30	0.1	0.1	0.1	0.1	0.5	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.5	1	1
Administration	Clerks	36.40	0.7	1.2	0.7	1	1	0	0	0	0.5	0.5	0.5	0.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Project Controls	Cost Analyst	24.00	2.4	1.4	1.4	1.5	1	0	0	0	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1	1	1	1
Project Controls	Scheduler	10.50	0.5	0.5	0.5	0.5	0.2	0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
Subcontract	Subcontract Staff	167.00	0	0	5	5	5	0	0	0	0	3	3	3	3	3	7	7	7	3	7	7	7	4	7	7
Subcontract	Subcontract Craft	837.00	0	0	20	30	15	0	0	0	0	5	12	12	12	6	25	25	25	5	30	30	30	5	50	50
Procurement	Buyer/Contracts Administrator	3.10	0.6	0.9	0.8	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Publ	Human Resource Rep.	1.60	0.2	0.2	0.7	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Mgr.	1.10	0.7	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Project Mgr.	1.40	0	0	0.4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0.10	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manpower Planning Sheet (CR2)

MPS # 1CA01 OSDF MANAGEMENT & OVERSIGHT

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									

Project Management	Program Mgr.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	0
Project Controls	Project Controls Mgr.	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0
Environmental Safety & Health	Safety & Health Mgr.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	0
Environmental Safety & Health	Rad Engineer	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0
QA/QC	QA/QC Tech.	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0
Procurement	Procur. & Contracting Mgr.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0
Environmental	Environmental Protection Rep.	0.5	0.5	1	1	0.5	0.5	1	1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0
Administration	Clerks	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1	0	0	0	0	0	0	0
Project Controls	Cost Analyst	1	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0	0	0	0	0	0	0
Project Controls	Scheduler	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.1	0.1	0	0	0	0	0	0	0	0
Subcontract	Subcontract Staff	7	4	7	7	7	4	7	7	7	4	5	5	3	0	0	0	0	0	0	0
Subcontract	Subcontract Craft	50	10	50	50	50	10	45	45	45	5	30	30	30	0	0	0	0	0	0	0
Procurement	Buyer/Contracts Administrator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Public Affairs	Human Resource Rep.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Mgr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Project Mgr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manpower Planning Sheet (CR2)

MPS # 1CA01 OSDF MANAGEMENT & OVERSIGHT

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Engineering & Design	Engineer Manager		2.80	0	0	0.8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.		0.20	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Controls	Estimator		2.00	0.2	0.3	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer		2.20	0.8	1.1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management	Waste Engineer		0.60	0.5	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	1186.60	10.50	10.50	36.20	46.90	28.70	0.00	0.00	0.00	1.80	9.80	17.20	17.20	18.40	12.40	36.20	36.20	36.50	12.50	41.50	41.50	42.90	14.90	63.40	63.40

Manpower Planning Sheet (CR2)

MPS # 1CA01 OSDF MANAGEMENT & OVERSIGHT

DRIVERS	START DATE	END DATE	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering & Design	Engineer Manager		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Controls	Estimator		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management	Waste Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	62.90	19.90	63.40	63.40	62.90	19.60	57.40	57.40	55.90	12.70	38.60	38.60	35.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CA02 OSDF ENGINEERING STAFF

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009																xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																			x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																							x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004													xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																									
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																	xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																									
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																					xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																									
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001						xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																									xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																									
321 OSDF Cell Placement	10/01/2003	06/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Project Management	Project Mgr.		33.20	1	1	1	1	1	0.2	0	0	0.5	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineering & Design	Engineer Civil		72.30	3	3	3	3	2.1	0.2	0	0	0.5	0.5	1	1	1	1	2	2	2	2	2	2	3	3	3	3
Engineering & Design	Drafter/CAD Operator		14.10	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0.2	0.2	0.2	1	0.5	0.5	0.5	0.5	0.5	0.5	1
Administration	Clerks		3.80	0.1	0.1	0.3	0.3	0.2	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
		Sheet Totals:	123.40	4.10	4.10	4.30	4.30	3.30	0.40	0.00	0.00	1.00	1.00	2.20	2.20	2.20	2.20	3.20	3.20	4.10	3.60	3.60	3.60	4.70	4.70	4.70	5.20

Manpower Planning Sheet (CR2)

MPS # 1CA02 OSDF ENGINEERING STAFF

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									
Project Management	Project Mgr.		1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Engineering & Design	Engineer Civil		3	3	3	3	3	3	3	3	1	1	1	1	1	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator		1	0.5	1	1	1	0.5	1	1	0.2	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0
Administration	Clerks		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	5.20	4.70	5.20	5.20	5.20	4.70	5.20	5.20	2.20	2.20	2.20	2.20	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CA03 OSDF CONSTRUCTION MANAGEMENT

DRIVERS	START DATE	END DATE	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009															xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																			
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																		x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																						x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004												xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																								
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																								
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																				xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																								
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001					xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																								xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																								
321 OSDF Cell Placement	10/01/2003	06/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

		TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Construction	Construction Mgr.	49.20	2.3	1.7	2.1	2.1	2	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2
Construction	Construction Engineer	104.60	4	3.6	7	7	4	0	0	0	1	1	1	1	2	2	2	2	2	2	2	2	4	3	4	4
Construction	Construction Coordinator	39.10	3.4	3	0	0	0.5	0	0	0	0.1	0.1	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1	1.5	1.5
Administration	Clerks	8.80	1.2	1.1	1.1	1	1	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Procurement	Buyer/Contracts Administrator	0.10	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Publ	Human Resource Rep.	0.50	0.2	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Rad Tech	9.80	1	2.6	3.1	3.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	Hazwat	0.60	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer	0.90	0.7	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.	0.20	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Project Mgr.	4.90	0.6	0.5	1.9	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Controls	Scheduler	2.20	1.2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	General Laborer	5.80	1.7	2.1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer	11.00	3.4	2.8	2.4	2.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Rad Engineer	2.60	1.2	0.2	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Safety & Health Mgr.	8.00	2	1.8	2.1	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Safety Tech.	0.60	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manpower Planning Sheet (CR2)

MPS # 1CA03 OSDF CONSTRUCTION MANAGEMENT

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									
Construction	Construction Mgr.		2	1	2	2	2	1	2	2	2	1	1	1	1	0	0	0	0	0	0	0
Construction	Construction Engineer		4	3	4	4	4	3	4	4	4	3	3	3	1	0	0	0	0	0	0	0
Construction	Construction Coordinator		1.5	1	1.5	1.5	1.5	1	1.5	1.5	1	1	1	1	0.5	0	0	0	0	0	0	0
Administration	Clerks		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
Procurement	Buyer/Contracts Administrator		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Public Affairs	Human Resource Rep.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Rad Tech		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	Hazwat		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Project Mgr.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Controls	Scheduler		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	General Laborer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Rad Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Safety & Health Mgr.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Safety Tech.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manpower Planning Sheet (CR2)

MPS # 1CA03 OSDF CONSTRUCTION MANAGEMENT

DRIVERS		START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Waste Management	Waste Engineer			1.70	0.8	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Sheet Totals:	250.60	24.70	22.30	21.30	21.20	7.50	0.00	0.00	0.00	2.10	2.10	3.10	3.10	4.10	4.10	4.10	4.10	4.10	4.10	4.60	4.60	7.70	5.20	7.70	7.70

Manpower Planning Sheet (CR2)

MPS # 1CA03 OSDF CONSTRUCTION MANAGEMENT

DRIVERS	START DATE	END DATE	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Waste Management	Waste Engineer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	7.70	5.20	7.70	7.70	7.70	5.20	7.70	7.70	7.00	5.00	5.00	5.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTION 1

3.0 ESTIMATE

CECP1

OSDF MANAGEMENT & OVERSIGHT

09/07/2001
8:43 AM

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: BUYCON **BUYER/CONTRACTS ADMN** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,180.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7	1,180.7
Yr Total Cost:	49,471	0	0	0	0	0	0	0	0	0
Cum Total Cost:	49,471	49,471	49,471	49,471	49,471	49,471	49,471	49,471	49,471	49,471

Resource: CLERKS **CLERKS** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,370.2	421.0	873.5	2,096.4	2,096.4	2,096.4	2,096.4	2,096.4	2,096.4	421.0
Cum Hours:	1,370.2	1,791.2	2,664.7	4,761.1	6,857.5	8,953.9	11,050.3	13,146.7	15,243.1	15,664.1
Yr Total Cost:	32,734	10,587	23,265	59,129	62,635	66,918	72,545	76,463	84,971	17,590
Cum Total Cost:	32,734	43,321	66,586	125,715	188,350	255,268	327,813	404,275	489,247	506,837

Resource: CSTANL **COST ANALYST** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	2,202.9	421.0	349.4	524.1	524.1	1,747.0	1,747.0	1,302.5	873.5	42.1
Cum Hours:	2,202.9	2,623.9	2,973.3	3,497.4	4,021.5	5,768.5	7,515.5	8,818.0	9,691.5	9,733.6
Yr Total Cost:	85,693	17,238	15,153	24,070	25,497	90,802	98,437	77,355	57,649	2,864
Cum Total Cost:	85,693	102,931	118,084	142,154	167,651	258,453	356,890	434,244	491,894	494,758

Resource: DRFCAD **DRAFTER/CAD OPERATOR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
Yr Total Cost:	1,382	0	0	0	0	0	0	0	0	0
Cum Total Cost:	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: ENGMGR **ENGINEERING MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,235.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6	1,235.6
Yr Total Cost:	73,889	0	0	0	0	0	0	0	0	0
Cum Total Cost:	73,889	73,889	73,889	73,889	73,889	73,889	73,889	73,889	73,889	73,889

Resource: ENPREP **ENVIR PROTECTION REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	145.2	210.5	0.0	88.3	349.4	1,332.5	1,332.5	1,318.0	174.7	0.0
Cum Hours:	145.2	355.7	355.7	444.0	793.4	2,125.9	3,458.4	4,776.4	4,951.1	4,951.1
Yr Total Cost:	7,019	10,711	0	5,039	21,123	86,065	93,301	97,271	14,328	0
Cum Total Cost:	7,019	17,730	17,730	22,769	43,892	129,957	223,258	320,529	334,857	334,857

Resource: ENSREP **ENVIR SCIENCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	88.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6
Yr Total Cost:	3,718	0	0	0	0	0	0	0	0	0
Cum Total Cost:	3,718	3,718	3,718	3,718	3,718	3,718	3,718	3,718	3,718	3,718

Resource: HRREP **HUMAN RESOURCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	643.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7
Yr Total Cost:	23,128	0	0	0	0	0	0	0	0	0
Cum Total Cost:	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: MAT300 **MATERIAL OBJCLASS300** **EOC:** MATERIAL
Res Dept: 949 **Overtime:** F01 **Class:** MAT

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	14,626.0	3,041.0	13,292.0	13,292.0	13,292.0	13,292.0	13,292.0	13,292.0	13,292.0	13,292.0
Cum Units:	14,626.0	17,667.0	30,959.0	44,251.0	57,543.0	70,835.0	84,127.0	97,419.0	110,711.0	124,003.0
Yr Total Cost:	14,626	3,123	14,019	14,412	14,816	15,245	15,687	16,142	16,610	17,092
Cum Total Cost:	14,626	17,749	31,769	46,181	60,996	76,241	91,929	108,071	124,681	141,773

Resource: ODC600 **ODC 600** **EOC:** ODC
Res Dept: 949 **Overtime:** F01 **Class:** ODC

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	4,052.0	45.0	180.0	3,028.0	3,028.0	3,028.0	3,028.0	3,028.0	3,028.0	3,028.0
Cum Units:	4,052.0	4,097.0	4,277.0	7,305.0	10,333.0	13,361.0	16,389.0	19,417.0	22,445.0	25,473.0
Yr Total Cost:	4,052	46	190	3,283	3,375	3,473	3,574	3,677	3,784	3,894
Cum Total Cost:	4,052	4,098	4,288	7,571	10,946	14,419	17,993	21,670	25,454	29,348

Resource: ODC700 **ODC 700** **EOC:** ODC
Res Dept: 949 **Overtime:** F01 **Class:** ODC

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	4,051.0	0.0	0.0	60,000.0	62,058.0	2,058.0	2,058.0	2,058.0	2,058.0	0.0
Cum Units:	4,051.0	4,051.0	4,051.0	64,051.0	126,109.0	128,167.0	130,225.1	132,283.0	134,341.1	134,341.1
Yr Total Cost:	4,051	0	0	65,056	69,171	2,360	2,429	2,499	2,572	0
Cum Total Cost:	4,051	4,051	4,051	69,107	138,278	140,638	143,067	145,566	148,138	148,138

Resource: PJCEST **ESTIMATOR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	820.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	820.6	820.6	820.6	820.6	820.6	820.6	820.6	820.6	820.6	820.6
Yr Total Cost:	45,552	0	0	0	0	0	0	0	0	0
Cum Total Cost:	45,552	45,552	45,552	45,552	45,552	45,552	45,552	45,552	45,552	45,552

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: PJCMGR **PROJECT CONTROLS MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	726.0	421.0	174.7	437.7	873.5	873.5	873.5	608.5	391.5	42.1
Cum Hours:	726.0	1,147.0	1,321.7	1,759.4	2,632.9	3,506.4	4,379.9	4,988.4	5,379.9	5,422.0
Yr Total Cost:	47,502	28,994	12,744	33,812	71,476	76,365	82,786	60,785	43,460	4,818
Cum Total Cost:	47,502	76,497	89,240	123,052	194,529	270,893	353,679	414,464	457,924	462,742

Resource: PJCSCH **SCHEDULERS** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	726.0	84.2	174.7	349.4	349.4	873.5	873.5	695.7	303.2	0.0
Cum Hours:	726.0	810.2	984.9	1,334.3	1,683.7	2,557.2	3,430.7	4,126.4	4,429.6	4,429.6
Yr Total Cost:	38,391	4,687	10,300	21,814	23,107	61,717	66,907	56,166	27,202	0
Cum Total Cost:	38,391	43,077	53,377	75,191	98,297	160,015	226,921	283,087	310,289	310,289

Resource: PRJMGR **PROJECT MANAGER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	617.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	617.8	617.8	617.8	617.8	617.8	617.8	617.8	617.8	617.8	617.8
Yr Total Cost:	55,083	0	0	0	0	0	0	0	0	0
Cum Total Cost:	55,083	55,083	55,083	55,083	55,083	55,083	55,083	55,083	55,083	55,083

Resource: PROMGR **PROGRAM MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	726.0	421.0	873.5	873.5	873.5	873.5	873.5	873.5	873.5	210.5
Cum Hours:	726.0	1,147.0	2,020.5	2,894.0	3,767.5	4,641.0	5,514.5	6,388.0	7,261.5	7,472.0
Yr Total Cost:	68,251	41,659	91,552	96,950	102,698	109,721	118,946	125,371	139,322	34,609
Cum Total Cost:	68,251	109,910	201,463	298,413	401,111	510,832	629,779	755,149	894,471	929,081

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: PURMGR **PROC & CONTRACT MGR** **EOC: LABOR**
Res Dept: 949 **Overtime: F01** **Class: SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,092.5	421.0	614.3	873.5	873.5	873.5	873.5	873.5	349.4	42.1
Cum Hours:	1,092.5	1,513.5	2,127.8	3,001.3	3,874.8	4,748.3	5,621.8	6,495.3	6,844.7	6,886.8
Yr Total Cost:	69,155	28,051	43,353	65,280	69,150	73,879	80,091	84,416	37,524	4,661
Cum Total Cost:	69,155	97,206	140,559	205,838	274,988	348,867	428,957	513,374	550,898	555,558

Resource: QACENG **QA ENGINEER** **EOC: LABOR**
Res Dept: 949 **Overtime: F01** **Class: SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	720.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	720.7	720.7	720.7	720.7	720.7	720.7	720.7	720.7	720.7	720.7
Yr Total Cost:	33,123	0	0	0	0	0	0	0	0	0
Cum Total Cost:	33,123	33,123	33,123	33,123	33,123	33,123	33,123	33,123	33,123	33,123

Resource: QACTEC **QA/QC TECH** **EOC: LABOR**
Res Dept: 949 **Overtime: F01** **Class: SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	2,007.3	421.0	0.0	174.7	174.7	349.4	349.4	216.9	174.7	0.0
Cum Hours:	2,007.3	2,428.3	2,428.3	2,603.0	2,777.7	3,127.1	3,476.5	3,693.4	3,868.1	3,868.1
Yr Total Cost:	61,985	13,684	0	6,369	6,747	14,416	15,628	10,226	9,153	0
Cum Total Cost:	61,985	75,669	75,669	82,039	88,785	103,202	118,830	129,056	138,209	138,209

Resource: RADENG **RAD ENGINEER** **EOC: LABOR**
Res Dept: 949 **Overtime: F02** **Class: SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	726.0	421.0	88.3	614.3	873.5	873.5	873.5	873.5	349.4	0.0
Cum Hours:	726.0	1,147.0	1,235.3	1,849.6	2,723.1	3,596.6	4,470.1	5,343.6	5,693.0	5,693.0
Yr Total Cost:	34,267	20,916	4,647	34,232	51,562	55,088	59,720	62,945	27,980	0
Cum Total Cost:	34,267	55,183	59,830	94,062	145,624	200,712	260,432	323,377	351,357	351,357

Resource: S&HMGR **SAFETY & HEALTH MGR** **EOC: LABOR**
Res Dept: 949 **Overtime: F01** **Class: SAL**

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	726.0	421.0	349.4	614.3	873.5	873.5	873.5	873.5	873.5	210.5
Cum Hours:	726.0	1,147.0	1,496.4	2,110.7	2,984.2	3,857.7	4,731.2	5,604.7	6,478.2	6,688.7
Yr Total Cost:	40,242	24,563	21,592	40,201	60,552	64,694	70,133	73,921	82,147	20,406
Cum Total Cost:	40,242	64,805	86,398	126,599	187,151	251,845	321,978	395,899	478,045	498,452

Resource: SERVSUB **SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** FY03 **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	0.0	0.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Cum Units:	0.0	0.0	1,000.0	2,000.0	3,000.0	4,000.0	5,000.0	6,000.1	7,000.1	8,000.1
Yr Total Cost:	0	0	1,055	1,084	1,115	1,147	1,180	1,214	1,250	1,286
Cum Total Cost:	0	0	1,055	2,139	3,254	4,401	5,581	6,795	8,045	9,331

Resource: TPSMGR **TECH/PROG SUPT MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	265.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	265.4	265.4	265.4	265.4	265.4	265.4	265.4	265.4	265.4	265.4
Yr Total Cost:	16,572	0	0	0	0	0	0	0	0	0
Cum Total Cost:	16,572	16,572	16,572	16,572	16,572	16,572	16,572	16,572	16,572	16,572

Resource: WSTENG **WASTE ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	107.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3
Yr Total Cost:	5,476	0	0	0	0	0	0	0	0	0
Cum Total Cost:	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	16,172.8	3,662.7	3,497.8	6,646.2	7,861.5	10,766.3	10,766.3	9,732.0	6,459.8	968.3
Cum Hours:	16,172.8	19,835.5	23,333.3	29,979.5	37,841.0	48,607.3	59,373.6	69,105.6	75,565.4	76,533.7
Yr Total Cost:	815,362	204,258	237,870	470,732	583,022	721,891	781,363	748,451	547,953	107,219
Cum Total Cost:	815,362	1,019,620	1,257,491	1,728,223	2,311,245	3,033,136	3,814,499	4,562,950	5,110,902	5,218,122

INCLUDES ESCALATION COSTS

09/07/2001
8:43 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP1
COMMENT #: F03-030

DATE: 09/05/01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

CAM _____ CONTROL TEAM _____

INCLUDES ESCALATION COSTS

CECP2

OSDF ENGINEERING STAFF

09/07/2001
9:39 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP2
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD CHIOU
CAM: JD CHIOU
PREPARED BY: W. F. FICK
FISCAL YEAR: 2002-2010

Resource: CLERKS CLERKS EOC: LABOR
Res Dept: 949 Overtime: 1 Class: SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	84.2	0.0	12.0	210.7	385.4	385.4	385.4	36.0	12.0
Cum Hours:	0.0	84.2	84.2	96.2	306.9	692.3	1,077.7	1,463.1	1,499.1	1,511.1
Yr Total Cost:	0	2,117	0	338	6,295	12,302	13,337	14,057	1,459	501
Cum Total Cost:	0	2,117	2,117	2,456	8,751	21,053	34,390	48,446	49,906	50,407

Resource: DRFCAD DRAFTER/CAD OPERATOR EOC: LABOR
Res Dept: 949 Overtime: 1 Class: SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	176.6	361.4	1,103.0	1,171.5	1,589.5	1,601.0	409.4	54.1
Cum Hours:	0.0	0.0	176.6	538.0	1,641.0	2,812.5	4,402.0	6,003.0	6,412.4	6,466.5
Yr Total Cost:	0	0	6,141	13,308	43,024	48,821	71,811	76,237	21,664	2,951
Cum Total Cost:	0	0	6,141	19,449	62,473	111,295	183,106	259,343	281,007	283,958

Resource: ENGCVL ENGINEER CIVIL EOC: LABOR
Res Dept: 949 Overtime: 1 Class: SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	971.3	1,315.0	2,642.0	3,530.0	5,301.0	5,301.0	5,313.0	1,807.0	433.0
Cum Hours:	0.0	971.3	2,286.3	4,928.3	8,458.3	13,759.3	19,060.3	24,373.3	26,180.3	26,613.3
Yr Total Cost:	0	55,597	79,726	169,623	240,070	385,168	417,553	441,101	166,717	41,181
Cum Total Cost:	0	55,597	135,322	304,945	545,015	930,183	1,347,736	1,788,837	1,955,554	1,996,735

Resource: ODC600 ODC 600 EOC: ODC
Res Dept: 949 Overtime: FY02 Class: ODC

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	0.0	3,078.0	180.0	5,325.0	5,325.0	5,325.0	5,325.0	5,325.0	5,325.0	180.0
Cum Units:	0.0	3,078.0	3,258.0	8,583.0	13,908.0	19,233.0	24,558.0	29,883.0	35,208.0	35,388.0
Yr Total Cost:	0	3,161	190	5,774	5,935	6,107	6,285	6,467	6,654	231
Cum Total Cost:	0	3,161	3,351	9,125	15,060	21,167	27,452	33,919	40,573	40,805

Resource: ODC700 ODC 700 EOC: ODC
Res Dept: 949 Overtime: FY05 Class: ODC

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10

INCLUDES ESCALATION COSTS

09/07/2001
9:39 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP2
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD CHIOU
CAM: JD CHIOU
PREPARED BY: W. F. FICK
FISCAL YEAR: 2002-2010

Yr Units:	0.0	0.0	0.0	0.0	1,029.0	1,029.0	1,029.0	1,029.0	1,029.0	0.0
Cum Units:	0.0	0.0	0.0	0.0	1,029.0	2,058.0	3,087.0	4,116.0	5,145.0	5,145.0
Yr Total Cost:	0	0	0	0	1,147	1,180	1,214	1,250	1,286	0
Cum Total Cost:	0	0	0	0	1,147	2,327	3,542	4,791	6,077	6,077

Resource: PRJMGR **PROJECT MANAGER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F02 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	508.2	1,315.0	1,747.0	1,747.0	1,747.0	1,747.0	1,747.0	1,747.0	421.0
Cum Hours:	0.0	508.2	1,823.2	3,570.2	5,317.2	7,064.2	8,811.2	10,558.2	12,305.2	12,726.2
Yr Total Cost:	0	47,694	130,716	183,897	194,799	208,121	225,620	237,806	264,269	65,647
Cum Total Cost:	0	47,694	178,410	362,307	557,106	765,227	990,847	1,228,653	1,492,921	1,558,569

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	1,563.7	2,806.6	4,762.4	6,590.7	8,604.9	9,022.9	9,046.4	3,999.4	920.1
Cum Hours:	0.0	1,563.7	4,370.3	9,132.7	15,723.4	24,328.3	33,351.2	42,397.6	46,397.0	47,317.1
Yr Total Cost:	0	108,569	216,773	372,941	491,270	661,700	735,819	776,917	462,050	110,512
Cum Total Cost:	0	108,569	325,341	698,282	1,189,552	1,851,252	2,587,072	3,363,989	3,826,039	3,936,551

CAM

CONTROL TEAM

INCLUDES ESCALATION COSTS

CECP3

OSDF CONSTRUCTION MANAGEMENT

09/07/2001
9:38 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: BUYCON **BUYER/CONTRACTS ADMN** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	12.6	0	0	0	0	0	0	0	0	0
Cum Hours:	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Yr Total Cost:	528	0	0	0	0	0	0	0	0	0
Cum Total Cost:	528	528	528	528	528	528	528	528	528	528

Resource: CLERKS **CLERKS** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	1,565.70	421	88.3	174.7	174.7	349.4	349.4	349.4	0	0
Cum Hours:	1,565.70	1,986.70	2,075.00	2,249.70	2,424.40	2,773.80	3,123.20	3,472.60	3,472.60	3,472.60
Yr Total Cost:	37,405	10,587	2,352	4,927	5,220	11,153	12,091	12,744	0	0
Cum Total Cost:	37,405	47,991	50,343	55,270	60,490	71,643	83,734	96,477	96,477	96,477

Resource: CNSCOD **CONSTRUCTION COORD** **EOC:** LABOR
Res Dept: 949 **Overtime:** 1 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	1,757.40	210.5	969.4	1,987.00	2,689.50	2,943.00	2,943.00	2,942.50	2,107.00	270.5
Cum Hours:	1,757.40	1,967.90	2,937.30	4,924.30	7,613.80	10,556.80	13,499.80	16,442.30	18,549.30	18,819.80
Yr Total Cost:	55,780	7,033	34,304	74,459	106,758	124,810	135,304	142,588	113,463	15,016
Cum Total Cost:	55,780	62,812	97,116	171,575	278,334	403,144	538,448	681,036	794,499	809,515

Resource: CNSENG **CONSTRUCTION ENG** **EOC:** LABOR
Res Dept: 949 **Overtime:** 1 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	8,279.80	1,684.00	1,747.00	3,974.00	4,214.00	8,173.00	8,173.00	8,172.00	6,682.00	541
Cum Hours:	8,279.80	9,963.80	11,710.80	15,684.80	19,898.80	28,071.80	36,244.80	44,416.80	51,098.80	51,639.80
Yr Total Cost:	451,249	96,604	106,151	255,704	287,220	595,157	645,197	679,961	617,854	51,566
Cum Total Cost:	451,249	547,853	654,003	909,707	1,196,927	1,792,083	2,437,281	3,117,242	3,735,096	3,786,661

INCLUDES ESCALATION COSTS

09/07/2001
9:38 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: CNSMGR **CONSTRUCTION MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** 1 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	2,897.20	842	1,747.00	1,987.00	2,107.00	3,899.00	3,959.00	3,958.00	2,648.00	541
Cum Hours:	2,897.20	3,739.20	5,486.20	7,473.20	9,580.20	13,479.20	17,438.20	21,396.20	24,044.20	24,585.20
Yr Total Cost:	179,655	54,958	120,778	145,470	163,399	323,049	355,600	374,711	278,588	58,671
Cum Total Cost:	179,655	234,613	355,391	500,861	664,260	987,309	1,342,909	1,717,620	1,996,208	2,054,879

Resource: ENGINR **ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	176.8	0	0	0	0	0	0	0	0	0
Cum Hours:	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8
Yr Total Cost:	12,157	0	0	0	0	0	0	0	0	0
Cum Total Cost:	12,157	12,157	12,157	12,157	12,157	12,157	12,157	12,157	12,157	12,157

Resource: ENSREP **ENVIR SCIENCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	25.2	0	0	0	0	0	0	0	0	0
Cum Hours:	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
Yr Total Cost:	1,057	0	0	0	0	0	0	0	0	0
Cum Total Cost:	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057	1,057

Resource: GLMNT **GEN LABOR MAINT** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** HOU

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	2,027.50	0	0	0	0	0	0	0	0	0
Cum Hours:	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50	2,027.50
Yr Total Cost:	49,552	0	0	0	0	0	0	0	0	0
Cum Total Cost:	49,552	49,552	49,552	49,552	49,552	49,552	49,552	49,552	49,552	49,552

INCLUDES ESCALATION COSTS

09/07/2001
9:38 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: HAZWAT **HAZWAT** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** HOU

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	170.7	0	0	0	0	0	0	0	0	0
Cum Hours:	170.7	170.7	170.7	170.7	170.7	170.7	170.7	170.7	170.7	170.7
Yr Total Cost:	4,914	0	0	0	0	0	0	0	0	0
Cum Total Cost:	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914

Resource: HRREP **HUMAN RESOURCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	158.1	0	0	0	0	0	0	0	0	0
Cum Hours:	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.1
Yr Total Cost:	5,681	0	0	0	0	0	0	0	0	0
Cum Total Cost:	5,681	5,681	5,681	5,681	5,681	5,681	5,681	5,681	5,681	5,681

Resource: MAT300 **MATERIAL OBJCLASS300** **EOC:** MATERIAL
Res Dept: 949 **Overtime:** F01 **Class:** MAT

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	4,627.00	0	68,900.00	68,900.00	68,900.00	103,350.00	103,350.00	68,900.00	68,900.00	15,900.00
Cum Units:	4,627.00	4,627.00	73,527.00	142,427.00	211,327.00	314,677.00	418,027.00	486,927.00	555,827.00	571,727.00
Yr Total Cost:	4,627	0	72,671	74,706	76,797	118,537	121,974	83,674	86,101	20,446
Cum Total Cost:	4,627	4,627	77,298	152,003	228,801	347,338	469,312	552,986	639,087	659,533

Resource: ODC600 **ODC 600** **EOC:** ODC
Res Dept: 949 **Overtime:** F01 **Class:** ODC

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	2,832.00	0	180	2,238.00	180	2,238.00	180	2,238.00	180	180
Cum Units:	2,832.00	2,832.00	3,012.00	5,250.00	5,430.00	7,668.00	7,848.00	10,086.00	10,266.00	10,446.00
Yr Total Cost:	2,832	0	190	2,427	201	2,567	212	2,718	225	231
Cum Total Cost:	2,832	2,832	3,022	5,448	5,649	8,216	8,428	11,146	11,371	11,603

INCLUDES ESCALATION COSTS

09/07/2001
9:38 AM

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: ODC700 **ODC 700** **EOC:** ODC
Res Dept: 949 **Overtime:** F05 **Class:** ODC

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	0	0	0	0	1,029.00	1,029.00	1,029.00	1,029.00	1,029.00	0
Cum Units:	0	0	0	0	1,029.00	2,058.00	3,087.00	4,116.00	5,145.00	5,145.00
Yr Total Cost:	0	0	0	0	1,147	1,180	1,214	1,250	1,286	0
Cum Total Cost:	0	0	0	0	1,147	2,327	3,542	4,791	6,077	6,077

Resource: PJCSCH **SCHEDULERS** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	594.2	0	0	0	0	0	0	0	0	0
Cum Hours:	594.2	594.2	594.2	594.2	594.2	594.2	594.2	594.2	594.2	594.2
Yr Total Cost:	31,421	0	0	0	0	0	0	0	0	0
Cum Total Cost:	31,421	31,421	31,421	31,421	31,421	31,421	31,421	31,421	31,421	31,421

Resource: PRJMGR **PROJECT MANAGER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	1,974.80	0	0	0	0	0	0	0	0	0
Cum Hours:	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80	1,974.80
Yr Total Cost:	176,073	0	0	0	0	0	0	0	0	0
Cum Total Cost:	176,073	176,073	176,073	176,073	176,073	176,073	176,073	176,073	176,073	176,073

Resource: QACENG **QA ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	3,788.00	0	0	0	0	0	0	0	0	0
Cum Hours:	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00	3,788.00
Yr Total Cost:	174,096	0	0	0	0	0	0	0	0	0
Cum Total Cost:	174,096	174,096	174,096	174,096	174,096	174,096	174,096	174,096	174,096	174,096

INCLUDES ESCALATION COSTS

09/07/2001
9:38 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

Resource: RADENG **RAD ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	769.6	0	0	0	0	0	0	0	0	0
Cum Hours:	769.6	769.6	769.6	769.6	769.6	769.6	769.6	769.6	769.6	769.6
Yr Total Cost:	36,325	0	0	0	0	0	0	0	0	0
Cum Total Cost:	36,325	36,325	36,325	36,325	36,325	36,325	36,325	36,325	36,325	36,325

Resource: RADTEC **RAD TECH** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	4,015.10	0	0	0	0	0	0	0	0	0
Cum Hours:	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10	4,015.10
Yr Total Cost:	136,835	0	0	0	0	0	0	0	0	0
Cum Total Cost:	136,835	136,835	136,835	136,835	136,835	136,835	136,835	136,835	136,835	136,835

Resource: S&HMGR **SAFETY & HEALTH MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** F01 **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	2,903.70	0	0	0	0	0	0	0	0	0
Cum Hours:	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70	2,903.70
Yr Total Cost:	160,952	0	0	0	0	0	0	0	0	0
Cum Total Cost:	160,952	160,952	160,952	160,952	160,952	160,952	160,952	160,952	160,952	160,952

Resource: SERVSUB **SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** F01 **Class:** SUB

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	337,469.00	57,330.00	0	0	0	0	0	0	0	0
Cum Units:	337,469.00	394,799.00	394,799.00	394,799.00	394,799.00	394,799.00	394,799.00	394,799.00	394,799.00	394,799.00
Yr Total Cost:	337,469	58,878	0	0	0	0	0	0	0	0
Cum Total Cost:	337,469	396,347	396,347	396,347	396,347	396,347	396,347	396,347	396,347	396,347

INCLUDES ESCALATION COSTS

09/07/2001
9:38 AM

PBS: OHFN03
WBS: 1.1.C.A
CTRL ACCT: CECP
CHARGE NO: CECP3
COMMENT #: F03-030

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2010

GRAND TOTALS:

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	31,116.40	3,157.50	4,551.70	8,122.70	9,185.20	15,364.40	15,424.40	15,421.90	11,437.00	1,352.50
Cum Hours:	31,116.40	34,273.90	38,825.60	46,948.30	56,133.50	71,497.90	86,922.30	102,344.20	113,781.20	115,133.70
Yr Total Cost:	1,858,609	228,058	336,445	557,692	640,742	1,176,453	1,271,594	1,297,646	1,097,517	145,929
Cum Total Cost:	1,858,609	2,086,667	2,423,112	2,980,804	3,621,546	4,797,999	6,069,592	7,367,238	8,464,755	8,610,684

CAM_____ CONTROL TEAM_____

INCLUDES ESCALATION COSTS

SECTION 1

4.0 RISK PLAN

Risk/Opportunity Identification and Analysis Form

Project: OSDF Management & Oversight		PBS Number: 03			Total Baseline Dollars (Minimum Case):			$17,765,357		
Evaluator: Wolinsky		WBS Number: 1.1.C.A								
CAM: J.D. Chiou	Date: 05/01/01	Control Account Number: CECP								
Project Task	Risk and/or Opportunity	Potential Impact	Internal Or External Driver	Impact Cost $ (Maximum Case)	Risk Impact Level	Risk Probability %	Risk Probability Level	Probable Cost $ (Likeliest Case)	Risk Critical Value	Risk Handling Strategy
Charge No. CECP1, OSDF Management										
Provide OSDF Projectized Management Staff & related ODCs	Period of performance must be extended 12 months due to delay in site critical path	Twelve-month OSDF schedule extension with attendant additional labor and overhead costs	Internal	$400,000.00	2	50	3	$200,000.00	2	Accept
Charge No. CECP2, OSDF Engineering Staff										
Provide OSDF Projectized Management Staff & related ODCs	Period of performance must be extended 12 months due to delay in site critical path	Twelve-month OSDF schedule extension with attendant additional labor and overhead costs	Internal	$400,000.00	2	50	3	$200,000.00	2	Accept
Charge No. CECP3, OSDF Construction Management										
Provide OSDF Projectized Management Staff & related ODCs	Period of performance must be extended 12 months due to delay in site critical path	Twelve-month OSDF schedule extension with attendant additional labor and overhead costs	Internal	$600,000.00	2	50	3	$300,000.00	2	Accept
			Total:	$1,400,000.00			Total:	$700,000.00		

OSDF Engineering

WBS DICTIONARY
CONTROL ACCOUNT/CHARGE NUMBER

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
DE-AC24-010H20115		29
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C.B	ENGINEERING	
7. APPROVED CP NO.		8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00		12/01/2000
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCLA/ACA	EW05H303	

11. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
Subcontracts
Other Direct Costs (ODCs)

b. TECHNICAL CONTENT:

This WBS element covers the OSDF engineering support necessary to complete the construction of the On-Site Disposal Facility (OSDF) within the eastern area of the FEMP site. The OSDF engineering consists of the completion of the preparation of certified for construction (CFC) packages for up to seven OSDF cells and the OSDF infrastructure based on the current OSDF final design including Design Criteria Package (DCP), calculations, design drawings, technical specifications and support plans approved by DOE and the regulatory agencies (US-EPA and Ohio EPA); Title III services, construction quality control (CQC) services; and review of OSDF monitoring data generated from leachate, OSDF groundwater monitoring wells and surface water monitoring.

c. SCOPE OF WORK:

The scope of work for these activities is specifically defined in Control Account CAEN. The key elements of this scope of work are as follows:
- OSDF Design - Excluding Final Cell
- OSDF Design - Final Cell
- OSDF CQC Services
- OSDF Title III Services

WORK SPECIFICALLY EXCLUDED:

- Construction of OSDF and OSDF infrastructure.

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT
FEMP (DEFENSE)	12/01/2000

3. IDENTIFICATION NUMBER	4. INDEX LINE NO.
DE-AC24-010H20115	29

5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE
1.1.C.B	ENGINEERING

7. APPROVED CP NO.	8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00	12/01/2000

9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER
CERCLA/ACA	EW05H303

11. ELEMENT TASK DESCRIPTION

- CQC services during the months of January - March (3 months).
- System Safety Reviews (SSRs) for OSDF construction and impacted material placement.
- Test Pad program for gray till.
- West Borrow Area investigation and engineering.
- Engineering design not included in the current approved OSDF final design.
- Support to develop, install, monitor, and perform data collection and interpretation for the OSDF Stewardship Program.
- Support for OSDF Control and Management and corrective action design if required.
- Preparation of OSDF Post-Closure Reports (annual, five-year, and at OSDF completion).
- Wheel wash facilities for OSDF impacted material placement.
- OSDF Engineering staff charged to control account CECP.
- Centralized services.

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU / 648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	12/00 - 01/10

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CAEN	OSDF ENGINEERING

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
Subcontracts
Other Direct Costs

b. TECHNICAL CONTENT:

This control account covers the OSDF engineering support necessary to complete the construction of the OSDF within the eastern area of the FEMP site. The OSDF engineering consists of the completion of the preparation of CFC packages for up to seven OSDF cells and the OSDF infrastructure based on the current OSDF final design, including the DCP, calculations, design drawings, technical specifications and support plans approved by DOE and the regulatory agencies; Title III services, CQC services and review of OSDF monitoring data generated from leachate, OSDF groundwater monitoring wells and surface water monitoring.

c. SCOPE OF WORK:

The scope of work for these activities is specifically defined in the following charge numbers:

CAEN1 - OSDF Design
CAEN5 - OSDF CQC Services
CAEN6 - OSDF Title III Services

d. WORK SPECIFICALLY EXCLUDED:

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU / 648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	12/00 - 01/10

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CAEN	OSDF ENGINEERING

14. ELEMENT TASK DESCRIPTION

Construction of OSDF and OSDF infrastructure

CQC services during the months of January-March (3 months)

System Safety Reviews (SSRs) for OSDF construction and impacted material placement

Test Pad program for gray till

West Borrow Area investigation and enginering

Engineering design not included in the current approved OSDF final design

Support to develop, install, monitor and perform data collection and interpretation for the OSDF Stewardship program

Support for OSDF control and management and corrective action design if required

Preparation of OSDF post-closure reports (annual, five-year, and at OSDF completion)

Wheel wash facilities for OSDF impacted material placement

OSDF engineering staff charged to control account CECP

Centralized services

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/01 - 7/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN1	OSDF DESIGN

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontractors

b. TECHNICAL CONTENT:

The On-Site Disposal Facility (OSDF) footprint consists of 7 cells that comprise approximately 64 acres in the northeast corner of the FEMP. OSDF design services under this charge number include the preparation of CFC packages for 6 cell covers (Cells 2 through 7) and 4 cell liners (Cells 4 through 7), as well as OSDF infrastructure construction.

There are no specific drivers identified for this charge number.

c. SCOPE OF WORK:

OSDF design services consist of four tasks: 1) CFC Package for remaining cell liners and final cover systems, 2)Support for procurement of OSDF construction subcontractor, 3) CFC Packages for infrastructure support, and 4) Other OSDF activities in FY2001.

CFC Package for Remaining Cell Liners and Final Cover Systems

Procurement:
Draft design options and negotiate with GeoSyntec Consultants

Preparation of OSDF CFC Package:
Prepare drawings and specifications
Perform internal reviews with support organizations (WAO, QC, etc)

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/01 - 7/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN1	OSDF DESIGN

14. ELEMENT TASK DESCRIPTION

Submit project records to ECDC and maintain copies in project file
Perform project management and control activities

Support for Procurement of OSDF Construction Subcontractor:
Prepare the solicitation and RFP
Pre-qualify the construction subcontractors
Conduct site visit with qualified subcontractors
Evaluate the proposals
Select the qualified contractor
Award the contract
Submit project records to ECDC and maintain copies in project file
Perform project management and control activities

CFC Packages for Infrastructure Support:
Prepare drawings and specifications for:
Access Control Facility
Removal of Temporary and Interim Leachate Line
OMTA Expansion
Construction Water Well
Air Monitoring Station
Perform internal reviews with support organizations (WAO, QC, etc)
project records to ECDC and maintain copies in project file
Perform project management and control activities

Other OSDF Activities in FY2001:
This work covers charges to be cross walked from charge number CCCD8 which includes the following tasks:
Title III services for the OSDF borrow area
Review OSDF monitoring data

d. WORK SPECIFICALLY EXCLUDED:

* All CFC work prior to December 1, 2000 for Cells 1 through 3

* Test Pad program for gray till.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.B	ENGINEERING	
5. PERFORMING DIV/DEPARTMENT CODE	**6. ORIGINATOR NAME/PHONE**	**7. WBS ELEMENT MANAGER**
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	**9. BUDGET TITLE**	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
NEW PER CP# FY01-0015-0003-00		12/01 - 7/08
12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CAEN1	OSDF DESIGN	

14. ELEMENT TASK DESCRIPTION

* West Borrow Area geotechnical investigation and design.

* Alternative analyses and evaluations requiring changes/revisions to the latest approved OSDF Final Design as on April 15, 2001 including drawings, technical specifications, design criteria, calculations, and support plans.

* Support to develop, install, monitor, and perform data collection and interpretation for the OSDF Long Term Stewardship Program.

* Corrective action investigation and design to support OSDF Control and Management.

* Surveying services required to support OSDF Title III services and CQC support including confirmation surveys during the OSDF construction and infrastructure construction, and impacted materials placement will be performed by Fluor Fernald, Inc. and is included in control account CCPL.

* Preparation of OSDF Post-Closure Reports (annual, five-year, and at OSDF completion).

* Design of wheel wash facilities for OSDF impacted material placement.

* Design, CQC, and Title III services for construction of laydown area at the existing waste pits railyard area north of the production area and additional plant roads.

* Trailers at the Access Control Facility.

* Design for water supply line from construction water well to OSDF, borrow area, and infrastructure construction.

* Drilling and installation of construction water well.

* Soil and water sampling during drilling of construction water well.

* Stockpiling of excavated impacted material outside the OSDF.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 4

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/01 - 7/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN1	OSDF DESIGN

14. ELEMENT TASK DESCRIPTION

* Installation of air monitoring stations.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/02 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN5	OSDF CQC SERVICES

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontractors

b. TECHNICAL CONTENT:

The On-Site Disposal Facility (OSDF) footprint consists of 7 cells that comprise approximately 64 acres in the northeast corner of the FEMP. Construction quality-control (CQC) services are needed for the remaining liners and caps, waste placement activities, infrastructure work and borrow-area development.

There are no specific drivers identified for this charge number.

c. SCOPE OF WORK:

Construction CQC services consist of two tasks: 1) Select CQC Subcontractor and 2) CQC Services.

Select and provide oversight of CQC Subcontractor
Prepare the solicitation and RFP
Pre-qualify the CQC subcontractors
Evaluate the proposals
Select the qualified subcontractor
Award the contract
Submit project records to ECDC and maintain copies in project file
Perform project management and control activities

CQC Services
Complete general employee and site worker training

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.B	ENGINEERING	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00		10/02 - 12/09
12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CAEN5	OSDF CQC SERVICES	

14. ELEMENT TASK DESCRIPTION

Prepare Health and Safety Plan
Observe methods of excavation, stockpiling and interim restoration, as carried out in the borrow area
Observe placement of impacted material
Perform inventory of geosynthetic materials
Ensure technical specifications are met for field work
Perform onsite and offsite QC testing
Provide a fully-equipped onsite field laboratory for conformance testing
Prepare daily reports, tests results, weekly schedule, manpower and project reports
Perform quality audit on geosynthetic testing laboratory

d. WORK SPECIFICALLY EXCLUDED:

All CQC work prior to December 1, 2000 for Cells 1 through 3.

Test Pad program for gray till.

West Borrow Area geotechnical investigation and design.

Alternative analyses and evaluations requiring changes/revisions to the latest approved OSDF Final Design as on April 15, 2001 including drawings, technical specifications, design criteria, calculations, and support plans.

Support to develop, install, monitor, and perform data collection and interpretation for the OSDF Long Term Stewardship Program.

Corrective action investigation and design to support OSDF Control and Management.

Surveying services required to support OSDF Title III services and CQC support including confirmation surveys during the OSDF construction and infrastructure construction, and impacted materials placement will be performed by Fluor Fernald, Inc. and is included in control account CCPL.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/02 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN5	OSDF CQC SERVICES

14. ELEMENT TASK DESCRIPTION

Preparation of OSDF Post-Closure Reports (annual, five-year, and at OSDF completion).

Design of wheel wash facilities for OSDF impacted material placement.

Design, CQC, and Title III services for construction of laydown area at the existing waste pits railyard area north of the production area and additional plant roads.

Equipment for borrow area test pit excavations to obtain samples for pre-conformance and conformance testing is included in charge account CCPL2.

CQC services for temporary cover system in OSDF Cell #2 and #3.

Engineering staff charges to control account CECP.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/01 - 1/10

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN6	OSDF TITLE III SERVICES

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontractor

b. TECHNICAL CONTENT:

The On-Site Disposal Facility (OSDF) footprint consists of 7 cells that comprise approximately 64 acres in the northeast corner of the FEMP. Title III services under this work scope will support construction activities for the borrow area, placement of impacted material, construction of remaining liners and caps, and infrastructure tasks.

There are no specific drivers identified for this charge number.

c. SCOPE OF WORK:

Title III services consist of two tasks: 1) Select Title III Subcontractor and 2) Title III Services.

Select Title III Subcontractor:
Prepare the solicitation and RFP
Pre-qualify the subcontractors
Evaluate the proposals
Select the qualified subcontractor
Award the contract
Submit project records to ECDC and maintain copies in project file
Perform project management and control activities

Title III Services:

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/01 - 1/10

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN6	OSDF TITLE III SERVICES

14. ELEMENT TASK DESCRIPTION

Prepare Health and Safety Plan for Title III services
Mobilize and demobilize the certifying engineer and administrative assistant
Review technical specifications, construction drawings, support plans and related contract documents
Review OSDF design criteria and support calculations
Review and approve technical submittals, work plans, and other CFC submittals
Monitor, review, evaluate and interpret CQC test results, waste manifestation records and tracking information
Review and approve as-built surveys for liners, caps, material placement, and infrastructure construction
Coordinate Title III services with OSDF engineering, construction, QC and CQC subcontractor
Prepare, review, evaluate and approve DCNs, RCIs, BCRs, and redline drawings
Interpret and clarify specifications, drawings, work plans, and contract documents, as needed
Prepare the yearly OSDF CQA Certification Report
Attend project meetings related to material procurement, construction activities, and Title III services
Monitor/observe, confirm compliance, and document construction of the OSDF and field related activities
Certify construction materials
Provide technical assistance to OSDF engineering and construction in evaluating claims or change orders submitted by the construction subcontractor
Maintain red-line CFC documents
Prepare and submit weekly Title III progress reports to engineering manager
Provide management and administrative support to perform Title III services
Visit GCL and GML manufacturing plants annually to inspect materials and sample materials for conformance testing

d. WORK SPECIFICALLY EXCLUDED:

- All Title III work prior to December 1, 2000 for Cells 1 through 3.
- Test Pad program for gray till.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.B	ENGINEERING

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/01 - 1/10

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CAEN6	OSDF TITLE III SERVICES

14. ELEMENT TASK DESCRIPTION

- Engineering staff charges to control account CECP.

- West Borrow Area geotechnical investigation and design.

- Alternative analyses and evaluations requiring changes/revisions to the latest approved OSDF Final Design as on April 15, 2001 including drawings, technical specifications, design criteria, calculations, and support plans.

- Support to develop, install, monitor, and perform data collection and interpretation for the OSDF Long Term Stewardship Program.

- Corrective action investigation and design to support OSDF Control and Management.

- Surveying services required to support OSDF Title III services and CQC support including confirmation surveys during the OSDF construction and infrastructure construction, and impacted materials placement will be performed by Fluor Fernald, Inc. and is included in control account CCPL.

- Preparation of OSDF Post-Closure Reports (annual, five-year, and at OSDF completion).

- Design of wheel wash facilities for OSDF impacted material placement.

- Design, CQC, and Title III services for construction of laydown area at the existing waste pits railyard area north of the production area and additional plant roads.

SECTION 2

1.0 NARRATIVE

1. PROJECT TITLE: ON-SITE DISPOSAL FACILITY PROJECT	**2. DATE: 09/10/01**	**3. PBS#: 03**
4. WBS ELEMENT CODE: 1.1.C.B.	**5. WBS ELEMENT TITLE:** OSDF ENGINEERING	
6. CAM NAME/ PHONE: JYH-DONG CHIOU/ 3726	**7. CAM SIGNATURE:**	
8. ORIGINAL/ CHANGE SCOPE/ PER CP#:	**9. CONTROL ACCOUNT: CAEN**	

SECTION 2: CAEN – OSDF ENGINEERING

1.0 NARRATIVE

1.1 OVERVIEW

The closure plan for this control account covers the preparation of the On-Site Disposal Facility (OSDF) certified for construction (CFC) packages for the remaining OSDF cells and infrastructure facilities, Construction Quality Control (CQC) services and Title III services for the construction of the remaining On-Site Disposal Facility (OSDF) and OSDF infrastructure construction, and review of OSDF monitoring data. The following charge numbers are under this control account:

1.1.1 CAEN1 – OSDF Design

This charge number includes the preparation of CFC packages for the remaining OSDF cells including OSDF Cell #7 and the OSDF infrastructure construction. CFC Packages for Cell #1 final cover system and Cells #1 through #3 liners have been completed previously and is not included in this charge number.

1.1.2 CAEN2 through CAEN4

Not used

1.1.3 CAEN5 – OSDF CQC Services

This charge number includes CQC services to support construction activities for the borrow area development, placement of impacted material, construction of remaining OSDF liners and final cover systems, and construction of OSDF infrastructure construction.

1.1.4 CAEN6 – OSDF Title III Services

This charge number includes Title III services to support construction activities for the borrow area development, placement of impacted material, construction of remaining OSDF liners and final cover systems, and construction of OSDF infrastructure construction.

~~1.1.5 CAEN7 – OSDF Monitoring~~

R1-F03-039

~~This charge number includes review of leachate, groundwater and surface water monitoring data for the OSDF.~~

1.2 ASSUMPTIONS/EXCLUSIONS

1.2.1 Assumptions

The following are general assumptions that apply to all charge numbers within this control account:

- The scope and schedule for this Control Account is based on Execution Scenario 6.
- U.S. EPA and OEPA will review and approve design change notices (DCNs) and requests for clarifications (RCIs) within seven calendar days of receipt of our transmittal.
- DOE will review and provide comments on DCNs and RCIs within two working days of receipt.
- PBSs will provide qualified matrixed manpower to support the specific work tasks identified and scheduled in this control account.
- Approved OSDF Final Design drawings, OSDF Technical Specifications, Design Criteria Package, Calculations, Support Plans, and Parts 6-9 of the latest Fluor Fernald, Inc. model contract including submittals and work plan preparation as on April 15, 2001 are applicable for OSDF design, CQC services, Title III services and OSDF monitoring.
- Performance Grades/Hazard Categories for OSDF systems, structures, and components (SSCs) and ALARA analysis for OSDF as of April 15, 2001 will remain the same.
- The OSDF Safety Assessment as of April 15, 2001 will be reviewed annually, but will not require change.
- The impacted material quantities remaining to be placed in the OSDF Cells are based on the April 24, 2001 revision of the "Proposed SDFP Schedule/Budget - Scenario 6" spreadsheet (i.e., 1,916 ,000 in place cubic yards (ICY) total soils/debris including 377,400 ICY of debris).
- Title III services and CQC services can be performed by separate subcontractors.

- Scope and projectized labor for OSDF Engineering administration, management, coordination, and oversight activities is covered under control account CECP.

- Material required for the clay caps, clay liners, vegetative layers, topsoil, general fill, and backfill will be available from the East field Borrow Area (east of the South Entrance Road).

- The area west of Eastfield Borrow Area (west of the South Entrance Road) will remain as a contingency borrow area and no new construction will be permitted in this area.

- Gray till excavated from the borrow area will not be used in construction of clay liners or clay caps.

R1-D-625

- Temporary cover system for Cell #2 and #3, if required in Fiscal Year (FY) 2001 through FY200~~5~~3, will consist of a heavy-duty surfactant.

- North Access Road will be closed by the end of FY2004.

R1-D-619

- DOE, US EPA, and OEPA will approve placement of the two-foot thick impacted material intervening layer for placement of impacted material after December 2001.

The following are assumptions that apply to specific charge numbers within this control account:

CAEN1 – OSDF Design

R1-D-618

- ~~GeoSyntec Consultants currently possess existing computer files for the 50 existing conceptual level construction drawings for remaining OSDF cell construction and the computer files for Technical Specifications, Support Plans, and Design Criteria Package.~~

- USEPA and OEPA will receive informational copies of the Final OSDF CFC Package for remaining OSDF cells. No USEPA and OEPA review and approval are required. CFC packages for the infrastructure construction will not be submitted to USEPA and OEPA.

- Based on impacted material quantities as on April 24, 2001, 7 OSDF cells will be constructed to place impacted material in the OSDF.

- Existing conditions including topographic information for the preparation of OSDF CFC package for the remaining cells will be based on latest information available as of April 15, 2001.

- Equipment wash facility use will be minimal due to D&D and impacted soil being hauled contaminated directly to the cell.
- Location of equipment wash facility and access facility (east of RIMIA) is acceptable to Land Use Group. Final location will be field adjusted.
- Construction of the Access Control Facility will be completed prior to removal of temporary leachate line.
- Excavated soil material from temporary and interim leachate line removal will be impacted and will be classified and segregated per the Impacted Material Placement Plan.
- No above WAC material will be encountered during removal of temporary/interim leachate line.
- Excavation/trenching limits for the temporary/interim leachate line removal will be provided by soil characterization group prior to removal of line.
- ~~Building 79 and the existing water tower will be removed by others prior to construction of OMTA expansion east of the production area.~~ OMTA expansion east of the production area will be completed after D&D removes Building 79 and the existing water tower.

R1 – D-614

- No additional hydrogeological studies are required for location and construction of construction water well.
- Design and installation of the construction well, pump, and power requirements will be similar to the existing construction water well.
- Construction water well will be drilled by specialty contractor.
- Power will be available within 1000 feet of construction water well location.
- Location of construction water well will be in close vicinity of existing construction water well.
- A new OMTA surface water collection system design shall be completed prior to excavation of utility isolation trench in Area 4A planned for 4th quarter FY2004. The existing surface water collection system ,which carries impacted runoff from the OMTA area, may be removed as part of the excavation of Area 4A.
- CADD services will be provided by Fluor Fernald, Inc. projectized labor from FY2002 through FY2010. CADD services manpower may be substituted by a CADD subcontractor.

CAEN5 – OSDF CQC Services

- Projectized and matrixed labor from Quality Control Operations will be covered under control account CCPL. Matrixed labor for Quality Control Operations for geosynthetic laboratory audits are included in CAEN5 scope.

- Fluor Fernald, Inc. will provide, trailer, utilities, phone, computer access, and office furniture to CQC subcontractor.

- CQC Subcontractor will provide on-site testing laboratory for soil index properties, granular material index properties, and compaction testing.

- CQC services required in FY2001 are included in control account CECP. CQC services required in the first quarter of FY2002 to support the OSDF and infrastructure construction are included in control account CAEN.

- OSDF CQC services will be performed between March 15 to December 31 in each year starting from March 15, 2003 and ending December 31, 2009.

- Leak detection testing of primary GML liner in OSDF cell liners #4 through #7 and GML in OSDF cell final covers #2 through #7 will be performed by the Construction Subcontractor.

- Travel expenses for projectized OSDF Engineering personnel will be covered by control account CECP starting in FY2002.

CAEN6 – OSDF Title III Services

- Projectized and matrixed labor from Quality Control Operations will be covered under control account CCPL. Matrixed labor from Quality Control Operations for geosynthetics plant visits and test data review is included in CAEN6 scope.

- Certifying Engineer and administrative assistance for Title III services will be located in facilities provided by Fluor Fernald, Inc.

- Title III services for impacted material placement will not be performed in the January through March 15 each year from FY2004 through FY2009.

- Timely daily, weekly, and monthly reports will be compiled based on collection of test results, impacted material manifests, and tracking information obtained from CQC subcontractors and surveys.

- Fluor Fernald, Inc. will purchase geosynthetic material for OSDF Cell #4 under Option 2 of the existing geosynthetic purchasing contract 99SC001440 and 99SC001441.
- Geosynthetic material for OSDF Cells #5 through #7 liners and OSDF Cell #2 through #7 final cover systems will be purchased under new geosynthetics procurement contracts.

- Travel expenses for projectized OSDF Engineering personnel will be covered by control account CECP starting in FY2002.

R1-F03-039

~~CAEN7 – OSDF Monitoring~~

~~None~~

1.2.2 Exclusions

The following are general exclusions that apply to all charge numbers within this control account:

- Test Pad program for gray till.

- West Borrow Area geotechnical investigation and design.

- Alternative analyses and evaluations requiring changes/revisions to the latest approved OSDF Final Design as on April 15, 2001 including drawings, technical specifications, design criteria, calculations, and support plans.

- Support to develop, install, monitor, and perform data collection and interpretation for the OSDF Long Term Stewardship Program.

- Corrective action investigation and design to support OSDF Control and Management.

- Surveying services required to support OSDF Title III services and CQC support including confirmation surveys during the OSDF construction and infrastructure construction, and impacted materials placement will be performed by Fluor Fernald, Inc. and is included in control account CCPL.

- Preparation of OSDF Post-Closure Reports (annual, five-year, and at OSDF completion).

- Design of wheel wash facilities for OSDF impacted material placement.

- Design, CQC, and Title III services for construction of laydown area at the existing waste pits railyard area north of the production area and additional plant roads.

The following are specific exclusions that apply to each charge number:

CAEN1 – OSDF Design

- Trailers at the Access Control Facility.
- Design for water supply line from construction water well to OSDF, borrow area, and infrastructure construction.
- Drilling and installation of construction water well.
- Soil and water sampling during drilling of construction water well.
- Stockpiling of excavated impacted material outside the OSDF.
- Installation of air monitoring stations.

CAEN5 – OSDF CQC Services

- Equipment for borrow area test pit excavations to obtain samples for pre-conformance and conformance testing is included in charge account CCPL2.
- CQC services for temporary cover system in OSDF Cell #2 and #3.

CAEN6 – OSDF TITLE III Services

None

R1-F03-039

~~CAEN7 – OSDF Monitoring~~

- ~~Monitoring data collection will be performed by Environmental Monitoring and Aquifer Restoration/Wastewater.~~
- ~~Monitoring activities extending beyond the end of the contract.~~

1.2.3 Government-Furnished Equipment/Services

The following are general DOE Services and Equipment that apply to all charge numbers within this control account:

R1-D-619

- ~~DOE, U.S. EPA, and OEPA will approve placement of the two foot thick impacted material intervening layer for placement of impacted material after December 2001.~~

- DOE will provide timely approvals of subcontract procurement actions per DOE-Fluor Fernald, Inc. contract requirements. These procurements would include CQC services, architect/engineer for design services, architect/engineer subcontractor for Title III services, and supplier for geosynthetic materials.

1.3 DRIVERS

General external events that must occur prior to the performance of tasks.

- EPLTS Valvehouse #7 installed and operational by the Aquifer Restoration/Wastewater Project (PBS-04) before end of fourth quarter, FY2006.

The following are specific drivers that apply to each charge number.

CAEN1 – OSDF Design

None

CAEN5 – OSDF CQC Services

None

CAEN6 – OSDF Title III Services

None

R1-F03-039

~~CAEN7 – OSDF Monitoring~~

- ~~Monitoring data will be provided for OSDF Engineering review by appropriate PBSs.~~

1.4 PROJECT PHYSICAL DESCRIPTION

The On-Site Disposal Facility is located in the northeast corner of the FEMP. The facility is located approximately within survey coordinates N483400, N480000, E1351750, and E1350600. There are several areas adjacent to the OSDF which support the construction of the liners, final cover systems and impacted material placement. These areas include the OSDF Borrow Area, the On-Site Disposal Facility Material Transfer Area (OMTA), including future OMTA Expansion Areas, the Construction Laydown Area including future

Construction Laydown Area, Contractor's Work Area, and the future Access Control Facility.

The OSDF Borrow Area is south of the OSDF in an area bounded on the east by the Mid Valley pipeline easement, on the west by the South Entrance Road, and on the south by Willey Road. The remaining area for OSDF Borrow Area development is approximately 30 acres and will be developed in seven Subareas. Material for clay liner and cap, vegetative soil layer, topsoil, and fill are excavated from the borrow area.

The OMTA currently consists of three areas located west of the OSDF; the bulk debris area, the container area, and the transite transfer area. These areas of the OMTA will be expanded as the project progresses.

The existing bulk debris area is bounded on the south by the Impacted Material Haul Road, on the north and east by the former production area fence, and on the west by "B" Street. The bulk debris area will be expanded to the west into the area of the existing quonset huts. The expanded bulk debris area will be bounded on the north by the former production area fence, on the south by the Impacted Material Haul Road, on the east by "B" Street and on the west by stockpile SP-7. The expanded area will be approximately 10 acres.

The existing container area is bounded on the south by Building 77, on the west by "E" Street, on the east by the former production area fence, and it extends to the north to the former location of Building 78. The container area will be expanded to the north and to the south. It will be extended to the north to the Impacted Material Haul Road. It will be expanded to the south approximately to the south edge of the existing water tower and contain approximately 4 acres.

The transite transfer area is located north of the tent support structures and south of the impacted haul road and Stockpile 7. The area contains approximately 1 acre.

The existing Construction Laydown Area is located west of the OSDF. It is bounded on the north by the Fire Training Road, on the south by the railyard on the east by the OSDF on the west by HWMU-1. Additional construction laydown area will be built to the south of OSDF contingency Cell #8 and north of the OSDF Borrow Area.

The future access control facility is planned to be located east of RIMIA in the existing gravel lot and west of the north access road. The access control facility will consist of an equipment wash facility, access control trailers, parking lot, and storm water control facilities. A haul road will be constructed east of OSDF Sedimentation Basin 1 and continue around the basin on the north and connect into the existing OMTA.

This Control Account CAEN (OSDF Engineering) includes support by subcontractors and Fluor Fernald, Inc. matrixed labor for OSDF Engineering tasks to be performed from FY2001 through the first quarter of FY2010. OSDF Engineering labor and other direct costs including travel and materials will be covered under Control Account CECP.

1.5 PROJECT PLAN/TECHNICAL SCOPE AND QUANTIFICATION

1.5.1 CAEN1 – OSDF DESIGN

This charge number includes subcontractors and support by Fluor Fernald, Inc. matrixed labor for preparation of OSDF CFC packages for the remaining OSDF cells and infrastructure facilities. This charge number also includes Title III services and OSDF monitoring data review to be performed in FY2001. The tasks and subtasks include:

- CAEN1 Task 1 – OSDF CFC Package for remaining cell liner and final cover systems
  - Subtask 1 Procurement for OSDF CFC Package
  - Subtask 2 Preparation of OSDF CFC Package
- CAEN1 Task 2 - Support for procurement of OSDF construction subcontractor
- CAEN1 Task 3 – OSDF CFC Package for Infrastructure Construction
  - Subtask 1 Preparation of OSDF Access Control Facility CFC Package
  - Subtask 2 Preparation of Removal of Temporary and Interim Leachate Line CFC Package
  - Subtask 3 Preparation of OSDF OMTA CFC Packages
  - Subtask 4 Preparation of OSDF Construction Water Well CFC Package
  - Subtask 5 Preparation of OSDF Air Monitoring Station CFC Package
- CAEN1 Task 4 – Other OSDF Activities in FY2001
  - Subtask 1 Provide Title III services
  - Subtask 2 Provide support for review of OSDF monitoring data

1) Task #1 – OSDF CFC Package for Remaining Cell Liner and Final Cover Systems

1.1) Subtask #1 – Procurement

1.1)1 Plan/Scope – Procurement

- The preparation of the OSDF CFC package will begin in the 4th quarter of FY2001. Procurement activities will be performed between March 15, 2001 through July 9, 2001. GeoSyntec Consultants will prepare the OSDF CFC package. The following scope will be performed by Fluor Fernald, Inc. matrixed labor by Acquisitions/Prime Contract Administrator:

- Add option to existing contract with GeoSyntec Consultants

- Negotiate with GeoSyntec Consultants

- Other scope which is projectized or centralized includes:

- OSDF Engineering will prepare statement of work and cost estimates and assist procurement in contract negotiations. These activities will be covered under control account CECP – OSDF Management and Oversight.

- Coordination and oversight by OSDF Engineering is included in control account CECP –OSDF Management and Oversight.

1.1)2 Quantification – Procurement

- Contract management will require 1.5 projectized OSDF Engineering FTEs for 1.5 months and 1 matrixed procurement/requisition FTE for 1 month.

1.2) Subtask #2 – Preparation of OSDF CFC Package

1.2)1 Plan/Scope – Preparation of OSDF CFC Package

- The OSDF CFC package for the remaining disposal facility cells will begin in Fiscal Year 2001 and continue into the first quarter of FY 2002. The Final OSDF CFC package will be prepared for the following construction scope:

  - construction of liners for OSDF cells #4 through #7;
  - construction of final cover systems for OSDF cells #2 through #7;
  - construction of horizontal monitoring wells for OSDF cells #4 through #7;
  - placement of impacted material in OSDF cells #2 through #7;
  - construction of OSDF haul roads to support cell construction and impacted material placement, and construction of OSDF access corridors within the OSDF battery limits;
  - construction of OSDF sedimentation basin #2, surface water management and erosion control, and backfilling of the existing OSDF sedimentation basin;
  - borrow area development management;
  - relocation of access road from the existing OMTA to OSDF and relocated Access Control Facility; and
  - removal of north access road in footprint area of OSDF.

- The Final OSDF CFC package is scheduled to be completed by GeoSyntec Consultants by the end of the 1st quarter of FY2002 and will include the following scope:

- prepare 85 construction drawings (approx. 50 drawings exist at conceptual level);
- review 24 existing technical specifications and revise as necessary;
- review 8 existing support plans and revise as necessary;
- revise existing Design Calculations Package as necessary;
- revise existing Design Criteria Package as necessary;
- incorporate OSDF DCNs, RCIs, and Support Plan page changes into the CFC documents;
- incorporate Fluor Fernald, Inc. comments;
- incorporate temporary cover specifications into package;
- incorporate DOE and Fluor Fernald, Inc. review comments;
- prepare construction quantities estimate;
- execute project management and site visits; and
- attend one (1) coordination meeting at the Fernald site.

• The following scope will be completed by Fluor Fernald, Inc. matrixed labor:

  - Perform internal review at 30% and 90% completion level by Environmental, Safety, Health, and Quality Integration (ESH&Q), Quality Control Operations, Natural Resources, and Aquifer Restoration/Wastewater.

• Other scope which is projectized includes:

  - Oversight and periodic review during preparation of CFC documents in GeoSyntec's Atlanta, GA office.

  - 30%, 90% and final review by OSDF Engineering is included in control account CECP.

  - Travel expenses by OSDF engineering. Travel expenses in FY2001 will be covered by this charge account. Travel expenses in FY2002 will be covered under control account CECP.

  - Internal review at 30% and 90% completion level by OSDF Construction is covered under a separate projectized control account.

• Other scope which is centralized includes:

  - Document Control/Procedure Management will provide document control activities to the project including preparing 90 copies of each drawing, technical specifications, and quantities estimates for internal, DOE and EPA distribution.

  - Waste Acceptance Organization (WAO) internal review at 30% and 90% completion levels.

1.2)2 Quantification - Preparation of CFC Package

- This subtask includes preparation of an estimated 85 construction drawings, revision of an estimated 24 technical specifications, and preparation of construction quantities estimate. CFC package activities will begin on July 10, 2001 and be completed by November 19, 2001.

- Internal reviews will require 0.1 FTEs each from Environmental, Safety, Health, and Quality Integration (ESH&Q), Quality Control Operations, Aquifer Restoration/Wastewater, and Natural Resources for a 3 month period.

- Oversight and coordination for preparation of OSDF CFC package will require 1.25 OSDF Engineering FTEs for approximately four (4) months. Travel expenses include approximately seven (7), 3-day trips to Atlanta, GA for 2.5 projectized OSDF Engineering personnel.

2) Task #2 – Support for Procurement of OSDF Construction Subcontractor

2.1) Plan/Scope - Support for Procurement of OSDF Construction Subcontractor

- This task includes selection of Construction Subcontractors to perform OSDF construction from March 15, 2003 through December 31, 2009. A selection process will award a construction contract to a qualified Construction Subcontractor. Selection process will include pre-qualification of Construction Subcontractor, preparation of proposal, solicitation (RFP), evaluation, selection of a qualified construction subcontractor and award. The selection process will start on October 1, 2002 and will be completed by June 30, 2003.

- The following Construction Subcontractor services will be procured to perform activities for borrow area development, OSDF liners and final covers construction, impacted material placement, and OSDF infrastructure construction:

  - Provide labor, material, and, equipment to perform the following construction activities:

    - Borrow area development: excavation, stockpiling, and hauling of fill, backfill, clay liner and cap materials, vegetative layer material, topsoil and general earthwork.

    - OSDF liners cells #4 through #7 and final cover construction Cells #2 through #7: construction of fill, subgrade of clay liners and caps, leak detection testing of GML in primary liner and final cover, drainage layers, biointrusion barrier, choke stone layer, granular filter, vegetative layer, topsoil, vegetation, geosynthetic materials, road

construction, surface water control structures, leachate collection, and leak detection, HDPE pipes, horizontal monitoring wells, and general site work.

- Impacted material placement: placement of impacted material placement, including protective layers and select impacted layers.

- OSDF Infrastructure: construction of general site work, roads, and concrete.

- Construction of OSDF Sedimentation Basin 2, surface water drainage systems, surface water management, and erosion control.

- The following scope of work will be performed by Fluor Fernald, Inc. matrixed labor from Acquisition / Prime Contract Administration.

  - Prepare prequalification criteria for the Construction subcontractor, review prequalification submittals, and prepare a list of qualified subcontractors (bidders).
  - Prepare Request for Proposal (RFP) for the Construction Subcontractor.
  - Arrange and conduct site visit for the bidders for the Construction Subcontractor.
  - Solicit and evaluate proposals.
  - Select Construction subcontractor.
  - Obtain DOE approval, if required, and award subcontract.
  - Subcontract management and administration.

- OSDF Engineering will support the selection process including preparing cost estimates, reviewing technical submittals, and preparing procurement packages. These activities are covered under control account CECP – OSDF Management and Oversight.

2.2) <u>Quantification - Support for Procurement of OSDF Construction Subcontractor</u>

- Selection of Construction Subcontractor will require 1.9 projectized OSDF engineering FTEs for approximately six (6) months and 1.5 matrixed procurement/requisition FTE for approximately six (6) months.

3) Task #3 – OSDF Infrastructure CFC Packages

3.1) Subtask #1 – Access Control Facility CFC Package

3.1)1 Plan/Scope - Access Control Facility CFC Package

- An Access Control Facility is scheduled to be constructed in the third and fourth quarter of FY2003. CFC package for this facility will be completed by the end of the 4th quarter of FY2001. The CFC package will be prepared for the following construction scope:

  - removal of existing equipment wash facility;
  - construction of equipment wash facility;
  - construction of OMTA access road from the existing OMTA to the Access Control Facility;
  - construction of trailer/parking area;
  - surface water management and erosion control;
  - installation and hookup of utilities including electrical, water, and drain line (telephone by others).

- The equipment wash facility is to be designed similar to the existing facility with a gravel base but with revised gravel gradation and an improved impacted drainage collection system. Impacted drainage runoff from the access control facility will be drained into the existing storm drainage inlet in Area 5 until the end of FY2006. Prior to September 30, 2006, the drainage from the access control facility will be diverted into OSDF Cell #7 valve vault. A siltation basin will be designed to settle sediments and used as a contingency basin to detain runoff. Surface water design shall be for a 10 year/24-hour storm event. A gravel parking area will be designed for a minimum of 10 car spaces. The access road from the access control facility to the OMTA will be a minimum 20 foot wide gravel surface. The existing chain-link fence will be relocated and gates will be designed at the ingress and egress.

- OSDF Engineering will perform the following scope under control account CECP:

  - design access control facility and siltation basin;
  - perform drainage analysis;
  - size surface water pipes and ditches;
  - design layout, grading, and utilities in access control facility, and trailer/parking area;
  - layout access road from equipment wash facility to OMTA (2 alternates)
  - design alignment and aggregate base for the access road;
  - oversight and coordination of design with CADD subcontractor;
  - prepare eight (8) technical specification sections;
  - prepare submittal register
  - design equipment wash facility and prepare details

- The following scope to be completed by CADD subcontractors includes:

  - Prepare 5 construction drawings

- Other scope which is centralized includes:

  - Design of mechanical and electrical components of equipment wash facility, design of power and yard lighting (Facilities Engineering and Engineering Services).

- Provide 15 copies for internal, and DOE distribution. (Document Control/Procedure Management).

3.1)2 Quantification - Access Control Facility CFC Package

- This subtask includes 0.7 FTE of subcontracted CADD operator services for 3 months. Design activities will require 0.8 centralized Engineering services FTEs for 2 months and 1.25 projectized OSDF Engineering FTEs for 3 months.

3.2) Subtask #2 – Removal of Temporary and Interim Leachate Line CFC Package

3.2)1 Plan/Scope - Removal of Temporary and Interim Leachate Line CFC Package

- The temporary and interim leachate lines will be removed in three phases. Phase I (Station 17+00 through Station 28+00 of temporary line) is scheduled to be removed in the fourth quarter of FY2001. Phase II (MH-3 Station 9+00 through Station 17+00 of temporary line) is scheduled to be removed in the third quarter of FY2003. Phase III (temporary leachate line from Station 28+00 through 36+00 and interim leachate line from temporary leachate MH-3 to Area 1 Phase I sedimentation basin inlet) is scheduled for removal in the first quarter of FY2006. OSDF Engineering will prepare the CFC package in the fourth quarter of FY2001. OSDF Engineering will perform the following scope under control account CECP:

  - establish trenching limits for removal of leachate line;
  - establish construction and storm water management control;
  - prepare three (3) technical specification sections;
  - oversight and coordination of drawings with CADD subcontractor.

- The following scope will be completed by a CADD subcontractor:

  - prepare 2 construction drawings

- Other scope which is centralized includes:

  - provide 15 copies for internal and DOE distribution (Document Control/Procedure Management)

3.2)2 Quantification - Removal of Temporary and Interim Leachate Line CFC Package

- This subtask includes 0.5 FTE of CADD subcontracted operator services for 0.5 months. Design activities will require 0.3 projectized OSDF Engineering FTEs over a 1 month period.

3.3) Subtask #3 – OSDF OMTA CFC Packages

3.3)1 Plan/Scope – OSDF OMTA CFC Packages

- A new On-Site Materials Transfer Area (OMTA) located north of the impacted haul road is scheduled for construction at the end of FY2001. The CFC package for the new facility is scheduled to be prepared in the third and fourth quarter of FY2001. An expansion of the existing OMTA located south toward the water tower is scheduled for FY2005. The CFC package for the OMTA expansion is scheduled to be prepared in the fourth quarter of FY2004. The CFC packages will be prepared for the following construction scope:

  - construction of graded aggregate surface;
  - construction of surface water management and erosion control;
  - installation of electric power line.

- OSDF Engineering will perform the following scope under control account CECP:

  - plan and profiles of relocated road from OMTA to OSDF for OMTA expansion;
  - design layout, grading, and utilities (except electrical);
  - design surface water management, collection, and erosion control measures;
  - design aggregate base;
  - oversight and coordination of design with CADD subcontractor;
  - prepare five (5) technical specification sections;
  - prepare submittal register.

- The following scope will be completed by a subcontractor or projectized labor:

  - OSDF Engineering will review and approve this CFC package under control account CECP.

- prepare 2 construction drawings for New OMTA (plan, details) (CADD subcontractor);

- prepare 2 construction drawings for OMTA expansion (plan, profile, details) (CADD projectized labor).

- Other scope which is centralized includes:

  - design electrical requirements (Engineering Services);

  - provide 15 copies for each CFC package (30 copies total) for internal, and DOE distribution (Document Control/Procedure Management).

3.3)2 Quantification – OSDF OMTA CFC Packages

- This subtask includes 0.25 FTE of subcontracted CADD operator services for 2 months. Design activities will require 0.25 projectized OSDF Engineering FTEs for the New OMTA for a 2 month period. A total of 2 construction drawings will be prepared by projectized labor for the OMTA expansion. Design activities will require 0.5 projectized OSDF Engineering FTEs, and one (1) projectized CADD operator FTE for a 1 month period. Design activities will also require 0.3 centralized Engineering services FTEs for a 1 month period for each project.

3.4) Subtask #4 – OSDF Construction Water Well CFC Package

3.4)1 Plan/Scope – OSDF Construction Water Well CFC Package

- A construction water well is scheduled to be constructed in FY2006. The CFC package will be prepared in the fourth quarter of FY2005. The CFC package will include the following scope performed by Fluor Fernald, Inc. matrixed labor:

  - evaluate hydrogeological conditions (Aquifer Restoration/Wastewater)

  - select flow rate, locate well, design well, and provide specifications (Aquifer Restoration/Wastewater)

- Scope which is projectized includes:

  - OSDF Engineering will review and approve this CFC package under control account CECP.

  - prepare 2 construction drawings (plan and detail)

- Other scope which is centralized includes:

  - select pump and design piping and electrical system (Engineering Services)

  - provide 15 copies for internal, and DOE distribution (Document Control/Procedure Management)

3.4)2 Quantification - OSDF Construction Water Well CFC Package

- This subtask includes CADD preparation of an estimated 2 construction drawings. Design activities will require 0.4 matrixed Aquifer Restoration/Wastewater engineer FTEs for a 3 month period and an additional 0.4 matrixed Aquifer Restoration/Wastewater technician for a 3 month period. Activities will also require 0.1 projectized OSDF Engineering FTEs and 0.3 centralized engineering services FTEs, and 0.1 projectized CADD services for a 3 month period.

3.5) Subtask #5 – OSDF Air Monitoring Station CFC Package

3.5)1 Plan/Scope – OSDF Air Monitoring Station CFC Package

- Air monitoring stations are located around the OSDF. The CFC packages will be prepared starting in the third quarter of FY2004 and each year thereafter through FY2008. Each CFC package will include the following:

  - 1 construction drawing (1 each year)
  - 1 electrical specification
  - monitoring station manufacturer's data

- The following scope of work will be completed by Fluor Fernald, Inc. matrixed labor:

  - provide monitoring station manufacturer's data to support electrical (Radiological Protection Operations)

- Scope which is projectized includes:

  - OSDF Engineering will review and approve this CFC package under control account CECP.

  - prepare construction drawings under control account CECP.

- Other scope which is centralized includes:

  - prepare electrical specification for monitoring station (Engineering Services)

- provide 20 copies for internal, DOE, and regulatory agency distribution (Document Control/Procedure Management)

3.5)2 Quantification – OSDF Air Monitoring Station CFC Package

- This subtask includes CADD preparation of a total of 5 construction drawings. Design activities will require 0.1 projectized OSDF Engineering FTEs, 0.1 projectized CADD services FTEs, 0.1 matrixed Radiological Protection Operations FTEs, and 0.1 centralized engineering services FTEs.

4) Task #4 – Other OSDF Activities in FY2001

4.1) Subtask #1 – Provide Title III Services

4.1)1 Plan/Scope – Provide Title III Services

- Title III services for the OSDF Borrow Area Development are specified in the current Borrow Area Management and Restoration Plan, Technical Specifications, and other appropriate Contract Documents. Title III services are required from the remainder of FY2001 for borrow area development activities and cap construction. The Title III services subcontractor shall perform the following scope of work for borrow area development and cap construction activities:

  - Support (Design, Field Observation, Changes) OSDF Control and Management

  - Perform technical submittal review

  - Resident Engineer shall provide oversight of CQC technicians, review CQC data, attend meetings, and compile information into a certification report.

  - Conduct Safety Work group meetings

  - Visit geosynthetic manufacturing plants to inspect material, and sample material for testing.

  - Subcontract geosynthetics testing laboratory for conformance testing

  - Review certification surveys.

- The following scope of work will be completed by Fluor Fernald, Inc. projectized labor by Quality Control Operations covered under control account CCPL:

  - Support (Design, Field Observation, Changes) OSDF Control and Management

- Perform technical submittal review
- Conduct Safety Work group meetings
- Visit geosynthetic manufacturing plants to perform testing lab audit

- The following scope of work will be performed by projectized OSDF Engineering and covered under control account CECP:

  - Support (Design, Field Observation, Changes) OSDF Control and Management

  - Perform technical submittal review

  - Provide procurement support for screening and restoration activities

  - Conduct Safety Work group meetings

  - Provide procurement support to purchase geosynthetics, stone materials, installation services, etc.

  - Review certification surveys.

4.1)2 Quantification - Provide Title III Services

- It is estimated that the Title III services subcontractor will provide one (1) full-time Certifying Engineer and one (1) full-time administrative assistant until the end of FY2001. Upon approval of new contract, activities will be transferred to charge account CAEN6.

- This subtask will require 1.5 projectized OSDF Engineering FTEs for 9 months.

4.2) Subtask #2 – Provide Support for Review of OSDF Monitoring Data

4.2)1 Plan/Scope - Provide Support for Review of OSDF Monitoring Data

- This charge number includes review of OSDF groundwater and leachate monitoring data provided by ARWWP surface water data in accordance with the OSDF Surface Water Management and Erosion Control Plan, and OSDF Post Closure and Inspection Plan. This monitoring data will be reviewed by projectized OSDF Engineering at the end of each quarter through September 30, 2001.

- The following scope of work will be performed by OSDF engineering under Control Account CECP:

  - Quarterly, review data provided by ARWWP for OSDF groundwater wells and leachate generation.

- Quarterly, review data provided by OSDF subcontractor and by OSDF Construction for the OSDF surface water management and erosion control.

- Quarterly, review monitoring data obtained under OSDF Post Closure and Inspection Plan.

4.2)2 Quantification - Provide Support for Review of OSDF Monitoring Data

This subtask will require 0.1 projectized OSDF Engineering FTEs for a 3 month period.

1.5.2 CAEN2-CAEN4 – Not Used

1.5.3 CAEN5 – OSDF CQC Services

This charge number includes selection of a subcontractor to perform CQC services to support borrow area development, OSDF liners and final cover construction, impacted material placement, and OSDF infrastructure construction from October 1, 2002 through December 31, 2009. This charge number also includes Fluor Fernald, Inc. matrixed labor to support the above scope from October 1, 2002 through December 31, 2009. The following tasks and subtasks are included in the scope for this charge number:

- CAEN5 Task 1 - Selection of OSDF CQC Subcontractor
- CAEN5 Task 2 - OSDF CQC Services
- Subtask 1 CQC services for OSDF Borrow Area Development
- Subtask 2 CQC services for OSDF Liner, Final Cover, and Infrastructure Construction
- Subtask 3 CQC services for Impacted Material Placement

1) Task #1 – Selection of CQC Subcontractor

1.1) Plan/Scope - Selection of CQC Subcontractor

- This task includes selection of CQC subcontractor to perform on-site and off-site CQC Services from March 15, 2003 through December 31, 2009. A selection process will award the CQC services to a qualified CQC subcontractor. Selection process will include pre-qualification of CQC subcontractor, preparation of proposal, solicitation (RFP), evaluation, selection of a qualified subcontractor, and award. The selection process will start on October 1, 2002 and will be completed by February 1, 2003.

- The following CQC subcontractor services will be procured to support the borrow area development, OSDF liners and final covers construction, impacted material placement, and OSDF infrastructure construction:

- Provide technicians, management and administrative support staff, equipment, and material to perform the following on-site and off-site conformance and performance construction quality control testing and support activities.

- Borrow area development: on-site and off-site preconformance and conformance testing of fill, backfill, clay liner and cap materials, vegetative layer material, topsoil and general earthwork.

- OSDF liners and final cover construction: on-site and off-site conformance and performance testing of fill, subgrade clay liners and caps, drainage layers, biointrusion barrier, choke stone layer, granular filter, vegetative layer, topsoil, vegetation, geosynthetic materials, road construction, surface water control structures, leachate collection, and leak detection, HDPE pipes, horizontal monitoring wells, and general site work.

- Impacted material placement: on-site performance testing of impacted material placement, including protective layers and select impacted layers.

- OSDF Infrastructure: on-site and off-site conformance and performance testing of general site work, geosynthetic material, and concrete.

- Provide daily reports and test results for the on-site and off-site testing, weekly schedule, progress reports, and summary of test results at the end of each construction activity.

- Provide on-site field laboratory with equipment and materials to perform the following on-site testing:

    - Proctor densities including one-point Proctor density (ASTM D698 and D1557)
    - Moisture content (ASTM D2216 or D4643)
    - Atterberg Limits (ASTM D4318)
    - Grain size (ASTM D422)
    - Sieve analyses (ASTM C136)
    - Bulk specific gravity (ASTM C127)
    - Soil classification (ASTM D2487)
    - In-Situ moisture (ASTM D3017)
    - In-Situ density (ASTM D2922)
    - Sand cone (ASTM D1556)
    - Drive Cylinder (ASTM D2937)
    - Geosynthetic material on-site testing
    - Sampling for destructive testing, field testing for peel adhesion
    - Miscellaneous equipment for on-site pre-conformance, conformance and performance testing

- General Employee and Site Worker training for the on-site technicians and management and administrative support staff.

- Coordination with off-site laboratory during off-site testing.

- Coordination with OSDF engineer, Construction, and Quality Control, and Title III Subcontractor during on-site testing.

- Health and Safety Plan for the subcontracted CQC services.

- Provide Quality Assurance of CQC documentation

• The following scope of work will be performed by Fluor Fernald, Inc. matrixed labor from Acquisition / Prime Contract Administration.

  - Prepare prequalification criteria for the CQC subcontractors, review prequalification submittals, and prepare a list of qualified subcontractors (bidders).

  - Prepare Request for Proposal (RFP) for the CQC services.

  - Arrange and conduct site visit for the bidders for the CQC services.

  - Solicit and evaluate proposals.

  - Select CQC services subcontractor.

  - Obtain DOE approval, if required, and award subcontract.

  - Audit off-site laboratory(s) of the CQC services subcontractor.

  - Subcontract management and administration.

• OSDF Engineering will support the selection process including preparing cost estimates, reviewing technical submittals, and preparing procurement packages. These activities are covered under control account CECP – OSDF Management and Oversight.

1.2) <u>Quantification - Selection of CQC Subcontractor</u>

• Selection of CQC subcontractor will require 1.5 projectized OSDF engineering FTEs for approximately four (4) months and 1.2 matrixed requisition FTE for approximately four (4) months.

2) Task #2 – CQC Services

- This task includes on-site and off-site testing CQC services to support the borrow area development, OSDF liners and final covers, construction, impacted material placement, and OSDF infrastructure construction. This task is divided into the following OSDF CQC services subtasks:

  Subtask #1 – CQC Services for Borrow Area Development.
  Subtask #2 – CQC Services for OSDF Liners, Final Covers, and Infrastructure Construction
  Subtask #3 – CQC Services for Impacted Material Placement.

- The following scope of work will be performed by Fluor Fernald, Inc. projectized and matrixed labor from Quality Control Operations on an as-needed basis, and is covered under control account CCPL:

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  - Observe methods of excavation, stockpiling, and interim restoration activities.
  - Provide oversight of CQC subcontractor.
  - Observe placement of impacted material
  - Perform inventory of geosynthetic material shipments
  - Observe field operations to ensure technical specifications are being met.
  - Assist CQC subcontractor in observance of geosynthetic installer's performance testing (vacuum box for extrusion welds, and air testing on fusion welds)

2.1) Subtask #1 – CQC Services for Borrow Area Development

2.1)1 Plan/Scope – CQC Services for Borrow Area Development

- CQC services for borrow area development will be as specified in technical specification sections 02200, 02215, 02225 and 13000 including OSDF Borrow Area Management Plan, and OSDF Construction Quality Assurance (CQA) Plan. Based on construction scope and schedule for Charge Account CCPL2, borrow area development will be performed from March 15, 2003 through December 31, 2008.

- CQC services for borrow area development includes:

  - Provide technicians, management and administrative support staff, equipment, and material to perform on-site and off-site construction quality control testing.

  - General Employee and Site Worker Training

  - Prepare Health and Safety Plan for the subcontracted CQC services

  - On-site and off-site preconformance testing in seven borrow sub-areas to verify potential clay, fill/backfill, vegetative layer, and topsoil material source.

  - Five test pits, 10-feet deep, per sub-area (total 7-subareas) for preconformance testing.

  - On-site and off-site conformance testing on screened clay cap and liner material, vegetative cover layer material, fill and backfill material, and topsoil material. Conformance testing and testing frequently on these materials will be as specified in CQA Plan and technical specifications on Sections 02200, 02215, 02225, 02250, and 02920.

  - Provide on-site field laboratory with equipment and materials for on-site conformance testing.

  - Off-site testing – Hydraulic conductivity, Hydrometer, and organic content of topsoil.

  - Daily reports and test results and weekly schedule, manpower, and projects reports

  - Coordination with OSDF construction, engineering, and Quality Control and Title III subcontractor.

2.1)2 <u>Quantification – CQC Services for Borrow Area Development</u>

- Preconformance Testing

- The following on-site and off-site preconformance testing will be performed at each test pit in each subarea (total 7-subareas):

  - Atterberg Limits (ASTM D4318) – 3 tests
  - Soil Classification (ASTM D2487) 3 tests
  - Particle Size (ASTM D422) – 3 tests

- Standard Proctor (ASTM D698) – 3 tests
- In Situ Moisture Content (ASTM D2216 or D4643) – 3 tests
- Hydraulic Conductivity (ASTM D5084) – 3 tests (off-site)
- Organic Content (ASTM D3042) – 1 test
- Hydrometer (ASTM D422) – 1 test (off-site)

- Conformance Testing

- For number of on-site and off-site conformance testing, see Table 1.

- It is estimated that two full-time technicians will be needed for four (4) months to perform on-site pre-conformance and conformance testing of clay liner material for each cell liner. Similarly, two full-time technicians will be needed for three (3) months to perform pre-conformance and conformance testing of clay cap material for each cell final cover.

- This subtask will require 0.3 projectized OSDF Engineering FTE for 9 months.

Table 1
Borrow Area Development
Preconformance/Conformance Testing for Clay Liner, Vegetative Cover and Topsoil

Material/Test	Number of Tests			
	Per Liner	Total for 4 Liners	Per Final Cover	For 6 Final Cover
1. Clay Liner Material				
a. Particle Size Analysis (ASTM C136)				
b. Atterberg Limits (ASTM 4318)	40	160	20	120
c. Moisture Content (ASTM D2216 or	40	160	20	120
ASTM D4643)	40	160	20	120
d. Soil Classification (ASTM D2487)				
e. Standard Proctor (ASTM D698)	40	160	20	120
f. Modified Proctor (ASTM D1567)	40	160	20	120
g. Hydraulic Conductivity (1)	20	80	10	60
(ASTM D5084)	10	40	6	36
h. Hydrometer Analysis (1)				
(ASTM D422)	4	16	2	12
2. Vegetative Cover Layer/Fill/Backfill Material				
a. Particle Size Analysis (ASTM C136)	5	20	10	60
b. Atterberg Limits (ASTM 4318)	5	20	10	60
c. Moisture Content (ASTM D2216 or	5	20	10	60
ASTM D4643)				
d. Soil Classification (ASTM D2487)	5	20	10	60
e. Standard Proctor (ASTM D698)	10	40	20	120
3. Topsoil				
a. Particle Size Analysis (ASTM C136)	N/A	N/A	5	30
b. Moisture Content (ASTM D2216 or			5	30
ASTM D4643)				

c. Soil Classification (ASTM D2487)			5	30
d. Organic Content (1) (ASTM D2974)			5	30
e. Atterberg Limits (ASTM D4318)			5	30

(1) Off-site Testing

2.1) Subtask #2 - CQC Services for OSDF Liners, Final Covers and Infrastructure Construction

2.1)1 Plan/Scope - CQC Services for OSDF Liners, Final Covers, and Infrastructure Construction

- CQC services for remaining OSDF liners for cells #4 through #7 including horizontal monitoring wells and final covers for cells #2 through #7, will be as specified in sections 02200, 02215, 02225, 02240, 02250, 02271, 02280, 02605, 02710, 02712, 02714, 02770, 02772, 02920 and 02930 and Construction Quality Assurance (CQA) Plan. Based on the construction scope and schedule for Construction Control Account CCPL, CQC services for the remaining OSDF liners, and final covers will be performed from October 1, 2001 through December 31, 2001 and from April 1, 2004 through December 31, 2009.

- CQC services for OSDF infrastructure construction will be as specified in Technical Specifications 02200, 02215, 02230, 02930, and for concrete placement shown on the construction drawing(s). CQC services for infrastructure construction will be based on the construction schedule and scope for Charge Account CBSP1 and will be performed from April 1, 2003 through November 30, 2005.

- CQC services for the remaining OSDF liners, final covers, and infrastructure construction includes:

  - Provide technicians, management, and administrative support staff, equipment, and material to perform on-site and off-site construction quality control testing.

  - General Employee and Site Worker Training

  - Prepare Health & Safety Plan for the subcontracted CQC services

  - On-site conformance and performance testing of components of OSDF liners and final covers as listed in Tables 3, 4, and 5. Components of OSDF liner includes: sub-grade clay liner, primary and secondary geosynthetic liners including GML, GCL and geotextile, drainage layers, and related earthwork, surface water controls, and road construction. Components of OSDF final cover includes: non-impacted contouring layer, clay cap, geosynthetic cap including GML, GCL, and geotextile, cover drainage layer, bio-intrusion barrier, choke stone layer, granular filter, vegetative layer, topsoil, and related earthwork and surface water controls.

- On-site field laboratory with equipment and materials for on-site conformance and performance testing.

- Off-site conformance and performance testing of geosynthetic materials, drainage layer material, and bio-intrusion barrier materials.

~~Procurement of electric leak detection subcontractor and testing.~~

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- ~~Electric leak detection will be performed on primary GML liner in each cell liner and GML cap in each final cover.~~

- ~~Electric leak detection testing subcontractor will provide two technicians, equipment and material required to perform the leak detection test. Fluor Fernald will provide construction water, labor and equipment for delivery and removing water from the test.~~

- Daily reports and test results and weekly schedule, manpower, and progress reports.

- Coordination with OSDF construction, engineering, Quality Control, and Title III subcontractor.

- The following scope of work will be performed by Fluor Fernald, Inc. matrixed labor from Quality Control Operations:

- Perform quality audit of geosynthetic testing laboratory including travel expenses for each audit trip.

2.1)2 <u>Quantification - CQC Services for OSDF Liners, Final Covers, and Infrastructure Construction</u>

- Quantities of conformance and performance testing for OSDF liners and final covers will be as shown on Table 3, Table 4, and Table 5

- Estimated number of technicians required for on-site conformance and performance testing of OSDF liner and final cover construction and infrastructure construction are as follows:

Table 2

On-Site Performance	No. of Technicians Per Liner/Per Final Cover	Duration Per Liner/Per Final Cover (months)
1. OSDF Liner		
a) Liner components, except geosynthetic liner.	2	6
b) Geosynthetic liner.	2	2
2. OSDF Final Cover		
a) Final cover components except geosynthetic cap.	2	4
b) Geosynthetic cap.	2	1
3. Infrastructure Construction	See Note 1	See Note 1

Note 1: Based on construction scope and schedule for the infrastructure construction, and for liner and final cover construction, no additional technicians are needed for conformance and performance testing of infrastructure construction.

This subtask will require 0.6 projectized OSDF Engineering FTE for 9 months.

This subtask will require 0.3 matrixed Quality Control Operations FTE for a 1 month period each in FY2004, FY2006, and FY2008. Travel expenses for matrixed personnel includes three (3) 2-day trips to geosynthetic testing laboratories. .

Table 3
Soil Conformance Testing for OSDF Liner and Final Cover
(Ref: Latest OSDF CQA Plan and Technical Specifications, as of April 25, 2001)

Material/Test	Number of Conformance Tests			
	Per Liner	Total for 4 Liners	Per Final Cover	Total for 6 Covers
1. Drainage Material				
a. Hydraulic Conductivity(ASTM D2434) (1)	10	40	7	42
b. Carbonate Content (ASTM D3042) (1)	6	24	3	18
c. Particle Size Analysis (ASTM C136)	10	40	7	42
d. Soil Classification (ASTM D2487)	10	40	7	42
2. Biointrusion Barrier				
a. Bulk Specific Gravity (ASTM C127)	N/A	N/A	4	24
b. Maximum Absorption (ASTM C127)			4	24
3. Choke Stone				
a. Particle Size Analysis (ASTM C136)	N/A	N/A	2	12
b. Bulk Specific Gravity (ASTM C127)			2	12
c. Maximum Absorption (ASTM C127)			2	12
4. Granular Filter				
a. Particle Size Analysis (ASTM C136)	N/A	N/A	4	24
b. Soil Classification (ASTM D2487)			4	24
5. Contouring Layer				
a. Particle Size Analysis (ASTM C136)	N/A	N/A	4	24
b. Atterberg Limits (ASTM D4318)			4	24
c. Moisture Content (ASTM D2216 or			4	24
D4643)			4	24
d. Soil Classification (ASTM D 2487)			4	24
e. Standard Proctor (ASTM D698)				

(1) Off-site Conformance Testing

Table 4
Off-Site Geosynthetics Conformance Testing for OSDF Liner and Final Cover
(Ref. Latest OSDF CQA Plan and Technical Specifications as of April 25, 2001)

Material/Test	Number of Conformance Tests			
	Per Liner	Total for 4 Liners	Per Final Cover	Total for 6 Covers
1. Geosynthetic Clay Liner (GCL)				
a. Hydraulic Conductivity (ASTM D6243)	10	40	5	30
b. Direct Shear (ASTM D 6243)				
Internal Testing	10	40	5	30
Interface Testing	10	40	5	30
2. Geomembrane (GML)				
a. Density (ASTM D792 Method A or ASTM D1505)	11	44	6	36
b. Thickness (ASTM D5994)	11	44	6	36
c. Tensile Strength at Yield (ASTM D638)	11	44	6	36
d. Tensile Strength at Break (ASTM D638)	11	44	6	36
e. Elongation at Yield (ASTM D638)	11	44	6	36
f. Elongation at Break (ASTM D638)	11	44	6	36
g. Carbon Black Content (ASTM D1603)	11	44	6	36
h. Carbon Black Dispersion (ASTM D5596)	11	44	6	36
3. Geotextile Filter				
a. Mass per Unit Area (ASTM D5261)	6	24	N/A	N/A
b. Grab Strength (ASTM D4632)	6	24		
c. Trapezoidal Tear Strength	6	24		
d. Puncture Resistance	6	24		
e. Burst Strength	6	24		
f. Apparent Opening Size	6	24		
g. Permittivity	6	24		
4. Geotextile Cushion or Separator				
a. Mass per Unit Area (ASTM D5261)	11	44	6	36
b. Grab Strength (ASTM D4632)	11	44	6	36
c. Trapezoidal Tear Strength	11	44	6	36
d. Puncture Resistance	11	44	6	36
e. Burst Strength	11	44	6	36

Table 5
Performance Testing for Each OSDF Liner and Final Cover
(Ref. Latest OSDF CQA Plan and Technical Specifications as of April 25, 2001

Test	Number of Performance Tests		
	Liner	Final Cover	Contouring Layer
1. Soil Tests			
a. In-Situ Moisture (ASTM D3017)	5 tests per acre per lift	5 tests per acre per lift	1 test per 10000 SF per lift
b. In-Situ Density (ASTM D2922)	5 tests per acre per lift	5 tests per acre per lift	1 test per 10000 SF per lift
c. Sand Cone (ASTM D1556 or Drive Cylinder ASTM D2937)	1 test per 25 nuclear tests	1 test per 25 nuclear tests	1 test per 25 nuclear tests
2. Geosynthetic Liners/Caps			
a. GCL	N/A	N/A	N/A
b. GML			
1) Peel Adhesion (ASTM 4371)	1 test/500 ft. of seam	1 test/500 ft. of seam	N/A
2) Bonded Seam Strength (ASTM 4437)	1 test/500 ft. of seam	1 test/500 ft. of seam	N/A
3) Vacuum Testing	100% extrusion seams	100% extrusion seams	N/A
4) Air pressure Testing	100% fusion seams	100% fusion seams	N/A
3. Geotextile	N/A	N/A	N/A

2.3) Subtask #3 - CQC Services for Impacted Material Placement

2.3)1 Plan/Scope - CQC Services for Impacted Material Placement

- CQC services for impacted material placement will be as specified in Technical Specifications Section 13010 including Impacted Material Placement Support Plan. CQC services for impacted material placement will be based on construction schedule and scope for control account CCPL3 and will be performed from October 1, 2003 through June 30, 2009.

- CQC services for impacted material placement include:

  - Provide technicians, management and administrative support staff, equipment, and material to perform on-site and off-site construction quality control testing.

  - General Employee, Site Worker, Radiation Work II, Asbestos, and Respirator training for each on-site technician.

- Prepare Health and Safety Plan for subcontracted CQC services

- On-site performance testing for impacted material placement including impacted material protective layers and select impacted material layers in OSDF cells #2 through #7.

- Provide daily reports, test results, impacted material manifests and tracking information, weekly schedule, manpower, and progress report.

- Approve impacted material manifests on a daily basis and track location of impacted material placement on a daily basis.

- Coordination with OSDF construction, engineering, quality control and Title III subcontractor.

2.3)2 Quantification - CQC Services for Impacted Material Placement

- Quantities of performance testing for impacted material will be as shown on Table 6.

- Two technicians will be needed from October 1, 2003 through December 31, 2003, March 15 through November 15 each year from FY2004 through FY2008, October 1, 2008, through November 15, 2008 and from March 15 through June 30, 2009. In calendar year 2006 and 2007, two additional technicians will be needed to support the double shift of impacted material placement.

- This subtask will require 0.2 projectized OSDF Engineering FTE for 9 months.

Table 6
Performance Testing for Impacted Material Placement
(Ref. Latest OSDF Impacted Material Placement Plan and
Technical Specifications as of April 25, 2001)

Component	No. of test per lift/grid
1. Category 1 material including 1-foot protective impacted layer and 3-foot select impacted layer (liner & cap)	
a. In-Situ Moisture (ASTM D3017)	1 test per 10000 SF per lift
b. In-Situ Density (ASTM D2922)	1 test per 10000 SF per lift
c. Sand Cone (ASTM D1556) or Drive Cylinder (ASTM D2937)	1 test per 25 nuclear tests
2. Category 2 material grid	
a. In-Situ Moisture (ASTM D3017)	1 test per 250 feet of side berm but not less than twice per lift
b. In-Situ Density (ASTM D2922)	1 test per 25 nuclear tests
c. Sand Cone (ASTM D1556) or Drive Cylinder (ASTM D2937)	
3. Category 3 material grid	
a. In-Situ Moisture (ASTM D3017)	1 test 10000 SF per 1-foot thick cover lift
b. In-Situ Density (ASTM D2922)	1 test per 25 nuclear tests
c. Sand Cone (ASTM D1556) or Drive Cylinder (ASTM D2937)	
4. Category 4 material grid	
a. In-Situ Moisture (ASTM D3017)	1 test per 250 feet of side berm but not less than twice per lift and 1 test per 10,000 SF of cover lift
b. In-Situ Density (ASTM D2922)	
c. Sand Cone (ASTM D1556) or Drive Cylinder (ASTM D2937)	1 test per 25 nuclear tests
5. Category 5 material grid	
a. Situ Moisture (ASTM D3017)	1 test 10000 SF per 1-foot thick cover lift
c. In-Situ Density (ASTM D2922)	1 test per 25 nuclear tests
d. Sand Cone (ASTM D1556) or Drive Cylinder (ASTM D2937)	

1.5.4 CAEN6 – OSDF Title III Services

This charge number includes selection of a Title III subcontractor, Title III services by subcontractor to support borrow area development, remaining OSDF liners and final covers, construction including infrastructure construction, impacted material placement, and Fluor Fernald, Inc. matrixed labor from October 1, 2001 through January 29, 2010. The following tasks are included in this charge number:

- CAEN6 Task1 – Selection of OSDF Title III Subcontractor
- CAEN6 Task 2 – OSDF Title III Services

1) Task #1 - Selection of OSDF Title III Subcontractor

1.1) Plan/Scope - Selection of OSDF Title III Subcontractor

- This task includes selection of Title III subcontractor to perform OSDF Title III services at the site. Title III services will be awarded to a qualified subcontractor by a selection process. Selection process will include prequalification of Title III subcontractors, preparation of proposal, solicitation (RFP), evaluation, selection of a qualified subcontractor, and award. This selection process will start on July 1, 2002 and will be completed by December 31, 2002.

- OSDF Title III subcontractor will be provide the following staff and perform Title III services to support borrow area development, remaining OSDF liners and final cover construction, OSDF infrastructure construction, and impacted material placement:

  - A full-time Resident Engineer/Certifying Engineer (hereafter called Certifying Engineer) and a full-time administrative assistant at the site to perform OSDF Title III service. The Certifying Engineer will have a minimum of ten years experience in Title III services, experience in certifying similar waste disposal facilities, and be a registered Professional Engineer in the State of Ohio. The Certifying Engineer will demonstrate knowledge of resident engineering and CQC activities including monitoring, documentation of construction activities in the field, preconformance, conformance, and performance testing, documentation, confirmation of compliance and technical interpretation of the monitoring and test results, and Title III services described below.

- Title III services will be performed for the following construction activities:

  - Borrow Area Development

  - Borrow area development in phases (subareas) including preconformance testing, site preparation, earthwork, screening, conformance testing, stockpiling, stockpile stabilization and interim restoration.

- OSDF Liners, Final Covers, and Infrastructure Construction

- OSDF liner system construction including site preparation, excavation, fill, subgrade preparation, clay liner, primary and secondary liners including geosynthetic liners and drainage layer, access road and haul road construction, surface water controls, fencing and related site work.

- OSDF final cover system construction including site preparation, excavation, fill, impacted and non-impacted surface water management, surface water controls, contouring layer, clay cap, geosynthetic caps, drainage layer, bio-intrusion barrier, choke stone, granular filter, vegetative layer, topsoil, vegetation, access corridors, fencing and related site work.

- OSDF infrastructure construction includes construction of access control facility, removal of the existing temporary leachate (Phase I, II, and III) and interim leachate lines, construction water well, OMTA expansion, and construction laydown area.

- Impacted material placement in OSDF cell #2 through #7 including placement of protective layers and select impacted material layers.

• Title III services include:

- Mobilization and demobilization of Certifying Engineer and administrative assistant.

- Review of technical specifications, construction drawings, support plans and related contract documents.

- Review of OSDF design criteria and support calculations.

- Review and approval of technical submittals, work plans, and other submittals specified in the Certified for Construction (CFC) documents.

- Field monitoring, review, evaluation, and interpretation of CQC test results and impacted material manifests and tracking information.

- Review and approval of construction "As-built" surveys for liner system, final cover system, impacted material placement, and infrastructure construction.

- Coordination of Title III services with OSDF engineering, construction, Quality Control Operations and CQC subcontractor.

- Prepare, review, evaluate, and approve DCNs, RCIs, NCRs, and contractor's "red-line" drawings.

- Interpretation and clarification of technical documents involving technical specifications, construction drawings, work plans, and related contract documents.

- Preparation of OSDF CQA Certification Report at the end of each calendar year covering OSDF liner and final cover construction, impacted material construction, and OSDF infrastructure construction. Sign and seal CQA Certification Report.

- Attend project meetings related to material procurement, construction activities, and Title III services.

- Monitor/observe, confirm compliance, and document construction of the OSDF and field related activities.

- Construction material certification.

- Provide technical assistance to the OSDF Engineering and Construction in evaluation of change order and/or claims by the Construction Contractor and/or material supplier.

- Maintain "red-line" CFC documents.

- Prepare and submit weekly Title III services progress reports to Engineering Manager.

- Prepare Health & Safety Plan for subcontracted Title III services.

- Provide management and administrative support to perform Title III services.

- Visit GCL and GML manufacturing plants (one visit per liner and cap) to inspect materials and sample materials for conformance testing.

• The following scope of work will be performed by Fluor Fernald, Inc. matrixed labor from Acquisition/Prime Contract Administration:

  - Prepare prequalification criteria for the Title III services subcontractors, review prequalification submittals and prepare a list of qualified subcontractors (bidders).

  - Prepare Request for Proposal (RFP) for the Title III services.

  - Arrange and conduct site visit for the bidders for the Title III services.

  - Solicit and evaluate proposals.

- Select Title III services subcontractor.

- Obtain DOE approval if required, and award subcontract.

- Audit office of the Title III services subcontractor.

- Subcontract management and administration.

- The following scope of work will be performed by OSDF Engineering and reviewed by OSDF Construction, Health & Safety and Quality Control Operations under Control Account CECP:

  - Support procurement in preparation of prequalification criteria, preparation of list of subcontractors, preparation of RFP, evaluation of proposals, selection of subcontractor, and subcontract management and administration of Title III services.

1.2) Quantification - Selection of OSDF Title III Subcontractor

- Selection of Title III services will require 1.5 projectized OSDF engineering FTE, 0.1 FTE each for construction and Quality Control for six (6) months, and 1.5 matrixed procurement/requisition FTEs for six (6) months.

2) Task #2 - Title III Services

2.1) Plan/Scope - Title III Services

- This task includes Title III services to support OSDF borrow area development, OSDF liners, final cover, infrastructure construction, and impacted material placement. Title III services included in charge number account CAEN6 will be performed by the Title III service subcontractor and Fluor Fernald, Inc. matrix labor from Acquisition / Prime Contract Administration. Title III services included in this charge number account will be performed in the first quarter of FY2002 through January 31, 2002 and then year round beginning from the first quarter of FY2003.

- The following scope of work will be included in the Title III subcontract:

  - A full-time Certifying Engineer and a full-time Administrative Assistant.

  - Title III services as described in Plan/Scope for CAEN6 Task 1 – Selection of OSDF Title III Subcontractor.

- The following scope of work will be performed by OSDF Engineering manpower and reviewed by projectized OSDF construction, Safety, and Quality Control Operations manpower included in Control Account CECP:

- Engineering oversight of Title III subcontractor and administration and management of Title III services.

- Review of CFC documents including technical specifications, construction drawings, support plans and related contract documents.

- Prepare construction borrow area management and restoration work plan and surface water and erosion control work plan.

- Prepare and review technical submittal specified in the CFC documents.

- Periodic observation of field construction activities.

- Review CQC test results and "as-built" surveys for liner system, final cover system, impacted material placement, and infrastructure construction.

- Provide procurement support to purchase construction materials, equipment, and services including geosynthetic materials, bio-intrusion barrier, and drainage layer.

- Visit GCL and GML manufacturing plants (one visit per liner and cap) to inspect materials and sample material for conformance testing.

- Prepare, review, evaluate and approve DCNs, RCIs, NCRs, and "red-line" drawings prepared by Title III services subcontractor and OSDF construction.

- Review OSDF CQA Certification Report prepared by Title III services subcontractor.

- Attend project meetings.

- Prepare Project Closeout Report.

- Prepare "as-built" construction documents.

- Review and evaluate change order and claims.

- Review clarification and interpretation prepared by the Title III services subcontractor.

• The following scope of work will be performed by matrixed Quality Control Operations:

  - Perform inspection and audit of GCL and GML manufacturing plants, including travel expenses for each audit.

- Perform review of Manufacturer's Quality Conformance testing and Construction Quality Conformance testing data.

2.2) Quantification – Title III Services

- It is estimated that Title III services subcontractor will provide one (1) full-time Certifying Engineer and one (1) full-time administrative assistant under the existing contract until January 31, 2002, and from October 1, 2002 through January 29, 2010 under the new contract to be procured under Task 1 of this charge number. The new contract to be procured will also include twelve (12) visits to GCL and GML manufacturing plants between January 1, 2003 and March 31, 2009.

- This subtask will require 1.25 projectized OSDF Engineering FTEs for 9 months.

- This subtask will require 0.5 matrixed Quality Control Operations FTEs for a 3-month period for each year starting from FY2004 through FY2009. Travel expenses include twelve (12), 2-day trips to the GCL and GML manufacturing plants.

R1-F03-039

~~1.5.5 CAEN7 – OSDF Monitoring~~

~~1) Plan/Scope – OSDF Monitoring~~

- ~~This charge number includes review of OSDF groundwater and leachate monitoring data provided by ARWWP surface water data in accordance with the OSDF Surface Water Management and Erosion Control Plan, and OSDF Post Closure and Inspection Plan. This monitoring data will be reviewed by projectized OSDF Engineering at the end of each quarter from October 1, 2001 to January 29, 2010.~~

- ~~The following scope of work will be performed by OSDF engineering under Control Account CECP:~~

  - ~~Quarterly, review data provided by ARWWP for OSDF groundwater wells and leachate generation.~~

  - ~~Quarterly, review data provided by OSDF subcontractor and by OSDF Construction for the OSDF surface water management and erosion control.~~
  - ~~Quarterly, review monitoring data obtained under OSDF Post Closure and Inspection Plan.~~

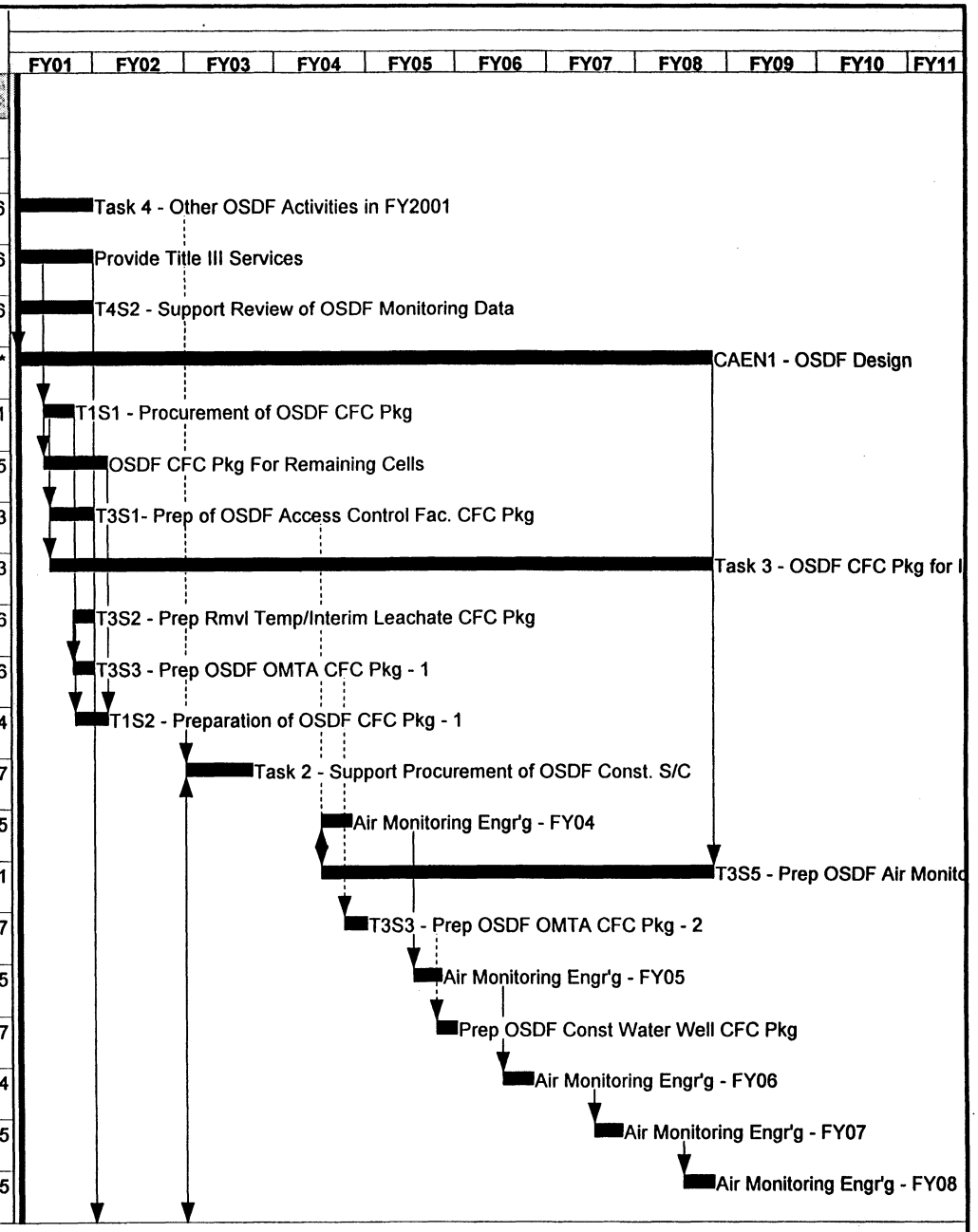
~~2) Quantification – OSDF Monitoring~~

- ~~This charge number requires 0.1 projectized OSDF Engineering FTEs for a 3-month period for each year starting from FY2002 through FY2010.~~

SECTION 2

2.0 SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
C PBS 03 - ON-SITE DISPOSAL FACILITY				
1.1.C.B ENGINEERING				
CAEN1 OSDF DESIGN - EXCLUDING FINAL CELL				
CCAEN10120	Task 4 - Other OSDF Activities in FY2001	01DEC00	27SEP01	186
CCAEN10130	Provide Title III Services	01DEC00	27SEP01	186
CCAEN10140	T4S2 - Support Review of OSDF Monitoring Data	01DEC00	27SEP01	186
CCAEN1H000	CAEN1 - OSDF Design	01DEC00	31JUL08	1,916*
CCAEN10020	T1S1 - Procurement of OSDF CFC Pkg	15MAR01	09JUL01	71
CCAEN10010	OSDF CFC Pkg For Remaining Cells	15MAR01	19NOV01	155
CCAEN10060	T3S1- Prep of OSDF Access Control Fac. CFC Pkg	02APR01	27SEP01	113
CCAEN10050	Task 3 - OSDF CFC Pkg for Infrastructure Const.	02APR01	31JUL08	1,643
CCAEN10070	T3S2 - Prep Rmvl Temp/Interim Leachate CFC Pkg	02JUL01*	27SEP01	56
CCAEN10075	T3S3 - Prep OSDF OMTA CFC Pkg - 1	02JUL01	27SEP01	56
CCAEN10030	T1S2 - Preparation of OSDF CFC Pkg - 1	10JUL01	19NOV01	84
CCAEN10040	Task 2 - Support Procurement of OSDF Const. S/C	01OCT02	30JUN03	167
CCAEN10111	Air Monitoring Engr'g - FY04	01APR04	29JUL04	75
CCAEN10110	T3S5 - Prep OSDF Air Monitoring CFC Pkg	01APR04*	31JUL08	971
CCAEN10080	T3S3 - Prep OSDF OMTA CFC Pkg - 2	01JUL04*	30SEP04	57
CCAEN10112	Air Monitoring Engr'g - FY05	01APR05	28JUL05	75
CCAEN10100	Prep OSDF Const Water Well CFC Pkg	05JUL05*	30SEP05	57
CCAEN10113	Air Monitoring Engr'g - FY06	03APR06	31JUL06	74
CCAEN10114	Air Monitoring Engr'g - FY07	02APR07	31JUL07	75
CCAEN10115	Air Monitoring Engr'g - FY08	01APR08	29JUL08	75



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Finish Date	27DEC09
Data Date	01DEC00
Run Date	05SEP01 14:51

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Sheet 1 of 3

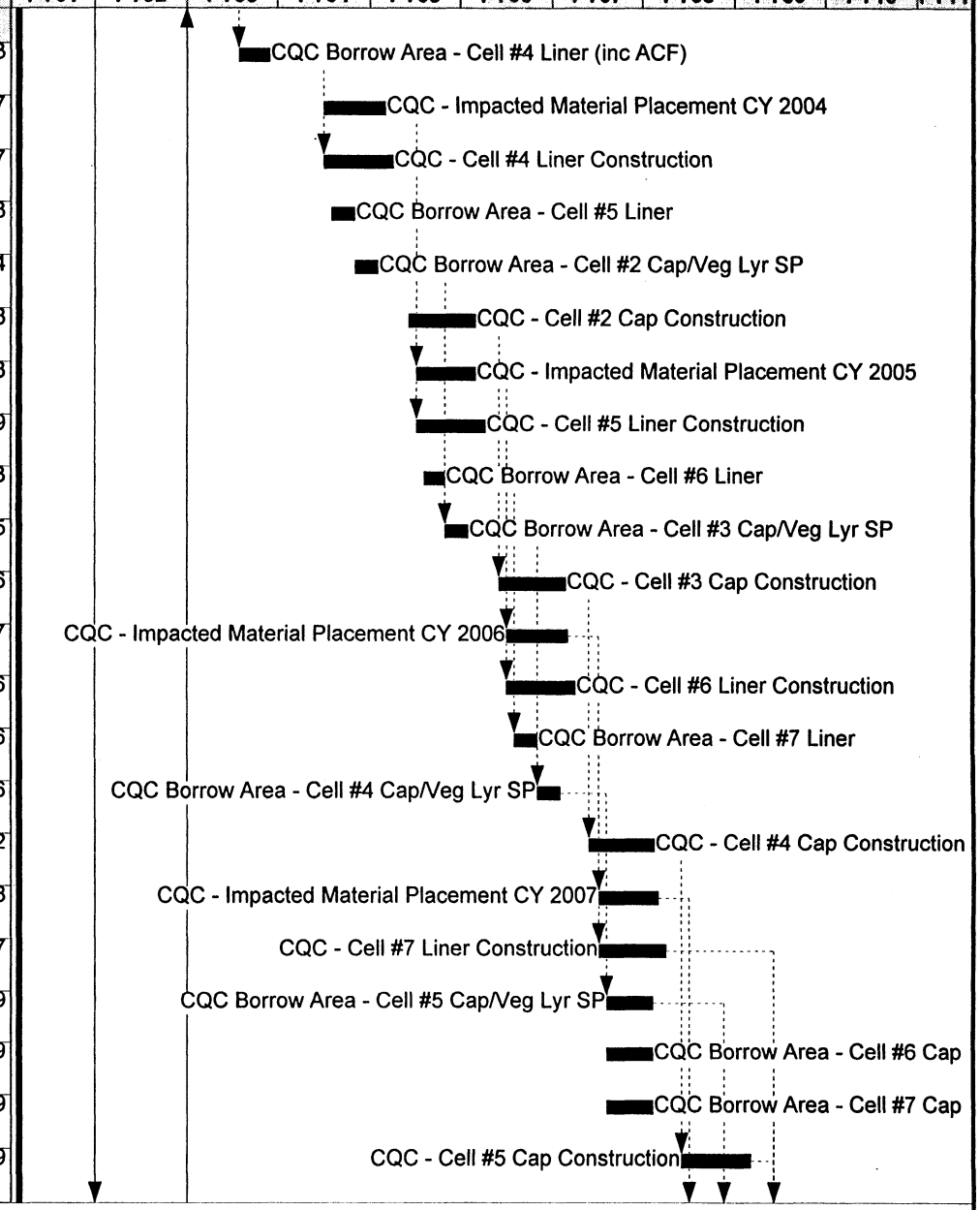
ON-SITE DISPOSAL FACILITY

1.1.C.B ENGINEERING

Early Bar
Progress Bar
Critical Activity

Date	Revision	Checked	Approved
	R1-F03-010		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CAEN5 OSDF CQC SERVICES				
CCAEN50040	CQC Borrow Area - Cell #4 Liner (inc ACF)	01MAY03	27AUG03	83
CCAEN50340	CQC - Impacted Material Placement CY 2004	01APR04	30NOV04	167
CCAEN50240	CQC - Cell #4 Liner Construction	01APR04	30DEC04	187
CCAEN50130	CQC Borrow Area - Cell #5 Liner	03MAY04	30JUL04	63
CCAEN50160	CQC Borrow Area - Cell #2 Cap/Veg Lyr SP	02AUG04	29OCT04	64
CCAEN50280	CQC - Cell #2 Cap Construction	01MAR05	28NOV05	188
CCAEN50350	CQC - Impacted Material Placement CY 2005	01APR05	30NOV05	168
CCAEN50250	CQC - Cell #5 Liner Construction	01APR05	03JAN06	189
CCAEN50140	CQC Borrow Area - Cell #6 Liner	02MAY05	29JUL05	63
CCAEN50170	CQC Borrow Area - Cell #3 Cap/Veg Lyr SP	01AUG05	31OCT05	65
CCAEN50290	CQC - Cell #3 Cap Construction	01MAR06	22NOV06	186
CCAEN50360	CQC - Impacted Material Placement CY 2006	03APR06	30NOV06	167
CCAEN50260	CQC - Cell #6 Liner Construction	03APR06	29DEC06	186
CCAEN50150	CQC Borrow Area - Cell #7 Liner	01MAY06	02AUG06	66
CCAEN50180	CQC Borrow Area - Cell #4 Cap/Veg Lyr SP	03AUG06	03NOV06	66
CCAEN50300	CQC - Cell #4 Cap Construction	01MAR07	16NOV07	182
CCAEN50370	CQC - Impacted Material Placement CY 2007	02APR07	30NOV07	168
CCAEN50270	CQC - Cell #7 Liner Construction	02APR07	31DEC07	187
CCAEN50190	CQC Borrow Area - Cell #5 Cap/Veg Lyr SP	04MAY07	05NOV07	129
CCAEN50200	CQC Borrow Area - Cell #6 Cap	04MAY07	05NOV07	129
CCAEN50210	CQC Borrow Area - Cell #7 Cap	04MAY07	05NOV07	129
CCAEN50310	CQC - Cell #5 Cap Construction	03MAR08	01DEC08	189



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Start Date	01DEC00
Finish Date	27DEC09
Data Date	01DEC00
Run Date	10SEP01 15:37

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Sheet 2 of 3

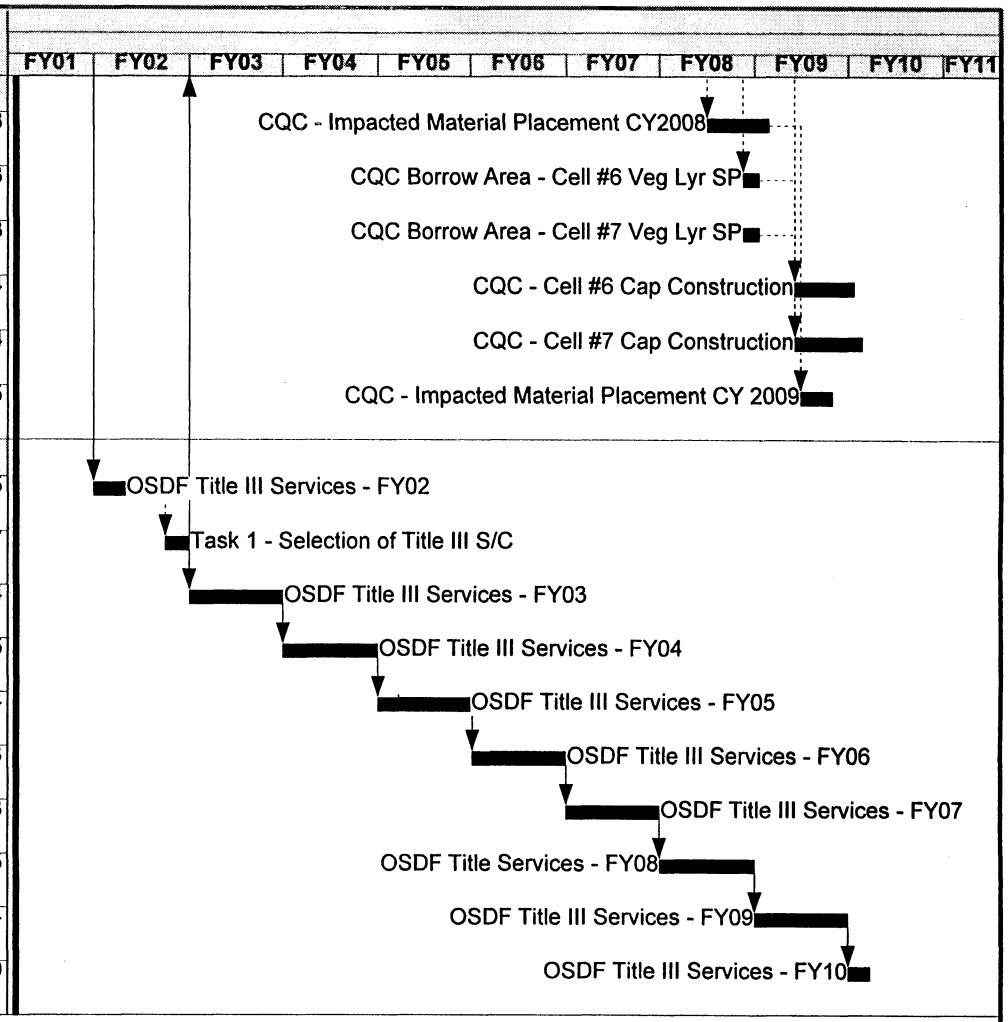
ON-SITE DISPOSAL FACILITY

1.1.C.B ENGINEERING

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-010		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CAEN5 OSDF CQC SERVICES				
CCAEN50380	CQC - Impacted Material Placement CY2008	01APR08	26NOV08	168
CCAEN50220	CQC Borrow Area - Cell #6 Veg Lyr SP	15AUG08	15OCT08	43
CCAEN50230	CQC Borrow Area - Cell #7 Veg Lyr SP	15AUG08	15OCT08	43
CCAEN50320	CQC - Cell #6 Cap Construction	02MAR09	21OCT09	164
CCAEN50330	CQC - Cell #7 Cap Construction	02MAR09	19NOV09	184
CCAEN50390	CQC - Impacted Material Placement CY 2009	01APR09	31JUL09	85
CAEN6 OSDF TITLE III SERVICES				
CCAEN60010	OSDF Title III Services - FY02	01OCT01	31JAN02	75
CCAEN60001	Task 1 - Selection of Title III S/C	01JUL02*	30SEP02	57
CCAEN60020	OSDF Title III Services - FY03	01OCT02	30SEP03	224
CCAEN60030	OSDF Title III Services - FY04	01OCT03	30SEP04	225
CCAEN60040	OSDF Title III Services - FY05	01OCT04	30SEP05	224
CCAEN60050	OSDF Title III Services - FY06	03OCT05	29SEP06	223
CCAEN60060	OSDF Title III Services - FY07	02OCT06	28SEP07	223
CCAEN60070	OSDF Title Services - FY08	01OCT07	30SEP08	225
CCAEN60080	OSDF Title III Services - FY09	01OCT08	30SEP09	224
CCAEN60090	OSDF Title III Services - FY10	01OCT09	22DEC09	50



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Data Date	01DEC00
Run Date	10SEP01 15:37

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Sheet 3 of 3

ON-SITE DISPOSAL FACILITY

1.1.C.B ENGINEERING

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-010		

SECTION 2

3.0 MANPOWER PLANS

Manpower Planning Sheet (CR2)

MPS # 1CB01 OSDF DESIGN

DRIVERS	START DATE	END DATE	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009															xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001	xx	xxx	xxx	xxx																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																		x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																						x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004												xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																								
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																								
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																				xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																								
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001					xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																								xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																								
321 OSDF Cell Placement	10/01/2003	06/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

		TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Engineering & Design	Engineer Manager	0.30	0	0	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer Civil	3.80	0.9	0.8	1	1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0.40	0	0.1	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Mgr.	0.60	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
Engineering & Design	Engineer Electrical	0.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Rep.	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
Project Management	Project Mgr.	3.80	1	0.8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer	8.40	2.5	1.9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sheet Totals:	17.60	4.40	3.60	4.10	4.30	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.40	0.20	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CB01 OSDF DESIGN

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									

Engineering & Design	Engineer Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer Civil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Mgr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Tech/Program Support Rep.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	Project Mgr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sheet Totals:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CB02 OSDF CQC SERVICES

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009																									
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx											xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																									
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																				x	xxx	xxx			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004													xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																									
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																	xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																									
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																					xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																									
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001						xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																									xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																									
321 OSDF Cell Placement	10/01/2003	06/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
QA/QC	QA Engineer		0.80	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1	0	0	0	0.1	0	0
		Sheet Totals:	0.80	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CB02 OSDF CQC SERVICES

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009											x	xxx	xxx	xx						
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009											x	xxx	xxx	xxx						
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									
QA/QC	QA Engineer		0	0.1	0	0	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CB03 OSDF TITLE III SERVICES

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009																xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																			x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																							x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004													xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																									
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																	xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																									
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																					xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																									
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001						xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																									xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																									
321 OSDF Cell Placement	10/01/2003	06/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
QA/QC	QA Engineer		3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0.5	0	0
		Sheet Totals:	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CB03 OSDF TITLE III SERVICES

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009											x	xxx	xxx	xx						
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009											x	xxx	xxx	xxx						
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									
QA/QC	QA Engineer		0	0.5	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0
		Sheet Totals:	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTION 2

4.0 ESTIMATE

CAEN1

OSDF DESIGN

09/07/2001
9:41 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.B
CTRL ACCT: CAEN
CHARGE NO: CAEN1
COMMENT #: F03-008, F03-010

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2008

Resource: DRFCAD **DRAFTER/CAD OPERATOR** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	88.4	0.0	22.0	18.0	18.0	9.0	9.0	9.0	0.0	0.0
Cum Hours:	88.4	88.4	110.4	128.4	146.4	155.4	164.5	173.5	173.5	173.5
Yr Total Cost:	2,757	0	766	663	703	375	407	429	0	0
Cum Total Cost:	2,757	2,757	3,523	4,186	4,889	5,264	5,671	6,100	6,100	6,100

Resource: ENGCVL **ENGINEER CIVIL** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,350.8	0.0	11.0	9.0	9.0	5.0	5.0	5.0	0.0	0.0
Cum Hours:	1,350.8	1,350.8	1,361.8	1,370.8	1,379.8	1,384.8	1,389.8	1,394.8	1,394.8	1,394.8
Yr Total Cost:	73,457	0	666	578	612	363	394	415	0	0
Cum Total Cost:	73,457	73,457	74,123	74,701	75,313	75,675	76,069	76,484	76,484	76,484

Resource: ENGELE **ENGINEER ELECTRICAL** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	11.0	9.0	9.0	5.0	5.0	5.0	0.0	0.0
Cum Hours:	0.0	0.0	11.0	20.0	29.0	34.0	39.0	44.0	44.0	44.0
Yr Total Cost:	0	0	641	556	589	349	379	400	0	0
Cum Total Cost:	0	0	641	1,198	1,787	2,136	2,515	2,915	2,915	2,915

Resource: ENGINR **ENGINEER** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	2,922.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7	2,922.7
Yr Total Cost:	200,965	0	0	0	0	0	0	0	0	0
Cum Total Cost:	200,965	200,965	200,965	200,965	200,965	200,965	200,965	200,965	200,965	200,965

INCLUDES ESCALATION COSTS

09/07/2001
9:41 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.B
CTRL ACCT: CAEN
CHARGE NO: CAEN1
COMMENT #: F03-008, F03-010

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2008

Resource: ENGMGR **ENGINEERING MGR** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	88.3	0.0	11.0	9.0	9.0	5.0	5.0	5.0	0.0	0.0
Cum Hours:	88.3	88.3	99.3	108.3	117.3	122.3	127.3	132.3	132.3	132.3
Yr Total Cost:	5,280	0	733	635	673	399	433	456	0	0
Cum Total Cost:	5,280	5,280	6,013	6,648	7,322	7,720	8,153	8,610	8,610	8,610

Resource: PARSONS **PARSONS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** FY01 **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	80,997.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Units:	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0	80,997.0
Yr Total Cost:	80,997	0	0	0	0	0	0	0	0	0
Cum Total Cost:	80,997	80,997	80,997	80,997	80,997	80,997	80,997	80,997	80,997	80,997

Resource: PRJMGR **PROJECT MANAGER** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,363.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4	1,363.4
Yr Total Cost:	121,561	0	0	0	0	0	0	0	0	0
Cum Total Cost:	121,561	121,561	121,561	121,561	121,561	121,561	121,561	121,561	121,561	121,561

Resource: SERVSUB **SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** GEO **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	1,292,111.7	301,075.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Units:	1,292,111.7	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0	1,593,187.0
Yr Total Cost:	1,292,112	309,204	0	0	0	0	0	0	0	0
Cum Total Cost:	1,292,112	1,601,316	1,601,316	1,601,316	1,601,316	1,601,316	1,601,316	1,601,316	1,601,316	1,601,316

INCLUDES ESCALATION COSTS

09/07/2001
9:41 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.B
CTRL ACCT: CAEN
CHARGE NO: CAEN1
COMMENT #: F03-008, F03-010

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. FICK
FISCAL YEAR: 2001-2008

Resource: TPSMGR **TECH/PROG SUPT MGR** **EOC:** LABOR
Res Dept: **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	44.1	0.0	57.0	47.0	47.0	25.0	25.0	25.0	0.0	0.0
Cum Hours:	44.1	44.1	101.1	148.1	195.1	220.1	245.1	270.1	270.1	270.1
Yr Total Cost:	2,754	0	3,967	3,465	3,671	2,086	2,260	2,382	0	0
Cum Total Cost:	2,754	2,754	6,721	10,186	13,857	15,943	18,203	20,585	20,585	20,585

Resource: TPSREP **TECH/PROG SUPT REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	23.0	19.0	19.0	10.0	10.0	10.0	0.0	0.0
Cum Hours:	0.0	0.0	23.0	42.0	61.0	71.0	81.0	91.0	91.0	91.0
Yr Total Cost:	0	0	1,332	1,166	1,235	694	753	793	0	0
Cum Total Cost:	0	0	1,332	2,499	3,734	4,428	5,181	5,974	5,974	5,974

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	5,857.7	0.0	135.0	111.0	111.0	59.0	59.0	59.0	0.0	0.0
Cum Hours:	5,857.7	5,857.7	5,992.7	6,103.7	6,214.7	6,273.7	6,332.7	6,391.7	6,391.7	6,391.7
Yr Total Cost:	1,779,882	309,204	8,106	7,064	7,483	4,265	4,626	4,876	0	0
Cum Total Cost:	1,779,882	2,089,086	2,097,192	2,104,256	2,111,740	2,116,005	2,120,631	2,125,507	2,125,507	2,125,507

CAM_____ CONTROL TEAM_____

INCLUDES ESCALATION COSTS

CAEN5

OSDF CQC SERVICES

09/07/2001
9:42 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.B
CTRL ACCT: CAEN
CHARGE NO: CAEN5
COMMENT #: F03-010

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2003-2010

Resource: QACENG **QA ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	0	0	42	32.7	44	43.2	43.9	44.6	49.4	5
Cum Hours:	0	0	42	74.7	118.7	161.8	205.7	250.3	299.7	304.7
Yr Total Cost:	0	0	2,152	1,772	2,529	2,650	2,921	3,130	3,849	401
Cum Total Cost:	0	0	2,152	3,924	6,453	9,103	12,024	15,155	19,004	19,405

Resource: SERVSUB **SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** **Class:** SUB

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	0	0	202,110.00	392,577.70	640,487.10	750,005.90	802,293.70	513,098.30	487,466.70	49,705.60
Cum Units:	0	0	202,110.00	594,687.70	1,235,174.80	1,985,180.70	2,787,474.30	3,300,572.60	3,788,039.30	3,837,745.00
Yr Total Cost:	0	0	213,171	425,657	713,900	860,215	946,872	623,123	609,163	63,916
Cum Total Cost:	0	0	213,171	638,828	1,352,728	2,212,944	3,159,815	3,782,938	4,392,102	4,456,018

GRAND TOTALS:

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	0	0	42	32.7	44	43.2	43.9	44.6	49.4	5
Cum Hours:	0	0	42	74.7	118.7	161.8	205.7	250.3	299.7	304.7
Yr Total Cost:	0	0	215,323	427,429	716,429	862,866	949,793	626,253	613,012	64,317
Cum Total Cost:	0	0	215,323	642,752	1,359,181	2,222,047	3,171,840	3,798,093	4,411,105	4,475,422

CAM_____ CONTROL TEAM_____

INCLUDES ESCALATION COSTS

CAEN6

OSDF TITLE III SERVICES

09/07/2001
9:43 AM

PBS: OHFN03
WBS: 1.1.C.B
CTRL ACCT: CAEN
CHARGE NO: CAEN6
COMMENT #: F03-010

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2003-2010

Resource: QACENG **QA ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	0	0	0	221.5	217.5	217.5	217.5	218	221.5	0
Cum Hours:	0	0	0	221.5	439	656.5	874	1,092.00	1,313.50	1,313.50
Yr Total Cost:	0	0	0	12,019	12,502	13,357	14,480	15,295	17,270	0
Cum Total Cost:	0	0	0	12,019	24,520	37,878	52,358	67,653	84,923	84,923

Resource: SERVSUB **SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** **Class:** SUB

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Units:	0	141,900.00	310,880.00	342,760.00	374,360.00	407,240.00	407,240.00	392,160.00	351,560.00	142,340.00
Cum Units:	0	141,900.00	452,780.00	795,540.00	1,169,900.00	1,577,140.00	1,984,380.10	2,376,540.10	2,728,100.10	2,870,440.10
Yr Total Cost:	0	145,731	327,894	371,641	417,269	467,082	480,627	476,252	439,327	183,034
Cum Total Cost:	0	145,731	473,625	845,267	1,262,536	1,729,618	2,210,245	2,686,497	3,125,824	3,308,858

GRAND TOTALS:

	Oct 00-01-Sep	Oct 01-02-Sep	Oct 02-03-Sep	Oct 03-04-Sep	Oct 04-05-Sep	Oct 05-06-Sep	Oct 06-07-Sep	Oct 07-08-Sep	Oct 08-09-Sep	Oct 09-10-Sep
Yr Hours:	0	0	0	221.5	217.5	217.5	217.5	218	221.5	0
Cum Hours:	0	0	0	221.5	439	656.5	874	1,092.00	1,313.50	1,313.50
Yr Total Cost:	0	145,731	327,894	383,660	429,771	480,439	495,107	491,547	456,597	183,034
Cum Total Cost:	0	145,731	473,625	857,286	1,287,057	1,767,496	2,262,603	2,754,150	3,210,747	3,393,781

CAM _____ CONTROL TEAM _____

INCLUDES ESCALATION COSTS

SECTION 2

5.0 RISK PLAN

Risk/Opportunity Identification and Analysis Form

Project: OSDF Engineering		PBS Number: 03				Total Baseline Dollars (Minimum Case):		$9,994,710		
Evaluator: Wolinsky		WBS Number 1.1.C.B								
CAM: J.D. Chiou	Date: 05/01/01	Control Account Number: CAEN								
Project Task	Risk and/or Opportunity	Potential Impact	Internal Or External Driver	Impact Cost $ (Maximum Case)	Risk Impact Level	Risk Probability %	Risk Probability Level	Probable Cost $ (Likeliest Case)	Risk Critical Value	Risk Handling Strategy
Charge No. CAEN1, OSDF Design										
Procurement of OSDF CFC Package Engineering Services Subcontractor	Extension of current GeoSyntec Contract incorporating this additional work is more expensive than anticipated	Additional engineering manhours	Internal	$300,000.00	2	50	3	$150,000.00	2	Accept
Preparation of OSDF CFC Package for cell liners and final cover systems	Unidentified AE scope adders results in doubling the projected cost	Twice the cost due to doubling the engineering manhours	Internal	$800,000.00	2	50	3	$400,000.00	2	Accept
Preparation of OSDF Access Control Facility CFC Package	Land use committee doesn't approve currently proposed location requiring redesign	Redo the conceptual and preliminary designs using in-house resources	Internal	$10,000.00	1	20	2	$2,000.00	1	Accept
Preparation of OSDF Construction Water Well CFC Package	Qualified matrixed personnel not available when needed	Delay of installation of water well by one month	Internal	$5,000.00	1	40	3	$2,000.00	2	Accept
Charge No. CAEN5, OSDF CQC Services										
Provide CQC Services - General	Period of performance must be extended due to a 12-month delay in site critical path work affecting OSDF	Twelve-month OSDF schedule extension with attendant additional costs	Internal	$300,000.00	2	50	3	$150,000.00	2	Accept
Provide CQC Services - General	Adequate number of qualified technicians not available on-site when needed over a one-month period	Increase overtime for remaining staff to provide necessary tests until additional trained staff is available	Internal	$20,000.00	1	40	3	$8,000.00	1	Accept
Charge No. CAEN6, OSDF Title III Services										
Provide Title III Services for Borrow Area Development	Not enough clay for liner and cap from brown till layer	Design Test Pad and Grading Plan and oversee construction/testing work by others	Internal	$500,000.00	2	40	3	$200,000.00	2	Accept
Provide Title III Services for OSDF Liners and Final Covers	Cell #7 material volumes are greater than anticipated requiring a larger Final Cover	Acquire an A/E and provide design of a larger final cover system	Internal	$300,000.00	2	50	4	$150,000.00	3	Accept

Risk/Opportunity Identification and Analysis Form

Project: OSDF Engineering		PBS Number: 03			Total Baseline Dollars (Minimum Case):			$9,994,710		
Evaluator: Wolinsky		WBS Number 1.1.C.B								
CAM: J.D. Chiou	Date: 05/01/01	Control Account Number: CAEN								
Project Task	Risk and/or Opportunity	Potential Impact	Internal Or External Driver	Impact Cost $ (Maximum Case)	Risk Impact Level	Risk Probability %	Risk Probability Level	Probable Cost $ (Likeliest Case)	Risk Critical Value	Risk Handling Strategy
Provide Title III Services for OSDF Liners and Final Covers	Failure of geosynthetic material in final cover system	Acquire an A/E and provide design topsoil/vegatative layer & rock: remove, stockpile, repair, replace, revegetate	Internal	$500,000.00	2	15	2	$75,000.00	2	Accept
Provide Title III Services for OSDF Liners and Final Covers	Period of performance must be extended due to a 12-month delay in site critical path work affecting OSDF	Twelve-month OSDF schedule extension with attendant additional costs	Internal	$300,000.00	2	50	3	$150,000.00	2	Accept
Charge No. CAEN7, OSDF Monitoring	NONE									
			Total:	$3,035,000.00			Total:	$1,287,000.00		
Charge No. CAEN6										
Provide Title III Services for OSDF Liners and Final Covers	Regulators require a Permanent Cap be installed for an extended shutdown of one Cell	Acquire and A/E and provide design to Build/Renove/Reinstall Final Cover	External	$50,000.00	1	10	2	$5,000.00	1	Accept

Construction

WBS DICTIONARY
CONTROL ACCOUNT/CHARGE NUMBER

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT
FEMP (DEFENSE)	12/01/2000

3. IDENTIFICATION NUMBER	4. INDEX LINE NO.
AC24-010H20115	30

5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE
1.1.C.C	INFRASTRUCTURE

7. APPROVED CP NO.	8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00	12/01/2000

9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER
CERCL/ACA	EW05H3030

11. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontractors
ODCs

b. TECHNICAL CONTENT:

Subcontractor services, support services, labor, material and equipment utilized by the FEMP for the OSDF Infrastructure Construction.

c. SCOPE OF WORK:

The scope of this WBS Element is further defined in the following control accounts:

Control Account CBSP
- Expansion of the On-Site Disposal Facility Material Transfer Area (OMTA)
- Construction of a new construction laydown area
- Relocation of the existing OSDF access control facility
- Installation of a new construction break trailer
- Relocation of the equipment wash facility
- Purchase/lease and installation of an additional office and lab trailer for the CQC consultant
- Removal of the temporary and interim leachate lines
- Drilling and development of a construction water well
- Extension of construction water supply piping
- Relocation of the perimeter OSDF air monitors
- Subtasks of all of these activities these activities will include fencing, ditches, construction of access roads, construction of parking areas, stormwater management and erosion control, dewatering as required and dust control.

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT
FEMP (DEFENSE)	12/01/2000

3. IDENTIFICATION NUMBER	4. INDEX LINE NO.
AC24-010H20115	30

5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE
1.1.C.C	INFRASTRUCTURE

7. APPROVED CP NO.	8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00	12/01/2000

9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER
CERCL/ACA	EW05H3030

11. ELEMENT TASK DESCRIPTION

Control Account CLTS
- Construction of the Enhanced Permanent Leachate Transmission System (EPLTS). Covers valve houses 1 through 6.

WORK SPECIFICALLY EXCLUDED

- Air monitoring of the OSDF during the project shutdown is budgeted and done by Environmental Monitoring
- Monitoring of leachate is the responsibility of Aquifer
- OSDF is not responsible for Stewardship activities during project shut down
- Treatment of stormwater
- Final restoration activities
- Placement of impacted material is budgeted in control account CCPL, control and management of OSDF facilities is budgeted in control account CDG1
- Staff labor charged to control account CECP
- Construction of the Enhanced Permanent Leachate Transmission System, Phase II, performed by the Aquifer project. (valve house #7)
- Monitoring wells
- Centralized services provided by other PBSs

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU / 648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	4/03 - 6/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CBSP	OSDF INFRASTRUCTURE CONSTRUCTION

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
Subcontractors

b. TECHNICAL CONTENT:

Subcontractor services, support services, labor, material and equipment utilized by the FEMP for the OSDF infrastructure construction.

c. SCOPE OF WORK:

The scope of this control account is further defined in charge number CBSP1, which includes the following:

Expansion of the OMTA

Construction of a new construction laydown area

Relocation of the existing OSDF access control facility

Installation of a new construction break trailer

Relocation of the equipment wash facility

purchase/lease and installation of an additional office and lab trailer for the CQC consultant

Removal of the temporary and interim leachate lines

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.C	INFRASTRUCTURE	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU / 648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00		4/03 - 6/09
12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)	
CBSP	OSDF INFRASTRUCTURE CONSTRUCTION	

14. ELEMENT TASK DESCRIPTION

Drilling and development of a construction water well

Extension of construction water supply piping

Relocation of the perimeter OSDF air monitors

Subtasks of all of these activities, including fencing, ditches, construction of access roads, construction of parking areas, stormwater management and erosion control, dewtering as required and dust

Construction of the EPLTS

d. WORK SPECIFICALLY EXCLUDED:

Air monitoring of the OSDF during the project shutdown is budgeted and done by Environmental Monitoring

Monitoring of leachate is the responsibility of the Aquifer Restoration Project

OSDF is not responsible for Stewardship activities during project shutdown

Treatment of stormwater

Final restoration activities

Placement of impacted material is budgeted in control acount CCPL, control and management of OSDF facilities is budgeted in control account CDG1

Staff labor charged to control account CECP

Monitoring wells

Centralized services provided by other PBSs

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU / 648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	4/03 - 6/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CBSP	OSDF INFRASTRUCTURE CONSTRUCTION

14. ELEMENT TASK DESCRIPTION

Covers valve houses 1 through 6

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	4/03 - 6/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CBSP1	OSDF MISCELLANEOUS INFRASTRUCTURE PROJECTS

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Subcontracts

b. TECHNICAL CONTENT:

The work under charge no. CBSP1 consists of construction of miscellaneous OSDF Infrastructure Projects. There are several areas adjacent to the OSDF in which the miscellaneous projects will be performed. They are the OSDF Borrow Area, the On-Site Disposal Facility Material Transfer Area (OMTA), the future OMTA Expansion Areas, the Construction Laydown Area, the future Construction Laydown Area, the Contractor's Administration Area and the OSDF North Stockpile Area. The OSDF Borrow Area is south of the OSDF in an area bounded on the east by the Mid-Valley pipeline easement, on the west by the South Entrance Road and on the south by Willey Road.

The OMTA consists of two areas, the Bulk Debris area and the Container Area, both of which are west of the OSDF. The bulk debris area is bounded on the south by the Impacted Material Haul Road, on the north by the Railyard, on the east by the OSDF and on the west by "B" Street. The Container Area is bounded on the south by building no. 77, on the west by "E" Street, on the east by the former production area and it extends to the north to the former location of building no. 78.

The Construction Laydown Area is west of the OSDF and is bounded on the north by the Fire Training road, on the south by the Railyard, on the east by the OSDF and on the west by the HWMU-1.

The Future Construction Laydown Area will be south of OSDF contingency cell number 8 and north of the OSDF Borrow Area.

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	4/03 - 6/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CBSP1	OSDF MISCELLANEOUS INFRASTRUCTURE PROJECTS

14. ELEMENT TASK DESCRIPTION

The Contractor's Administration Area will be southeast of the OSDF, northeast of the OSDF Borrow Area and southeast of the former Sewage Treatment Facility. The OSDF North Stockpile Area is north of the OSDF, south of the intersection of the new North Entrance road and the old North Entrance Road.

Drivers for These Miscellaneous Projects

- Approved OSDF Final Design
- Sufficient building trade labor to support double shift
- EPA approval of IMPP change from 4 feet thick intervening layer to 2 feet thick
- East side of east field Borrow Area contains sufficient suitable material to complete cell liner and final cover construction
- North Access closed by end of FY 04 and no improvements will be made after that
- RIMIA semi-trailer parking area will be relocated or not needed by WGS by the first quarter of FY 04.

c. SCOPE OF WORK:

- Submittals and Procurement
- Relocation of Access Control Facility
- Phase II Removal of Temporary Leachate Line
- Equipment Wash Certification
- Relocate Existing Stockpiles
- Permanent Power for Air Monitors and Relocation of Air Monitors
- OMTA Container area Expansion
- Construction of New Laydown Area
- Phase III Removal of Temporary Leachate Line
- Construction Water Well
- Demolish North Wheel Wash at Impacted Material Haul Road
- Remove Underground/Above-ground Interim Leachate Line
- Demobilization - D&D of OSDF Infrastructure Facility
- Closeout

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.C	INFRASTRUCTURE	
5. PERFORMING DIV/DEPARTMENT CODE	**6. ORIGINATOR NAME/PHONE**	**7. WBS ELEMENT MANAGER**
49	JD CHIOU (3726)	JD CHIOU
8. BUDGET AND REPORTING NUMBER	**9. BUDGET TITLE**	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
NEW PER CP# FY01-0015-0003-00		4/03 - 6/09
12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CBSP1	OSDF MISCELLANEOUS INFRASTRUCTURE PROJECTS	

14. ELEMENT TASK DESCRIPTION

d. WORK SPECIFICALLY EXCLUDED:

Phase I Removal of Temporary Leachate Line

Treatment of surface water and leachate

Costs and schedule delays that result from DOE required accountability, criticality or other drills

Final restoration of the OSDF Borrow Area and areas outside the OSDF Final Cover

Leachate contingency plans

Construction of Valve House #7

Excavation and hauling of impacted material from excavations, size reduction of debris and excavated material such as at or below grade structures, utilities and concrete

Purchase and disposal of major pieces of construction equipment which cannot be decontaminated and removed from site except for one CAT #826

Dust control on paved roadways

Impacted Material Haul Road Removal

Size reduction of impacted material or debris from D&D projects

Construction costs for a laydown area at the Waste Pits' Railyard

Construction Quality Control services

Cost increases or schedule delays for unforeseen subsurface geo-technical conditions or resulting from the discovery of cultural resources

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 4

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU (3726)	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	4/03 - 6/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CBSP1	OSDF MISCELLANEOUS INFRASTRUCTURE PROJECTS

14. ELEMENT TASK DESCRIPTION

Graveled construction laydown yards, 1. North triangle area, 2. Construct laydown yard west of cell 2, 3. Construction laydown yard south of cell 8 will be left in place, 4. Service road to item no. 2 left in place.

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP# FY01-0015-0003-00	12/00 - 5/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CLTS	ENHANCED PERMANENT LTS

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontract

b. TECHNICAL CONTENT:

This control account covers the completion of the Enhanced Permanent Leachate Transmission System (EPLTS). The entire scope of this work will occur in FY01, beginning December 1, 2000.

c. SCOPE OF WORK:

The scope of this control account is contained within the following two charge numbers:

- CLTS1 - Enhanced Permanent LTS Design FY01
- CLTS2 - Enhanced Permanent LTS Construction FY01

d. WORK SPECIFICALLY EXCLUDED:

All EPLTS design and construction performed prior to December 1, 2000.

Phase II of the EPLTS to be performed by the Aquifer project.

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP# FY01-0015-0003-00	12/00 - 5/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CLTS1	ENHANCED PERMANENT LTS DESIGN FY01

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

This charge number covers only the Title III support from the A&E contractor for construction of the Enhanced Permanent Leachate Transmission System during FY01, beginning December 1, 2000.

c. SCOPE OF WORK:

The scope of this charge number is specific to title III support performed only during the completion of the EPLTS as noted above.

d. WORK SPECIFICALLY EXCLUDED:

EPLTS construction

Title I/II Design (completed prior to December 2000)

Title III support performed prior to December 2000.

Design of Phase II of the EPLTS to be performed by the Aquifer project.

FF engineering support

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.C	INFRASTRUCTURE

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
CHANGE PER CP# FY01-0015-0003-00	12/00 - 5/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CLTS2	ENHANCED PERMANENT LTS CONSTRUCTION FY01

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Materials
Subcontract

b. TECHNICAL CONTENT:

This charge number covers the completion of construction and acceptance testing of the Enhanced Permanent Leachate Transmission System (EPLTS). This work will be performed entirely in FY01, beginning December 1, 2000.

c. SCOPE OF WORK:

The scope of this charge number is specific to only that work required to complete construction and start-up of the EPLTS system. Also included is the CM support as noted on manpower sheet 1CC03.

d. WORK SPECIFICALLY EXCLUDED:

EPLTS Design and Title III support

EPLTS construction performed prior to December 1, 2000.

Construction of EPLTS, Phase II to be performed by the Aquifer project.

Project Manager	Control Account Manager	Control Team Manager

SECTION 3

1.0 NARRATIVE

1. PROJECT TITLE: ON-SITE DISPOSAL FACILITY PROJECT	**2. DATE: 04/26/01**	**3. PBS#: 03**
4. WBS ELEMENT CODE: 1.1.C.C.	**5. WBS ELEMENT TITLE:** OSDF INFRASTRUCTURE CONSTRUCTION	
6. CAM NAME/ PHONE: JYH-DONG CHIOU/ 3726	**7. CAM SIGNATURE:**	
8. ORIGINAL/ CHANGE SCOPE/ PER CP#:	**9.CONTROL ACCOUNT: CBSP & CLTS**	

SECTION 3: CBSP – OSDF INFRASTRUCTURE CONSTRUCTION; CLTS – ENHANCED PERMANENT LEACHATE TRANSMISSION SYSTEM

1.0 NARRATIVE

1.1 OVERVIEW

The closure plan for these control accounts covers OSDF Infrastructure Construction and includes expansion of the On-Site Disposal Facility Material Transfer Area (OMTA), construction of a new construction laydown area, relocation of the OSDF access control facility, removal and new construction of the OSDF equipment wash facility, construction of required access roads, removal of the wheel wash on the Impacted Material Haul road and design and construction of the enhanced permanent leachate transmission system. OSDF Infrastructure Construction further covers purchase and installation of a construction break trailer and installation of CQC office trailer and lab trailer parking and service area for equipment and contaminated access roads to the Cell. OSDF Infrastructure Construction also includes removal of the temporary and interim leachate lines, development of another construction water well, extension of construction water supply piping and relocation of the perimeter OSDF air monitors. Work under control account CLTS was completed in FY01.

The tasks included under these control accounts are as follows:

1.1.1 CBSP1 – OSDF Miscellaneous Infrastructure Projects

Charge Number CBSP1 covers the labor, equipment and material costs and subcontractor costs required to construction the miscellaneous infrastructure projects.

1.1.2 CLTS1 – Enhanced Permanent LTS Design

Charge Number CLTS1 covers the labor, material costs and subcontractor costs required to complete the Title III design activities.

1.1.3 CLTS2 – Enhanced Permanent LTS Construction

Charge Number CLTS1 covers the labor, equipment and material costs and subcontractor costs required to complete the construction of the Enhanced Permanent LTS. Activities completed in FY01 include installation of all valve house foundations, installation and testing of double-contained leachate lines, installation and testing of the HDPE secondary containment system, installation and testing of the 13.2KV lines, installation and testing of all valves and instrumentation, and commissioning of Valve Houses 1, 2 & 3.

1.2 ASSUMPTIONS/EXCLUSIONS

1.2.1 Assumption

- Scope and schedule based on Scenario 6.
- All work is performed with building trades personnel (Davis Bacon).
- The future construction laydown area will be built south of the OSDF Cell #8, as part of OSDF Infrastructure (CBSP).
- Phase I of the temporary leachate removal will be performed in 2001.
- The existing leachate lines between manholes 1 and 2 and manholes 2 and 3 will not be excavated and removed after the manholes are demolished.
- If required, the Waste Pits Rail Yard area will be available to use as a laydown area for stockpiling of OSDF Construction Materials by IQ – FY06.
- Main phone line trunk relocation that currently is in the OSDF footprint will be re-located by D&D as part of their utility relocation.
- Any alterations to the leachate conveyance line tie-in between the Bio-Surge Lagoon and AWWT are the responsibility of Aquifer.
- Infrastructure work activities will be done by Fluor Fernald and the construction support contractor through FY03. The cell contractor will be responsible for the remaining activities through FY09.

1.2.2 Exclusions

- Treatment of surface water, leachate is excluded.
- Quantities for CLTS work scope, as all work is completed in FY01.
- Additional costs and schedule delays that result from DOE required accountability, criticality or other drills are excluded.

- Final restoration of the OSDF Borrow Area and areas outside of the limits of the OSDF Final Cover is excluded.
- Leachate contingency plans are excluded is excluded from this control account.
- Construction of Valve House #7 is excluded from this control account.
- Excavation and hauling of impacted material from excavations, size reduction of debris and excavated material such as at- or below-grade structures, utilities, and concrete is excluded is excluded from this control account.
- Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site is excluded and assumed to be decontaminated (exception 1 CAT 826).
- Dust Control on paved roads is excluded from this control account.
- Impacted Material Haul Road Removal is excluded from this control account.
- Size reduction of impacted material or debris from D&D projects is excluded from this control account.
- Construction costs for a laydown area at the Waste Pits railyard are excluded.
- Construction Quality Control services are excluded from this control account.
- Cost increases or schedule delays caused by other than normal weather are excluded.
- Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources are excluded.
- Graveled construction laydown yards, 1. North triangle area, 2. Construct laydown yard west of cell 2, 3. Construction laydown yard south of cell 8 will be left in place, 4. Service road to item 2 left in place.

1.2.3 Government-Furnished Equipment/Services

None

1.3 DRIVERS - General

- Approved OSDF Final Design.
- Sufficient building trade labor can be employed to support double shift.

- EPA approves proposed IMPP change from 4-foot intervening layer to 2 foot.

- East side of east field Borrow Area contain-s sufficient suitable material to complete cell liner and final cover construction. Gray clay is not used for clay liner or clay cap construction. Brown clay may be used for vegetative and contouring layers if the required quantity of gray clay is insufficient.

- North Access closed by end of FY 04 and no improvements will be made after that time.

- RIMIA semi-trailer parking area will be relocated or not needed by WGS by the first quarter of FY04.

1.4 PROJECT PHYSICAL DESCRIPTION

The following comprises the areas in which OSDF infrastructure construction will be performed:

The On-Site Disposal Facility is located in the northeast corner of the FEMP. The facility is located within survey coordinates N483400, N480000, E1351750, and E1350600. There are several areas adjacent to the OSDF, which support the construction of the liners, caps and impacted material placement. These are the OSDF Borrow Area, the On-Site Disposal Facility Material Transfer Area (OMTA), the future OMTA Expansion Areas, the Construction Laydown Area, the future Construction Laydown Area, the Contractor's Administration Area and the OSDF North Stockpile Area.

The OSDF Borrow Area is south of the OSDF in an area bounded on the east by the Mid-Valley pipeline easement, on the west by the South Entrance Road, and on the south by Willey Road. The remaining area for OSDF Borrow Area development is approximately 30 acres and will be developed in seven Subareas.

The OMTA currently consists of two areas, the bulk debris area and the container area, both are located west of the OSDF. Both areas of the OMTA will be expanded as the project progresses.

The existing container area is bounded on the south by Building 77, on the west by "E" Street, on the east by the former production area fence, and it extends to the north to the former location of Building 78. The container area will be expanded to the north and to the south. It will be extended to the north to the Impacted Material Haul Road. It will be expanded to the south approximately to the south edge of the existing water tower.

The existing bulk debris area is bounded on the south by the Impacted Material Haul Road, on the north by the railyard, on the east by the OSDF and on the west by "B" Street. The bulk debris area will be expanded to the west into the area of the existing quonset huts. The expanded bulk debris area will be bounded on the north by the former production area fence, on the south by the Impacted Material Haul Road, on the east by "B" Street and on the west by stockpile SP-7.

The existing Construction Laydown Area is located west of the OSDF. It is bounded on the north by the Fire Training Road, on the south by the railyard on the east by the OSDF on the west by HWMU-1. Another construction laydown area will be built to the south of contingency OSDF Cell 8 and north of the OSDF Borrow Area.

The Contractor's Administration Area is located southeast of the OSDF. It is northeast of the OSDF Borrow Area and southeast of the form Sewage Treatment Plant.

The OSDF North Stockpile Area is located north of the OSDF. It is located south of the intersection of the new North Entrance Road and the old North Entrance Road.

1.5 PROJECT PLAN/TECHNICAL SCOPE AND QUANTIFICATION

1.5.1 CBSP1 – OSDF Miscellaneous Infrastructure Projects

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by SDFP Engineering and supported by SDFP construction, safety and QC. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, and QA plan. Prepare construction schedule for infrastructure projects through FY03.

1.1)2 Quantification - Submittals

- Intermittent review of plan. Labor – construction engineering, engineering, safety, quality assurance, and resident engineer.

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

t schedule for infrastructure projects. Procure material,
d specialty contractor services. The following material,
d services will be procured for the OSDF miscellaneous
cts:

construction/Rad fence, riprap for check dams, surfactant,
concrete, reinforcing steel and other materials for construction
nt wash; geotextile material and #304 stone for the
n area, access control facility, access roads and OMTA
oles, phone lines, security lights, potable water lines and drain
access control facility;

, small tools and heavy equipment, supplies for field survey,
ss facilities, tool trailer and a 12′ x 60′ break trailer.

es Labor, Labor Support Contractor labor,

ces: subcontractor for development of a new construction
ractor for installation and setup of the new break trailer,
uipment maintenance, subcontractor for fueling of equipment,
vide construction debris/trash removal and port-o-let services
to provide bottled water.

curement

ons through FY03

n of Access Control Facility

tion of Access Control Facility

ment, perform safety checks, training, installation of surface
and erosion controls, construction/Rad fence, installation of

ground utilities to the new access control facility and new
ility including potable water, and drain lines

to the access control facility and new equipment wash facility

ailers T-96, T-98 and T-125 from existing access control
subcontractor will provide oversight for trailer removal.

access control facility and new contaminated access road

- Placement of 8" of #304 stone at the new access control facility and contaminated access road

- Excavate and construct a new sediment basin and excavate and construct the new equipment wash facility. The sediment basin and the equipment wash facility are lined with geomembrane

- Install fence around relocated access control facility and new equipment wash facility

- Dust control

2.2) Quantification - Relocation of Access Control Facility

- Mobilization of equipment will take 1 week and require 1 mechanic and 1 safety engineer. Installation of surface water management and erosion controls, construction/Rad fence, installation of construction signs will take 5 days and require 4 laborers, 1 operator, CAT 416, 1,000lf silt fence.

- Installation of underground utilities will take 21 days and will require 1 CAT 416 backhoe, 1 walk-behind compactor, 1 CAT D-6 dozer, 2 operators, 1 CAT 613 waterwagon, .5 teamster, 3 laborers

- Installation of power to the access control facility and new equipment wash facility will take 10 days and will require 2 electricians, 1 bucket truck, power poles, cable and other electrical equipment

- Removal and storage of trailers T-96, T-98 and T-125 will take 10 days and will require 1 CAT TH83 forklift, 1 operator, 2 carpenters and 2 laborers

- Grading of the new access control facility and new contaminated access road will take 30 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 14G motor grader, 1 CAT 613 paddle wheel, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 3 operators, 1 CAT 613 waterwagon, .5 teamster and 2 laborers

- Placement of 8" of #304 stone at the new access control facility and contaminated access road will take 15 days and will require 1 CAT D8 bulldozer with a spreader box, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon, 1 teamster and 2 laborers. This activity will require 150,000 sf of geotextile, and 6,000 tons of #304 stone

- Excavation and construction of a new sediment basin and excavate and construction of the new equipment wash facility will take 25 days and will require 1 CAT 416 backhoe and 1 operator for 25 days, 1 CAT D6 bulldozer and

1 operator for 10 days, 1 Volvo A-30 truck and 1 teamster for 10 days, 1 walk behind compactor, 2 electricians for 5 days, 2 pipefitters for 5 days, 2 carpenters for 10 days, and 2 laborers for 25 days. This activity will require 4,500 sf of geomembrane and geotextile material and 300 tons of #57 washed stone

- Installation of the 300 feet of chain link fence around relocated access control facility and new equipment wash facility will take 5 days and require 1 bobcat with a post hole attachment, 1 operator, 2 ironworkers ad 1 laborer

3) Task #3 - Phase II Temporary Leachate Removal

3.1) Plan/Scope - Phase II Temporary Leachate Removal

- Remove/size reduce old equipment wash and haul to a stockpile area in Cell #3.

- Excavate and remove 900lf of old leachate and haul and stockpile in cell 3, 2,500cy of excavation.

- Excavate and remove impacted material around and under the old access control area, 4,500cy.
- Phase II leachate backfill 900lf trench with clean material from borrow area.

3.2) Quantification - Phase II Temporary Leachate Removal

- 1 CAT 330 excavator, 1 CAT D-6 dozer, 1 Volvo A-30 truck, 1 day, 2 operators for 3 days, 2 laborers for 5 days.
- 1 CAT 330 excavator, CAT D-6 dozer, 2" pump, 1 trench box, 3 Volvo A-30 trucks.

- 1 CAT 330 excavator, 1 CAT D-6 dozer, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 2 operators for 10 days, 2 laborers for 10 days, and 3.25 teamsters for 6 days.

- 1 CAT 950 loader, 1 CAT 330 excavator, 1 CAT D-6 dozer, 1 CAT 825 sheep's foot roller, 2 CAT 563 smooth drum roller, 1 2x2"pump, 1 CAT 613 waterwagon, 3 operators for 15 days, 3 laborers for 15 days, 1 foreman for 15 days, and 3.25 teamsters for 6 days.

4) Task #4 - Equipment Wash Certification

4.1) Plan/Scope - Equipment Wash Certification

- This scope of work includes planning, agency review, field sampling, laboratory analysis, and analytical result reporting to the regulatory agencies. Development of the variances for the A1PII Precertification and Certification Project Specific Plans

and a Page Change Notice (PCN) to A1PII Certification Design Letter documentation This documentation is necessary as describing the scope of work for certifying one (1) Certification Unit at EWW. Matrixed support is necessary for the development and review of the variance and PCN. Additionally, matrixed support is necessary for physical sampling (Environmental Monitoring, PBS04) and laboratory analysis (Analytical Services, PBS04). Projectized support from SDFP real-time is necessary after EWW removal to address precertification. Precertification results will be included with PCN and variance. Projectized support also is necessary to draft the variances, draft the PCN, survey 16 certification sample locations, and update results in A1PII Certification Report. Centralized support will be necessary from ECDC and for certifications statistical tables.

4.2) Quantification - Equipment Wash Certification

- Work will occur over two quarters. The first quarter will allow for variances and PCN development and regulatory review. It is assume that the agencies and the project will need to familiarize themselves with the Area 1 documentation. The second quarter will allow for field, analytical work, final documentation, and agency approval. Actual field surveying of sixteen (16) certification locations and sample taking with submission to the onsite analytical laboratory can be accomplished in two (2) work days. Matrix manpower is listed below for 3 quarters:

MPM	3rd Qtr FY03	4th Qtr FY04
qaqctec	4 hours	4 hours
s&heng	4 hours	
chemist	0	20 hours
labtec	0	20 hours
enstec	0	40 hours
ensrep	0	10 hours

5) Task #5 - Relocate Existing Stockpiles

5.1) Plan/Scope - Relocation Existing Stockpiles

- Excavate, load and haul stockpiles that are located in the southeast corner of the OSDF Cell #4 footprint. Stockpiles are to be relocated to the Borrow Area Stockpile Area

- Dust Control

5.2) Quantification - Relocation Existing Stockpiles

- Excavation, loading and hauling approximately 12,000 cy of stockpiles from the southeast corner of the OSDF Cell #4 footprint will take 15 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 4 teamsters and 1 laborer

6) Task #6 - Permanent Power for Air Monitors and Relocation of Air Monitors

6.1) Plan/Scope - Permanent Power for Air Monitors and Relocation of Air Monitors

- Install permanent power along the east side of the OSDF for the perimeter OSDF air monitors

- Relocate air monitors at the completion of each new liner and prior to placement of the 1 foot impacted material protective cover for each liner.

- Construction survey

- Dust control

6.2) Quantification - Permanent Power for Air Monitors and Relocation of Air Monitors

- Installation of permanent power along the east side of the OSDF for perimeter air monitors will take 15 days and will require 1 bucket truck, 8 power poles and 2 electricians

- Relocation of air monitors at the completion of each new liner and prior to placement of the 1 foot impacted material protective cover for each liner will take 5 days and will require 1 CAT 416 backhoe, 1 operator, 2 laborers and 2 electricians.

7) Task #7 - OMTA Container Area Expansion

7.1) Plan/Scope - OMTA Container Area Expansion

- Expansion of the OMTA Container area north to the Impacted Material Haul Road and south to approximately the south edge of the existing water tower

- Construct a new OMTA stormwater collection system

- Construction survey

- Dust control

7.2) Quantification - OMTA Container Area Expansion

- Expansion of the OMTA Container area will take 45 days and will require 1 CAT D6 bulldozer, 1 CAT 950 loader, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, and 1.5 teamsters. This activity will require 153,000 sf of geotextile and 6,000 tons of #304 stone

- Construction of new OMTA stormwater collection system will take 8 days and will require 3 laborers, 1 operator, 1,000 lf of pipe, CAT 416B, CAT 563 walk behind compactor.

- Construction survey will take 5 days and will require 2 surveyors.

8) Task #8 - Construction of New Laydown Area

8.1) Plan/Scope - Construction of New Laydown Area

- Construction of a new construction material laydown area south of Cell #8.

- Installation of construction fence around the new construction material laydown area

- Construction survey

- Dust control

8.2) Quantification - Construction of New Laydown Area

- Excavation/grading of the new construction material laydown area south of Cell #8 will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 613 paddle wheel, 1 CAT 563 smooth drum roller, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, 3 teamsters and 2 laborers.

- Placement of the gravel surface will take 15 days and will require 1 CAT D8 bulldozer with spreader box, 1 CAT D6 bulldozer, 2 operators, 1 CAT 613 waterwagon, 1 teamster and 4 laborers. This activity will require 436,000 sf of geotextile and 17,000 tons of #304 stone.

- Installation of construction fence around the construction material laydown area will take 5 days and will require 3 laborers. This activity will require 2,700 lf of construction fencing material.

- Construction survey will take 5 day and will require 2 surveyors.

- Dust control

9) Task #9 - Removal of Temporary Leachate Line – Phase III

9.1) Plan/Scope - Removal of Temporary Leachate Line – Phase III

- Excavate and remove the existing underground temporary leachate line (Phase III) from approximately station 28+00 to station 36+00. This represents approximately 800 lf of leachate line from the EPLTS permanent lift station north.
- Backfill and compact the excavation
- Repair asphalt – 20x15
- Fertilize and seed – 24,000 sq ft

9.2) Quantification - Removal of Temporary Leachate Line – Phase III

- Excavation will take 15 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 12.5 days), 3.5 teamsters, 1 3" pump, and 2 laborers
- Backfill of the excavation will take 15 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 950 loader, 1 CAT 563 smooth drum roller, 3 operators, 1 CAT 613 waterwagon, 3 Volvo A-30 trucks, 3.5 teamsters 2 walk behind compactors and 3 laborers.
- Asphalt repair – 1 day sub – 20x15
- Seed and fertilize – 24,000 sq ft – 2 laborers – 2 days

10) Task #10 - Construction Water Well

10.1) Plan/Scope - Construction Water Well

- Drill and develop construction water well capable of pumping 250-350 gpm.
- Tie water well into construction water lines and install additional water line.

10.2) Quantification - Construction Water Well

- Drilling and development of a construction water well will be performed by a specialty subcontractor.
- Tie in of the water well to the existing construction water lines and installation of 2,000 lf of 4" HDPE water line will take 5 days and will require 2 pipefitters, and a HDPE pipe welding machine

11) Task #11 - Demolish Existing North Wheel Wash at Impacted Material Haul Road

11.1) Plan/Scope - Demolish Existing North Wheel Wash at Impacted Material Haul Road

- Lock out water and electric
- Disconnect water
- Demolish, size reduce concrete slab
- Excavate, load, haul concrete to the OSDF
- Dust control

11.2) Quantification - Demolish Existing North Wheel Wash at Impacted Material Haul Road

- Lockout of water and electric will require 2 pipefitters for 0.5 days and 2 electricians for 0.5 days

- Disconnecting water lines will take 1 day and required 2 pipefitters

- Demolition and size reduction of the concrete slab will take 2 days and will require 1 CAT 330 excavator with a hoe-ram attachment, 1 operator and 2 laborers

- Excavation, loading and hauling of the concrete to the OSDF will take 2 days and will require 1 CAT 330 excavator, 1 operator, 1 Volvo A-30 truck, 1 teamster and 2 laborers

- Dust control will require 1 CAT 613 waterwagon and 1 teamster for 2 days

12) Task #12 - Remove Underground/Above-Ground Interim Leachate Line

12.1) Plan/Scope - Remove Underground/Above-Ground Interim Leachate Line

- Remove the underground/ above ground interim leachate line from LCS/LDS manhole #3 to the existing sediment basing inlet adjacent to the south end of OSDF Cell #5.

- Dust Control

12.2) Quantification - Remove Underground/Above-Ground Interim Leachate Line

- Removal of the underground/ above ground interim leachate line (approximately 1,000 lf) will take 4 days. This activity will require 1 CAT 330 excavator and 1 operator for 1 day, 1 CAT TH83 forklift and 1 operator for 3 days, roll-off box truck and 1 teamster for 0.5 days, and 2 laborers for 4 days

- This activity will require 1 CAT 613 waterwagon and 1 teamster for 2 days.

13) Task #13 - Demobilization – D&D of OSDF Infrastructure Facility

13.1) Plan/Scope - Demobilization - D&D of OSDF Infrastructure Facility

- Remove 15,000 lf of 4" HDPE temporary construction water lines and dispose of in the OSDF
- Remove contaminated surface at access control facility and dispose of in the OSDF
- Demolish and dispose of the new equipment wash and dispose of in the OSDF
- Remove above ground electric, power poles and air monitors
- Disconnect utilities to trailers T-96, T-98, T-125, T-135 and the break trailer and dispose of in the OSDF
- Demolish and size reduce trailers and dispose of in the OSDF
- Demolish and size reduce CAT 826 compactor and dispose of in the OSDF
- Demolish and size reduce the 4 specialized roll-off boxes used to transport debris and dispose of in the OSDF
- Decontaminate equipment
- Placement of this material in the OSDF is covered under charge number CCPL3

13.2) Quantification - Demobilization - D&D of OSDF Infrastructure Facility

- Removal of 15,000 lf of 4" HDPE temporary construction water lines will take 10 days and will require 1 CAT TH83 forklift, 1 operator, 1 roll-off box truck, 2 roll-off boxes, and 4 laborers. This activity will require 1 teamster for 0.5 days.
- Removal of the contaminated surface at the access control facility will take 7 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators, 3 Volvo A-30 trucks, 3 teamsters, and 2 laborers. This activity will also require 1 CAT 613 waterwagon and 1 operator for 3.5 days. The approximate quantity of material to be excavated and disposed of is 7,000 CY.
- Demolition and disposal of the new equipment wash will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators, 1 roll-off box truck and roll-off box, 1 teamster and 2 laborers.
- Remove above ground electric, power poles and air monitors will take 2 days and will require 2 electricians, 1 bucket truck, and 2 laborers.

- Disconnecting utilities from trailers will take 1 day and will require 2 pipefitters and 2 electricians

- Demolition and size reduction of the trailers will take 5 days and will require 1 CAT 330 excavator with a shear attachment, 1 CAT 950 loader, 2 operators, 1 roll-off box truck with specialized roll-off box, 1 teamster, and 2 laborers

- Demolition and size reduction of the CAT 826 compactor will take 2 days and will require 1 CAT 330 excavator with a shear attachment, 1 CAT 950 loader, 2 operators, 1 roll-off box truck with specialized roll-off box, 1 teamster, and 2 laborers. This activity will also require 1 mechanic for 0.5 days to drain fluids from the CAT 826.

- Demolition and size reduction of the 4 specialized roll-off boxes will take 2 days and will require 1 CAT 330 excavator with a shear attachment, 1 CAT 950 loader, 2 operators and 2 laborers

- Decontamination of equipment will take 5 days and will require 2 laborers and 2 pressure washers

14) Task #14 - Phase I Temporary Leachate Removal

14.1) Plan/Scope - Phase I Temporary Leachate Rremoval

- Excavate and remove 1300lf of old leachate and haul and stockpile in cell 3, 3,850cy of excavation.
- Phase I leachate backfill 1300lf trench with clean material from borrow area.

14.2) Quantification - Phase I Temporary Leachate Removal

- 1 CAT 330 excavator, 1 CAT D-6 dozer, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 2 operators for 10 days, 2 laborers for 10 days, and 3.25 teamsters for 6 days.

- 1 CAT 950 loader, 1 CAT 330 excavator, 1 CAT D-6 dozer, 1 CAT 825 sheep's foot roller, 2 CAT 563 smooth drum roller, 1 2x2"pump, 1 CAT 613 waterwagon, 3 operators for 15 days, 3 laborers for 15 days, 1 foreman for 15 days, and 3.25 teamsters for 6 days.

15) Task #15 - Closeout

15.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

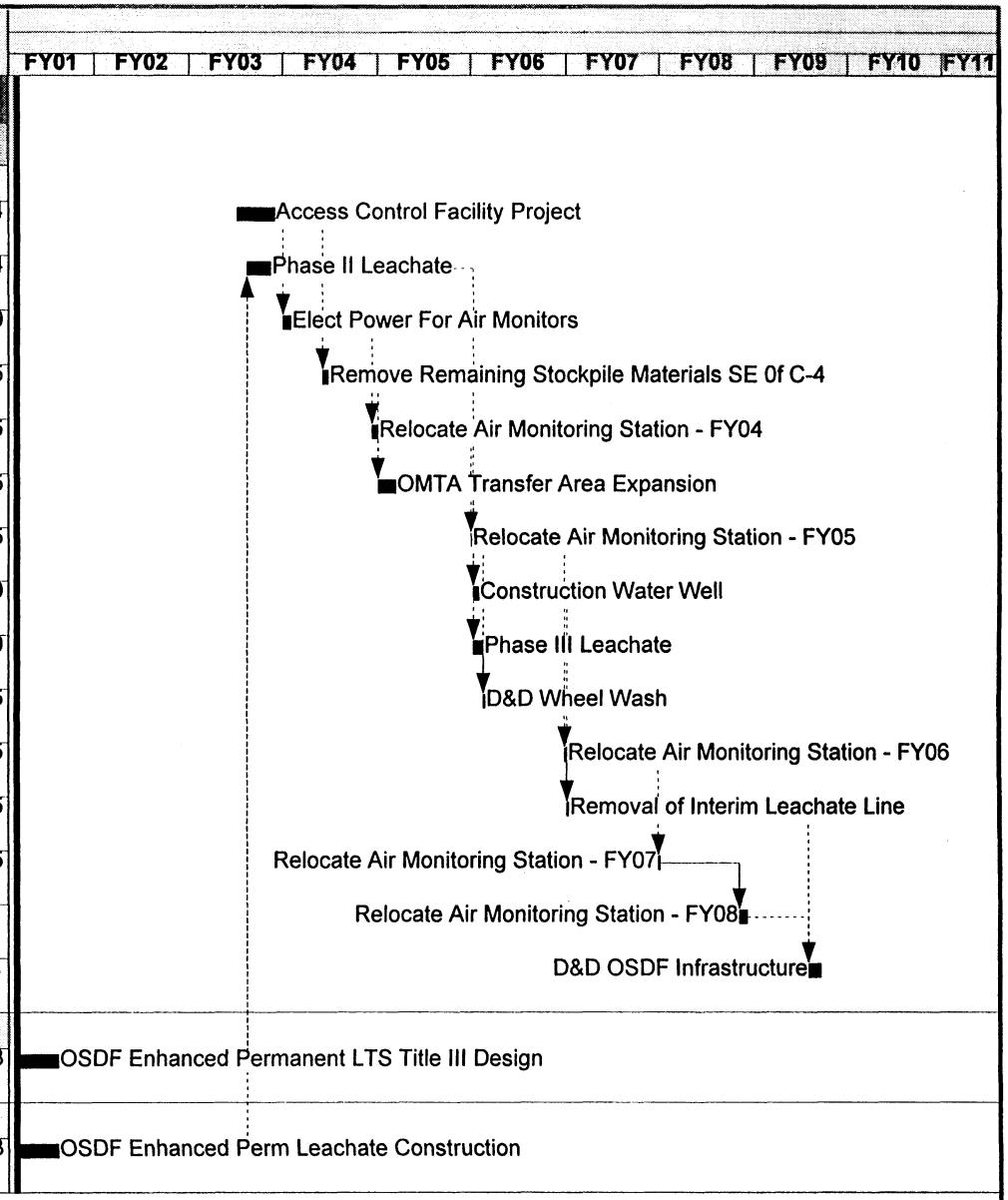
15.2) Quantification - Closeout

Not applicable

SECTION 3

2.0 SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
C PBS 03 - ON-SITE DISPOSAL FACILITY				
1.1.C.C INFRASTRUCTURE				
CBSP1 OSDF MISC INFRASTRUCTURE PROJECTS				
CCBSP10010	Access Control Facility Project	01APR03*	27AUG03	104
CCBSP10020	Phase II Leachate	15MAY03*	14AUG03	64
CCBSP10050	Elect Power For Air Monitors	01OCT03*	28OCT03	20
CCBSP10110	Remove Remaining Stockpile Materials SE 0f C-4	01MAR04*	19MAR04	15
CCBSP10060	Relocate Air Monitoring Station - FY04	10SEP04	30SEP04*	15
CCBSP10130	OMTA Transfer Area Expansion	01OCT04	07DEC04	45
CCBSP10070	Relocate Air Monitoring Station - FY05	26SEP05	30SEP05*	5
CCBSP10150	Construction Water Well	03OCT05	28OCT05	20
CCBSP10030	Phase III Leachate	03OCT05*	14NOV05	30
CCBSP10160	D&D Wheel Wash	14NOV05	18NOV05	5
CCBSP10080	Relocate Air Monitoring Station - FY06	25SEP06	29SEP06*	5
CCBSP10040	Removal of Interim Leachate Line	02OCT06*	06OCT06	5
CCBSP10090	Relocate Air Monitoring Station - FY07	24SEP07	28SEP07*	5
CCBSP10100	Relocate Air Monitoring Station - FY08	01AUG08	29AUG08	21
CCBSP10170	D&D OSDF Infrastructure	01MAY09*	15JUN09	31
CLTS1 ENHANCED PERMANENT LTS TITLE DESIGN FY01				
CCLTS10010	OSDF Enhanced Permanent LTS Title III Design	01DEC00	15MAY01	113
CLTS2 ENHANCED PERMANENT LTS CONSTRUCTION FY01				
CCLTS24000	OSDF Enhanced Perm Leachate Construction	01DEC00	15MAY01	113



FLUOR FERNALD

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Start Date	01DEC00
Finish Date	27DEC09
Data Date	01DEC00
Run Date	10SEP01 15:39

BLCF - CC01

Sheet 1 of 1

ON-SITE DISPOSAL FACILITY

1.1.C.C INFRASTRUCTURE

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	E-547		
	E-553		

SECTION 3

3.0 MANPOWER PLANS

Manpower Planning Sheet (CR2)

MPS # 1CC01 OSDF MISC INFRASTRUCTURE PROJECTS

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
219 General Sump (Elec. Power Center Bldg.)	04/01/2004	07/19/2004																xxx	x								
301 OSDF Summary Schedule	04/01/2004	12/23/2009																xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																			x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																							x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004													xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																									
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																	xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																									
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																					xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																									
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001						xx																			
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																									
321 OSDF Cell Placement	10/01/2003	06/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Environmental Safety & H	Rad Tech		1.20	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0.1	0.1	0	0	0.1	0.1	0	0	0.1
Environmental	Environmental Scientist Rep.		0.70	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0.1	0	0	0	0.1	0	0	0
Engineering & Design	Drafter/CAD Operator		0.30	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Safety Engineer		1.20	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0.1	0.1	0	0	0.1	0.1	0	0	0.1
Environmental Safety & H	Industrial Hygienist		0.60	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0.1	0	0	0	0.1	0	0	0
Environmental	Environmental Scientist Tech.		0.30	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0
		Sheet Totals:	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.50	0.50	0.00	0.00	0.20	0.40	0.00	0.00	0.20	0.50	0.00	0.00	0.20

Manpower Planning Sheet (CR2)

MPS # 1CC01 OSDF MISC INFRASTRUCTURE PROJECTS

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
219 General Sump (Elec. Power Center Bldg.)	04/01/2004	07/19/2004																				
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									

Environmental Safety & Health	Rad Tech	0.1	0	0	0.1	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Safety Engineer	0.1	0	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0	0	0	0
Environmental Safety & Health	Industrial Hygienist	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Tech.	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sheet Totals:	0.60	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CC03 ENHANCED PERMANENT LTS CONSTRUCTION F

DRIVERS	START DATE	END DATE	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009															xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																			
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																		x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																						x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004												xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																								
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																								
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																				xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																								
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001					xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																								xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																								
321 OSDF Cell Placement	10/01/2003	06/30/2009													xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

		TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
Construction	Construction Coordinator	2.00	0.8	0.7	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer	5.90	3.1	2.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management	Waste Engineer	0.10	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer Piping/Mechanic	2.30	0.9	0.8	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer	3.70	1.8	1.6	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Rad Tech	0.10	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & H	Safety Engineer	0.80	0	0.3	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Procurement	Buyer/Contracts Administrator	0.70	0.5	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Publ	Human Resource Rep.	0.40	0.1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	Construction Engineer	3.60	0.9	1.3	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administration	Clerks	0.10	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	Construction Mgr.	1.50	0.9	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	General Laborer	2.60	1.4	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0.20	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sheet Totals:	24.00	10.70	9.80	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Manpower Planning Sheet (CR2)

MPS # 1CC03 ENHANCED PERMANENT LTS CONSTRUCTION F

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									

Construction	Construction Coordinator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management	Waste Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Engineer Piping/Mechanic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QA/QC	QA Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Rad Tech	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Safety & Health	Safety Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Procurement	Buyer/Contracts Administrator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources & Public Affairs	Human Resource Rep.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	Construction Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administration	Clerks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	Construction Mgr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Labor	General Laborer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engineering & Design	Drafter/CAD Operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sheet Totals:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTION 3

4.0 ESTIMATE

CBSP1

OSDF MISC INFRASTRUCTURE PROJECTS

09/07/2001
9:44 AM

PBS: OHFN03
WBS: 1.1.C.C
CTRL ACCT: CBSP
CHARGE NO: CBSP1
COMMENT NO D551,D552,D553

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2003-2009

Resource: DRFCAD **DRAFTER/CAD OPERATOR** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	88.3	0.0	0.0	19.7	19.7	0.0	0.0	0.0
Cum Hours:	0.0	0.0	88.3	88.3	88.3	108.0	127.7	127.7	127.7	127.7
Yr Total Cost:	0	0	3,071	0	0	821	890	0	0	0
Cum Total Cost:	0	0	3,071	3,071	3,071	3,892	4,782	4,782	4,782	4,782

Resource: ENSREP **ENVIR SCIENCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	88.3	42.1	42.0	65.1	58.0	0.0	0.0	0.0
Cum Hours:	0.0	0.0	88.3	130.4	172.4	237.5	295.5	295.5	295.5	295.5
Yr Total Cost:	0	0	4,132	2,086	2,204	3,650	3,525	0	0	0
Cum Total Cost:	0	0	4,132	6,218	8,422	12,072	15,597	15,597	15,597	15,597

Resource: ENSTEC **ENVIR SCIENTIST TECH** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	0.0	42.1	3.3	49.3	26.3	0.0	0.0	0.0
Cum Hours:	0.0	0.0	0.0	42.1	45.4	94.7	121.0	121.0	121.0	121.0
Yr Total Cost:	0	0	0	1,408	117	1,866	1,079	0	0	0
Cum Total Cost:	0	0	0	1,408	1,525	3,391	4,470	4,470	4,470	4,470

Resource: FIELDSUB **FIELD SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	0.0	0.0	944,920.0	243,750.0	738,420.0	343,780.0	194,190.0	37,960.0	222,880.0	0.0
Cum Units:	0.0	0.0	944,920.0	1,188,670.0	1,927,090.0	2,270,870.0	2,465,060.0	2,503,020.0	2,725,900.0	2,725,900.0
Yr Total Cost:	0	0	996,635	264,289	823,058	394,297	229,184	46,100	278,522	0
Cum Total Cost:	0	0	996,635	1,260,923	2,083,981	2,478,278	2,707,462	2,753,562	3,032,084	3,032,084

Resource: INDHYG **INDUSTRIAL HYGIENIST** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

INCLUDES ESCALATION COSTS

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	88.3	42.1	42.0	49.3	26.2	0.0	0.0	0.0
Cum Hours:	0.0	0.0	88.3	130.4	172.4	221.7	247.9	247.9	247.9	247.9
Yr Total Cost:	0	0	4,571	2,308	2,438	3,058	1,762	0	0	0
Cum Total Cost:	0	0	4,571	6,879	9,317	12,375	14,137	14,137	14,137	14,137

Resource: **RADTEC** **RAD TECH** **EOC:** **LABOR**
Res Dept: **949** **Overtime:** **Class:** **SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	44.1	86.2	93.6	108.8	58.0	44.1	88.4	0.0
Cum Hours:	0.0	0.0	44.1	130.3	223.9	332.7	390.7	434.8	523.2	523.2
Yr Total Cost:	0	0	1,676	3,468	3,989	4,954	2,863	2,295	5,111	0
Cum Total Cost:	0	0	1,676	5,144	9,134	14,088	16,951	19,246	24,357	24,357

Resource: **S&HENG** **SAFETY ENGINEER** **EOC:** **LABOR**
Res Dept: **949** **Overtime:** **Class:** **SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	88.3	86.2	93.6	92.9	26.2	44.1	88.4	0.0
Cum Hours:	0.0	0.0	88.3	174.5	268.1	361.0	387.2	431.3	519.7	519.7
Yr Total Cost:	0	0	4,895	5,059	5,819	6,170	1,887	3,347	7,456	0
Cum Total Cost:	0	0	4,895	9,954	15,773	21,943	23,830	27,177	34,632	34,632

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	397.4	298.7	274.5	385.1	214.4	88.2	176.8	0.0
Cum Hours:	0.0	0.0	397.4	696.1	970.6	1,355.8	1,570.2	1,658.4	1,835.2	1,835.2
Yr Total Cost:	0	0	1,014,979	278,618	837,626	414,817	241,190	51,741	291,089	0
Cum Total Cost:	0	0	1,014,979	1,293,597	2,131,223	2,546,040	2,787,229	2,838,970	3,130,059	3,130,059

CAM _____ CONTROL TEAM _____

INCLUDES ESCALATION COSTS

CBSP1

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

August 15, 2001

PROJECT DESCRIPTION: Baseline OSDF – Infrastructure Construction
WBS NUMBER: 1.1.C.C
PROJECT ENGINEER: W. Zebick
ESTIMATOR: D.Usborne, R. Smolin
ESTIMATE NUMBER: C2-01-05-08 - (13, 14, 15, 16, 17, 18, 19) R1

BASIS OF ESTIMATE

Verbal Scope	☒	P & ID's	☐	Work Plan	☐
Drawings	☐	Equipment List	☐	Site Walk	☐
Sketches	☐	Specifications	☐	Eng. Mtg.	☒
Flow Diagrams	☐	Written Scope	☒	Estimate	☐

TYPE OF ESTIMATE:

Change Proposal	☐	Government	☐
Plan/Feasibility	☐	Conceptual	☐
Construction	☐	Title I Design	☐
Budget	☒	Independent	☐

BASIS OF ESTIMATE:

These estimates were prepared for the 2001 Baseline cost of the OSDF Infrastructure Construction, Charge Number CBSP1.

Work encompasses: the relocation of the access control facility including sitework, underground utilities, and electrical; the moving and storage of T96, T98, and T125; contaminated access road roadwork; purchase and installation of a new break trailer; a new equipment wash facility and sediment basin; reinstallation of T96, T98, and T125; phase I, II, and III of the temporary leachate removal; relocation of stockpiles; powering and relocation of air monitors; expansion of OMTA container area; construction of a laydown area, a new construction water well, D&D of wheel wash; removal of interim leachate line, and D&D of OSDF infrastructure.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

August 15, 2001

PROJECT DESCRIPTION: Baseline OSDF – Infrastructure Construction
WBS NUMBER: 1.1.C.C
PROJECT ENGINEER: W. Zebick
ESTIMATOR: D.Usborne, R. Smolin
ESTIMATE NUMBER: C2-01-05-08 - (13, 14, 15, 16, 17, 18, 19) R1

Each estimate indicates the work to be performed for each year involved. Revisions for each FY are as noted:

C2-01-05-08-13 R1 for FY03	Change surveying to $25,000.
C2-01-05-08-14 R1 for FY04	Change surveying to $3,000. Delete trailer related items.
C2-01-05-08-15 R1 for FY05	Delete trailer related items.
C2-01-05-08-16 R1 for FY06	Delete trailer related items.
C2-01-05-08-17 R1 for FY07	Delete trailer related items.
C2-01-05-08-18 R1 for FY08	Delete trailer related items, change duration to 1 month, and reduce mob/demob equipment items to one.
C2-01-05-08-19 R1 for FY09	Change surveying to $3,000. Delete trailer related items.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

August 15, 2001

PROJECT DESCRIPTION: Baseline OSDF – Infrastructure Construction
WBS NUMBER: 1.1.C.C
PROJECT ENGINEER: W. Zebick
ESTIMATOR: D.Usborne, R. Smolin
ESTIMATE NUMBER: C2-01-05-08 - (13, 14, 15, 16, 17, 18, 19) R1

ESTIMATE ASSUMPTIONS

EXECUTION:

- ☒ This project is to be performed on a 50-hour week, 10 hours a day.
- ☐ This project is to be performed on a 40-hour week, 8 hours a day.
- ☐ Premium time allowed.

WAGE RATES:

- ☒ Wage rates within this estimate are based on Project Labor Agreement rates, effective October 2000 and are considered FY01 dollars for estimating.
- ☐ Wage rates within this estimate are based on FF Support Contractor FSC 645 wage rates, effective January 30, 2001 and are considered FY01 dollars for estimating.
- ☐ Wage rates within this estimate are based on FF FTE Planning Labor Rates FY01.

ENGINEERING:

- ☒ N/A
- ☐ Engineering dollars provided by the Project Engineer.
- ☐ Engineering dollars have been factored in at the standard 12% of the total direct and indirect field costs as per request of Project Engineer.

CONSTRUCTION MANAGEMENT:

- ☒ N/A
- ☐ Construction Management dollars provided by the Project Engineer.
- ☐ Construction Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

PROJECT MANAGEMENT:

- ☒ N/A
- ☐ Project Management dollars provided by the Project Engineer.
- ☐ Project Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

August 15, 2001

PROJECT DESCRIPTION: Baseline OSDF – Infrastructure Construction
WBS NUMBER: 1.1.C.C
PROJECT ENGINEER: W. Zebick
ESTIMATOR: D.Usborne, R. Smolin
ESTIMATE NUMBER: C2-01-05-08 - (13, 14, 15, 16, 17, 18, 19) R1

WASTE PROGRAM MANAGEMENT:

☒ N/A
☐ Waste Program Management dollars provided by the Project Engineer.

PRODUCTIVITY:

A productivity factor has been developed and applied to the unit man-hours derived from MEANS, Richardson, NECA, and or any other published estimating source. See attachment APPENDIX "A" and APPENDIX "B".

ESCALATION:

Escalation costs are excluded from the target estimate. The escalation costs are calculated within the Micro-Frame computer system according to the plan for rebaselining.

UNIT RATES:

Unit man-hours, equipment and material dollars are based on Richardson, MEANS, NECA, and or other published rates.

G & A (HO EXPENSE):

G & A are excluded from the target estimate. The G & A cost are calculated within the Micro-Frame computer system according to the plan for rebaselining.

HEALTH PHYSICS:

N/A

RISK BUDGET:

N/A

CONTINGENCY:

N/A

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

August 15, 2001

PROJECT DESCRIPTION: Baseline OSDF – Infrastructure Construction
WBS NUMBER: 1.1.C.C
PROJECT ENGINEER: W. Zebick
ESTIMATOR: D.Usborne, R. Smolin
ESTIMATE NUMBER: C2-01-05-08 - (13, 14, 15, 16, 17, 18, 19) R1

ESTIMATE INCLUSIONS & EXCLUSIONS

INCLUSIONS:

- Premobilization & Mobilization.
- Demobilization.
- Labor hours.
- Material dollars.
- Equipment dollars for operating expenses @ 85% efficiency, and rental on a monthly basis.
- Premium time.
- Labor resources, material dollars, construction equipment resources, durations, all quantities were provided by the project team.

EXCLUSIONS:

- Permits and fees.
- FF G & A (Home Office Expense).
- Construction Management.
- Any second tier subcontract costs.
- Project Management dollars.
- Waste Management dollars.
- Subcontractor's support and supervision.
- Subcontractor's training.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE #: C2-01-05-08-13-R1
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$25,160			$25,160
Task 1 - Submittals			$1,010		$18,000		$19,010
Overhead and Profit				$149,770			$149,770
MOBILIZATION	162		$3,700	$34,100	$1,800	$1,000	$40,600
Task 2 - Relocate Access Control Facility	7,035		$171,580	$7,000	$134,880	$130,360	$443,820
Task 3 - Phase II Temp Leachate Removal	1,511		$34,400		$130	$60,690	$95,220
Project Staffing							Not Required
DEMOBILIZATION	430		$9,800	$2,400			$12,200
DIRECT FIELD COSTS TOTAL	**9,138**	**$24.13**	**$220,490**	**$218,430**	**$154,810**	**$192,050**	**$785,780**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$3,300		$3,300
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	178		$4,300		$2,300		$6,600
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$128,100				$128,100
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$9,600	$11,500	$21,100
INDIRECT FIELD COSTS TOTAL	**178**		**$132,400**		**$15,200**	**$11,500**	**$159,100**
DIRECT & INDIRECT FIELD COSTS TOTAL	**9,316**	**$37.88**	**$352,890**	**$218,430**	**$170,010**	**$203,550**	**$944,880**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$944,900**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY03 R1 | DATE: 15-Aug-01

ESTIMATE NO. C2-01-05-08-13-R1 | ESTIMATOR: RIS/DU

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FACTORS

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$220,490	$218,430	$154,810	$192,050		$785,780
IFC COST FACTOR	1.6005	–	1.0362	1.0000	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6005	1.0000	1.0983	1.0600	1.0600	
BASE ESTIMATE $'S	$352,890	$218,430	$170,035	$203,573		$944,928
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6005	1.0000	1.0983	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$352,890	$218,430	$170,035	$203,573		$944,928

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY03 R i
DATE: 15-Aug-01
ESTIMATE NO. C2-01-05-08-13-R1
ESTIMATOR: RIS/DU
CLIENT: DOE
LOCATION: FERNALD
WBS NO.: 1.1.C.C
TASK NO.: CBSP1

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		25160				
			$25,160				$25,160
	Task 1 - Submittals	1010		18000			
		$1,620		$19,770			$21,390
	Overhead and Profit		149770				
			$149,770				$149,770
	MOBILIZATION	3700	34100	1800	1000		
		$5,920	$34,100	$1,980	$1,060		$43,060
	Task 2 - Relocate Access Control Fac	171580	7000	134880	130360		
		$274,610	$7,000	$148,140	$138,180		$567,930
	Task 3 - Phase II Temp Leachate Removal	34400		130	60690		
		$55,060		$140	$64,330		$119,530
	Project Staffing						
	DEMOBILIZATION	9800	2400			12200	
		$15,680	$2,400				$18,080
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$944,920

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$25,160			$25,160
	Task 1 - Submittals										$1,010		$18,000		$19,010
	Overhead and Profit											$149,770			$149,770
	MOBILIZATION				162						$3,700	$34,100	$1,800	$1,000	$40,600
	Task 2 - Relocate Access Control Facility				7,035						$171,580	$7,000	$134,880	$130,360	$443,820
	Task 3 - Phase II Temp Leachate Removal				1,511						$34,400		$130	$60,690	$95,220
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				430						9,800	2,400			$12,200
	Subtotal Direct Cost	1	LOT		9138						220,490	218,430	154,810	192,050	$785,780

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Insurance & Bond, OH & P	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							898520				$25,160			$25,160
	Task 1 - Submittals														
D	Purchase 12 x 60 change trailer & HVAC	1	EA	20	20	50.62			18,000		$1,010		$18,000		$19,010
	Sub-total				50						$1,010		$18,000		$19,010
	Overhead and Profit			20%								$149,770			$149,770

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd	7	MO					550				$3,800			$3,800
	Support trailer 1 reqd	7	MO					350				$2,420			$2,420
D	Install Utilities	1	LS	40	40	22.69			1,000	500	$900		$1,000	$500	$2,400
	Survey and Engineering Controls	1	LS					25,000				$25,000			$25,000
D	Other misc. requirements as required.	1	LS	80	80	22.69			500	500	$1,800		$500	$500	$2,800
D	Portable toilets 2 ea	7	MTH					85				$390			$390
D	Potable water, Allow 5jug/mth, $8/jug	7	MTH					12	40.00			$80	$300		$380
D	Mobilize contractor equipment	12	EA	3	42	23.64		200			$990	$2,400			$3,390
	MOBILIZATION				162						$3,700	$34,100	$1,800	$1,000	$40,600
D															
D															
D															
D															
D															
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.	1	LS	20	20	22.69					$500				$500
D	Remove all Utilities.	1	LS	20	20	22.69					$500				$500
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				430						$9,800	$2,400			$12,200
	Mobilization & Demobilization				592						13,495	36,495	1,800	1,000	$52,790

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 2 - Relocate Access Control Facility		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Install Surface Water Mgt.& Erosion Control															
	Silt fence		1000	LF						0.30				$300		
	Construction fence		1000	LF	0.04	40	23.64			1.05		$950		$1,050		$2,000
	Signage		1	Lot						200.00				$200		$200
D	Operators	1	5	Days	10	50	27.03					$1,350				$1,350
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Laborer Foreman	1	5	Days	10	50	23.75					$1,190				$1,190
D	Cat TH83 forklift	1	5	Days	10	50	27.03				279.41	$1,350			$1,400	$2,750
	Removal & Storage of Trailers T96, T98, T125															
	Trailer mover w/ truck		1	Lot					2,000				$2,000			$2,000
D	Laborers	2	10	Days	10	200	22.65					$4,530				$4,530
D	Laborer Foreman	1	10	Days	10	100	23.75					$2,380				$2,380
D	Carpenters	2	10	Days	10	200	25.10					$5,020				$5,020
D	Cat TH83 forklift	1	10	Days	10	100	27.03				279.41	$2,700			$2,790	$5,490
	Install Underground Utilities															
	Excav trench, 2" PVC water line w/ 8"x2"Tee															
D	Laborers	1	2	Days	10	20	22.65					$450				$450
D	Cat 416 B backhoe	1	2	Days	10	20	27.03				202.98	$540			$410	$950
	Install 2" PVC water line		200	LF						1.62				$420		$420
D	Pipefitters	2	2	Days	10	40	22.65					$910				$910
	BF trench for 2" PVC water line															
D	Laborers	2	2	Days	10	40	22.65					$910				$910
D	Laborer Foreman	1	2	Days	10	20	23.75					$480				$480
D	Cat 416 B backhoe	1	2	Days	10	20	27.03				202.98	$540			$410	$950
	Compactor, walk behind	1	2	Days							173.94				$350	$350
	Excav trench, 36" CMP															
D	Laborers	1	2	Days	10	20	22.65					$450				$450
D	Cat 416 B backhoe	1	2	Days	10	20	27.03				202.98	$540			$410	$950
	Place sand bedding and		160	Tons						6.00				$480		$480
	Install 36" CMP		100	LF						29.50				$2,950		$2,950
D	Laborers	2	2	Days	10	40	22.65					$910				$910
D	Laborer Foreman	1	2	Days	10	20	23.75					$480				$480
D	Cat 416 B backhoe	1	2	Days	10	20	27.03				202.98	$540			$410	$950
	BF trench for 36" CMP															
D	Laborers	2	1	Days	10	20	22.65					$450				$450
D	Laborer Foreman	1	1	Days	10	10	23.75					$240				$240
D	Cat 416 B backhoe	1	1	Days	10	10	27.03				202.98	$270			$200	$470
	Compactor, walk behind	1	1	Days							173.94				$170	$170

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 2 - Relocate Access Control Facility		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Install Underground Utilities (continued)															
	Excav trench, 12" HDPE pipe															
D	Laborers	2	4	Days	10	80	22.65					$1,810				$1,810
D	Laborer Foreman	1	4	Days	10	40	23.75					$950				$950
D	Cat 416 B backhoe	1	4	Days	10	40	27.03				202.98	$1,080			$810	$1,890
	Install 12" HDPE pipe		300	LF						10.29				$3,090		$3,090
D	Pipefitters	2	4	Days	10	80	22.65					$1,810				$1,810
D	Cat 416 B backhoe	1	4	Days	10	40	27.03				202.98	$1,080			$810	$1,890
	HDPE welding machine	1	4	Days							365				$1,460	$1,460
	BF trench for 12" HDPE pipe															
D	Laborers	2	4	Days	10	80	22.65					$1,810				$1,810
D	Laborer Foreman	1	4	Days	10	40	23.75					$950				$950
D	Cat 416 B backhoe	1	4	Days	10	40	27.03				202.98	$1,080			$810	$1,890
	Compactor, walk behind	1	4	Days							173.94				$700	$700
	Grading of Access Control Facility & Contaminated Access Road															
	Excavate - Facility & Road		2,000	Cy												
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Laborer Foreman	1	5	Days	10	50	23.75					$1,190				$1,190
D	Cat D6 dozer	1	5	Days	10	50	27.03				510.32	$1,350			$2,550	$3,900
D	Cat 613 paddle scraper	1	5	Days	10	50	27.03				672.61	$1,350			$3,360	$4,710
D	Cat 613 water wagon	1	5	Days	10	50	22.86				499.78	$1,140			$2,500	$3,640
	BF w/ general fill - Facility & Road		3,000	CY												
D	Cat D6 dozer	1	10	Days	10	100	27.03				510.32	$2,700			$5,100	$7,800
D	Cat 613 paddle scraper	1	10	Days	10	100	27.03				672.61	$2,700			$6,730	$9,430
D	Cat 825 sheepsfoot compact	1	10	Days	10	100	27.03				970.23	$2,700			$9,700	$12,400
D	Cat 613 water wagon	1	5	Days	10	50	22.86				499.78	$1,140			$2,500	$3,640
	Site Grading		14,000	SY												
D	Laborers	4	10	Days	10	400	22.65					$9,060				$9,060
D	Laborer Foreman	1	10	Days	10	100	23.75					$2,380				$2,380
D	Cat D6 dozer	1	10	Days	10	100	27.03				510.32	$2,700			$5,100	$7,800
D	Cat 613 paddle scraper	1	10	Days	10	100	27.03				672.61	$2,700			$6,730	$9,430
D	Cat 563 compactor	1	10	Days	10	100	27.03				331.35	$2,700			$3,310	$6,010
D	Cat 14G grader	1	10	Days	10	100	27.03				533.73	$2,700			$5,340	$8,040
D	Compactor, walk behind	1	10	Days							173.94				$1,740	$1,740
D	Cat 613 water wagon	1	10	Days	10	100	22.86				499.78	$2,290			$5,000	$7,290
	Install geotextile for area stone		150,000	SF						0.08				$12,000		$12,000
D	Laborers	2	3	Days	10	60	22.65					$1,360				$1,360
D	Laborer Foreman	1	3	Days	10	30	23.75					$710				$710
D	Place area stone, 8" thk, #304		6,000	Tons						13.05				$78,300		$78,300
D	Laborers	2	12	Days	10	240	22.65					$5,440				$5,440
D	Laborer Foreman	1	12	Days	10	120	23.75					$2,850				$2,850
D	Cat D8 dozer w/ spreader bo	1	12	Days	10	120	27.03				942.87	$3,240			$11,310	$14,550
D	Cat 563 compactor	1	15	Days	10	150	27.03				331.35	$4,050			$4,970	$9,020
D	Cat 613 water wagon	0.5	7	Days	10	35	22.86				499.78	$800			$1,750	$2,550

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 2 - Relocate Access Control Facility		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Power for Access Control Facility & New Equipment Wash															
	Matl: Power feed		1	Lot						25,000					$25,000	$25,000
	(includes: 3 poles, 500 LF wire, and electrical equipment)															
D	Electricians	2	10	Days	10	200	24.89					$4,980				$4,980
D	Bucket truck	1	10	Days							$75.00				$750	$750
	Security lighting, 4 pole fixtures		1	Lot						3,000					$3,000	$3,000
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
D	Bucket truck	1	5	Days							$75.00				$380	$380
	Sediment Basin & Equipment Wash															
	Excavate & grade		500	CY												
D	Laborers	2	12	Days	10	240	22.65					$5,440				$5,440
D	Laborer Foreman	1	12	Days	10	120	23.75					$2,850				$2,850
D	Cat D6 dozer	1	5	Days	10	50	27.03				510.32	$1,350			$2,550	$3,900
D	Cat 416 B backhoe	1	5	Days	10	50	27.03				202.98	$1,350			$1,010	$2,360
D	Volvo A30 artic. dump truck	1	5	Days	10	50	22.86				594.81	$1,140			$2,970	$4,110
	Matl: Power feed		1	Lot						5000.00				$5,000		$5,000
	(includes: 2 poles, wire, 2" submersable pump, electrical equipment)															
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
	2" HDPE water supply		200	LF						1.62				$420		$420
	4" drain		100	LF						1.30				130		$130
D	Pipefitters	2	5	Days	10	100	22.65					$2,260				$2,260
	Equipment wash materials															
	RR ties		20	ea						26.30				$530		$530
	Geomembrane		4500	SF						0.25				$1,130		$1,130
	Geotextile material		3000	SF						0.08				$240		$240
	#57 area stone		300	Tons						12.00				$3,600		$3,600
	Wall support posts 4x6, 12' lg ea, 8' c/c		18	ea						22.20				$400		$400
	Fiberglass panels		800	SF						2.87				$2,300		$2,300
D	Laborers	2	10	Days	10	200	22.65					$4,530				$4,530
D	Laborer Foreman	1	10	Days	10	100	23.75					$2,380				$2,380
D	Carpenters	2	10	Days	10	200	25.10					$5,020				$5,020
D	Cat 416 B backhoe	0.5	10	Days	10	50	27.03				202.98	$1,350			$1,010	$2,360
	Chain link fence, 6' H w/ barbed wire		300	LF						13.95				$4,190		$4,190
D	Laborers	1	5	Days	10	50	22.65					$1,130				$1,130
D	Ironworkers	2	5	Days	10	100	26.13					$2,610				$2,610
D	Bobcat w/ post auger	1	5	Days	10	50	27.03				133.81	$1,350			$670	$2,020
	4' wire construction / rad fence		3000	LF						1.05				$3,150		$3,150
D	Laborers	2	6	Days	10	120	22.65					$2,720				$2,720
D	Laborer Foreman	1	6	Days	10	60	23.75					$1,430				$1,430

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 2 - Relocate Access Control Facility		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set UpTrailers T96, T98, T125 & New Break Trailer															
	Trailer relocating specialist		1	Lot					5000				$5,000			$5,000
	Assist trailer moving															
D	Laborers	2	15	Days	10	300	22.65					$6,790				$6,790
D	Laborer Foreman	1	15	Days	10	150	23.75					$3,560				$3,560
D	Carpenters	2	15	Days	10	300	25.10					$7,530				$7,530
D	Cat TH83 forklift	1	15	Days	10	150	27.03				279.41	$4,050			$4,190	$8,240
	Trailer electrical hook-up															
D	Electricians	2	2	Days	10	40	24.89					$1,000				$1,000
	Plumbing electrical hook-up															
D	Pipefitters	2	5	Days	10	100	22.65					$2,260				$2,260
	Matl: Skirting, blocking, steps, etc.		1	Lot						10000				$10,000		$10,000
	Matl: Telephone and communication lines		1	Lot						5000				$5,000		$5,000
	Task 2 - Relocate Access Control Facility					7,035						$171,580	$7,000	$134,880	$130,360	$443,820

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO.: C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 3 - Phase II Temp Leachate Removal		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 3 - Phase II Temporary Leachate Removal															
	Excavate and remove old leachate and haul to stockpile area in Cell #3.															
mD	From estimate, OSDF Phase1 Leachate Remove FY01 which was prepared for the 01 Rebasline					816						$17,930		$130	$28,000	$46,060
	Adjust for quantity differences:															
	Previous estimate = 1100 LF															
	This estimate = 900 LF + 33% of 250 LF = 983 LF															
	Therefore, used 89 % of Previous estimate															
	D&D old wash equipment															
mD	Laborers	2	3	Days	10	60	22.65					$1,360				$1,360
mD	Laborer Foreman	1	3	Days	10	30	23.75					$710				$710
mD	Cat 330 excavator	1	2	Days	10	20	22.86				802.77	$460			$1,610	$2,070
mD	Cat D6 dozer	1	2	Days	10	20	27.03				510.32	$540			$1,020	$1,560
mD	Volvo A30 artic. dump truck	1	1	Days	10	10	22.86				594.81	$230			$590	$820
	Excavate and remove impacted material around and under the old access control area.		2500	CY												
mD	Laborers	1	6	Days	10	60	22.65					$1,360				$1,360
mD	Cat 330 excavator	1	6	Days	10	60	22.86				802.77	$1,370			$4,820	$6,190
mD	Cat D6 dozer	1	6	Days	10	60	27.03				510.32	$1,620			$3,060	$4,680
mD	Volvo A30 artic. dump truck	2	6	Days	10	120	22.86				594.81	$2,740			$7,140	$9,880
mD	Cat 613 water wagon	0.5	6	Days	10	30	22.86				499.78	$690			$1,500	$2,190
	Backfill old access control area with clean material															
mD	Laborers	1	3	Days	10	30	22.65					$680				$680
mD	Cat 950 loader	1	3	Days	10	30	22.86				802.77	$690			$2,410	$3,100
mD	Volvo A30 artic. dump truck	3	3	Days	10	90	22.86				594.81	$2,060			$5,350	$7,410
mD	Cat D6 dozer	1	3	Days	10	30	27.03				510.32	$810			$1,530	$2,340
mD	Cat 825 sheepsfoot compact	1	3	Days	10	30	27.03				970.23	$810			$2,910	$3,720
mD	Cat 613 water wagon	0.5	3	Days	10	15	22.86				499.78	$340			$750	$1,090
	Task 3 - Phase II Temp Leachate Removal					1511						$34,400		$130	$60,690	$95,220

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO. C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Infrastructure	08-Aug-01	15-May-03	29-Jun-03	14-Aug-03	3.0	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					3.0	MONTHS		
					3.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	22.7	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE - Infrastructure FY04	DATE:	15-Aug-01
ESTIMATE #:	C2-01-05-08-14	ESTIMATOR:	RIS/DU
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.C	TASK NO.:	CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$6,460			$6,460
Task 1 - Submittals							Not Required
Overhead and Profit				$38,450			$38,450
MOBILIZATION	78		$1,800	$2,900	$300	$1,000	$6,000
Surveying				$3,000			$3,000
Electrical for Air Monitors	600		$13,960		$39,290	$11,270	$64,520
Electrical for Relocated Air Monitors	360		$8,720		$12,000	$1,430	$22,150
Relocate Existing Stockpiles	540		$13,320			$42,870	$56,190
Project Staffing							Not Required
DEMOBILIZATION	390		$8,800	$2,400			$11,200
DIRECT FIELD COSTS TOTAL	**1,968**	**$23.68**	**$46,600**	**$53,210**	**$51,590**	**$56,570**	**$207,970**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$700		$700
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	38		$900		$500		$1,400
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$27,100				$27,100
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$3,200	$3,400	$6,600
INDIRECT FIELD COSTS TOTAL	**38**		**$28,000**		**$4,400**	**$3,400**	**$35,800**
DIRECT & INDIRECT FIELD COSTS TOTAL	**2,006**	**$37.18**	**$74,600**	**$53,210**	**$55,990**	**$59,970**	**$243,770**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$243,800**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY04 | DATE: 15-Aug-01

ESTIMATE NO. C2-01-05-08-14 | ESTIMATOR: RIS/DU

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FACTORS

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$46,600	$53,210	$51,590	$56,570		$207,970
IFC COST FACTOR	1.6009	–	1.0233	1.0000	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6009	1.0000	1.0847	1.0600	1.0600	
BASE ESTIMATE $'S	$74,600	$53,210	$55,957	$59,964		$243,732
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6009	1.0000	1.0847	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$74,600	$53,210	$55,957	$59,964		$243,732

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY04 | **DATE:** 15-Aug-01

ESTIMATE NO. C2-01-05-08-14 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)–>>					
	Insurance & Bond		6460				
			$6,460				$6,460
	Task 1 - Submittals						
	Overhead and Profit		38450				
			$38,450				$38,450
	MOBILIZATION	1800	2900	300	1000		
		$2,880	$2,900	$330	$1,060		$7,170
	Surveying		3000				
			$3,000				$3,000
	Electrical for Air Monitors	13960		39290	11270		
		$22,350		$42,620	$11,950		$76,920
	Electrical for Relocated Air Monitors	8720		12000	1430		
		$13,960		$13,020	$1,520		$28,500
	Relocate Existing Stockpiles	13320			42870		
		$21,320			$45,440		$66,760
	Project Staffing						
	DEMOBILIZATION	8800	2400			11200	
		$14,090	$2,400				$16,490
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$243,750

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO.: C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$6,460			$6,460
	Task 1 - Submittals	Not Required													Not Required
	Overhead and Profit											$38,450			$38,450
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying											$3,000			$3,000
	Electrical for Air Monitors				600						$13,960		$39,290	$11,270	$64,520
	Electrical for Relocated Air Monitors				360						$8,720		$12,000	$1,430	$22,150
	Relocate Existing Stockpiles				540						$13,320			$42,870	$56,190
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				390						8,800	2,400			$11,200
	Subtotal Direct Cost	1	LOT		1968						46,600	53,210	51,590	56,570	$207,970

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO.: C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							230712				$6,460			$6,460
	Task 1 - Submittals														
D	Plans	16	EA	50	800	50.62					$40,500				$40,500
D	Technical submittals	100	EA	5	500	50.62					$25,310				$25,310
D	Site access & GET traing, cnstrct work force	25	EA	18	450	23.64					$10,640				$10,640
D	Site access & GET traing, PM, CM etc	7	EA	18	126	33.69					$4,240				$4,240
D	Site access & GET traing, surveyers & others	4	EA	18	72	50.00					$3,600				$3,600
											$400				
	Sub-total				N.R.										Not Required
	Overhead and Profit			20%								$38,450			$38,450

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO.: C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Install Utilities		LS	40		22.69			1,000	500				$500	$500
D	Other misc. requirements as required.		LS	80		22.69			500	500				$500	$500
D	Portable toilets 2 ea	7	MTH					85				$400			$400
D	Potable water, Allow 5jug/mth, $8/jug	7	MTH					12	40.00			$80	$300		$380
D	Mobilize contractor equipment	12	EA	3	78	23.64		200			$1,840	$2,400			$4,240
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying	1	ls					3,000				$3,000			$3,000
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.		LS	20		22.69									
D	Remove all Utilities.		LS	20		22.69									
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				390						$8,800	$2,400			$11,200
	Mobilization & Demobilization				468						10,620	6,790	300	1,000	$18,710

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO.: C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Cable & Air Monitors	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Electrical for Air Monitors														
	Power to East side from Air Monitor														
	Power equipment from Air Monitor	1	Lot						25,000				$25,000		$25,000
	Power poles	8	ea						500.00				$4,000		$4,000
	Transformer	1	ea						900.00	100.00			$900	$120	$1,020
	Cable	2200	lf						4.27				$9,390		$9,390
	Bucket Truck	128	hr							75.00				$11,150	$11,150
D	Foreman 2	15	Days	10	300	21.59					$6,480				$6,480
D	Electrician 2	15	Days	10	300	24.93					$7,480				$7,480
	Electrical for Air Monitors				600						$13,960		$39,290	$11,270	$64,520
	Electrical for Relocated Air Monitors														
	Power to East side	1	Lot						10400				$10,400		$10,400
D	Electricians 2	5	Days	10	100	24.89					$2,490				$2,490
D	Laborers 2	5	Days	10	100	22.65					$2,260				$2,260
D	Operators 1	5	Days	10	50	27.03					$1,350				$1,350
D	Foreman 1	5	Days	10	50	21.59					$1,080				$1,080
	Power pole	1	ea						500.00				$500		$500
	Cable	100	lf						4.27				$430		$430
	Backhoe Cat 416 1	0.23	Mth							2800				$650	$650
	Backhoe Cat 416 at 85%		Hrs	43						8.70				$370	$370
	Power to West side	1	Lot						300				$300		$300
	PVC 8" sleeve	50	lf						7.40				$370		$370
D	Electricians 2	2	Days	10	40	24.89					$1,000				$1,000
D	Operators 1	2	Days	10	20	27.03					$540				$540
	Backhoe Cat 416 1	0.09	Mth							2800				$260	$260
	Backhoe Cat 416 at 85%		Hrs	17						8.70				$150	$150
	Electrical for Relocated Air Monitors				360						$8,720		$12,000	$1,430	$22,150
	Subtotal Direct Cost	1	LOT		960						$22,680		$51,290	$12,700	$86,670

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO.: C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Relocate Existing Stockpiles	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 5 Relocate Existing Stockpiles														
	Relocate stockpile (12 days)	12000	cy												
D	Laborer	120	hr	1.0	120	22.65					$2,720				$2,720
	CAT D6 dozer	102	hr	1.0						73.26				$7,473	$7,473
	CAT 330 excavator	102	hr	1.0						99.74				$10,173	$10,173
	Volvo A30 artic. Dump truck	102	hr	3.0						73.62				$22,528	$22,528
	CAT 613 water wagon	102	hr	0.5						52.81				$2,693	$2,693
D	Operator	120	hr	2.0	240	27.03					$6,490				$6,490
D	Teamster	120	hr	1.5	180	22.86					$4,110				$4,110
	Subtotal Direct Cost	1	LOT		540						13,320			42,870	$56,190

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY04
ESTIMATE NO. C2-01-05-08-14
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Infrastructure	08-Aug-01	01-Mar-04	10-Mar-04	19-Mar-04	0.6	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					0.6	MONTHS		
					1.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	31.1	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE #: C2-01-05-08-15 R1
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$19,440			$19,440
Task 1 - Submittals							Not Required
Overhead and Profit				$115,690			$115,690
MOBILIZATION	78		$1,800	$2,900	$300	$1,000	$6,000
Surveying				$17,000			$17,000
Cable & Air Monitors	360		$8,720		$12,000	$1,430	$22,150
OMTA Container Area	3,419		$69,460		$351,480	$45,655	$466,595
Project Staffing							Not Required
DEMOBILIZATION	390		$8,800	$2,400			$11,200
DIRECT FIELD COSTS TOTAL	**4,247**	**$20.91**	**$88,780**	**$157,430**	**$363,780**	**$48,085**	**$658,075**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$1,300		$1,300
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	83		$1,700		$900		$2,600
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$51,600				$51,600
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$22,000	$2,900	$24,900
INDIRECT FIELD COSTS TOTAL	**83**		**$53,300**		**$24,200**	**$2,900**	**$80,400**
DIRECT & INDIRECT FIELD COSTS TOTAL	**4,330**	**$32.82**	**$142,080**	**$157,430**	**$387,980**	**$50,985**	**$738,475**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$738,500**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY05 R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2-01-05-08-15 R1 | **ESTIMATOR:** RIS/DU

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

F A C T O R S

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$88,780	$157,430	$363,780	$48,085		$658,075
IFC COST FACTOR	1.6004	–	1.0060	1.0000	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6004	1.0000	1.0664	1.0600	1.0600	
BASE ESTIMATE $'S	$142,080	$157,430	$387,939	$50,970		$738,419
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6004	1.0000	1.0664	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$142,080	$157,430	$387,939	$50,970		$738,419

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY05 R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2-01-05-08-15 R1 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		19440				
			$19,440				$19,440
	Task 1 - Submittals						
	Overhead and Profit		115690				
			$115,690				$115,690
	MOBILIZATION	1800	2900	300	1000		
		$2,880	$2,900	$320	$1,060		$7,160
	Surveying		17000				
			$17,000				$17,000
	Cable & Air Monitors	8720		12000	1430		
		$13,960		$12,800	$1,520		$28,280
	OMTA Container Area	69460		351480	45655		
		$111,160		$374,820	$48,390		$534,370
	Project Staffing						
	DEMOBILIZATION	8800	2400			11200	
		$14,080	$2,400				$16,480
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$738,420

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE NO.: C2-01-05-08-15 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$19,440			$19,440
	Task 1 - Submittals	Not Required													Not Required
	Overhead and Profit											$115,690			$115,690
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying											$17,000			$17,000
	Cable & Air Monitors				360						$8,720		$12,000	$1,430	$22,150
	OMTA Container Area				3,419						$69,460		$351,480	$45,655	$466,595
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				390						8,800	2,400			$11,200
	Subtotal Direct Cost	**1**	**LOT**		**4247**						**88,780**	**157,430**	**363,780**	**48,085**	**$658,075**

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE NO.: C2-01-05-08-15 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond								COST							
	Performance bond	1.3%							THRU							
	Insurance	1.5%							OH & P							
	Sub-total	2.8%							694134				$19,440			$19,440
	Task 1 - Submittals															
D	Plans		16	EA	50	800	50.62					$40,500				$40,500
D	Technical submittals		100	EA	5	500	50.62					$25,310				$25,310
D	Site access & GET traing, cnstrct work force		25	EA	18	450	23.64					$10,640				$10,640
D	Site access & GET traing, PM, CM etc		7	EA	18	126	33.69					$4,240				$4,240
D	Site access & GET traing, surveyers & others		4	EA	18	72	50.00					$3,600				$3,600
												$1,000				
	Sub-total					N.R.										Not Required
	Overhead and Profit															
					20%								$115,690			$115,690

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE NO.: C2-01-05-08-15 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Install Utilities		LS	40		22.69			1,000	500				$500	$500
D	Other misc. requirements as required.		LS	80		22.69			500	500				$500	$500
D	Portable toilets 2 ea	7	MTH					85				$400			$400
D	Potable water, Allow 5jug/mth, $8/jug	7	MTH					12	40.00			$80	$300		$380
D	Mobilize contractor equipment	12	EA	3	78	23.64		200			$1,840	$2,400			$4,240
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying	1	ls					17,000				$17,000			$17,000
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.		LS	20		22.69									
D	Remove all Utilities.		LS	20		22.69									
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200.00			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				390						$8,800	$2,400			$11,200
	Mobilization & Demobilization				468						10,620	13,790	300	1,000	$25,710

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE NO.: C2-01-05-08-15 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Cable & Air Monitors		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Power to East side		1	Lot						10400				$10,400		$10,400
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Operators	1	5	Days	10	50	27.03					$1,350				$1,350
D	Foreman	1	5	Days	10	50	21.59					$1,080				$1,080
	Power pole		1	ea						500.00				$500		$500
	Cable		100	lf						4.27				$430		$430
	Backhoe Cat 416	1	0.23	Mth							2800				$650	$650
	Backhoe Cat 416 at	85%		Hrs	43						8.70				$370	$370
	Power to East side					300						$7,180		$11,330	$1,020	$19,530
	Power to West side		1	Lot						300				$300		$300
	PVC 8" sleeve		50	lf						7.40				$370		$370
D	Electricians	2	2	Days	10	40	24.89					$1,000				$1,000
D	Operators	1	2	Days	10	20	27.03					$540				$540
	Backhoe Cat 416	1	0.09	Mth							2800				$260	$260
	Backhoe Cat 416 at	85%		Hrs	17						8.70				$150	$150
	Power to West side					60						$1,540		$670	$410	$2,620
	Subtotal Direct Cost		1	LOT		360						$8,720		$12,000	$1,430	$22,150

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY05 R1
ESTIMATE NO.: C2-01-05-08-15 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	OMTA Container Area	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 7														
	Expansion of OMTA container area (15days)														
	CAT D6		hr	1.0						73.26					
	CAT 950 loader		hr	1.0						65.02					
	Volvo A30		hr	0.5						73.62					
	Truck		hr	0.5						16.32					
	CAT 613 water wagon		hr	0.5						52.81					
	CAT 563 compactor		hr	1.0						40.98					
D	Operator	150	hr	2.0	300	24.57					$7,370				$7,370
D	Teamster	150	hr	1.0	150	20.59					$3,090				$3,090
D	Laborer	150	hr	2.0	300	20.59					$6,180				$6,180
	Geotextile	153,000	sf						0.08				$12,240		$12,240
	Stone #304	6,000	tn						13.05				$78,300		$78,300
	Task 8														
	Construction Laydown Yard														
	10 acre excavating/grading (20days)														
	Excavate/grading														
	CAT D6	170	hr	1.0						73.26				$12,450	$12,450
	CAT 613	170	hr	1.0						83.19				$14,140	$14,140
	CAT 563 compactor	170	hr	1.0						40.98				$6,970	$6,970
D	Operator	200	hr	2.0	400	24.57					$9,830				$9,830
	Volvo A30 truck	43	hr	2.0						73.62				$6,260	$6,260
	CAT 613 water wagon	43	hr	0.5						7.25				$155	$155
D	Teamster	50	hr	2.0	100	20.78					$2,080				$2,080
D	Teamster	100	hr	1.0	100	20.78					$2,080				$2,080
D	Operator	200	hr	2.0	400	24.57					$9,830				$9,830
D	Laborer	200	hr	2.0	400	20.59					$8,240				$8,240
D	Laborer	100	hr	2.0	200	20.59					$4,120				$4,120
	Geotextile	436,000	sf						0.08				$34,880		$34,880
	Place #304 stone (15 days)	17000	tn						13.05				$221,850		$221,850
	CAT D8 spreader box	128	hr	1.0	128										
	CAT 563 compactor	128	hr	1.0	128					40.98				$5,220	$5,220
D	Operator	150	hr	2.0	300	24.57					$7,370				$7,370
	CAT 613 water wagon	128	hr	0.5	64					7.25				$460	$460
D	Laborer	150	hr	2.0	300	20.59					$6,180				$6,180
	Fence (construction)	2700	lf						1.56				$4,210		$4,210
D	Laborer	50	hr	3.0	150	20.59					$3,090				$3,090
	SubTotal Direct Costs	1	LOT		3,419						69,460		351,480	45,655	$466,595

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE #: C2-01-05-08-16 R1
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$9,290			$9,290
Task 1 - Submittals	895		$33,170				$33,170
Overhead and Profit				$55,290			$55,290
MOBILIZATION	158		$3,600	$2,900	$800	$1,000	$8,300
Surveying				$17,000			$17,000
Cable & Air Monitors	360		$8,720		$12,000	$1,430	$22,150
Task 9 - Phase III Temporary Leachate Removal	722		$15,900		$2,060	$23,340	$41,300
Task 10 - Construction Water Well	100		$2,260	$88,580	$200	$1,830	$92,870
Task 11 - Demo No. Wheel Wash @ Impact Matl. Haul	140		$3,460			$3,080	$6,540
Project Staffing							Not Required
DEMOBILIZATION	390		$8,800	$2,400			$11,200
DIRECT FIELD COSTS TOTAL	**2,765**	**$27.45**	**$75,910**	**$175,460**	**$15,060**	**$30,680**	**$297,110**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$600		$600
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$43,300				$43,300
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$900	$1,800	$2,700
INDIRECT FIELD COSTS TOTAL			**$43,300**		**$1,500**	**$1,800**	**$46,600**
DIRECT & INDIRECT FIELD COSTS TOTAL	**2,765**	**$43.11**	**$119,210**	**$175,460**	**$16,560**	**$32,480**	**$343,710**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$343,700**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY06 R1 | DATE: 15-Aug-01

ESTIMATE NO. C2-01-05-08-16 R1 | ESTIMATOR: RIS/DU

F A C T O R S

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$75,910	$175,460	$15,060	$30,680		$297,110
IFC COST FACTOR	1.5704	–	1.0398	1.0000	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.5704	1.0000	1.1022	1.0600	1.0600	
BASE ESTIMATE $'S	$119,210	$175,460	$16,600	$32,521		$343,790
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.5704	1.0000	1.1022	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$119,210	$175,460	$16,600	$32,521		$343,790

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY06 R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2-01-05-08-16 R1 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		9290				
			$9,290				$9,290
	Task 1 - Submittals	33170					
		$52,090					$52,090
	Overhead and Profit		55290				
			$55,290				$55,290
	MOBILIZATION	3600	2900	800	1000		
		$5,650	$2,900	$880	$1,060		$10,490
	Surveying		17000				
			$17,000				$17,000
	Cable & Air Monitors	8720		12000	1430		
		$13,690		$13,230	$1,520		$28,440
	Task 9 - Phase III Temporary Leachat	15900		2060	23340		
		$24,970		$2,270	$24,740		$51,980
	Task 10 - Construction Water Well	2260	88580	200	1830		
		$3,550	$88,580	$220	$1,940		$94,290
	Task 11 - Demo No. Wheel Wash @ I	3460			3080		
		$5,430			$3,260		$8,690
	Project Staffing						
	DEMOBILIZATION	8800	2400			11200	
		$13,820	$2,400				$16,220
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$343,780

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS			COST / UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Insurance & Bond											$9,290			$9,290
	Task 1 - Submittals				895						$33,170				$33,170
	Overhead and Profit											$55,290			$55,290
	MOBILIZATION				158						$3,600	$2,900	$800	$1,000	$8,300
	Surveying											$17,000			$17,000
	Cable & Air Monitors				360						$8,720		$12,000	$1,430	$22,150
	Task 9 - Phase III Temporary Leachate Removal				722						$15,900		$2,060	$23,340	$41,300
	Task 10 - Construction Water Well				100						$2,260	$88,580	$200	$1,830	$92,870
	Task 11 - Demo No. Wheel Wash @ Impact Matl. Haul Rd				140						3,460			3,080	$6,540
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				390						8,800	2,400			$11,200
	Subtotal Direct Cost	**1**	**LOT**		**2765**						**75,910**	**175,460**	**15,060**	**30,680**	**$297,110**

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							331716				$9,290			$9,290
	Task 1 - Submittals														
D	Plans	8	EA	40	320	50.62					$16,200				$16,200
D	Technical submittals	25	EA	5	125	50.62					$6,330				$6,330
D	Site access & GET traing, cnstrct work force	25	EA	18	450	23.64					$10,640				$10,640
	Sub-total				895						$33,170				$33,170
	Overhead and Profit														
				20%								$55,290			$55,290

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Install Utilities		LS	40		22.69			1,000	500				$500	$500
D	Other misc. requirements as required.	1	LS	80	80	22.69			500	500	$1,800		$500	$500	$2,800
D	Portable toilets 2 ea	7	MTH					85				$400			$400
D	Potable water, Allow 5jug/mth, $8/jug	7	MTH					12	40.00			$80	$300		$380
D	Mobilize contractor equipment	12	EA	3	78	23.64		200			$1,840	$2,400			$4,240
	MOBILIZATION				158						$3,600	$2,900	$800	$1,000	$8,300
	Surveying	1	ls					17,000				$17,000			$17,000
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.		LS	20		22.69									
D	Remove all Utilities.		LS	20		22.69									
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200.00			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				390						$8,800	$2,400			$11,200
	Mobilization & Demobilization				548						12,420	13,790	800	1,000	$28,010

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Cable & Air Monitors		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Power to East side		1	Lot						10400				$10,400		$10,400
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Operators	1	5	Days	10	50	27.03					$1,350				$1,350
D	Foreman	1	5	Days	10	50	21.59					$1,080				$1,080
	Power pole		1	ea						500.00				$500		$500
	Cable		100	lf						4.27				$430		$430
	Backhoe Cat 416	1	0.23	Mth							2800				$650	$650
	Backhoe Cat 416 at	85%		Hrs	43						8.70				$370	$370
	Power to East side					300						$7,180		$11,330	$1,020	$19,530
	Power to West side		1	Lot						300				$300		$300
	PVC 8" sleeve		50	lf						7.40				$370		$370
D	Electricians	2	2	Days	10	40	24.89					$1,000				$1,000
D	Operators	1	2	Days	10	20	27.03					$540				$540
	Backhoe Cat 416	1	0.09	Mth							2800				$260	$260
	Backhoe Cat 416 at	85%		Hrs	17						8.70				$150	$150
	Power to West side					60						$1,540		$670	$410	$2,620
	Subtotal Direct Cost		1	LOT		360						$8,720		$12,000	$1,430	$22,150

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 9 and Task 10	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 9 - Phase III Temporary Leachate Removal														
	Excavate and remove old leachate and haul to stockpile area in Cell #3.														
mD	From estimate, OSDF Phase1 Leachate Remove FY01 which was prepared for the 01 Rebasline				669						$14,710		$110	$23,000	$37,820
	Adjust for quantity differences:														
	Previous estimate = 1100 LF														
	This estimate = 800 LF														
	Therefore, used 73 % of Previous estimate														
mD	Saw cut asphalt road 20x15	40	LF	0.042	2	22.65				0.76	$50			$30	$80
mD	Repair asphalt road	300	SF	0.097	41	22.65			1.12	0.27	$930		$340	$80	$1,350
mD	Fertilize & seed, 24,000 SF	0.46	Acre	20.000	9	22.65			3500.00	500	$210		$1,610	$230	$2,050
	Task 9 - Phase III Temporary Leachate Removal				722						$15,900		$2,060	$23,340	$41,300
	Task 10 - Construction Water Well														
	Drill and develop water well capable of 250-350 gpm.	1	ea					88579				$88,580			$88,580
mD	Tie water well to existing lines														
mD	4"x 8" Tap	1	ea						200.00				$200		$200
mD	4" HDPE pipe	2000	LF												
mD	Pipefitters 2	5	Days	10	100	22.65					$2,260				$2,260
	HDPE welding machine 1	5	Days							365				$1,830	$1,830
	Task 10 - Construction Water Well				100						$2,260	$88,580	$200	$1,830	$92,870
	Task 9 and Task 10														

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO.: C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Task 5 - Relocate Existing Stockpiles		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 11 - Demo No. Wheel Wash @ Impact Matl. Haul Rd															
	Lockout water and electric feeds															
mD	Pipefitters	2	0.5	Days	10	10	29.62					$300				$300
mD	Electricians	2	0.5	Days	10	10	24.89					$250				$250
	Disconnect water lines										594.81					
mD	Pipefitters	2	1	Days	10	20	29.62					$590				$590
	Demo & size reduce concrete slab															
mD	Laborers	2	2	Days	10	40	22.65					$910				$910
D	Cat 330 excavator	1	2	Days	10	20	22.86				802.77	$460			$1,610	$2,070
	Hydraulic hammer, boom mt	1	2	Days							33.72				$80	$80
	Excavate, load, and haul debris															
mD	Laborers	2	1	Days	10	20	22.65					$450				$450
D	Cat 330 excavator	1	1	Days	10	10	27.03				802.77	$270			$800	$1,070
D	Volvo A30 artic. dump truck	1	1	Days	10	10	22.86				594.81	$230			$590	$820
	Task 11 - Demo No. Wheel Wash @ Impact Matl. Haul Rd					140						$3,460			$3,080	$6,540
	Subtotal Direct Cost		1	LOT		280						$3,460			$3,080	$6,540

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY06 R1
ESTIMATE NO. C2-01-05-08-16 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Infrastructure	08-Aug-01	02-Oct-06	04-Oct-06	06-Oct-06	0.1	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					0.1	MONTHS		
					0.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	61.9	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE #: C2 -01-05-08-17 R1
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$5,210			$5,210
Task 1 - Submittals							Not Required
Overhead and Profit				$30,980			$30,980
MOBILIZATION	78		$1,800	$2,900	$300	$1,000	$6,000
Surveying				$10,000			$10,000
Cable & Air Monitors	360		$8,720		$12,000	$1,430	$22,150
Remove underground/above interim leachate line	1,942		$35,810		$4,360	$30,800	$70,970
Project Staffing							Not Required
DEMOBILIZATION	390		$8,800	$2,400			$11,200
DIRECT FIELD COSTS TOTAL	**2,770**	**$19.90**	**$55,130**	**$51,490**	**$16,660**	**$33,230**	**$156,510**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$800		$800
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	54		$1,100		$600		$1,700
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$32,100				$32,100
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$1,100	$2,000	$3,100
INDIRECT FIELD COSTS TOTAL	**54**		**$33,200**		**$2,500**	**$2,000**	**$37,700**
DIRECT & INDIRECT FIELD COSTS TOTAL	**2,824**	**$31.28**	**$88,330**	**$51,490**	**$19,160**	**$35,230**	**$194,210**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$194,200**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY07 R1 | DATE: 15-Aug-01

ESTIMATE NO. C2 -01-05-08-17 R1 | ESTIMATOR: RIS/DU

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FACTORS

FIXED PRICE !	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$55,130	$51,490	$16,660	$33,230		$156,510
IFC COST FACTOR	1.6022	–	1.0840	1.0000	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6022	1.0000	1.1491	1.0600	1.0600	
BASE ESTIMATE $'S	$88,330	$51,490	$19,144	$35,224		$194,187
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6022	1.0000	1.1491	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$88,330	$51,490	$19,144	$35,224		$194,187

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY07 R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2 -01-05-08-17 R1 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		5210				
			$5,210				$5,210
	Task 1 - Submittals						
	Overhead and Profit		30980				
			$30,980				$30,980
	MOBILIZATION	1800	2900	300	1000		
		$2,880	$2,900	$340	$1,060		$7,180
	Surveying		10000				
			$10,000				$10,000
	Cable & Air Monitors	8720		12000	1430		
		$13,970		$13,790	$1,520		$29,280
	Remove underground/above interim le	35810		4360	30800		
		$57,380		$5,010	$32,650		$95,040
	Project Staffing						
	DEMOBILIZATION	8800	2400			11200	
		$14,100	$2,400				$16,500
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$194,190

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO.: C2 -01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$5,210			$5,210
	Task 1 - Submittals	Not Required													Not Required
	Overhead and Profit											$30,980			$30,980
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying											$10,000			$10,000
	Cable & Air Monitors				360						$8,720		$12,000	$1,430	$22,150
	Remove underground/above interim leachate line				1,942						$35,810		$4,360	$30,800	$70,970
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				390						8,800	2,400			$11,200
	Subtotal Direct Cost	**1**	**LOT**		**2770**						**55,130**	**51,490**	**16,660**	**33,230**	**$156,510**

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO.: C2 -01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							185904				$5,210			$5,210
	Task 1 - Submittals														
D	Plans	16	EA	50	800	50.62					$40,500				$40,500
D	Technical submittals	100	EA	5	500	50.62					$25,310				$25,310
D	Site access & GET traing, cnstrct work force	25	EA	18	450	23.64					$10,640				$10,640
D	Site access & GET traing, PM, CM etc	7	EA	18	126	33.69					$4,240				$4,240
D	Site access & GET traing, surveyers & others	4	EA	18	72	50.00					$3,600				$3,600
											$600				
	Sub-total				N.R.										Not Required
	Overhead and Profit			20%								$30,980			$30,980

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO.: C2 -01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Install Utilities		LS	40		22.69			1,000	500				$500	$500
D	Other misc. requirements as required.		LS	80		22.69			500	500				$500	$500
D	Portable toilets 2 ea	7	MTH					85				$400			$400
D	Potable water, Allow 5jug/mth, $8/jug	7	MTH					12	40.00			$80	$300		$380
D	Mobilize contractor equipment	12	EA	3	78	23.64		200			$1,840	$2,400			$4,240
	MOBILIZATION				78						$1,800	$2,900	$300	$1,000	$6,000
	Surveying	1	LS					10,000				$10,000			$10,000
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.		LS	20		22.69									
D	Remove all Utilities.		LS	20		22.69									
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				390						$8,800	$2,400			$11,200
	Mobilization & Demobilization				468						10,620	10,290	300	1,000	$22,210

CONTRACTOR - Stated in FY01 DOLLARS .

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO.: C2 -01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Cable & Air Monitors		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Power to East side		1	Lot						10400				$10,400		$10,400
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Operators	1	5	Days	10	50	27.03					$1,350				$1,350
D	Foreman	1	5	Days	10	50	21.59					$1,080				$1,080
	Power pole		1	ea						500.00				$500		$500
	Cable		100	lf						4.27				$430		$430
	Backhoe Cat 416	1	0.23	Mth							2800				$650	$650
	Backhoe Cat 416 at	85%		Hrs	43						8.70				$370	$370
	Power to East side					300						$7,180		$11,330	$1,020	$19,530
	Power to West side		1	Lot						300				$300		$300
	PVC 8" sleeve		50	lf						7.40				$370		$370
D	Electricians	2	2	Days	10	40	24.89					$1,000				$1,000
D	Operators	1	2	Days	10	20	27.03					$540				$540
	Backhoe Cat 416	1	0.09	Mth							2800				$260	$260
	Backhoe Cat 416 at	85%		Hrs	17						8.70				$150	$150
	Power to West side					60						$1,540		$670	$410	$2,620
	Subtotal Direct Cost		1	LOT		360						$8,720		$12,000	$1,430	$22,150

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO.: C2 -01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Remove underground/above interim leachate line	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 12														
	Remove underground/above interim leachate line														
	Excavate Leachate Line														
	Remove Material 1,000 lf														
mD	Laborer	40	hr	4	160	20.59					$3,290				$3,290
mD	Operator	50	hr	2	100	24.57					$2,460				$2,460
mD	Pipefitter	10	hr	1	10	26.40					$260				$260
mD	Teamster	60	hr	2	120	20.78					$2,490				$2,490
	Pickup Truck	15	hr							14.62				$220	$220
	Kebelco 2201V	65	hr							58.44				$3,800	$3,800
	Cat 416B	30	hr							23.94				$720	$720
	Volvo A25C	65	hr							67.10				$4,360	$4,360
	Volvo A25C	65	hr							67.10				$4,360	$4,360
	Backfill Leachate Line														
	Pickup Truck	50	hr							14.62				$730	$730
	Volvo A25C	50	hr							67.10				$3,360	$3,360
	Volvo A25C	50	hr							67.10				$3,360	$3,360
	Cat 416B	50	hr							23.94				$1,200	$1,200
	Volvo L-150	50	hr							60.11				$3,010	$3,010
	Kebelco 2201V	50	hr							58.44				$2,920	$2,920
	Finn Hydo	50	hr							15.00				$750	$750
	Remote Trench Compactor	50	hr							20.00				$1,000	$1,000
	Sheepfoot Compactor	50	hr							113.00					
mD	Laborer	40	hr	4	160	20.59					$3,290				$3,290
mD	Operator	80	hr	2	160	24.57					$3,930				$3,930
mD	Teamster	50	hr	2	100	20.78					$2,080				$2,080
	Trench Box rental	1	wk							300.00				$300	$300
mD	Operator move box 5x's	20	hr	1	20	24.57					$490				$490
mD	Laborer 2 ea move box 5x's	20	hr	2	40	20.59					$820				$820
mD	Laborer 1ea sample 5x's	3	hr	1	3	20.59			50.00	50.00	$60		$150	$150	$360
	CAT D8 spreader box	128	hr	1.0	128										
	CAT 563 compactor	128	hr	1.0	128					0.75				$100	$100
D	Operator	150	hr	2.0	300	24.57					$7,370				$7,370
	CAT 613 water wagon	128	hr	0.5	64					7.25				$460	$460
D	Laborer	150	hr	2.0	300	20.59					$6,180				$6,180
	Fence (construction)	2700	lf						1.56				$4,210		$4,210
D	Laborer	50	hr	3.0	150	20.59					$3,090				$3,090
	SubTotal Direct Costs	1	LOT		1,942						35,810		4,360	30,800	$70,970

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY07 R1
ESTIMATE NO. C2-01-05-08-17 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Monitoring Well	08-Aug-01	24-Sep-07	26-Sep-07	28-Sep-07	0.1	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					0.1	MONTHS		
					0.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	73.7	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY08 R1
ESTIMATE #: C2 -01-05-08-18 R1
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$1,010			$1,010
Task 1 - Submittals							Not Required
Overhead and Profit				$6,030			$6,030
MOBILIZATION	87		$2,000	$300	$500	$1,000	$3,800
Relocation of Air Monitors	250		$6,100		$10,400	$650	$17,150
Project Staffing							Not Required
DEMOBILIZATION	100		$2,400	$200			$2,600
DIRECT FIELD COSTS TOTAL	**437**	**$24.03**	**$10,500**	**$7,540**	**$10,900**	**$1,650**	**$30,590**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$200		$200
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	9		$200		$100		$300
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$6,100				$6,100
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$700	$100	$800
INDIRECT FIELD COSTS TOTAL	**9**		**$6,300**		**$1,000**	**$100**	**$7,400**
DIRECT & INDIRECT FIELD COSTS TOTAL	**446**	**$37.71**	**$16,800**	**$7,540**	**$11,900**	**$1,750**	**$37,990**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$38,000**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY08 R1 | DATE: 15-Aug-01

ESTIMATE NO. C2 -01-05-08-18 R1 | ESTIMATOR: RIS/DU

F A C T O R S

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$10,500	$7,540	$10,900	$1,650		$30,590
IFC COST FACTOR	1.6000	--	1.0275	1.0000	--	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6000	1.0000	1.0892	1.0600	1.0600	
BASE ESTIMATE $'S	$16,800	$7,540	$11,872	$1,749		$37,961
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6000	1.0000	1.0892	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$16,800	$7,540	$11,872	$1,749		$37,961

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY08 R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2 -01-05-08-18 R1 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		1010				
			$1,010				$1,010
	Task 1 - Submittals						
	Overhead and Profit		6030				
			$6,030				$6,030
	MOBILIZATION	2000	300	500	1000		
		$3,200	$300	$540	$1,060		$5,100
	Relocation of Air Monitors	6100		10400	650		
		$9,760		$11,330	$690		$21,780
	Project Staffing						
	DEMOBILIZATION	2400	200			2600	
		$3,840	$200				$4,040
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$37,960

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY08 R1
ESTIMATE NO.: C2 -01-05-08-18 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$1,010			$1,010
	Task 1 - Submittals	Not Required													Not Required
	Overhead and Profit											$6,030			$6,030
	MOBILIZATION				87						$2,000	$300	$500	$1,000	$3,800
	Relocation of Air Monitors				250						$6,100		$10,400	$650	$17,150
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				100						2,400	200			$2,600
	Subtotal Direct Cost	1	LOT		437						10,500	7,540	10,900	1,650	$30,590

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY08 R1
ESTIMATE NO.: C2 -01-05-08-18 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							36180				$1,010			$1,010
	Task 1 - Submittals														
D	Plans	16	EA	50	800	50.62					$40,500				$40,500
D	Technical submittals	100	EA	5	500	50.62					$25,310				$25,310
D	Site access & GET traing, cnstrct work force	25	EA	18	450	23.64					$10,640				$10,640
D	Site access & GET traing, PM, CM etc	7	EA	18	126	33.67					$4,240				$4,240
D	Site access & GET traing, surveyers & others	4	EA	18	72	50.00					$3,600				$3,600
											$200				
	Sub-total				N.R.										Not Required
	Overhead and Profit														
				20%								$6,030			$6,030

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY08 R1
ESTIMATE NO.: C2 -01-05-08-18 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Install Utilities		LS	40		22.69			1,000	500				$500	$500
D	Other misc. requirements as required.	1	LS	80	80	22.69			500	500	$1,800		$500	$500	$2,800
D	Portable toilets 2 ea	1	MTH					85				$60			$60
D	Potable water, Allow 5jug/mth, $8/jug	1	MTH					12	40.00			$10			$10
D	Mobilize contractor equipment	1	EA	3	7	23.64		200			$170	$200			$370
	MOBILIZATION				87						$2,000	$300	$500	$1,000	$3,800
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.	1	LS	20	20	22.69					$500				$500
D	Remove all Utilities.	1	LS	20	20	22.69					$500				$500
mC	Decontaminate Equipment.	1	ea	10	10	22.69					$200				$200
D	Loadout contractors equipment.	1	ea	20	20	22.69		200			$500	$200			$700
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				100						$2,400	$200			$2,600
	Mobilization & Demobilization				187						4,385	485	500	1,000	$6,370

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY08 R1
ESTIMATE NO.: C2 -01-05-08-18 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Cable & Air Monitors		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Relocation of Air Monitors		1	Lot						10400				$10,400		$10,400
D	Electricians	2	5	Days	10	100	24.89					$2,490				$2,490
D	Laborers	2	5	Days	10	100	22.65					$2,260				$2,260
D	Operators	1	5	Days	10	50	27.03					$1,350				$1,350
	Backhoe Cat 416	1	0.23	Mth							2800				$650	$650
	Backhoe Cat 416 at	85%		Hrs	43						8.70				$370	$370
	Relocation of Air Monitors					250						$6,100		$10,400	$650	$17,150
	Cable from Vault to Haul Rd		1	Lot						300				$300		$300
D	Electricians	2	2	Days	10	40	24.89					$1,000				$1,000
D	Operators	1	2	Days	10	20	27.03					$540				$540
	Backhoe Cat 416	1	0.09	Mth							2800				$260	$260
	Backhoe Cat 416 at	85%		Hrs	17						8.70				$150	$150
	Cable from Vault to Haul Rd					60						$1,540		$300	$260	$2,100
	Subtotal Direct Cost		1	LOT		310						$7,640		$10,700	$1,170	$19,510

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY08
ESTIMATE NO. C2 -01-05-08-18
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Air Monitors	08-Aug-01	05-Aug-08	20-Aug-08	05-Sep-08	1.0	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					1.0	MONTHS		
					1.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	84.5	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE - Infrastructure FY09 R1	DATE:	15-Aug-01
ESTIMATE #:	C2-01-05-08-19 R1	ESTIMATOR:	RIS/DU
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.C	TASK NO.:	CBSP1

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$5,970			$5,970
Task 1 - Submittals							Not Required
Overhead and Profit				$35,510			$35,510
MOBILIZATION	158		$3,600	$5,500	$500	$500	$10,100
D&D of OSDF Infrastructure Facility	2,430		$53,730		$2,550	$58,589	$114,869
Project Staffing							Not Required
DEMOBILIZATION	390		$8,800	$2,400			$11,200
DIRECT FIELD COSTS TOTAL	**2,978**	**$22.21**	**$66,130**	**$49,380**	**$3,050**	**$59,089**	**$177,649**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$1,000		$1,000
MISC. EQUIP. RENTAL	-	-	-				
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation	58		$1,300		$700		$2,000
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$38,400				$38,400
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$300	$3,500	$3,800
INDIRECT FIELD COSTS TOTAL	**58**		**$39,700**		**$2,000**	**$3,500**	**$45,200**
DIRECT & INDIRECT FIELD COSTS TOTAL	**3,036**	**$34.86**	**$105,830**	**$49,380**	**$5,050**	**$62,589**	**$222,849**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$222,800**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY09 R1 | DATE: 15-Aug-01

ESTIMATE NO. C2-01-05-08-19 R1 | ESTIMATOR: RIS/DU

FACTORS

CLIENT: DOE | LOCATION: FERNALD

WBS NO.: 1.1.C.C | TASK NO.: CBSP1

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$66,130	$49,380	$3,050	$59,089		$177,649
IFC COST FACTOR	1.6003	--	1.5574	1.0000	--	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6003	1.0000	1.6508	1.0600	1.0600	
BASE ESTIMATE $'S	$105,830	$49,380	$5,035	$62,634		$222,879
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6003	1.0000	1.6508	1.0600	1.0600	
FPS TARGET ESTIMATE (FY00 $)	$105,830	$49,380	$5,035	$62,634		$222,879

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE - Infrastructure FY0S R1 | **DATE:** 15-Aug-01

ESTIMATE NO. C2-01-05-08-19 R1 | **ESTIMATOR:** RIS/DU

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.C | **TASK NO.:** CBSP1

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		5970				
			$5,970				$5,970
	Task 1 - Submittals						
	Overhead and Profit		35510				
			$35,510				$35,510
	MOBILIZATION	3600	5500	500	500		
		$5,760	$5,500	$830	$530		$12,620
	D&D of OSDF Infrastructure Facility	53730		2550	58589		
		$85,990		$4,210	$62,100		$152,300
	Project Staffing						
	DEMOBILIZATION	8800	2400			11200	
		$14,080	$2,400				$16,480
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$222,880

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO.: C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS			COST / UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Insurance & Bond											$5,970			$5,970
	Task 1 - Submittals	Not Required													Not Required
	Overhead and Profit											$35,510			$35,510
	MOBILIZATION				158						$3,600	$5,500	$500	$500	$10,100
	D&D of OSDF Infrastructure Facility				2,430						$53,730		$2,550	$58,589	$114,869
	Project Staffing	Not Required													Not Required
	DEMOBILIZATION				390						8,800	2,400			$11,200
	Subtotal Direct Cost	**1**	**LOT**		**2978**						**66,130**	**49,380**	**3,050**	**59,089**	**$177,649**

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO.: C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	Insurance & Bond, OH & P	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	Sub-total 2.8%							213083				$5,970			$5,970
	Task 1 - Submittals														
D	Plans	16	EA	50	800	50.62					$40,500				$40,500
D	Technical submittals	100	EA	5	500	50.62					$25,310				$25,310
D	Site access & GET traing, cnstrct work force	25	EA	18	450	23.64					$10,640				$10,640
D	Site access & GET traing, PM, CM etc	7	EA	18	126	33.70					$4,250				$4,250
D	Site access & GET traing, surveyers & others	4	EA	18	72	50.00					$3,600				$3,600
											$800				
	Sub-total				N.R.										Not Required
	Overhead and Profit														
				20%								$35,510			$35,510

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO.: C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

	Mobilization & Demobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	MOBILIZATION														
	S/C Office Trailer 1 reqd		MO					550							
	Support trailer 1 reqd		MO					350							
D	Surveying		LS					3,000				$3,000			$3,000
D	Other misc. requirements as required.	1	LS	80	80	22.69			500	500	$1,800		$500	$500	$2,800
D	Portable toilets 2 ea	1	MTH					85				$60			$60
D	Potable water, Allow 5jug/mth, $8/jug	1	MTH					12	40.00			$10	$40		$50
D	Mobilize contractor equipment	12	EA	3	78	23.64		200			$1,840	$2,400			$4,240
	MOBILIZATION				158						$3,600	$5,500	$500	$500	$10,100
	DEMOBILIZATION														
D	Complete Punch List items.	1	LS	20	20	22.69					$500				$500
D	Remove Trailer and Change Facilities.		LS	20		22.69									
D	Remove all Utilities.		LS	20		22.69									
mC	Decontaminate Equipment.	12	ea	10	120	22.69					$2,700				$2,700
D	Loadout contractors equipment.	12	ea	20	240	22.69		200			$5,400	$2,400			$7,800
D	Other area requirements.	1	LS	10	10	22.69					$200				$200
	DEMOBILIZATION				390						$8,800	$2,400			$11,200
	Mobilization & Demobilization				548						12,420	7,885	520	,500	$21,325

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO.: C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	D&D of OSDF Infrastructure Facility	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Task 13														
	D&D of OSDF Infrastructure Facility														
	Remove HDPE 4"														
	15,000 lf (10days)														
	CAT TH83 forklift	128	hr	1.0						34.61				$4,412	$4,412
mD	Operator	150	hr	1.0	150	24.57					$3,690				$3,690
	ROB Truck	128	hr	1.0						67.10				$8,555	$8,555
mD	Laborer	150	hr	4.0	600	20.59					$12,350				$12,350
mD	Teamster	150	hr	0.5	75	20.78					$1,560				$1,560
	Remove contaminated surface														
	7000cy (7days)														
	CAT 330 excavator	60	hr	1.0						99.74				$5,934	$5,934
	CAT D6 dozer	60	hr	1.0						63.28				$3,765	$3,765
mD	Operator	70	hr	2.0	140	24.57					$3,440				$3,440
	Volvo A30 trucks	60	hr	3.0						73.62				$13,141	$13,141
mD	Teamster	70	hr	3.0	210	20.78					$4,360				$4,360
mD	Laborer	70	hr	2.0	140	20.59					$2,880				$2,880
mD	Pipefitter	70	hr	1.0	70	29.03					$2,030				$2,030
mD	Teamster	70	hr	2.0	140	20.78					$2,910				$2,910
	CAT 613 water wagon	26	hr	1.0						83.19				$2,121	$2,121
mD	Operator	30	hr	1.0	30	24.57					$740				$740
	Demolition & disposal														
	(2days)														
	CAT 330 excavator	17	hr	1.0						99.74				$1,696	$1,696
	CAT D6 dozer	17	hr	1.0						63.28				$1,076	$1,076
mD	Operator	20	hr	2.0	40	24.57					$980				$980
	ROB Truck	17	hr	1.0						67.10				$1,141	$1,141
mD	Teamster	20	hr	1.0	20	20.78					$420				$420
mD	Laborer	20	hr	2.0	40	20.59					$820				$820
	Remove above ground elect														
	power poles & air monitors														
	(2days)														
mD	Electrician	40	hr	2.0	80	24.93					$1,990				$1,990
	Bucket truck	34	hr	1.0					75.00				$2,550		$2,550
mD	Laborer	40	hr	2.0	80	20.59					$1,650				$1,650

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO.: C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ITEM NO.	D&D of OSDF Infrastructure Facility	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Disconnect utilities from trailer (1 day)														
mD	Pipefitter	20	hr	2.0	40	29.03					$1,160				$1,160
mD	Electrician	20	hr	2.0	40	24.93					$1,000				$1,000
	Demo & size reduction of trailer (5days)														
	CAT 330 excavator w/ shear	43	hr	1.0						99.74				$4,239	$4,239
	CAT 950 loader	43	hr	1.0						77.14				$3,278	$3,278
mD	Operator	50	hr	2.0	100	24.57					$2,460				$2,460
	ROB Truck	43	hr	1.0						67.10				$2,852	$2,852
mD	Teamster	50	hr	1.0	50	20.78					$1,040				$1,040
mD	Laborer	50	hr	2.0	100	20.59					$2,060				$2,060
	Demo & size reduct of compactor (2day)														
	CAT 826 compactor														
	CAT 330 excavator w/ shear	17	hr	1.0						99.74				$1,696	$1,696
	CAT 950 loader	17	hr	1.0						77.14				$1,311	$1,311
mD	Operator	20	hr	2.0	40	24.57					$980				$980
	ROB truck	17	hr	1.0											
mD	Teamster	20	hr	1.0	20	20.78					$420				$420
mD	Laborer	20	hr	2.0	40	20.59					$820				$820
mD	Mechanic	10	hr	0.5	5	22.40					$110				$110
	Demo & size of 4 spec. ROB's														
	CAT 330 excavator w/ shear	17	hr	1.0						99.74				$1,696	$1,696
	CAT 950 loader	17	hr	1.0						77.14				$1,311	$1,311
mD	Operator	20	hr	2.0	40	24.57					$980				$980
mD	Laborer	20	hr	2.0	40	20.59					$820				$820
	D&D of Equip														
mD	Laborer	50	hr	2.0	100	20.59					$2,060				$2,060
	Pressure washer	43	hr	2.0						4.28				$364	$364
	D&D of OSDF Infrastructure Facility	1	LOT		2,430						53,730		2,550	58,589	$114,869

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE - Infrastructure FY09 R1
ESTIMATE NO. C2-01-05-08-19 R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
Monitoring Well	08-Aug-01	01-May-09	23-May-09	15-Jun-09	1.5	MONTHS	32	100.0%
Liner			00-Jan-00		0.0	MONTHS	142	0.0%
Video & Demob			00-Jan-00		0.0	MONTHS	36	0.0%
TOTAL					1.5	MONTHS		
					1.0		210	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	93.6	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

APPENDIX " A"

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NC C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

PERCENT OF INFLUENCE ON CHART MANHOURS

	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF NFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	EXCELLENT	90.0%	12.0%	0.108
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			80.0%	20.0%	0.16
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<---- MULTIPLE SHIFTS-											
WORK WEEK						5-10s per Means R010-110				85.0%	15.0%	0.1275
50 HOUR WORK WEEK	////////// ////// MULTIPLE-SHIFT //////////	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
60 HOUR WORK WEEK	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
SHIFTWORK							OR					
2ND SHIFT					2ND SHIFT		ONE SHIFT			100.0%	3.0%	0.03
3RD SHIFT			3RD SHIFT				ONLY			100.0%	5.0%	0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		105.0%	4.0%	0.042
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			95.0%	8.0%	0.076
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			80.0%	10.0%	0.08
											100.0%	90.4%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED
2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 90.4%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.11

EFFICIENCY FACTORS

BASELINE - Infrastructure FY03 R1
-05-08-13-R1

C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

PLE:

DARD CHART MANHOURS =	NET	100
IENCY FACTORS:		
SPECIFIC (SEE APPENDIX A)	[redacted]	11.0
BASE UNIT MANHOURS		111
TIME PRODUCTIVITY FACTOR	0.00%	0
DETAIL WORKSHEET BACK-UP)		111
SPECIFIC (confined space,	0.0%	0
elevation, congestion, etc.)		111

PECIFIC (Based on current data
stimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
IVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
/ ADD MH's	5.00%	6	27.00%	30	64.00%	71	72.00%	80	96.00%	107
)/TOTAL HRS	1.05	116.6	1.27	141	1.64	182	1.72	190.9	1.96	217.6
/SITE PROD.	1.1655		1.4097		1.8204		1.9092		2.1756	

: Use the Default Productivity Factor of 'mC' for working
in a contaminated area if the Safety Level cannot be determined.

D FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

hours worked in a specific PPE level divided by 10 hour working
= (PPE) ManDays to determine material cost of PPE's.
APPENDIX C - HEALTH PHYSICS)

	12.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

E EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY
UGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL,
BTAIN A MORE ACCURATE ACCOUNT OF OVERALL
IENCY IMPACT DUE TO PPE REQUIREMENTS IN
LING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF BASELINE - Infrastructure FY03 R1
ESTIMATE NO. C2-01-05-08-13-R1
CLIENT: DOE
WBS NO.: 1.1.C.C

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.95	0.79	0.71	0.71	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.95	0.79	0.611	0.582	0.51
NET PRODUCTIVITY MULTIPLIER		**1.05**	**1.27**	**1.64**	**1.72**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg. Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per [5 - 10's		600	600	600	600	600
ADDITN'L.SITE SAFETY MEETINGS NOT INCLD. IN BAS	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	2	3	4	4	4
** (2 OUT OF 8 MONTHS) 25.00%	MINUTES	10	12	15	15	15
TOTAL		5	9	15	15	15
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		570	476	425	425	410
AVAILABLE WORK TIME FACTOR		**0.95**	**0.79**	**0.71**	**0.71**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's. Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances. Changed to July & August over an 8 mth period.

DISTRIBUTE COST BY ACTIVITY PER FY

PROJECT:	OSDF BASELINE - Infrastructure Rev1 Aug 2001	DATE:	15-Aug-01
ESTIMATE #:		ESTIMATOR:	RIS/DU
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.C	TASK NO.:	CBSP1

FLUOR FERNALD

FY03

		Bond	Submtl	O&P	Mob	Demob	Reloc Access	Temp Leach		
Per est		25160	21390	149770	43060	18080	567930	119530	944920	
Reloc Access		25160	21390		43060		567930		657540	82.7%
Temp Leach Rmvl						18080		119530	137610	17.3%
									795150	
Reloc Access	**total**	**$25,160**	**$21,390**	**$ 123,851**	**$43,060**		**$ 567,930**		**781391**	
Temp Leach Rmvl	**total**			**$25,919**		**$18,080**		**$ 119,530**	**163529**	
									944920	

FY04

		Bond	Submtl	O&P	Mob	Demob	Elect Air Montr	Elect Relo Montr	Reloc Stkpl	Survey		
Per est		6460		38450	7170	16490	76920	28500	66760	3000	243750	
Elect Air Montr		6460			7170		76920			1340	91890	44.8%
Reloc Stkpl									66760	1163	67923	33.1%
Elect Relo Montr						16490		28500		497	45487	22.2%
											205300	
Elect Air Montr	**total**	**$ 6,460**		**$17,210**	**$ 7,170**		**$76,920**			**$ 1,340**	**$ 109,100**	
Reloc Stkpl	**total**			**$12,721**					**$66,760**	**$ 1,163**	**$ 80,644**	
Elect Relo Montr	**total**			**$ 8,519**		**$16,490**		**$ 28,500**		**$ 497**	**$ 54,006**	
											243750	

DISTRIBUTE COST BY ACTIVITY PER FY

PROJECT: OSDF BASELINE - Infrastructure Rev1 Aug 2001
ESTIMATE #:
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS/DU
LOCATION: FERNALD
TASK NO.: CBSP1

FY05

	Bond	Submtl	O&P	Mob	Demob	Air Montr	Survey	OMTA Contr		
Per est	19440		115690	7160	16480	28280	17000	534370	738420	
Air Monitor	19440				16480	28280	854		65054	10.4%
OMTA Containers				7160			16146	534370	557676	89.6%
									622730	
Air Monitor total	**$19,440**		**$12,086**		**$16,480**	**$28,280**	**$ 854**		**$ 77,140**	
OMTA Containers total			**$103,604**	**$ 7,160**			**$ 16,146**	**$534,370**	**$ 661,280**	
									738420	

FY06

	Bond	Submtl	O&P	Mob	Demob	Air Montr	Survey	Leachate	H2O Well	Wheel Wash		
Per est	9290	52090	55290	10490	16220	28440	17000	51980	94290	8690	343780	
Air Montr					16220	28440	2636				47296	16.4%
Leachate	9290	52090		10490			4818	51980			128668	44.6%
H2O Well							8740		94290		103030	35.7%
Wheel Wash							806			8690	9496	3.3%
											288490	
Air Montr total			**$ 9,064**		**$16,220**	**$28,440**	**$ 2,636**				**$ 56,361**	
Leachate total	**$ 9,290**	**$52,090**	**$24,660**	**$10,490**			**$ 4,818**	**$51,980**			**$ 153,328**	
H2O Well total			**$19,746**				**$ 8,740**		**$94,290**		**$ 122,776**	
Wheel Wash total			**$ 1,820**				**$ 806**			**$ 8,690**	**$ 11,315**	
											343780	

DISTRIBUTE COST BY ACTIVITY PER FY

PROJECT:	OSDF BASELINE - Infrastructure Rev1 Aug 2001	DATE:	15-Aug-01
ESTIMATE #:		ESTIMATOR:	RIS/DU
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.C	TASK NO.:	CBSP1

FLUOR FERNALD

FY07

	Bond	Submtl	O&P	Mob	Demob	Air Montr	Survey	Leachate		
Per est	5210		30980	7180	16500	29280	10000	95040	194190	
Air Montr					16500	29280	2355		48135	29.5%
Leachate	5210			7180			7645	95040	115075	70.5%
									163210	
Air Monitor total			$ 9,137		$16,500	$29,280	$ 2,355		$ 57,272	
Leachate total	$ 5,210		$21,843	$ 7,180			$ 7,645	$95,040	$ 136,918	
									194190	

FY08

	Bond	Submtl	O&P	Mob	Demob	Relo Air Mntr		
Per est	1010		6030	5100	4040	21780	37960	
Relo Air Mntr	1010		6030	5100	4040	21780	37960	100%
							37960	
Relo Air Mntr total	$ 1,010		$ 6,030	$ 5,100	$ 4,040	$21,780	$ 37,960	

FY09

	Bond	Submtl	O&P	Mob	Demob	D&D OSDF		
Per est	5970		35510	12620	16480	152300	222880	
D&D OSDF	5970		35510	12620	16480	152300	222880	100%
							222880	
D&D OSDF total	$ 5,970		$35,510	$12,620	$16,480	$ 152,300	$ 222,880	

COMPARE MAY 2001 INFRASTRUCTURE BASELINE TO REVISION 1 AUG 2001

PROJECT: OSDF BASELINE - Infrastructure
ESTIMATE # C2-01-05-08
CLIENT: DOE
WBS #: 1.1.C.C

FLUOR FERNALD

DATE: 15-Aug-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CBSP1

FY	May	Aug (Rev 1)	
03	$ 935,000	$ 944,900	
04	$ 278,000	$ 243,800	
05	$ 755,600	$ 738,500	
06	$ 356,500	$ 343,700	
07	$ 211,100	$ 194,200	
08	$ 73,100	$ 38,000	
09	$ 226,600	$ 222,800	
	$ 2,835,900	$ 2,725,900	$ (110,000)

CLTS1

ENHANCED PERMANENT LTS DESIGN FY01

09/07/2001
9:49 AM

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

PBS: OHFN03
WBS: 1.1.C.C
CTRL ACCT: CLTS
CHARGE NO: CLTS1
COMMENT NO N/A

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2001

Resource: SERVSUB **SUBS** **EOC:** **SUBCONTRACTORS**
Res Dept: 949 **Overtime:** GEOS **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	198,611.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Units:	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0	198,611.0
Yr Total Cost:	198,611	0	0	0	0	0	0	0	0	0
Cum Total Cost:	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Total Cost:	198,611	0	0	0	0	0	0	0	0	0
Cum Total Cost:	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611	198,611

CAM_____

CONTROL TEAM_____

INCLUDES ESCALATION COSTS

CLTS2

ENHANCED PERMANENT LTS CONSTRUCTION FY01

09/07/2001
9:48 AM

PBS: OHFN03
WBS: 1.1.C.C
CTRL ACCT: CLTS
CHARGE NO: CLTS2
COMMENT NO N/A

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2001

Resource: BUYCON **BUYER/CONTRACTS ADMN** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	161.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6
Yr Total Cost:	6,771	0	0	0	0	0	0	0	0	0
Cum Total Cost:	6,771	6,771	6,771	6,771	6,771	6,771	6,771	6,771	6,771	6,771

Resource: CLERKS **CLERKS** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Yr Total Cost:	301	0	0	0	0	0	0	0	0	0
Cum Total Cost:	301	301	301	301	301	301	301	301	301	301

Resource: CNSCOD **CONSTRUCTION COORD** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	715.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	715.9	715.9	715.9	715.9	715.9	715.9	715.9	715.9	715.9	715.9
Yr Total Cost:	22,722	0	0	0	0	0	0	0	0	0
Cum Total Cost:	22,722	22,722	22,722	22,722	22,722	22,722	22,722	22,722	22,722	22,722

Resource: CNSENG **CONSTRUCTION ENG** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,308.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1	1,308.1
Yr Total Cost:	71,292	0	0	0	0	0	0	0	0	0
Cum Total Cost:	71,292	71,292	71,292	71,292	71,292	71,292	71,292	71,292	71,292	71,292

Resource: CNSMGR **CONSTRUCTION MGR** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

INCLUDES ESCALATION COSTS

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	379.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2
Yr Total Cost:	23,514	0	0	0	0	0	0	0	0	0
Cum Total Cost:	23,514	23,514	23,514	23,514	23,514	23,514	23,514	23,514	23,514	23,514

Resource: DRFCAD **DRAFTER/CAD OPERATOR** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
Yr Total Cost:	787	0	0	0	0	0	0	0	0	0
Cum Total Cost:	787	787	787	787	787	787	787	787	787	787

Resource: ENGINR **ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,630.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8	1,630.8
Yr Total Cost:	112,135	0	0	0	0	0	0	0	0	0
Cum Total Cost:	112,135	112,135	112,135	112,135	112,135	112,135	112,135	112,135	112,135	112,135

Resource: ENGMEC **ENGINEER MECH/PIPING** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	733.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0
Yr Total Cost:	45,579	0	0	0	0	0	0	0	0	0
Cum Total Cost:	45,579	45,579	45,579	45,579	45,579	45,579	45,579	45,579	45,579	45,579

Resource: FIELDSUB **FIELD SUBS** **EOC:** SUBCONTRACTORS
Res Dept: 949 **Overtime:** STAV **Class:** SUB

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	890,138.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Units:	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0	890,138.0
Yr Total Cost:	890,138	0	0	0	0	0	0	0	0	0
Cum Total Cost:	890,138	890,138	890,138	890,138	890,138	890,138	890,138	890,138	890,138	890,138

Resource: GLMNT **GEN LABOR MAINT** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** HOU

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	708.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	708.0	708.0	708.0	708.0	708.0	708.0	708.0	708.0	708.0	708.0
Yr Total Cost:	17,303	0	0	0	0	0	0	0	0	0
Cum Total Cost:	17,303	17,303	17,303	17,303	17,303	17,303	17,303	17,303	17,303	17,303

Resource: HRREP **HUMAN RESOURCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	145.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5
Yr Total Cost:	5,227	0	0	0	0	0	0	0	0	0
Cum Total Cost:	5,227	5,227	5,227	5,227	5,227	5,227	5,227	5,227	5,227	5,227

Resource: MAT300 **MATERIAL OBJCLASS300** **EOC:** MATERIAL
Res Dept: 949 **Overtime:** **Class:** MAT

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	6,657.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Units:	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0	6,657.0
Yr Total Cost:	6,657	0	0	0	0	0	0	0	0	0
Cum Total Cost:	6,657	6,657	6,657	6,657	6,657	6,657	6,657	6,657	6,657	6,657

Resource: QACENG **QA ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	1,068.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2	1,068.2
Yr Total Cost:	49,095	0	0	0	0	0	0	0	0	0
Cum Total Cost:	49,095	49,095	49,095	49,095	49,095	49,095	49,095	49,095	49,095	49,095

Resource: RADTEC **RAD TECH** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
Yr Total Cost:	1,510	0	0	0	0	0	0	0	0	0
Cum Total Cost:	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510

Resource: S&HENG **SAFETY ENGINEER** **EOC:** LABOR
Res Dept: 949 **Overtime:** FY01 **Class:** SAL

	Oct 00-	Oct 01-	Oct 02-	Oct 03-	Oct 04-	Oct 05-	Oct 06-	Oct 07-	Oct 08-	Oct 09-

09/07/2001
9:48 AM

	Sep 01	Sep 02	Sep 03	Sep 04	Sep 05	Sep 06	Sep 07	Sep 08	Sep 09	Sep 10
Yr Hours:	353.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9
Yr Total Cost:	17,593	0	0	0	0	0	0	0	0	0
Cum Total Cost:	17,593	17,593	17,593	17,593	17,593	17,593	17,593	17,593	17,593	17,593

Resource: **WSTENG** **WASTE ENGINEER** **EOC:** **LABOR**
Res Dept: **949** **Overtime:** **FY01** **Class:** **SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	44.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
Yr Total Cost:	2,261	0	0	0	0	0	0	0	0	0
Cum Total Cost:	2,261	2,261	2,261	2,261	2,261	2,261	2,261	2,261	2,261	2,261

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	7,330.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cum Hours:	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6	7,330.6
Yr Total Cost:	1,272,884	0	0	0	0	0	0	0	0	0
Cum Total Cost:	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884	1,272,884

CAM_____ CONTROL TEAM_____

INCLUDES ESCALATION COSTS

SECTION 3

5.0 RISK PLAN

Risk/Opportunity Identification and Analysis Form

Project: OSDF Infrastructure Construction		PBS Number: 03			Total Baseline Dollars (Minimum Case):			$3,130,059		
Evaluator: Wolinsky		WBS Number: 1.1.C.C								
CAM: J.D. Chiou	Date: 05/01/01	Control Account Number: CBSP								
Project Task	Risk and/or Opportunity	Potential Impact	Internal Or External Driver	Impact Cost $ (Maximum Case)	Risk Impact Level	Risk Probability %	Risk Probability Level	Probable Cost $ (Likeliest Case)	Risk Critical Value	Risk Handling Strategy
Charge No. CBSP1, OSDF Infrastructure Construction										
Relocate Access Control Facility including building new equipment wash	Land use committee doesn't approve currently proposed facility location	Additional cost due to less than optimal siting	Internal	$10,000.00	1	20	2	$2,000.00	1	Accept
Relocate Access Control Facility including building new equipment wash	Unexpected discovery of cultural resources requires sampling and documentation	Schedule delay of 2 months	Internal	$100,000.00	2	10	2	$10,000.00	2	Accept
Relocate Access Control Facility including building new equipment wash	Unforseen subsurface conditions requires soil removal and replacement	Schedule delay of 2 weeks plus replacement of soil in excavated area	Internal	$25,000.00	1	30	2	$7,500.00	1	Accept
Relocate Air Monitors including power supply	Power supply not available as planned	Extra cost to run permanent power an extra 1/4 mile	Internal	$100,000.00	2	25	2	$25,000.00	2	Accept
Expand OMTA area	Unexpected discovery of cultural resources requires sampling and documentation	Schedule delay of 2 months	Internal	$100,000.00	2	10	2	$10,000.00	2	Accept
Expand OMTA area	Unforseen subsurface conditions requires soil removal and replacement	Schedule delay of 2 weeks plus replacement of soil in excavated area	Internal	$25,000.00	1	30	2	$7,500.00	1	Accept
Construct water well	Adequate supply of water not available at proposed location	Redrill well in new location results in additional cost and 1 month schedule delay	Internal	$100,000.00	2	30	2	$30,000.00	2	Accept
Remove underground/above ground interim leachate line	Unforseen subsurface conditions requires soil removal and replacement	Schedule delay of 2 weeks plus replacement of soil in excavated area	Internal	$25,000.00	1	30	2	$7,500.00	1	Accept
Construction of Miscellaneous Facilities - General	Minor construction schedule extension due to various issues, e.g., inclement weather, equipment deliveries, rework	One-month schedule extension	Internal	$100,000.00	2	30	2	$30,000.00	2	Accept
			Total:	$585,000.00			Total:	$129,500.00		

Risk/Opportunity Identification and Analysis Form

Project: Enhanced Permanent LTS		PBS Number: 03			Total Baseline Dollars (Minimum Case):			$1,471,495		
Evaluator: Hughes, Wolinsky		WBS Number: 1.1.C.C								
CAM: J.D. Chiou	Date: 05/01/01	Control Account Number: CLTS								
Project Task	Risk and/or Opportunity	Potential Impact	Internal Or External Driver	Impact Cost $ (Maximum Case)	Risk Impact Level	Risk Probability %	Risk Probability Level	Probable Cost $ (Likeliest Case)	Risk Critical Value	Risk Handling Strategy
Charge No. CLTS1, Enhanced Permanent LTS Design FY01										
	Design Complete - NO RISK									
Charge No. CLTS2, Enhanced Permanent LTS Construction FY01										
Operation of EPLTS	Previously installed ILTS line between the control valve house and the permanent lift station needs to be replaced due to leakage	Increased cost due to labor, rental equipment, and material required for repair and temporary pumping of leachate.	Internal	$125,000.00	2	50	3	$62,500.00	2	Accept
			Total:	$125,000.00			Total:	$62,500.00		

WBS DICTIONARY
CONTROL ACCOUNT/CHARGE NUMBER

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT	
FEMP (DEFENSE)	12/01/2000	
3. IDENTIFICATION NUMBER		4. INDEX LINE NO.
AC24-010H20115		31
5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE	
1.1.C.D	CONSTRUCTION	
7. APPROVED CP NO.		8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00		09/05/2001
9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER	
CERCL/ACA	EW05H3030	

11. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontractors
OCDs

b. TECHNICAL CONTENT:

Subcontractor services, support services, matrixed labor, material and equipment utilized by the FEMP for Borrow Area development, construction of cell liners 4 through 7, placement of impacted material in cells 2 through 7, construction of final covers 1 through 7, temporary cover for cells 2 and 3 and infrastructure projects built prior to October 1, 2001.

c. SCOPE OF WORK:

The scope of this WBS Element is further defined in control account CCPL and includes the following:

- Matrixed labor from Fluor Fernald, Inc. support organizations
- Excavation of material from the borrow area to support liner and final cover construction
- Construction of liners for cells 4 through 7
- Hauling of impacted material from the OMTA and placement of impacted material in cells 2 through 7
- Construction of final covers for cells 1 through 7
- Electric leak detection of the liner and final cover geomembrane liners
- Installation of cap monitoring instruments
- Construction of stormwater management and erosion and sediment controls
- Interim restoration of the Borrow Area
- Installation of a temporary cover on the impacted material in Cells 2 and 3
- Furnish geosynthetic material for liner and final cover construction

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE	2. DATE OF CONTRACT
FEMP (DEFENSE)	12/01/2000

3. IDENTIFICATION NUMBER	4. INDEX LINE NO.
AC24-010H20115	31

5. WBS ELEMENT CODE	6. WBS ELEMENT TITLE
1.1.C.D	CONSTRUCTION

7. APPROVED CP NO.	8. DATE OF CHANGES
NEW PER CP# FY01-0115-0003-00	09/05/2001

9. SYSTEM DESIGN DESCRIPTION	10. BUDGET AND REPORTING NUMBER
CERCL/ACA	EW05H3030

11. ELEMENT TASK DESCRIPTION

- Furnish aggregate and stone material for the liner and final cover construction
- Dust Control
- Horizontal monitoring wells for cells 4 through 7
- Removal of Phase I of the North Access Rd within the OSDF footprint
- Removal and placement in the OSDF of all service roads, stockpiles and previously installed infrastructure which is not required after completion of the OSDF construction

WORK SPECIFICALLY EXCLUDED

- Excavation and hauling of impacted material from excavation, size reduction of debris and excavated material such as at- or below-grade structures, utilities, concrete
- Any alterations to the tie between the Bio-Surge Lagoon and AWWT are the responsibility of Aquifer.
- Air monitoring of the OSDF during the project shutdown is budgeted and done by Environmental Monitoring.
- Monitoring of leachate is the responsibility of Aquifer.
- Roll-off boxes and sealands are provided by Waste Generator Services.
- OSDF is not responsible for Stewardship activities during project shut down
- The existing leachate lines between manholes 1 and 2 and manholes 2 and 3 will not be excavated and removed after the manholes are demolished
- Treatment of stormwater
- Final restoration activities n OSDF and Borrow Area
- Control and management of OSDF, the Borrow Area, and OMTA is budgeted in control account CDG1, infrastructure construction is budgeted in CBSP
- Staff labor is charged to control account CECP
- Monitoring wells
- Centralized services provided by other PBSs
- Removal of all Phase I of the North Access Rd outside of the OSDF footprint
- Dust control on paved road
- Impacted material haul road removal

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU /648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CCPL	OSDF CONSTRUCTION

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontractors

b. TECHNICAL CONTENT:

Subcontractor services support services, matrixed labor, material and equipment utilized by the FEMP for Borrow Area development, construction of cell liners 4 through 7, placement of impacted material in cells 2 through 7, construction of final covers 1 through 7, temporary cover for cells 2 and 3 and infrastructure projects completed after December 2000 but before October 1, 2001.

c. SCOPE OF WORK:

The scope of this control account is further defined in charge number CCPL1-4 and CCPLA-K and includes the following:

Matrixed labor from Fluor Fernald Inc. support contractors

Excavation of material from the borrow area to support liner and final cover construction

Construction of liners for cells 4 through 7

Hauling of impacted material from the OMTA and placement of impacted material in cells 2 through 7

Construction of final covers for cells 1 through 7

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU /648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CCPL	OSDF CONSTRUCTION

14. ELEMENT TASK DESCRIPTION

Electric leak detection of the liner and final cover geomembrane liners

Installation of cap monitoring instruments

Construction of stormwater management and erosion and sediment controls

Interim restoration of the Borrow Area

Installation of a temporary cover on the impacted material in Cells 2 and 3

Furnish geosynthetic material for liner and final cover construction

Furnish aggregate and stone material for the liner and final cover construction

Dust Control

Horizontal monitoring wells for cells 4 through 7

Removal of Phase I of the North Access Road within the OSDF footprint

Removal and placement in the OSDF of all service roads, stockpiles and previously installed infrastructure which is not required after completion of the OSDF construction

d. WORK SPECIFICALLY EXCLUDED:

Excavation and hauling of impacted material from excavation, size reduction of debris and excavated material such as at- or below-grade structures, utilies, concrete

Any alterations to the tie between the Bio-Surge Lagoon and AWWT are the responsibility of the Aquifer Restoration Project

Air monitoring of teh OSDF during the project shutdown is budgeted and done by

WORK SCOPE DEFINITION
(Control Account)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU /648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0115-0003-00	12/00 - 12/09

12. TASK IDENTIFICATION (CONTROL ACCOUNT)	13. TASK DESCRIPTION (ONE LINE)
CCPL	OSDF CONSTRUCTION

14. ELEMENT TASK DESCRIPTION

Environmental Monitoring

Monitoring of leachate is the responsibility of the Aquifer Restoration Project

Roll-off boxes and sealands are provided by Waste Generator Services

OSDF is not responsible for Stewardship activities during project shutdown

The existing leachate lines between manholes 1 and 2 and manholes 2 and 3 will not be excavated and removed after the manholes are demolished

Treatment of stormwater

Final restoration activities in OSDF and the Borrow Area

Control and management of OSDF, Borrow Area and OMTA is budgeted in CBSP

Staff labor is charged to control account CECP

Monitoring wells

Centralized services is provided by other PBSs

Removal of all Phase I of the North Access Road outside of the OSDF footprint

Dust control on paved road

Impacted material haul road removal

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/01 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL1	OSDF CONSTRUCTION, MATRIXED LABOR

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontract

b. TECHNICAL CONTENT:

Charge Number CCPL1 covers Fluor Fernald matrixed labor from acquisitions, environmental safety and health (IH), Rad Operations, quality control, lab services, construction support service supervision, engineering services, environmental compliance, environmental monitoring/sampling, information management, infrastructure services, waste generator services, public affairs, operation assurance, and project controls/cost scheduling.

Drivers:
- Availability of matrixed labor after seasonal shutdowns
- Construction contracts will be written to put more burden on the Contractor to fulfill some of the current matrixed labor responsibilities and assignments such as: radiological compliance activities, quality assurance, and safety.

c. SCOPE OF WORK:

These matrixed personnel are utilized to support the construction operations of the OSDF from FY02 through FY09. The construction schedule is based on five (5) ten-hour days, Monday through Friday, throughout the construction season and minimal matrixed labor support throughout the seasonal shutdown. The schedule is also based on five (5) ten-hour days on a double shift basis during excavation

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.D	CONSTRUCTION	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00		10/01 - 12/09
12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CCPL1	OSDF CONSTRUCTION, MATRIXED LABOR	

14. ELEMENT TASK DESCRIPTION

and placement in 2006 and 2007. A majority of the matrixed labor support includes safety, radiological control, and quality assurance/control as follows:

- Safety personnel will coordinate with construction management personnel and the cell contractor's safety personnel on safety compliance and programs.
- Radiological technicians will perform air monitoring, radiological permitting, access control, and OSDF operations coverage.
- Quality assurance/control will oversee the CQC contractor and monitor impacted material placement, liner construction, cap construction, and borrow area management.

d. WORK SPECIFICALLY EXCLUDED:

Building trades labor

Fluor Fernald construction management

Fluor Fernald staff labor is covered under work package CECP3

Screening of clay materials is covered under work package CCPL2

All centralized services

Matrixed labor for OSDF Infrastructure Construction, Contols and Management, and work package CCPL4 (during FY01)

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/01 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL1	OSDF CONSTRUCTION, MATRIXED LABOR

14. ELEMENT TASK DESCRIPTION

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	5/03 - 12/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL2	OSDF BORROW AREA DEVELOPMENT

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Development of the OSDF Borrow Area. Development of the Borrow Area includes; submittals, procurement of equipment and materials, site preparation, excavating, screening, stockpiling, restoration, and project close-out.

c. SCOPE OF WORK:

Excavate and screen soil in the OSDF Borrow Area to provide material for use as: clay liner or clay material, contouring layer material, vegetative layer material, topsoil, compacted fill or rocky fill. Activities included in this scope of work are:

Prepare work plans, technical submittals and submittal register.

Procure material, equipment, labor specialty contractor services.

Site preparation; mobilization, verification of existing conditions (surveys), clearing and grubbing, stripping and stockpiling topsoil, build access roads, set-up field trailer relocated stockpiles (as required) set-up screener, install fences and signs and install surface water management and erosion controls.

Excavate material and push to screener for processing.

Screen (process) material and haul to stockpile area.

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	5/03 - 12/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL2	OSDF BORROW AREA DEVELOPMENT

14. ELEMENT TASK DESCRIPTION

Load and haul reject material to stockpile area. Identify end use of material.

Maintain dust controls.

Interim restoration of all disturbed areas

Perform final surveys

Close-out

d. WORK SPECIFICALLY EXCLUDED:

- Fluor Fernald staff labor (CECP3)
- Fluor Fernald matrixed labor (CCPL1)
- All centralized service
- Borrow Area development performed prior to FY02
- Treatment of surface water, leachate.
- Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.
- Final restoration of the OSDF Borrow Area and areas outside of the limits of the OSDF Final Cover.
- Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.
- Dust Control on paved roads.
- Construction Quality Control services.
- Cost increases or schedule delays caused by other than normal weather.
- Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/03 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL3	OSDF PLACEMENT

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontracts

b. TECHNICAL CONTENT:

Charge Number CCPL3 covers Subcontractor labor, equipment and material for Impacted Material Placement in Cells #2 through #7. Placement consists of the Select, Protective and Categories 1 through 5 of Impacted Material from various D&D projects and soil excavations. Charge Number CCPL3 also covers the control and management of active Impacted Material Catchment Areas located within the cells along with grading and compaction requirements, receiving of Impacted Material in the OMTA and removal of a portion of the Impacted Material Haul Road west of the OSDF.

Drivers:

Availability of sufficient building trade labor

EPA approval of 4-foot intervening layer to 2-foot intervening layer

c. SCOPE OF WORK:

Prepare work plans, technical submittals and the submittal register.

Mobilize equipment, perform safety checks, training, installation of surface water management and erosion controls, construction and rad fence.

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/03 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL3	OSDF PLACEMENT

14. ELEMENT TASK DESCRIPTION

Verification of existing conditions (including field surveys)

Installation of construction signs and grid signs.

Receive Impacted Material at the OMTA.

Removal of Impacted Portion of OSDF Haul Road west of OSDF

Placement of 12-inch Protective Layer (Cell Liner)

Placement of 24-inches of Select Impacted Material (Cell Liner)

Place Impacted Material in Cells #2 through #7

Placement of 36-inches of Select Impacted Material (Cell Cap)

Completion of Project Punchlist

Demobilize

d. WORK SPECIFICALLY EXCLUDED:

Additional costs and schedule delays that result from DOE required accountability, criticality, or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Excavation and hauling of Impacted Material from excavations, size reduction of debris and excavated material such as at-or below-grade structures, utilities, and concrete.

Dust Control on paved roads.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 3

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	10/03 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL3	OSDF PLACEMENT

14. ELEMENT TASK DESCRIPTION

Size reduction of Impacted Material or Debris from D&D projects.

Re-loading of prohibited items that were loaded and dumped in the cell.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

Treatment of surface water, leachate.

Fluor Fernald matrixed labor is covered under work package CCPL1.

Fluor Fernald staff labour is covered under work package CECP3.

All centralized services.

OSDF placement covered under CCPL4.

Impacted Material Haul Road Removal.

Construction costs for a laydown area at the Waste Pits railyard.

Construction Quality Control services.

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 1

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.D	CONSTRUCTION	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00		12/00 - 9/03
12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CCPL4	OSDF PH II CONSTRUCTION, MATERIAL, SERVICES	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Labor
Material
Subcontracts

b. TECHNICAL CONTENT:

Charge Number CCPL4 covers subcontractor costs and Fluor Fernald labor, equipment, andmaterial for activities associated with Cell 1 final cover construction, including installation of the temporary cover on the impacted material in Cell #2 and Cell #3. The temporary cover will be ConCover 180, which must be placed twice a year. This charge number also includes construction of the OMTA expansion/transite transfer areas west of "B" Street, FY01 impacted material placement, and control and management of the OMTA bulk debris. Charge Number CCPL4 also includes completion of miscellaneous OSDF activities started prior to but finished after December 1, 2000.

Drivers: - Last application of ConCover will be in the spring of 2003
- EPA approval of ConCover application

c. SCOPE OF WORK:

Submittals and procurement associated with ConCover application

Application of ConCover 180 in Cell #2 and Cell #3 through FY03

FY01 Impacted Material Placement

Construction of OMTA Expansion area from "B" Street west along the north process

Project Manager	Control Account Manager	Control Team Manager

WORK SCOPE DEFINITION
(Work Package)

1. PROJECT TITLE	2. DATE	
FEMP (DEFENSE)	09/05/2001	Page 2

3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	12/00 - 9/03

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL4	OSDF PH II CONSTRUCTION, MATERIAL, SERVICES

14. ELEMENT TASK DESCRIPTION

fence

Construction of the Transite Transfer Area

Operation and management of the OMTA Bulk Debris material receiving area from FY01 through FY03

Minor Control and Management activities in the OSDF during winter shutdown periods

The following activities were completed during FY01 subsequent to December 1, 2000:

Complete construction of OMTA from "B" Street to the east construction fence
Complete construction of Service Road Northwest of Cell #1
Complete construction of laydown yard west of Cell #1
Purchase of general services and materials
Complete purchase of stone/geosynthetics material for Cell #1 Final Cover Construction

Includes work scope cross walked from charge number CCC22 performed during FY01 for OSDF Phase II Construction, Materials, Service

d. WORK SPECIFICALLY EXCLUDED:

Treatment of surface water, leachate

Additional costs and schedule delays that result from DOE required accountability, criticality, or other drills

Leachate contingency plans

Excavation and hauling of impacted material from excavation, size reduction of debris and excavated material such as at or below-grade structures, utilities, and concrete

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPL4	OSDF PH II CONSTRUCTION, MATERIAL, SERVICES

14. ELEMENT TASK DESCRIPTION

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site

Impacted Material Haul Road removal

Construction quality control services

Cost increases or schedule delays caused by other than normal weather

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources

Construction of Valve House #7

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CCPLA	OSDF CELL #2 CAP	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #2 cap. The work scope includes submittals and procurement; site preparation; construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer and topsoil; vegetation; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #2 cap in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLA	OSDF CELL #2 CAP

14. ELEMENT TASK DESCRIPTION

fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #2; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #2 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #2; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and dust control.

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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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CCPLA	OSDF CELL #2 CAP

14. ELEMENT TASK DESCRIPTION

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #2; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #2; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #2 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald matrixed labor required for this work is covered under work package CCPL1

Fluor Fernald staff labor is covered under work package CECP3

Screening of clay materials is covered under work package CCPL2

All centralized services

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CCPLA	OSDF CELL #2 CAP

14. ELEMENT TASK DESCRIPTION

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/06 - 12/06

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLB	OSDF CELL #3 CAP

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #3 cap. The work scope includes submittals and procurement, site preparation, and construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer topsoil, vegetation and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #3 cap in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training;

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLB	OSDF CELL #3 CAP

14. ELEMENT TASK DESCRIPTION

installation of surface water management and erosion controls; construction fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #3; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #3 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #3; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and

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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLB	OSDF CELL #3 CAP

14. ELEMENT TASK DESCRIPTION

dust control.

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #3; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #3; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #3 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald matrixed labor required for this work is covered under work package CCPL1.

Fluor Fernald staff labor is covered under work package CECP3

Screening of clay materials is coverd under work package CCPL2

All centralized services

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CCPLB	OSDF CELL #3 CAP

14. ELEMENT TASK DESCRIPTION

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLC	OSDF CELL #4 LINER

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #4 liner. The work scope includes submittals and procurement; site preparation; construction of clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers; construction of perimeter clay wedges and access ramps; construction of the catchment area; video inspection of HDPE pipe; installation of horizontal monitoring wells #4 and #5; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #4 liner in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of material by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLC	OSDF CELL #4 LINER

14. ELEMENT TASK DESCRIPTION

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction fence; field surveys; clearing and grubbing; access/haul roads; removal of topsoil, excavation, overexcavation; removal of existing utilities including drain tiles; subgrade preparation and surveying of subgrade; maintenance of subgrade until placement of first lift of clay liner; installation of gravity inlet structures and reinforced concrete pipe; and dust control.

Construction of clay liner including maintenance of the Borrow Area Haul Road; traffic controls at the intersection of the Borrow Area Haul Road and North Entrance Road; loading of clay liner material from the OSDF Borrow Area stockpiles and hauling to OSDF Cell #4; placement, compaction, maintenance and survey of the clay material; construction surveys; and dust control.

Construction of primary and secondary geosynthetic liners including receiving, unloading, inspecting, storing geosynthetic liner materials (GCL, GML and geotextile); installation of liner penetration boxes and HPDE pipe; top of clay liner surface acceptance by the cell contractor, Fluor Fernald, Inc., GML specialty contractor and CQC consultant; primary and secondary GCL, GML and geotextile placement and installation, panel layout, welding, seaming and non-destructive testing and repair of GML; leak detection testing of the GML; location survey of GML panel and seams; hydrotesting of penetration boxes and solid wall HDPE pipe between penetration boxes and valve house #4; trenching, placement, primary and secondary liner terminations, backfill and compaction around OSDF Cell #4 perimeter; construction surveys; and dust control.

Construction of primary and secondary drainage layers including receiving, stockpiling, and inspection of #78 and #57 stone; placing drainage layer; installation of perforated HDPE pipe; rolling and surveying of drainage layer surfaces; construction surveys; and dust control.

Construction of perimeter clay wedges and access ramp including loading from Borrow area stockpiles and hauling to the OSDF Cell #4 perimeter; placement, compaction, maintenance and survey of the perimeter clay wedges; placement of sacrificial geomembrane; construction for Cell #4 access ramp; construction surveys; and dust control.

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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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CCPLC	OSDF CELL #4 LINER

14. ELEMENT TASK DESCRIPTION

Placing and surveying of non-impacted granular layer and geotextile in the Cell #4 catchment area.

Video inspection of solid wall HDPE pipes for the leachate detection system, leachate collection system, and redundant leachate collection system by specialty contractor, including initial videotaping of leachate lines between valve houses and inlet boxes in Cell #4.

Installation of horizontal monitoring wells #4 and #5 and tie-in to valve houses; and hydrotesting of the solid wall pipes for the leachate detection system, leachate collection system, and redundant leachate collection system.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald matrixed labor required for this work is covered under work package CCPL1.

Fluor Fernald staff labor is covered under work package CECP3

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Leachate contingency plans.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLC	OSDF CELL #4 LINER

14. ELEMENT TASK DESCRIPTION

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

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8. BUDGET AND REPORTING NUMBER	**9. BUDGET TITLE**	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
NEW PER CP# FY01-0015-0003-00		3/07 - 12/07
12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CCPLD	OSDF CELL #4 CAP	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #4 cap. The work scope includes submittals and procurement; site preparation; construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer and topsoil; vegetation; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #4 cap in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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1. PROJECT TITLE	2. DATE	
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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/07 - 12/07

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLD	OSDF CELL #4 CAP

14. ELEMENT TASK DESCRIPTION

fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #4; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #4 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #4; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and dust control.

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(Work Package)

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/07 - 12/07

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLD	OSDF CELL #4 CAP

14. ELEMENT TASK DESCRIPTION

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #4; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #4; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #4 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered under work package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

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(Work Package)

1. PROJECT TITLE	2. DATE	
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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/07 - 12/07

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLD	OSDF CELL #4 CAP

14. ELEMENT TASK DESCRIPTION

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME	
1.1.C.D	CONSTRUCTION	
5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW CP# FY01-0015-0003-00		8/04 - 12/05
12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CCPLE	OSDF CELL #5 LINER	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #5 liner. The work scope includes submittals and procurement; site preparation; construction of clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers; construction of perimeter clay wedges and access ramps; construction of the catchment area; video inspection of HDPE pipe; installation of horizontal monitoring well #6; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #5 liner in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of material by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training;

Project Manager	Control Account Manager	Control Team Manager

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW CP# FY01-0015-0003-00	8/04 - 12/05

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLE	OSDF CELL #5 LINER

14. ELEMENT TASK DESCRIPTION

installation of surface water management and erosion controls; construction fence; field surveys; clearing and grubbing; access/haul roads; removal of topsoil, excavation, overexcavation; removal of existing utilities including drain tiles; subgrade preparation and surveying of subgrade; maintenance of subgrade until placement of first lift of clay liner; installation of gravity inlet structures and reinforced concrete pipe; and dust control.

Construction of clay liner including maintenance of the Borrow Area Haul Road; traffic controls at the intersection of the Borrow Area Haul Road and North Entrance Road; loading of clay liner material from the OSDF Borrow Area stockpiles and hauling to OSDF Cell #5; placement, compaction, maintenance and survey of the clay material; construction surveys; and dust control.

Construction of primary and secondary geosynthetic liners including receiving, unloading, inspecting, storing geosynthetic liner materials (GCL, GML and geotextile); installation of liner penetration boxes and HPDE pipe; top of clay liner surface acceptance by the cell contractor, Fluor Fernald, Inc., GML specialty contractor and CQC consultant; primary and secondary GCL, GML and geotextile placement and installation, panel layout, welding, seaming and non-destructive testing and repair of GML; leak detection testing of the GML; location survey of GML panel and seams; hydrotesting of penetration boxes and solid wall HDPE pipe between penetration boxes and valve house #5; trenching, placement, primary and secondary liner terminations, backfill and compaction around OSDF Cell #5 perimeter; construction surveys; and dust control.

Construction of primary and secondary drainage layers including receiving, stockpiling, and inspection of #78 and #57 stone; placing drainage layer; installation of perforated HDPE pipe; rolling and surveying of drainage layer surfaces; construction surveys; and dust control.

Construction of perimeter clay wedges and access ramp including loading from Borrow area stockpiles and hauling to the OSDF Cell #5 perimeter; placement, compaction, maintenance and survey of the perimeter clay wedges; placement of sacrificial geomembrane; construction for Cell #5 access ramp; construction surveys; and dust control.

Placing and surveying of non-impacted granular layer and geotextile in the Cell

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW CP# FY01-0015-0003-00	8/04 - 12/05

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLE	OSDF CELL #5 LINER

14. ELEMENT TASK DESCRIPTION

#5 catchment area.

Video inspection of solid wall HDPE pipes for the leachate detection system, leachate collection system, and redundant leachate collection system by specialty contractor, including initial videotaping of leachate lines between valve houses and inlet boxes in Cell #5.

Installation of horizontal monitoring well #6 and tie-in to valve house; and hydrotesting of the solid wall pipes for the leachate detection system, leachate collection system, and redundant leachate collection system.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered under work package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Leachate contingency plans.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLE	OSDF CELL #5 LINER

14. ELEMENT TASK DESCRIPTION

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU
8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00		3/08 - 12/08
12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)	
CCPLF	OSDF CELL #5 CAP	

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #5 cap. The work scope includes submittals and procurement; site preparation; construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer and topsoil; vegetation; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #5 cap in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/08 - 12/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLF	OSDF CELL #5 CAP

14. ELEMENT TASK DESCRIPTION

fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #5; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #5 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #5; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and dust control.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/08 - 12/08

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLF	OSDF CELL #5 CAP

14. ELEMENT TASK DESCRIPTION

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #5; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #5; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #5 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered under work package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLF	OSDF CELL #5 CAP

14. ELEMENT TASK DESCRIPTION

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	8/05 - 12/06

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLG	OSDF CELL #6 LINER

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #6 liner. The work scope includes submittals and procurement; site preparation; construction of clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers; construction of perimeter clay wedges and access ramps; construction of the catchment area; video inspection of HDPE pipe; installation of horizontal monitoring well #7; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #6 liner in accordance with certified construction drawings, specifications and other contract requirements. Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of material by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	8/05 - 12/06

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLG	OSDF CELL #6 LINER

14. ELEMENT TASK DESCRIPTION

fence; field surveys; clearing and grubbing; access/haul roads; removal of topsoil, excavation, overexcavation; removal of existing utilities including drain tiles; subgrade preparation and surveying of subgrade; maintenance of subgrade until placement of first lift of clay liner; installation of gravity inlet structures and reinforced concrete pipe; and dust control.

Construction of clay liner including maintenance of the Borrow Area Haul Road; traffic controls at the intersection of the Borrow Area Haul Road and North Entrance Road; loading of clay liner material from the OSDF Borrow Area stockpiles and hauling to OSDF Cell #6; placement, compaction, maintenance and survey of the clay material; construction surveys; and dust control.

Construction of primary and secondary geosynthetic liners including receiving, unloading, inspecting, storing geosynthetic liner materials (GCL, GML and geotextile); installation of liner penetration boxes and HPDE pipe; top of clay liner surface acceptance by the cell contractor, Fluor Fernald, Inc., GML specialty contractor and CQC consultant; primary and secondary GCL, GML and geotextile placement and installation, panel layout, welding, seaming and non-destructive testing and repair of GML; leak detection testing of the GML; location survey of GML panel and seams; hydrotesting of penetration boxes and solid wall HDPE pipe between penetration boxes and valve house #6; trenching, placement, primary and secondary liner terminations, backfill and compaction around OSDF Cell #6 perimeter; construction surveys; and dust control.

Construction of primary and secondary drainage layers including receiving, stockpiling, and inspection of #78 and #57 stone; placing drainage layer; installation of perforated HDPE pipe; rolling and surveying of drainage layer surfaces; construction surveys; and dust control.

Construction of perimeter clay wedges and access ramp including loading from Borrow area stockpiles and hauling to the OSDF Cell #6 perimeter; placement, compaction, maintenance and survey of the perimeter clay wedges; placement of sacrificial geomembrane; construction for Cell #6 access ramp; construction surveys; and dust control.

Placing and surveying of non-impacted granular layer and geotextile in the Cell #6 catchment area.

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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	8/05 - 12/06

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLG	OSDF CELL #6 LINER

14. ELEMENT TASK DESCRIPTION

Video inspection of solid wall HDPE pipes for the leachate detection system, leachate collection system, and redundant leachate collection system by specialty contractor, including initial videotaping of leachate lines between valve houses and inlet boxes in Cell #6.

Installation of horizontal monitoring well #7 and tie-in to valve house; and hydrotesting of the solid wall pipes for the leachate detection system, leachate collection system, and redundant leachate collection system.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered under work package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Leachate contingency plans.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	8/05 - 12/06

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLG	OSDF CELL #6 LINER

14. ELEMENT TASK DESCRIPTION

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

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3. WBS ELEMENT CODE	4. WBS ELEMENT TITLE/NAME
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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0006-00	3/09 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLH	OSDF CELL #6 CAP

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract
Materials

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #6 cap. The work scope includes submittals and procurement, site preparation, and construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer topsoil, vegetation and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #6 cap in accordance with certified construction drawings, specifications and other contract requirements. Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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1.1.C.D	CONSTRUCTION

5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLH	OSDF CELL #6 CAP

14. ELEMENT TASK DESCRIPTION

fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #6; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #6 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #6; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and dust control.

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5. PERFORMING DIV/DEPARTMENT CODE	6. ORIGINATOR NAME/PHONE	7. WBS ELEMENT MANAGER
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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0006-00	3/09 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLH	OSDF CELL #6 CAP

14. ELEMENT TASK DESCRIPTION

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #6; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #6; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #6 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered under work package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLH	OSDF CELL #6 CAP

14. ELEMENT TASK DESCRIPTION

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	8/06 - 12/07

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLJ	OSDF CELL #7 LINER

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #7 liner. The work scope includes submittals and procurement; site preparation; construction of clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers; construction of perimeter clay wedges and access ramps; construction of the catchment area; video inspection of HDPE pipe; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #7 liner in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of material by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training;

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5. PERFORMING DIV/DEPARTMENT CODE	**6. ORIGINATOR NAME/PHONE**	**7. WBS ELEMENT MANAGER**
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8. BUDGET AND REPORTING NUMBER	**9. BUDGET TITLE**	
EW05H3030	ON-SITE DISPOSAL FACILITY	
10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
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12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CCPLJ	OSDF CELL #7 LINER	

14. ELEMENT TASK DESCRIPTION

installation of surface water management and erosion controls; construction fence; field surveys; clearing and grubbing; access/haul roads; removal of topsoil, excavation, overexcavation; removal of existing utilities including drain tiles; subgrade preparation and surveying of subgrade; maintenance of subgrade until placement of first lift of clay liner; installation of gravity inlet structures and reinforced concrete pipe; and dust control.

Construction of clay liner including maintenance of the Borrow Area Haul Road; traffic controls at the intersection of the Borrow Area Haul Road and North Entrance Road; loading of clay liner material from the OSDF Borrow Area stockpiles and hauling to OSDF Cell #7; placement, compaction, maintenance and survey of the clay material; construction surveys; and dust control.

Construction of primary and secondary geosynthetic liners including receiving, unloading, inspecting, storing geosynthetic liner materials (GCL, GML and geotextile); installation of liner penetration boxes and HPDE pipe; top of clay liner surface acceptance by the cell contractor, Fluor Fernald, Inc., GML specialty contractor and CQC consultant; primary and secondary GCL, GML and geotextile placement and installation, panel layout, welding, seaming and non-destructive testing and repair of GML; leak detection testing of the GML; location survey of GML panel and seams; hydrotesting of penetration boxes and solid wall HDPE pipe between penetration boxes and valve house #7; trenching, placement, primary and secondary liner terminations, backfill and compaction around OSDF Cell #7 perimeter; construction surveys; and dust control.

Construction of primary and secondary drainage layers including receiving, stockpiling, and inspection of #78 and #57 stone; placing drainage layer; installation of perforated HDPE pipe; rolling and surveying of drainage layer surfaces; construction surveys; and dust control.

Construction of perimeter clay wedges and access ramp including loading from Borrow area stockpiles and hauling to the OSDF Cell #7 perimeter; placement, compaction, maintenance and survey of the perimeter clay wedges; placement of sacrificial geomembrane; construction for Cell #7 access ramp; construction surveys; and dust control.

Placing and surveying of non-impacted granular layer and geotextile in the Cell

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EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLJ	OSDF CELL #7 LINER

14. ELEMENT TASK DESCRIPTION

#7 catchment area.

Video inspection of solid wall HDPE pipes for the leachate detection system, leachate collection system, and redundant leachate collection system by specialty contractor, including initial videotaping of leachate lines between valve houses and inlet boxes in Cell #7.

Tie-in to valve house; and hydrotesting of the solid wall pipes for the leachate detection system, leachate collection system, and redundant leachate collection system.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered underwork package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Leachate contingency plans.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

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8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
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CCPLJ	OSDF CELL #7 LINER

14. ELEMENT TASK DESCRIPTION

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

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12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLK	OSDF CELL #7 CAP

14. ELEMENT TASK DESCRIPTION

a. ELEMENTS OF COST:

Subcontract

b. TECHNICAL CONTENT:

Subcontractor labor, equipment and material costs required to construct the OSDF Cell #7 cap. The work scope includes submittals and procurement; site preparation; construction of contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer and topsoil; vegetation; and project closeout.

c. SCOPE OF WORK:

Provide for the construction of the OSDF Cell #7 cap in accordance with certified construction drawings, specifications and other contract requirements.

Related activities and services included in the scope of work are:

Contractor submittals to include preparation of work plans, technical submittals and the submittal register prepared by the cell contractor, including surface water management and erosion control plan, earthwork work plan, fugitive dust control plan, safe work plan, traffic control plan, project specific health and safety plan, QA plan and construction schedule.

Procurement of direct materials by Fluor Fernald, Inc, to include GCL and GML geosynthetic liner material, geotextile and welding rod.

Site preparation to include mobilization by the cell contractor; training; installation of surface water management and erosion controls; construction

Project Manager	Control Account Manager	Control Team Manager

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CCPLK	OSDF CELL #7 CAP

14. ELEMENT TASK DESCRIPTION

fence; field surveys, clearing and grubbing; excavation; culvert installation; construction of access/service road on the west side of the OSDF; reworking of the drainage ditch on the west side of Cell #7; excavation of the sacrificial clay wedges; removal of the OSDF haul road on the west side of Cell #7 and stockpiling of the non-impacted removed material; and dust control.

Construction of the contouring layer to include removal of existing silt fence from the select impacted material layer; initial survey of the existing select impacted material layer; grading and recompacting of the select layer; construction of access ramp; placing of non-impacted contouring layer; survey and verification of contouring layer elevations; surface water management and erosion controls; and dust control.

Construction of the clay cap to include maintenance of the Borrow Area Haul Road and North Entrance Road; traffic controls at the Borrow Area Haul Road and North Entrance Road intersection; excavation loading and hauling of the clay cap material from the OSDF Area stockpiles to OSDF Cell #7; placement compaction maintenance and surveying of the clay surface; construction survey; and dust control

Construction of the geosynthetic cap to include receiving, unloading, inspecting and storing of geosynthetic cap materials (GCL, GML and geotextile); top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor and CQC consultant; deployment of GCL, GML and geotextile; panel layout, welding, seaming and non-destructive testing of GML; leak detection testing of the GML by the cell contractor; location survey of GML panel and seams; construction surveying; and dust control.

Construction of the drainage layer to include receiving, unloading, stockpiling and inspecting of #78 stone; placing, rolling and surveying of the drainage layer surface; construction surveys; and dust control.

Construction of the Biointrusion barrier to include receiving, unloading, stockpiling and inspecting of biointrusion barrier and choke stone materials; survey and verification of top of drainage layer elevation prior to placement of the biointrusion barrier; placing of biointrusion barrier and choke stone; and dust control.

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10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?		**11. ESTIMATED START / COMPLETION DATE**
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12. TASK IDENTIFICATION (WORK PACKAGE)	**13. TASK DESCRIPTION (ONE LINE)**	
CCPLK	OSDF CELL #7 CAP	

14. ELEMENT TASK DESCRIPTION

Construction of the filter layer including receiving and stockpiling of the filter layer material (sand); survey and verification of top of biointrusion barrier layer elevation prior to placement of the filter layer; loading hauling and placement of the filter layer material; and dust control.

Construction of the vegetative layer including maintenance of the Borrow Area Haul Road, survey and verification of top of filter layer elevation prior to placement of the vegetative layer; loading of the vegetative layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #7; placement of the vegetative layer; and dust control.

Construction of the topsoil layer including maintenance of the Borrow Area Haul Road; survey and verification of top of the vegetative layer elevation prior to placement of the topsoil layer; loading of the topsoil layer material from OSDF Borrow Area stockpiles and hauling to OSDF Cell #7; placement of the topsoil layer; and dust control.

Plant permanent vegetation on the Cell #7 final cover including seeding and erosion mat.

Project closeout to include completion of project punchlist; final surveys and redline drawings submittal; and demobilization by the cell contractor.

d. WORK SPECIFICALLY EXCLUDED:

Fluor Fernald staff labor is covered underwork package CECP3

Fluor Fernald matrixed labor is covered under work package CCPL1

Screening of clay materials is coverd under work package CCPL2

All centralized services

Treatment of surface water, leachate.

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49	JD CHIOU/648-3726	JD CHIOU

8. BUDGET AND REPORTING NUMBER	9. BUDGET TITLE
EW05H3030	ON-SITE DISPOSAL FACILITY

10. ORIGINAL SCOPE? / CHANGE TO WORK SCOPE? / NEW SCOPE?	11. ESTIMATED START / COMPLETION DATE
NEW PER CP# FY01-0015-0003-00	3/09 - 12/09

12. TASK IDENTIFICATION (WORK PACKAGE)	13. TASK DESCRIPTION (ONE LINE)
CCPLK	OSDF CELL #7 CAP

14. ELEMENT TASK DESCRIPTION

Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.

Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.

Dust Control on paved roads.

Construction Quality Control services.

Cost increases or schedule delays caused by other than normal weather.

Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

SECTION 4

1.0 NARRATIVE

1. PROJECT TITLE: ON-SITE DISPOSAL FACILITY PROJECT	2. DATE: 09/10/01	3. PBS#: 03
4. WBS ELEMENT CODE: 1.1.C.D.	5. WBS ELEMENT TITLE: OSDF CONSTRUCTION	
6. CAM NAME/ PHONE: JYH-DONG CHIOU/ 3726	7. CAM SIGNATURE:	
8. ORIGINAL/ CHANGE SCOPE/ PER CP#:	9.CONTROL ACCOUNT: CCPL	

SECTION 4: CCPL – OSDF CONSTRUCTION

1.0 NARRATIVE

1.1 OVERVIEW

The closure plan for this control account covers OSDF Construction Matrixed Labor, OSDF Borrow Area Development, OSDF impacted material placement in OSDF Cells #2 through #7, OSDF Phase III Construction/ Material/ Services for the OSDF Cell #1 final cover, construction of liners for OSDF Cells #4, #5, #6, and #7, and construction of final covers (caps) OSDF Cells #2 through #7.

The following charge numbers are under this control account:

1.1.1 CCPL1 – OSDF Construction, Matrixed Labor

Charge Number CCPL1 is for support of construction of the OSDF and associated activities. It covers Fluor Fernald matrixed labor from acquisitions, environmental safety and health (IH), Rad Operations, quality control, lab services, construction support service supervision, engineering services, environmental compliance, environmental monitoring/sampling, information management, infrastructure services, waste generator services, public affairs, operation assurance, project controls/ cost scheduling.

1.1.2 CCPL2 – OSDF Borrow Area Development

Charge Number CCPL2 covers subcontractor labor, equipment and material required to provide clay for the clay liners for OSDF Cells #4 through #7, and to provide the material required for the various layers of the OSDF final covers for OSDF Cells #2 through #7. Work covered by this charge number begins with excavation, includes stockpiling in the OSDF Borrow Area, and ends with interim restoration of the excavated areas of the Borrow Area excavation. Screening and stockpiling of clay for OSDF Cell #4 liner will be performed by Fluor Fernald, Inc.

1.1.3 CCPL3 – OSDF Placement

Charge Number CCPL3 covers subcontractor labor, equipment and material required to place impacted material from D&D operations and soils excavation. It covers placement of all impacted material categories in OSDF Cells #2 through #7.

1.1.4 CCPL4 – OSDF Phase III Construction, Materials, Services

Charge Number CCPL4 covers subcontractor costs, and Fluor Fernald labor, equipment and material for activities associated with Cell 1 final cover construction that extend beyond September 30, 2001 and includes installation of the temporary cover on the impacted material in Cell #2 and Cell #3. The temporary cover will be ConCover 180, which must be placed twice a year. This charge number also covers management of the OSDF Cell #1 final cover through December 31, 2001. This charge number also includes OMTA expansion/ transite transfer area west of "B" Street, FY01 impacted material placement and control and management of the OMTA bulk debris after completion of impacted material placement.

1.1.5 CCPLA – OSDF Cell #2 Cap

Charge Number CCPLA covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #2 cap.

1.1.6 CCPLB – OSDF Cell #3 Cap

Charge Number CCPLB covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #3 cap.

1.1.7 CCPLC – OSDF Cell #4 Liner

Charge Number CCPLC covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #4 liner.

1.1.8 CCPLD – OSDF Cell #4 Cap

Charge Number CCPLD covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #4 cap.

1.1.9 CCPLE – OSDF Cell #5 Liner

Charge Number CCPLE covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #5 liner.

1.1.10 CCPLF – OSDF Cell #5 Cap

Charge Number CCPLF covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #5 cap.

1.1.11 CCPLG – OSDF Cell #6 Liner

Charge Number CCPLG covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #6 liner.

1.1.12 CCPLH – OSDF Cell #6 Cap

Charge Number CCPLH covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #6 cap.

1.1.13 CCPLJ – OSDF Cell #7 Liner

Charge Number CCPLJ covers subcontractor labor, equipment and material costs and subcontractor costs required to construct the OSDF Cell #7 liner.

1.1.14 CCPLK – OSDF Cell #7 Cap

Charge Number CCPLK covers subcontractor labor, equipment and material costs required to construct the OSDF Cell #7 cap.

1.2 ASSUMPTIONS/EXCLUSIONS

1.2.1 Assumptions

1.2.1.1 General Assumptions

- Scope and schedule based on Scenario 6.
- All work is performed with building trades personnel (Davis Bacon).
- The future construction laydown area will be built south of the OSDF Cell #8, as part of OSDF Infrastructure (CBSP).
- The existing leachate lines between manholes 1 and 2 and manholes 2 and 3 will be abandoned in place.
- R1 – D-615 General area air sample monitoring will not be performed when the OSDF and/or OMTA are shut down, unless maintenance or other activities are performed in the cell.

- There is no SSR or ORR required prior to liner construction, cover construction, OSDF Borrow Area development or impacted material placement.

- If required, the Waste Pits Rail Yard area will be available to use as a laydown area for stockpiling of OSDF Construction Materials by IQ – FY06.

- Double shift work will require lighting and will cause an increase in traffic and an increase in noise from equipment and operations at night. It is assumed that 2nd shift work will be acceptable to neighbors, nearby residents, stakeholders, the EPA and the DOE.

- Main phone line trunk relocation that currently is in the OSDF footprint will be re-located by D&D as part of their utility relocation.

- RIMIA semi-trailer parking area will be relocated or not needed by WGS by the first quarter of FY04.

- Any alterations to the leachate conveyance line tie-in between the Bio-Surge Lagoon and AWWT are the responsibility of Aquifer.

1.2.1.2 Specific Assumptions

CCPL1 – OSDF Construction, Matrixed Labor

- Matrixed labor does not include building trades labor.

- Matrixed labor is baselined with the assumption that the cell contractor will take over some of the matrixed labor responsibilities and assignments such as radiological compliance activities, quality assurance and safety. Contracts will be written to put more burden on the contractor to fulfill these requirements.

CCPL2 – OSDF Borrow Area Development

- East side of east field Borrow Area contains sufficient suitable material to complete cell liner and final cover construction. Gray clay is not used for clay liner or clay-cap construction. Brown clay may be used for vegetative and contouring layers if the required quantity of gray clay is insufficient.

CCPL3 – OSDF Placement

- Impacted material placement is based on EPA approval of proposed IMPP change from 4-foot intervening layer to 2-foot intervening layer.

- The impacted material quantities remaining to be placed in the OSDF Cells are based on the 4/24/01 revision of the "Proposed SDFP Schedule/Budget –

Scenario 6" spreadsheets (i.e. 1,916,000 ICY total soils/debris including 377,400 ICY of debris).

- Impacted material, including double-bagged asbestos, packaged in closed containers will be delivered to the OSDF in a manner that the containers can be safely and easily unloaded. Improperly packaged containers will be returned to the originator for repackaging.

- Impacted material received at the OMTA and/or at the OSDF will meet approved waste acceptance criteria.

- An additional CAT 826 or equivalent compactor will be leased or purchased to support debris placement in construction years 2006 and 2007.

- The production area will operate as a contamination area to facilitate hauling of debris. Wheel washing will not be performed on roll-off box/debris trucks.

- Thorium-contaminated debris sent to the OSDF is to be covered by a surfactant budgeted for and applied by D&D prior to delivery to the OMTA. The OMTA will not become a thorium area after thorium contaminated material is dumped.

- Soils Excavation Project will load and haul thorium-contaminated soils/debris into trucks so as not to contaminate the truck tires and haul roads. OSDF will unload the truck so that the tires and haul roads are not contaminated.

- Debris will be received in the bulk debris area when the OSDF is shut down. Debris will be received in the container area when the OSDF is open. Transite will be delivered to the transite transfer area on flatbeds by Waste Generator Services and unloaded by the Cell Contractor.

<u>CCPL4 – OSDF Phase III Construction, Material, Services</u>

- Last application of ConCover will be in the spring of 2003.
- EPA approval of ConCover application.

<u>CCPLA – OSDF Cell #2 Cap</u>
<u>CCPLB – OSDF Cell #3 Cap</u>
<u>CCPLD – OSDF Cell #4 Cap</u>
<u>CCPLF – OSDF Cell #5 Cap</u>
<u>CCPLH – OSDF Cell #6 Cap</u>
<u>CCPLK – OSDF Cell #7 Cap</u>

CCPLC – OSDF Cell #4 Liner
CCPLE – OSDF Cell #5 Liner
CCPLG – OSDF Cell #6 Liner
CCPLJ – OSDF Cell #7 Liner

- Over excavation of unsuitable subgrade material for OSDF cell liners will be less than 2,000 CY per cell.

1.2.2 Exclusions

- Treatment of surface water, leachate.
- Additional costs and schedule delays that result from DOE required accountability, criticality or other drills.
- Final restoration of the OSDF Borrow Area and areas outside of the limits of the OSDF Final Cover.
- Leachate contingency plans.
- Construction of Valve House #7.
- Excavation and hauling of impacted material from excavations, size reduction of debris and excavated material such as at- or below-grade structures, utilities, and concrete.
- Purchase and disposal of major pieces of construction equipment that cannot be decontaminated and removed from site.
- Dust Control on paved roads.
- Impacted Material Haul Road Removal.
- Size reduction of impacted material or debris from D&D projects.
- Construction costs for a laydown area at the Waste Pits railyard.
- Construction Quality Control services.
- Cost increases or schedule delays caused by other than normal weather.
- Cost increases or schedule delays for unforeseen subsurface geotechnical conditions or resulting from the discovery of cultural resources.

- Annual video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by ARWWP.

1.2.3 Government-Furnished Equipment/Services

None

1.3 DRIVERS - General

- Approved OSDF Final Design.
- Sufficient building trade labor can be employed to support double shift excavation and placement in 2006 and 2007.
- Closure of North Access Road by end of FY04.
- Availability of matrixed labor after seasonal shutdowns.

1.4 PROJECT PHYSICAL DESCRIPTION

The On-Site Disposal Facility is located in the northeast corner of the FEMP. The facility is located within survey coordinates N483400, N480000, E1351750, and E1350600. There are several areas adjacent to the OSDF, which support the construction of the liners, caps and impacted material placement. These are the OSDF Borrow Area, the On-Site Disposal Facility Material Transfer Area (OMTA), the future OMTA Expansion Areas, the Construction Laydown Area, the future Construction Laydown Area, the Contractor's Administration Area and the OSDF North Stockpile Area.

The OSDF Borrow Area is south of the OSDF in an area bounded on the east by the Mid-Valley pipeline easement, on the west by the South Entrance Road, and on the south by Willey Road. The remaining area for OSDF Borrow Area development is approximately 30 acres and will be developed in seven Subareas.

The OMTA currently consists of two areas, the bulk debris area and the container area, - both are located west of the OSDF. Both areas of the OMTA will be expanded as the project progresses.

The existing container area is bounded on the south by Building 77, on the west by "E" Street, on the east by the former production area fence, and it extends to the north to the former location of Building 78. The container area will be expanded to the north to the Impacted Material Haul Road and to the south approximately to the south edge of the existing water tower.

The existing bulk debris area is bounded on the south by the Impacted Material Haul Road, on the north by the railyard, on the east by the OSDF and on the west by "B" Street. The bulk debris area will be expanded to the west into the area of the existing quonset huts. The expanded bulk debris area will be bounded on the north by the former production area fence, on the south by the Impacted Material Haul Road, on the east by "B" Street and on the west by stockpile SP-7.

The existing Construction Laydown Area is located west of the OSDF. It is bounded on the north by the Fire Training Road, on the south by the railyard on the east by the OSDF on the west by HWMU-1. Another construction laydown area will be built to the south of contingency OSDF Cell 8 and north of the OSDF Borrow Area.

The Contractor's Administration Area is located southeast of the OSDF. It is northeast of the OSDF Borrow Area and southeast of the form Sewage Treatment Plant.

The OSDF North Stockpile Area which is triangular in shape, is located north of the OSDF and south of the intersection of the new North Entrance Road and the old North Entrance Road.

1.5 PROJECT PLAN/TECHNICAL SCOPE AND QUANTIFICAITON

1.5.1 CCPL1 – OSDF Construction, Matrixed Labor

OSDF construction matrixed labor include: acquisitions, environmental safety and health (IH), rad operations, quality control, lab services, construction support services, waste generator services, public affairs, operation assurance, project control/cost scheduling. The construction schedule is based on (5) ten hour days, Monday through Friday through out the construction season and minimal matrixed support through the seasonal shutdown. The construction schedule is based on (5) ten-hour days on a double shift basis during excavation and placement in 2006 and 2007.

1) Task #1 – Matrixed Labor

1.1) Plan/Scope – Matrixed Labor

- These matrixed personnel are utilized to support the construction operations of the OSDF from FY01 through FY09. A majority of the matrixed labor support include safety, radiological control, quality assurance/control, are essential to the success of the construction execution. Safety personnel will coordinate with construction management personnel and the cell contractor's safety personnel on safety compliance and programs. Radiological technicians will perform air monitoring, radiological permitting, access control and OSDF operations coverage. Quality assurance/control will oversee the CQC contractor and monitor impacted material placement, liner construction, cap construction and borrow area management.

1.2) Quantification – Matrixed Labor

- See manpower schedule #1CD03

1.5.2 CCPL2 – OSDF Borrow Area Development

The scope of work for this charge number is the development of the OSDF Borrow Area. OSDF Borrow Area Development includes: submittals and procurement, site preparation, excavation, screening, and stockpiling of material for the OSDF liners and caps, interim restoration and close-out. Borrow Area Development will be performed by a construction contractor (cell contractor) from 2004 through 2008. Borrow Area Development in 2003 consists of excavation, screening and stockpiling of clay for Cell #4 liner and will be performed by Fluor Fernald, Inc.

1) Task #1 – Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope – Submittals

Screening and stockpiling of clay for OSDF Liner #4 will be performed by Fluor Fernald. Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by SDFP Engineering and supported by SDFP construction, safety and QC. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, borrow area management plan and QA plan.

The remainder of the Borrow Area Development will be performed by the cell contractor. Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, borrow area management plan, project specific health and safety plan and QA plan. The construction schedule for Borrow Area Development will be prepared by the cell contractor.

1.1)2 Quantification – Submittals

None

1.2) Subtask #2 – Procurement

1.2)1 Plan/Scope – Procurement

Procure material, equipment, labor and specialty contractor services for the screening and stockpiling of clay for the OSDF Cell #4 liner. The following material, equipment, labor and services will be procured by Fluor Fernald, Inc. for this activity:

- Material: none
- Equipment: heavy equipment, screener, conveyor vehicles, small tools.
- Labor: Building Trades Labor, Labor Support Contractor labor,
- Subcontractor/Services: port-o-let services and bottled water.

1.2)2 Quantification

Not applicable.

2) Task #2 – Site Preparation

Site Preparation includes Technical Specification Sections 02100, 02110, 02200, and 02721.

2.1) Plan/Scope – Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, excavation of test pits for pre-conformance testing, construction fence,

- Verification of existing conditions (including field surveys)

- Clearing and grubbing, access roads, preparation of construction area, stripping and stockpiling of topsoil

- Purchase and setup of an 8′ x 12′ field trailer

- Relocation of stockpiles as required

- Purchase/lease and setup of screening equipment. This activity will require a vendor representative to oversee setup.

- Dust control

2.2) Quantification – Site Preparation

The following are estimated quantities for the construction contractor per season:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, 1 superintendent, and 1 safety engineer

- Training, all labor must receive on-site training

- Installation of silt fence and excavation of test pits for pre-conformance testing will take 3 days and will require 2 laborers, 1 CAT 416 backhoe, 1 operator and 1,000 lf of silt fence.

- Field survey will take 1 day and will require 2 surveyors

- Stripping of approximately 5.5 acres or approximately 9,000 cy of top soil and stockpiling will take 8 days and will require 1 CAT D8 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 4 teamsters, and 1 laborer

- Set up of the 8′ x 12′ field trailer will take 2 days and will require 2 laborers

- Stockpile SP-0028 is approximately 8,000 cy. Relocation will take 6 days and will require 1 CAT D8 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 4 teamsters and 1 laborer.

- Installation of construction fencing will take 2 weeks and will require 2 laborers and 2,650 lf of fencing

- Surface water management and erosion control/storm drainage ditched and culverts

- Install 30" CMP - 100lf will require 1 CAT 330 excavator, 1 walk behind compactor, 1 CAT 563 compactor, 12 cyd pipe bedding, 2 laborers and 1 operators for 2 days.

- Excavate 500lf 2" bottom ditch this will require 1 CAT 330 trackhoe, 1 haul truck, 1 operator for 3 days and 1 teamster and 1 laborer for 1 day.

- Setup of screener and conveyors will take 3 days and will require 1 CAT 330 excavator, 1 CAT 966 loader, 2 operators and 2 laborers.

3) <u>Task #3 – Excavate and Screen Clay Material</u>

Excavate and screen clay material include Technical Specification Sections 02200, 02225 and 13000

3.1) <u>Plan/Scope – Excavation and Screen Clay Material</u>

- Excavate clay material and push to stockpiles to be screened

- Load clay material from stockpiles and transport to screener

- Screen clay material, remove waste material for use as fill on permanent slopes of Borrow Area or stockpile for use as contouring or vegetative layer material

- Load and haul screened material to the Borrow Area Stockpile area
- Construction survey
- Dust control

3.2) Quantification

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, stockpiling, transportation to the screener, screening of clay, and hauling of clay and waste material to the Borrow Area stockpile area for each clay liner (liners 4) will take 86 days in FY03. This activity will require 1 screener, 2 conveyors, 1 CAT 330 excavator, 1 CAT 966 loader, 1 CAT D8 bulldozer, 1 CAT Challenger with disc, 3.5 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 4 teamsters, 1 laborer, 1 2" water pump, 1 small electric generator.
- Excavation, stockpiling, transporting to screener, screening of clay, and hauling of clay and waste material to the Borrow Area stockpile for each liner and cap from FY04 through FY08 will take 88 days for a cap and a liner per season. This activity will require 2 screeners, 4 conveyers, 2 CAT 330 excavators, 1 CAT 966 loader, 1 CAT D8 bulldozer, 1 CAT Challenger with disc, 4.5 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon, 4 teamsters, 2 laborers, 1-2" pump, and 1 small electric generator.
- Construction survey will take 20 days and will require 2 surveyors.

4) Task #4 – Excavate and Stockpile Contouring Layer, Vegetative Layer and Topsoil Layer

Excavation and stockpile contouring layer, vegetative layer and topsoil layer includes Technical Specification Sections 02240 and 13000

4.1) Plan/Scope – Excavate and Stockpile Contouring Layer, Vegetative Layer and Topsoil Layer

- Excavate material for contouring layer, vegetative layer and topsoil layer, load and haul to the Borrow Area Stockpile Area.
- Construction survey
- Dust control

4.2) Quantification – Excavate and Stockpile Contouring Layer, Vegetative Layer and Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- This activity will take 50 days and require 1 CAT 330 excavator, 1 CAT D8 bulldozer, 1 CAT D6 bulldozer, 3 operators, 4 Volvo A-30 trucks, 4 teamsters and 1 laborer

- Construction survey will require 2 surveyors for 12 days

- Dust control will require 1 CAT 613 waterwagon and 1 teamster

5) Task #5 – Interim Restoration

5.1) Plan/Scope – Interim Restoration

- Fine grading of slopes
- Fine grading of bottom of excavation
- Temporary seeding
- Installation of erosion mat on slopes
- Permanent seeding on final slopes by subcontractor
- Application of surfactant on stockpiles by subcontractor
- Construction survey
- Surface water management and erosion control
- Dust control

5.2) Quantification – Interim Restoration

Refer to table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Interim restoration will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT challenger with disc, 2 operators, 1 Volvo A-30 trucks, 1 CAT 613 waterwagon, 2 teamsters, 2 laborers

- Construction survey will take 5 days and will require 2 surveyors

- Dust control

6) Task #6 – Closeout

6.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

6.2) Quantification

The following are estimated quantities for the construction contractor:

1.5.3 CCPL3 – OSDF Placement

The scope of work for this charge number is impacted material placement and includes: submittals and procurement, site preparation, receiving soil/debris in the OSDF Material Transfer Area (OMTA), removal of portions of the impacted material haul road west of the OSDF, placement of OSDF Cell liner protective and select layers, placement of OSDF final cover select layers, placement of Category 1 through 5 material and close-out. Impacted material placement will be performed by the cell contractor. Impacted material placement is based on Rev. 1 and page change notices of the IMPP issued as of April 15, 2001.

1) Task #1 – Submittals

Submittals include Technical Specification 13010

1.1) Plan/Scope – Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, impacted material placement plan, project specific health and safety plan and QA plan. The construction schedule for impacted material placement will be prepared by the cell contractor.

1.2) Quantification – Submittals

Not applicable

2) Task #2 – Site Preparation

Site preparation includes Technical Specification Sections 02100 and 13010

2.1) Plan/Scope – Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction/Rad fence,
- Verification of existing conditions (including field surveys)
- Installation of construction signs and Cell grid signs

2.1) Quantification – Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, 1 superintendent, and 1 safety engineer
- Training – field labor force must receive on-site training
- Installation of silt fence will take 4 days and will require 2 laborers, 1 CAT 416 backhoe, 1 operator and 2,000 lf of silt fence.
- Installation of construction/Rad fencing will take 2 days and will require 2 laborers and 1,000 lf of fencing
- Field survey will take 1 day and will require 2 surveyors
- Installation of construction signs and Cell grid signs will take 3 days and will require 2 laborers

3) Task #3 – Receive Impacted Material at the OMTA

3.1) Plan/Scope – Receive Impacted Material at the OMTA

The OMTA will consist of four areas: 1) a container area; 2) a bulk debris area; 3) a transite transfer area; and 4) a bulk soil area.

- Waste Generator Services (WGS) will bring roll-off boxes of debris to the bulk debris area and dump the debris. The cell contractor will consolidate the material into piles. Debris will be received in the bulk debris area from December through February when the OSDF is shut down. The cell contractor will load bulk debris into transport vehicles, haul to OSDF and dump. The equipment in the bulk debris area will be utilized year round to consolidate material into piles and to load material to be transported to the OSDF.

- WGS will deliver roll-off boxes of debris to the container area. The cell contractor will pick up the containers, transport to the Cell, dump and return the containers to the container area. The container area will operate from March through November when the OSDF is open.

- WGS will deliver palletized/bundled transite to the transite transfer area and the cell contractor will unload the material. The cell contractor will load the transite onto flatbeds, transport to the Cell and unload the transite in the Cell.

- Cell contractor (soils excavation) will excavate, load and haul soil to the OMTA bulk soil area and consolidate into piles. The cell contractor will also excavate, load and haul bulk soil from the OMTA bulk soil area to the OSDF and dump.

- Lighting for double shift operations.

3.2) Quantification – Receive Impacted Material at the OMTA

The following are estimated quantities for the construction contractor:

- Consolidation of debris into piles in the bulk debris area will take place December through February. Loading of material from the bulk debris area and transport to the OSDF will take place March through December. These activities will require the same equipment and labor which will be 1 CAT 763 track loader with 4-way bucket, 1 CAT 330 excavator with grapple, 1 small hydroseeder for dust control, 1 farm tractor to pull the hydroseeder, 1 operator, and 2.5 laborers. Loading of bulk debris will also require 2 roll-off box trucks, 4 specialized roll-off boxes (Fluor Fernald currently owns 2 of the boxes) and 2 teamsters March through November.

- Transport of roll-off boxes from the container area to the OSDF will utilize the roll-off box trucks, teamster and laborers from the bulk debris area and will take place March through November.

- Unloading of transite in the transite transfer area, loading of the transite onto flatbeds, transporting to the OSDF and unloading in the Cell will take place from March through November. This activity will require 1 CAT TH83 forklift, 1 semi-tractor and 5 semi-flatbed trailers. Because this activity is intermittent, the operator and teamster required for this activity will be shared with other activities.

- Lighting for double shift operations in the OMTA will take place for 5.5 months per year in years 2006 and 2007. This activity will require 4 portable gas powered light plants for 5.5 months.

4) Task #4 – Removal of Impacted Portion of the OSDF Haul Road

Removal of impacted portion of the OSDF Haul Road includes Technical Specification Section 02200

4.1) Plan/Scope – Removal of Impacted Portion of the OSDF Haul Road

- Remove a 20-foot wide x 400-foot long section of the impacted material haul road adjacent to the west side of the OSDF. Excavation will be to a depth of 2.5 feet. This activity will occur 6 times (once each for Cells 2 through 7) in the construction season prior to the construction of a particular cap. The excavated impacted material will be placed in the OSDF. Equipment and labor for placement of this material is part of task 8 of this charge number.

- Construction survey

- Dust control

4.2) Quantification – Removal of Impacted Portion of the OSDF Haul Road

The following are estimated quantities for the construction contractor:

- Removal of the impacted material haul road will take 2 days and will require 1 CAT 330 excavator, 1 CAT D8 bulldozer, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 3 teamsters and 1 laborer. Approximately 750 cy of impacted material will be excavated.

- Construction survey will take 0.5 days and will require 2 surveyors

5) Task #5 – Placement of the 12-Inch Protection Layer (Cell Liner)

Placement of the 12-inch protective layer (cell liner) includes Technical Specifications Impacted Material Placement Plan, 13010

5.1) Plan/Scope – Placement of the 12-Inch Protection Layer (Cell Liner)

- Placement of the 12-inch impacted material protective layer for the Cell liners will occur 4 times (once each for Cells 4 through 7). The in-place quantity will be approximately 11,000 cy for each Cell liner. The material will be excavated and delivered to the OSDF by the cell contractor (Soils Excavation Project).

- Construction survey

- Dust control

5.2) Quantification – Placement of the 12-Inch Protection Layer (Cell Liner)

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Placement of each of the 12" impacted material protective covers for the Cell liners will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 5 days for dust control), 0.5 teamster, and 2 laborers

- Survey of the top of protective layer will take 2 days and will require 2 surveyors.

6) Task #6 – Placement of 24 Inches of Select Impacted Material (Cell Liner)

Placement of 24 inches of select impacted material (cell liner) includes Technical Specifications Impacted Material Placement Plan, 13010

6.1) Plan/Scope – Placement of 24 Inches of Select Impacted Material (Cell Liner)

- Placement of the 24" select impacted material for the Cell liners will occur 4 times (once each for Cells 4 through 7). The in-place quantity will be approximately 22,000 cy for each Cell liner. The material will be excavated and delivered to the OSDF by the cell contractor (soils excavation).

- Construction survey.

- Dust control

6.2) Quantification – Placement of 24 Inches of Select Impacted Material (Cell Liner)

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Placement of each of the 24" select impacted material layers for the Cell liners will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.5 teamster, and 2 laborers

- Survey of the top of select impacted material layer will take 1 day and will require 2 surveyors.

7) Task #7 – Placement of 36 Inches Select Impacted Material (Cell Cap)

Placement of 36 inches select impacted material (cell cap) includes Technical Specifications Impacted Material Placement Plan, 13010

7.1) Plan/Scope – Placement of 36 Inches Select Impacted Material (Cell Cap)

- Placement of the 36" select impacted material layer for the OSDF will occur 6 times (once each for Cells 2 through 7). The in-place quantity will be approximately 33,000 cy for each Cell cap. The material will be excavated and delivered to the OSDF by the cell contractor (soils excavation).

- Install 2 rows of silt fence on the east and west slopes of the cell.

- Construction survey.

- Dust control.

7.2) Quantification – Placement of 36 Inches Select Impacted Material (Cell Cap)

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Placement of each of the 36" select impacted material layers for the OSDF will take 20 days and will require 1 CAT D6 bulldozer, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 2 laborers

- Installation of 2 rows of silt fence will require 1,600 lf of silt fence. Labor for silt fence installation is included in the 36" select impacted material layer placement activity. Silt fence installation will require 1 trencher for 5 days.

- Survey of the top of select impacted material layer will take 1 day and will require 2 surveyors.

8) Task #8 – Placement of Impacted Material

Placement of impacted material includes Technical Specification Impacted Material Placement Plan, 13010

8.1) Plan/Scope – Placement of Impacted Material

- Recompaction of the Cell surface when placement begins in a given construction season

- Actual placement of impacted material will typically occur from mid-March through the end of November (8.5 months). Equipment mobilization, equipment decontamination, and equipment demobilization will require an additional 1.5 months. These activities will take place from mid-February through mid-December. Placement of all categories of impacted material is included, but a

precise duration for each category cannot be determined in advance and is not necessary. The required equipment will be shifted between placement activities of different categories as needed. Placement of impacted material during construction years 2006 and 2007 will be performed on a double-shift basis. Shift differential will be applied to 2nd shift.

- Construction survey
- Dust control

8.2) Quantification – Placement of Impacted Material

The following are estimated quantities for the construction contractor:

- Recompaction of the Cell surface prior to placement of impacted material will take 3 days. The equipment and labor is included in the placement activity.
- Placement of impacted material will require the following equipment for 10 months per year: 1 CAT D8 bulldozer, 1 CAT 563 smooth drum roller, 1 CAT 330 excavator, 1 CAT TH83 forklift, 3.5 operators, 2 CAT 613 waterwagons (for dust control), 1 semi-tractor, 2 teamsters, 5 laborers. Placement of impacted material will require 1 CAT 826 compactor for 12 months. During calendar years 2006 and 2007, 1 additional CAT 826 and 10 portable light plants will be required for 5.5 months per year.
- Construction survey will require 2 surveyors for 10 months.

9) Task #9 – Closeout

9.1) Plan/Scope – Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

9.2) Quantification

Not applicable

1.5.4 CCPL4 – OSDF Phase III Construction, Materials, Services

The following activities will be completed prior to implementation of CCPL4 and do not require plan and scope or quantity descriptions.

- Complete construction OMTA from "B" Street to east construction fence.
- Complete construction on Service Road N.W. or Cell #1.
- Complete construction or laydown yard west of Cell #2.
- Purchase or general services and materials.
- Complete purchase or stone/geosynthetics material for Cap #1 subcontractor.
- Excavation or the vegetative cover (gray clay) – part of Cap #1 subcontractor.

1) Task #1 – Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plan for ConCover application, work plan and technical submittals will be prepared by SDFP engineering and supported by construction, safety, QA and resident engineer.

1.1)2 Quantification - Submittals

- 1 plan, 5 days – laborer, construction engineer, safety, QA, and resident engineer.

1.2) Subtask #2 – Procurement

1.2)1 Plan/Scope - Procurement

- Procure materials, equipment, labor, specialty subcontractor. The following materials, equipment, labor, and services will be procured for OSDF Phase III construction/materials and services:

  Material: ConCover;
  Equipment: vehicles, small tools and heavy equipment.
  Labor: Building Trades Labor, Labor Support Contractor labor,
  Subcontractor/Services: subcontractor for the application of ConCover.

1.2)2 Quantification - Procurement

- 6 requisitions, 1 laborer, and 1 buyer

2) Task #2 – OSDF Phase III Construction

2.1) Plan/Scope - OSDF Phase III Construction

- Completion of OSDF Phase III construction which includes the completion of the construction activities punchlist completion, red line drawings, turnover of any owner manuals. Completion of control and management of Cell #1 cap through 12/31/01 and project close out.

2.2) Quantification - OSDF Phase III Construction

- Included in Phase III Cap contract, specifications, drawing, quantities and pay items.

3) Task #3 - Application of ConCover 180 in Cell #2 and Cell #3

3.1) Plan/Scope - Application of ConCover 180 in Cell #2 and Cell #3

- Applications: last quarter of FY01, 3rd quarter of FY02, 1st quarter of FY03, and 3rd quarter of FY03.

- This activity will require grading, shaping of impacted material surfaces to prevent erosion

3.2) Quantification - Application of ConCover 180 in Cell #2 and Cell #3

- Grading/shaping impacted material surfaces will take 10 days for each application and will require 1 operator, 2 laborers, 1 teamster, 1 CAT D-6 dozer, 1 CAT 613 waterwagon, and 1 CAT 563 smooth drum roller. The area of impacted material surface for each application will be approximately 610,000 sf

- Application and decontamination of equipment used to apply ConCover will take 5 days and will require 2 laborers.

4) Task #4 - FY01 Impacted Material Placement

4.1) Plan/Scope - FY-1 Impacted Material Placement

- Impacted material placement

4.2) Quantification - FY01 Impacted Material Placement

- Place 60,000 cy of impacted material in Cell #2 and Cell – 3.5 months. Impacted soil, 50,000 cy and Category #2 and Category #4 debris – 10,000 cy 1 CAT D8 bulldozer, 1 Cat 826 compactor, 1 Cat 563 compactor, CAT 613 waterwagon, CAT 963 track loader, 1 Cat 322 trackhoe/grappler, 2 ROB trucks – 4 operators, 2 teamsters and 6 laborers

5) Task #5 - OMTA Expansion/Transite Transfer Area

5.1) Plan/Scope - OMTA Expansion/Transite Transfer Area

- Construction OMTA expansion from "B" Street west along north process fence and construct Transite Transfer Area.

5.2) Quantification - OMTA Expansion/Transite Transfer Area

- 4.7 acres or stoned transfer area 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 1 CAT 613 waterwagon, 1 CAT 963 loader, 1 Volvo A-30 truck, 2 operators, 2 Teamsters, 3 Laborers - 11,500 tons of #304 stone 12" thick, 1 CAT D8 bulldozer with spreader box, 500 lf of construction fence.

- Electric poles to run two air monitors– 6 poles – 1000 lf of cable – 2 electricians, bucket truck, 10 days, 2 operators, 2 teamsters, 3 laborers – 2.5 months, 1 operator, stone spreader – 12 days.

6) Task #6 - OMTA Operations/Bulk Debris

6.1) Plan/Scope - OMTA Operations/Bulk Debris

- Receiving, dumping, stockpiling bulk debris material in OMTA bulk debris impacted debris coming from D&D complexes. This activity will extend through FY01 to last quarter of FY03, but does not begin until task 4 of this charge number is complete. This activity also covers minor control and management activities in OSDF. This activity runs through the winter months.

6.2) Quantification - OMTA Operations/Bulk Debris

- 1 CAT 963 loader, Cat 322 trackhoe with grappler, 1 hydro-seeder, 1 farm tractor. 1 operator, 3 laborers, 2" gas pump, 0.25 teamster. 40 hours per week – FY01-FY03.

1.5.5 CCPLA - OSDF Cell #2 Cap

The scope of work for this charge number is the construction of the OSDF Cell #2 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

Construction of Cell #2 cap will be performed by the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #2 cap will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

- The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #2 cap:

  Material: GCL, GML with welding rod, geotextile
  Equipment: None
  Labor: None
  Subcontractor/Services: None

1.2)3 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.

- Rework the drainage ditch on the west side of Cell #2

- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number

- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent

- Training, all labor must receive on-site training

- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing

- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.

- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum

CAT 613 waterwagon (for ½ day for dust control), 1 teamster
borer.

t long V-drainage ditch on the west side of Cell #2 will take
re 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer,
drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613
days), 3.25 operators and 1 laborer. Placement of riprap in
days and will require 300 tons of type "D" riprap, 1 CAT 330
6 bulldozer, 2 operators and 2 laborers.

oot wide x 400 foot long OSDF haul road from the west side of
ation of sacrificial clay wedge will take 5 days and will require
ozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks,
gon (for dust control), 2.5 teamsters and 1 laborer

g Layer

ion 02240

ring Layer

fence (two rows) from select impacted material layer
o of the existing select impacted material layer
p of select layer
np with non-impacted contouring layer material
material contouring layer
n-impacted material contouring layer
gement and erosion control

touring Layer

silt fence (two rows) from select impacted material layer will
equire 1 CAT 416 Backhoe, 1 operator and 2 laborers.

cation of the top of the existing select impacted material layer
will require 2 surveyors.

acting the top of the select layer will take 5 days and will
ldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT
r dust control), 1 teamster and 2 laborers.

access ramp will take 2 days and will require 1 CAT 330
6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators,

6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #2 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters

- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772)

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)

- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant

- GCL, GML and geotextile deployment

- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Leak detection testing of GML by specialty contractor.

- Location survey of GML panels and seams will be performed by the cell contractor

- Construction survey

- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.

- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) <u>Task #6 - Drainage Layer</u>

Technical specification section 02710

6.1) <u>Plan/Scope - Drainage Layer</u>

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #2

- Placing drainage layer, rolling and surveying of drainage layer surface

- Construction survey

- Dust control

6.2) <u>Quantification - Drainage Layer</u>

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 30,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers

- Construction survey will require 2 surveyors for 1 day

- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials

- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier

- Place biointrusion barrier and choke stone

- Dust control

7.2) Quantification - Biointrusion Barrier

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.

- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.

- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.
- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.
- Loading, hauling, and placement of the filter layer material
- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.
- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.
- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days for dust control), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.
- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #2

- Placement of the vegetative layer
- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.

- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.

- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.
- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #2
- Placement of the topsoil layer

- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.

- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.

- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #2 final cover including seeding and erosion mat

11.2) Quantification - Permanent Vegetation

The following are estimated quantities for the construction contractor:

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #2 final cover surface that will require permanent vegetation is 7.25 acres.

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

12.2) Quantification - Close-out

Not applicable

1.5.6 CCPLB - OSDF Cell #3 Cap

The scope of work for this charge number is the construction of the OSDF Cell #3 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

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Construction of Cell #3 cap will be performed by ~~Fluor Fernald, Inc. (self-performed) with the exception of the following activities: GML installation - panel layout, welding, seaming, testing and repair of GML, sewing of geotextile and leak detection testing of GML. Specialty contractors will perform these activities~~ the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #3 cap will be prepared by the cell.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #3 cap:

Material: GCL, GML with welding rod, geotextile
Equipment: None
Labor: None
Subcontractor/Services: None

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 – Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721)

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.

- Rework the drainage ditch on the west side of Cell #3

- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number

- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent

- Training, all labor must receive on-site training

- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing

- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.

- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for ½ day for dust control), 1 teamster (for ½ day) and 1 laborer.

- Rework of the 400 ft long V-drainage ditch on the west side of Cell #3 will take 3 days and will require 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for .75 days), 3.25 operators and 1 laborer. Placement of riprap in the ditch will take 2 days and will require 300 tons of type "D" riprap, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators and 2 laborers

- Removal of the 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF and excavation of sacrificial clay wedge will take 5 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 2.5 teamsters and 1 laborer

3) <u>Task #3 - Contouring Layer</u>

Technical specification 02240

3.1) <u>Plan/Scope - Contouring Layer</u>

- Remove existing silt fence (two rows) from select impacted material layer
- Survey and verify top of the existing select impacted material layer
- Grade, recompact top of select layer
- Construct access ramp with non-impacted contouring layer material
- Place non-impacted material contouring layer
- Survey and verify non-impacted material contouring layer
- Surface water management and erosion control
- Dust control

3.2) Quantification - Contouring Layer

- Removal of existing silt fence (two rows) from select impacted material layer will take 1 day and will require 1 CAT 416 Backhoe, 1 operator and 2 laborers.

- Surveying and verification of the top of the existing select impacted material layer will take 1 day and will require 2 surveyors.

- Grading and recompacting the top of the select layer will take 5 days and will require1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster and 2 laborers.

- Construction of the access ramp will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #3 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey
- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters
- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers
- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.
- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)
- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant
- GCL, GML and geotextile deployment
- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.
- Leak detection testing of GML by specialty contractor.

- Location survey of GML panels and seams will be performed by the cell contractor
- Construction survey
- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.
- Acceptance of the top of clay liner will require 2 surveyors for 1 day.
- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.
- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.
- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.
- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) Task #6 - Drainage Layer

Technical specification section 02710)

6.1) Plan/Scope - Drainage Layer

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #3.
- Placing drainage layer, rolling and surveying of drainage layer surface
- Construction survey

- Dust control

6.2) Quantification - Drainage Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 30,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter.

- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers.

- Construction survey will require 2 surveyors for 1 day.

- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster.

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials

- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier.

- Place biointrusion barrier and choke stone

- Dust control

7.2) Quantification - Biointrusion

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.

- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.

- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.

- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.

- Loading, hauling, and placement of the filter layer material

- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.

- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.

- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road

- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.

- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #3

- Placement of the vegetative layer

- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.

- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.

- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road

- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.

- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #3

- Placement of the topsoil layer

- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.

- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.

- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon (for dust control), and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #3 final cover including seeding and erosion mat.

11.2) Quantification - Permanent Vegetation

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #3 final cover surface that will require permanent vegetation is 7.25 acres

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

12.2) Quantification - Closeout

Not applicable

1.5.7 CCPLC – OSDF Cell #4 Liner

The scope of work for this charge number is the construction of the OSDF Cell #4 liner. Construction of the OSDF Cell #4 liner includes: submittals and procurement, site preparation, clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers, construction of perimeter clay wedges and access ramps, catchment area, video inspection of HDPE pipe, horizontal monitoring wells #4 and #5, and close-out.

Construction of OSDF Cell #4 liner will be performed by the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for OSDF Cell #4 liner will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable.

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #4 liner:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable.

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization, training, installation of SWM&EC, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, access/haul roads, removal of topsoil, excavation, overexcavation, removal of existing utilities including drain tiles as shown on current (year 2001) utility drawings and subgrade preparation
- Survey subgrade and acceptance by Fluor Fernald
- Maintain subgrade until placement of first lift of clay liner
- Installation of gravity inlet structures and reinforced concrete pipe
- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Installation of SWM&EC will require 2 laborers, 1 operator and a CAT 416 backhoe for 2 days. 1,100 lf of silt fence will be needed.
- Installation of the construction fence will require 2 laborers for 2 days and 1,000 lf of construction fence.
- Surveying of existing conditions will require 2 surveyors, one week (40 hours each)

- Construction of a portion of the OSDF haul road (approximately 440 lf of road, adjacent and to the west of OSDF Cell 4) will be constructed of crushed stone and will require 1,000 cy of fill, 500 tons of #304 stone. Construction will take 5 days. Construction will require 2 Volvo 30-ton trucks, 1 waterwagon, 3 teamsters, 1 CAT 825 sheep's foot roller, 1 CAT 966 loader, 1 CAT D-6 bulldozer, 3 operators, and 2 laborers.

- Preparation of the construction area

- Removal of topsoil

- Excavation of liner #4 will be 4,000 cy and will take 10 days to complete. Required equipment and labor will be 1 water truck, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-6 bulldozer, 1 CAT D-8 bulldozer, 1 CAT 330 excavator, 3 operators. Excavation will progress from east to west.

- Over-excavation of unsuitable material will be 2,000 cy and will take 5 days to complete. This activity will require 1 CAT 613 waterwagon, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller and 3 operators

- Removal of existing utilities is included with excavation.

- Removal of topsoil is included in other activities

- Surveying of the liner #4 subgrade will take 2 surveyors 2 days to complete

- Maintaining the liner #4 subgrade prior to placement of the clay liner will require 2 laborers, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 1 operator and 1 3" pump. Total duration will be 2 days.

- Installation of the gravity inlet structure and the reinforced concrete pipe will take 5 days to complete. Installation will require 2 laborers, 1 CAT 330 excavator, 1 operator, 60 lf of 12" RCP and gravel material to bed and surround the RCP.

3) <u>Task #3 - Clay Liner</u>

Technical specification section 02225

3.1) <u>Plan/Scope - Clay Liner</u>

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. Consists of installing stop signs and removing stop signs after completion of the clay wedge.

- Load clay liner material from OSDF Borrow Area stockpiles and haul to OSDF Cell #4

- Placement, compaction, maintenance and survey of the clay surface

- The clay liner will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Clay liner placement will progress from east to west. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

3.2) Quantification - Clay Liner

Refer to table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon, 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the clay liner construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the clay liner activity.

- Traffic control at the intersection of the Borrow Area Haul Road and the North Entrance Road will require 1 laborer to install and remove stop signs, warning signs at the beginning and the end of the clay hauling activity. This activity will require 1 laborer for 8 hours.

- Loading of clay material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 25 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the clay liner will require 1 CAT D8 low-ground pressure bulldozer, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 1 CAT SS250 soil stabilizer, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 4 laborers. Of the four laborers 1will act as a spotter, 1 will act as the grade checker, and

2 will perform rock picking from the clay liner. The CAT 613 waterwagon and teamster will also support stone delivery at the construction laydown area and other concurrent clean work. Clay liner construction will require 33,000 ICY of clay.

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

4) Task #4 - Primary and Secondary Geosynthetic Liners

Technical specification sections 02605, 02714, 02770 and 02772

4.1) Plan/Scope - Primary and Secondary Geosynthetic Liners

- Receiving, unloading, inspecting, storing geosynthetic liner material (GCL, GML and geotextile), liner penetration boxes and HDPE pipe (solid wall and perforated). The geosynthetic material will be stored south of the OSDF Cell #4 liner area.

- Top of clay liner surface acceptance by the cell contractor, Fluor Fernald, GML specialty contractor, and CQC consultant

- Primary and secondary GCL, GML and geotextile placement and installation of 6 liner penetration boxes

- Hydro test penetration boxes and solid wall HDPE pipes between penetration boxes and valve house #4 for the leachate detection system, leachate collection system, and redundant leachate collection system

- Movement of the GCL, GML, and geotextile from the storage location to the OSDF Cell #4 liner and deployment of the material will be performed by the cell contractor. Deployment of the GCL, GML and geotextile will be from east to west.

- Panel layout, welding, seaming, tie-in of penetration boxes, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor.

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- Leak detection testing of primary GML will be performed by the cell contractor. ~~Support labor provided by Fluor Fernald~~

- Location survey of GML panels and seams will be performed by the cell contractor

- Trenching, placement of primary and secondary liner terminations, backfill and compaction around OSDF Cell #4 perimeter

- Construction survey

- Dust control

4.2) Quantification - Primary and Secondary Geosynthetic Liners

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 15 days over a period of two months. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Placement of the 3 secondary penetration boxes on the west side of the liner will take 12 days to complete. This activity will require 1 CAT 330 excavator, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the clay, installation and connection of the penetration boxes and hydro testing of the lines to valve house #4.

- Placement of the 3 primary penetration boxes on the west side of the liner will take 9 days to complete. This activity will require 1 posi-trac with bucket, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the gravel, installation and connection of the penetration boxes and hydro testing of the lines to valve house #4.

- Deployment of the secondary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the secondary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile will be performed by a specialty contractor. The contractor cost will include labor, material and equipment for this work.

- Deployment of the primary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the primary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile which will be performed by the cell contractor. The contractor cost will include labor, material and equipment for this work.

- Leak detection testing of the primary GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

- Trenching and placement of the secondary and primary liner terminations around the perimeter will take 5 days and require a CAT 330 excavator, 1 operator, 1 walk behind compactor and 2 laborers.

5) Task #5 - Primary and Secondary Drainage Layers

Technical specification section 02605 and 02710

5.1) Plan/Scope - Primary and Secondary Drainage Layers

- Receiving, stockpiling and inspecting the #78 and #57 stone will occur south of OSDF liner #4. There will be two periods of stockpiling stone – 1 for the secondary and 1 for the primary.

- Placing drainage layer, installation of perforated HDPE pipe, and rolling and surveying of drainage layer surfaces

- Construction survey

- Dust control

5.2) Quantification - Primary and Secondary Drainage Layers

Refer to table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of the #78 and #57 stone for the secondary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Placement of the #78 and #57 stone and the perforated drainage pipe for the secondary layer will take 10 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 3 Volvo A-30 trucks, 3 teamsters, 2 pipefitters and 4 laborers. Of the 4 laborers, 1 will act as a spotter, 1 will act as a grade checker, 2 will work on grading of the stone. Handling of the pipe will be shared by these laborers.

- Receiving, stockpiling and inspection of the #78 and #57 stone for the primary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Dust control will require 1 CAT 613 waterwagon (for 10 days) and 0.5 teamster.

6) Task #6 - Construction of Perimeter Clay Wedges and Access Ramp

6.1) Plan/Scope - Construction of Perimeter Clay Wedges and Access Ramp

- Traffic control at intersection of Borrow Area Haul Road and North Entrance Road is covered under Task 3 of this charge number.

- Load from OSDF Borrow Area stockpiles and haul to OSDF Cell #4 perimeter clay wedges

- Placement, compaction, maintenance and survey of the OSDF Cell #4 perimeter clay wedges

- Placement of sacrificial geomembrane

- Construction of OSDF Cell #4 access ramp

- Construction survey

- Dust control

6.2) Quantification - Construction of Perimeter Clay Wedges and Access Ramp

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Loading, hauling, placement and compaction of clay material for OSDF Cell #4 perimeter wedges will take 10 days and require 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller, 1 CAT D6 bulldozer, 2.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon, 5 teamsters and 2 laborers. This activity will also require 2 surveyors for 1 day.

- Placement of the sacrificial geomembrane will take 2 days and will require 4 laborers

- Construction of the OSDF Cell #4 Access Ramp will take 3 days and will require 1 CAT D6 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 3 teamsters, and 1 laborer. This activity will also require one water truck for 1.5 days and one teamster for 1.5 days.

- This activity will require 2 surveyors for 1 day

7) Task #7 - Catchment Area

Technical specification sections 02710 and 02714

7.1) Plan/Scope - Catchment Area

- Place and survey non-impacted granular layer and geotextile in the catchment area
- Construction survey

7.2) Quantification - Catchment Area

The following are estimated quantities for the construction contractor:

- Placement of the non-impacted granular layer and geotextile in the catchment area will require 1 CAT D6 LGP bulldozer, 1 operator, 2 Volvo A-30 trucks, 2 teamsters and 4 laborers.

8) Task #8 - Video Inspection of HDPE Pipe

Technical specification section 02605

8.1) Plan/Scope - Video Inspection of HDPE Pipe

- Video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by a specialty contractor

- This activity covers the initial videotaping of leachate lines between valve houses and inlet boxes in Cell 4.

8.2) Quantification - Video Inspection of HDPE Pipe

The following are estimated quantities for the construction contractor:

- Video inspection will take a specialty contractor 1 day with 2 technicians.

9) Task #9 - Horizontal Monitoring Wells (HMW) #4 and #5

9.1) Plan/Scope - Horizontal Monitoring Wells (HMW) #4 and #5

- Horizontal monitoring wells must be installed and operating a minimum of 12 months prior to placement of the 12" impacted protective layer in OSDF Cell liners #4 and #5.

- Receive, store, inspect HDPE pipe (perforated and solid), geotextile and drainage material

- Place/install HDPE pipe, geotextile, and drainage layer

- Tie-in with HDPE pipe outside Valve House #4, Valve House #5 and perform hydro testing the solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system.

- Construction survey

- Dust control

9.2) Quantification - Horizontal Monitoring Wells (HMW) #4 and #5

The following are estimated quantities for the construction contractor:

OSDF Liner #4 HMW

- Receive, store and inspect HDPE pipe (perforated and solid), geotextile and drainage material for OSDF Cell #4 horizontal monitoring wells will take ½ of one day and require 2 laborers and 1 operator.

- Placement/ installation of the HDPE pipe, geotextile material an drainage layer stone for OSDF Cell #4 horizontal monitoring wells will take 6 weeks and require 1 CAT 330 excavator, 1 CAT D6 bulldozer (4 weeks), 1 CAT 825 sheep's foot roller (2 weeks), 2.5 operators, 1 laborer, and 2 pipefitters. This activity will require 2 surveyors 1 day.

- Tie-in of the HDPE pipe to stub-outs from valve houses #4 will take 2 days and require 2 pipefitters (backfill is included in the placement task)

- Dust control will require 1 CAT 613 waterwagon and one teamster for ½ of the time

OSDF Cell #5 HMW

- Receive, store and inspect HDPE pipe (perforated and solid), geotextile and drainage material for OSDF Cell #5 horizontal monitoring wells will take ½ of one day and require 2 laborers and 1 operator.

- Placement/ installation of the HDPE pipe, geotextile material an drainage layer stone for OSDF Cell #5 horizontal monitoring wells will take 6 weeks and require 1 CAT 330 excavator, 1 CAT D6 bulldozer (4 weeks), 1 CAT 825 sheep's foot roller (2 weeks), 2.5 operators, 1 laborer, and 2 pipefitters. This activity will require 2 surveyors 1 day.

- Tie-in of the HDPE pipe to stub-outs from valve houses #5 will take 2 days and require 2 pipefitters (backfill is included in the placement task)

- Dust control will require 1 CAT 613 waterwagon and one teamster for ½ of the time

10) Task #10 - Closeout

10.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

10.2) Quantification - Closeout

Not applicable

1.5.8 CCPLD – OSDF Cell #4 Cap

The scope of work for this charge number is the construction of the OSDF Cell #4 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

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Construction of Cell #4 cap will be performed by ~~Fluor Fernald, Inc. (self-performed) with the exception of the following activities: GML installation – panel layout, welding, seaming, testing and repair of GML, sewing of geotextile and leak detection testing of GML. Specialty contractors will perform these activities~~ the cell contractor.

1) Task #1 – Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

- Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #4 cap will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

- The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #4 cap:

  Material: GCL, GML with welding rod, geotextile.
  Equipment: None.
  Labor: None
  Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721)

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.

- Rework the drainage ditch on the west side of Cell #4

- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number

- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent

- Training, all labor must receive on-site training

- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing

- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.

- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for ½ day for dust control), 1 teamster (for ½ day) and 1 laborer.

- Rework of the 400 ft long V-drainage ditch on the west side of Cell #4 will take 3 days and will require 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for .75 days), 3.25 operators and 1 laborer. Placement of riprap in the ditch will take 2 days and will require 300 tons of type "D" riprap, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators and 2 laborers.

- Removal of the 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF and excavation of sacrificial clay wedge will take 5 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 2.5 teamsters and 1 laborer

3) Task #3 - Contouring Layer

Technical specification 02240

3.1) Plan/Scope - Contouring Layer

- Remove existing silt fence (two rows) from select impacted material layer
- Survey and verify top of the existing select impacted material layer
- Grade, recompact top of select layer
- Construct access ramp with non-impacted contouring layer material
- Place non-impacted material contouring layer
- Survey and verify non-impacted material contouring layer
- Surface water management and erosion control
- Dust control

3.2) Quantification - Contouring Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Removal of existing silt fence (two rows) from select impacted material layer will take 1 day and will require 1 CAT 416 Backhoe, 1 operator and 2 laborers.

- Surveying and verification of the top of the existing select impacted material layer will take 1 day and will require 2 surveyors.

- Grading and recompacting the top of the select layer will take 5 days and will require1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster and 2 laborers.

- Construction of the access ramp will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #4 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters

- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)
- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant
- GCL, GML and geotextile deployment
- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.
- Leak detection testing of GML by specialty contractor.
- Location survey of GML panels and seams will be performed by the cell contractor
- Construction survey
- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.
- Acceptance of the top of clay liner will require 2 surveyors for 1 day.
- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.

- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) Task #6 - Drainage Layer

Technical specification section 02710

6.1) Plan/Scope - Drainage Layer

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #4.

- Placing drainage layer, rolling and surveying of drainage layer surface

- Construction survey

- Dust control

6.2) Quantification - Drainage Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 30,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter.

- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers.

- Construction survey will require 2 surveyors for 1 day.

- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster.

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials
- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier.
- Place biointrusion barrier and choke stone
- Dust control

7.2) Quantification - Biointrusion Barrier

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.
- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.
- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.
- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.

- Loading, hauling, and placement of the filter layer material
- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.
- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.
- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.
- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #4
- Placement of the vegetative layer
- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap

construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.

- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.

- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920)

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road

- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.

- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #4

- Placement of the topsoil layer

- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken

from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.

- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.

- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon (for dust control), and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #4 final cover including seeding and erosion mat.

11.2) Quantification - Permanent Vegetation

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #4 final cover surface that will require permanent vegetation is 7.25 acres

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

12.2) Quantification - Closeout

- Not applicable.

1.5.9 CCPLE – OSDF Cell #5 Liner

The scope of work for this charge number is the construction of the OSDF Cell #5 liner. Construction of the OSDF Cell #5 liner includes: submittals and procurement, site preparation, clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers, construction of perimeter clay wedges and access ramps, catchment area, video inspection of HDPE pipe, horizontal monitoring wells #6, and close-out.

Construction of OSDF Cell #5 liner will be performed by the cell contractor.

1) Task #1 – Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for OSDF Cell #5 liner will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #5 liner:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable.

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization, training, installation of SWM&EC, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, access/haul roads, removal of topsoil, excavation, overexcavation, removal of existing utilities including drain tiles as shown on current (year 2001) utility drawings and subgrade preparation
- Remove the north entrance road transition south of OSDF Cell #5
- Remove the chain link fence south of OSDF Cell #5
- Install chain link fence east of the OSDF from Cell #5 south to Cell #8 and south of Cell #8
- Fill the north 1/3 of OSDF sediment basin #1 and reroute associated drainage ditches
- Survey subgrade and acceptance by Fluor Fernald
- Maintain subgrade until placement of first lift of clay liner
- Installation of gravity inlet structures and reinforced concrete pipe
- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Installation of SWM&EC will require 2 laborers, 1 operator and a CAT 416 backhoe for 2 days. 1,100 lf of silt fence will be needed.
- Installation of the construction fence will require 2 laborers for 2 days and 1,000 lf of construction fence.
- Removal of north entrance road transition south of OSDF Cell #5 will take 5 days and will require removal of approximately 2,600 cy of material, 1 CAT D6 bulldozer, 1 CAT 330 excavator, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1.25 days), 3.25 teamsters and 1 laborer
- Removal of 1,500 ft of chain link fence south of OSDF Cell #5 will take 3 days and will require 1 CAT 416 backhoe, 1 operator and 4 laborers

- Installation of 2,400 ft of chain link fence and 2 gates will take 10 days, and require 1 Bobcat with auger attachment, 2 ironworkers and 3 laborers

- Fill the north 1/3 of OSDF sediment basin #1 and reroute associated drainage ditches will take 8 days and will require 10,000 cy of fill from the Borrow Area, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 4 days), 4.5 teamsters and 1 laborer.

- Surveying of existing conditions will require 2 surveyors, one week (40 hours each)

- Construction of a portion of the OSDF haul road (approximately 440 lf of road, adjacent and to the west of OSDF Cell 5) will be constructed of crushed stone and will require 1,000 cy of fill, 500 tons of #304 stone. Construction will take 5 days. Construction will require 2 Volvo 30-ton trucks, 1 waterwagon, 3 teamsters, 1 CAT 825 sheep's foot roller, 1 CAT 966 loader, 1 CAT D-6 bulldozer, 3 operators, and 2 laborers.

- Preparation of the construction area

- Excavation of liner #5 will be 4,000 cy and will take 10 days to complete. Required equipment and labor will be 1 water truck, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-6 bulldozer, 1 CAT D-8 bulldozer, 1 CAT 330 excavator, 3 operators. Excavation will progress from east to west.

- Over-excavation of unsuitable material will be 2,000 cy and will take 5 days to complete. This activity will require 1 CAT 613 waterwagon, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller and 3 operators

- Removal of existing utilities is included with excavation.

- Removal of topsoil is included in other activities

- Surveying of the liner #5 subgrade will take 2 surveyors 2 days to complete

- Maintaining the liner #5 subgrade prior to placement of the clay liner will require 2 laborers, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 1 operator and 1 3" pump. Total duration will be 2 days.

- Installation of the gravity inlet structure and the reinforced concrete pipe will take 5 days to complete. Installation will require 2 laborers, 1 CAT 330 excavator, 1 operator, 60 lf of 12" RCP and gravel material to bed and surround the RCP.

3) Task #3 - Clay Liner

Technical specification section 02225

3.1) Plan/Scope - Clay Liner

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. Consists of installing stop signs and removing stop signs after completion of the clay wedge.

- Load clay liner material from OSDF Borrow Area stockpiles and haul to OSDF Cell #5

- Placement, compaction, maintenance and survey of the clay surface

- The clay liner will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Clay liner placement will progress from east to west. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

3.2) Quantification - Clay Liner

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon, 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the clay liner construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the clay liner activity.

- Traffic control at the intersection of the Borrow Area Haul Road and the North Entrance Road will require 1 laborer to install and remove stop signs, warning signs at the beginning and the end of the clay hauling activity. This activity will require 1 laborer for 8 hours.

- Loading of clay material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks

and 6 teamsters. The activity will take 25 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the clay liner will require 1 CAT D8 low-ground pressure bulldozer, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 1 CAT SS250 soil stabilizer, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 4 laborers. Of the four laborers 1will act as a spotter, 1 will act as the grade checker, and 2 will perform rock picking from the clay liner. The CAT 613 waterwagon and teamster will also support stone delivery at the construction laydown area and other concurrent clean work. Clay liner construction will require 33,000 ICY of clay.

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

4) Task #4 - Primary and Secondary Geosynthetic Liners

Technical specification sections 02605, 02714, 02770 and 02772

4.1) Plan/Scope - Primary and Secondary Geosynthetic Liners

- Receiving, unloading, inspecting, storing geosynthetic liner material (GCL, GML and geotextile), liner penetration boxes and HDPE pipe (solid wall and perforated). The geosynthetic material will be stored south of the OSDF Cell #5 liner area.

- Top of clay liner surface acceptance by the cell contractor, Fluor Fernald, GML specialty contractor, and CQC consultant

- Primary and secondary GCL, GML and geotextile placement and installation of 6 liner penetration boxes

- Hydro test penetration boxes and solid wall HDPE pipes between penetration boxes and valve house #4 for the leachate detection system, leachate collection system, and redundant leachate collection system

- Movement of the GCL, GML, and geotextile from the storage location to the OSDF Cell #5 liner and deployment of the material will be performed by the cell contractor. Deployment of the GCL, GML and geotextile will be from east to west.

- Panel layout, welding, seaming, tie-in of penetration boxes, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor.

- Leak detection testing of primary GML will be performed by the cell contractor

- Location survey of GML panels and seams will be performed by the cell contractor

- Trenching, placement of primary and secondary liner terminations, backfill and compaction around OSDF Cell #5 perimeter

- Construction survey

- Dust control

4.2) Quantification - Primary and Secondary Geosynthetic Liners

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 15 days over a period of two months. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Placement of the 3 secondary penetration boxes on the west side of the liner will take 12 days to complete. This activity will require 1 CAT 330 excavator, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the clay, installation and connection of the penetration boxes and hydro testing of the lines to valve house #4.

- Placement of the 3 primary penetration boxes on the west side of the liner will take 9 days to complete. This activity will require 1 posi-trac with bucket, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the gravel, installation and connection of the penetration boxes and hydro testing of the lines to valve house #4.

- Deployment of the secondary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the secondary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing

of geotextile will be performed by a specialty contractor. The contractor cost will include labor, material and equipment for this work.

- Deployment of the primary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the primary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile which will be performed by the cell contractor. The contractor cost will include labor, material and equipment for this work.

- Leak detection testing of the primary GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by Fluor Fernald. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

- Trenching and placement of the secondary and primary liner terminations around the perimeter will take 5 days and require a CAT 330 excavator, 1 operator, 1 walk behind compactor and 2 laborers.

5) <u>Task #5 – Primary and Secondary Drainage Layers</u>

Technical specification section 02605 and 02710

5.1) <u>Plan/Scope - Primary and Secondary Drainage Layers</u>

- Receiving, stockpiling and inspecting the #78 and #57 stone will occur south of OSDF liner #5. There will be two periods of stockpiling stone – 1 for the secondary and 1 for the primary.

- Placing drainage layer, installation of perforated HDPE pipe, and rolling and surveying of drainage layer surfaces

- Construction survey

- Dust control

5.2) Quantification - Primary and Secondary Drainage Layers

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of the #78 and #57 stone for the secondary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Placement of the #78 and #57 stone and the perforated drainage pipe for the secondary layer will take 10 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 3 Volvo A-30 trucks, 3 teamsters, 2 pipefitters and 4 laborers. Of the 4 laborers, 1 will act as a spotter, 1 will act as a grade checker, 2 will work on grading of the stone. Handling of the pipe will be shared by these laborers.

- Receiving, stockpiling and inspection of the #78 and #57 stone for the primary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Dust control will require 1 CAT 613 waterwagon (for 10 days) and 0.5 teamster.

6) Task #6 - Construction of Perimeter Clay Wedges and Access Ramp

6.1) Plan/Scope - Construction of Perimeter Clay Wedges and Access Ramp

- Traffic control at intersection of Borrow Area Haul Road and North Entrance Road is covered under Task 3 of this charge number.

- Load from OSDF Borrow Area stockpiles and haul to OSDF Cell #5 perimeter clay wedges

- Placement, compaction, maintenance and survey of the OSDF Cell #5 perimeter clay wedges

- Placement of sacrificial geomembrane

- Construction of OSDF Cell #5 access ramp

- Construction survey

- Dust control

6.2) Plan/Scope - Construction of Perimeter Clay Wedges and Access Ramp

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Loading, hauling, placement and compaction of clay material for OSDF Cell #5 perimeter wedges will take 10 days and require 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller, 1 CAT D6 bulldozer, 2.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon, 5 teamsters and 2 laborers. This activity will also require 2 surveyors for 1 day.

- Placement of the sacrificial geomembrane will take 2 days and will require 4 laborers

- Construction of the OSDF Cell #5 Access Ramp will take 3 days and will require 1 CAT D6 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 3 teamsters, and 1 laborer. This activity will also require one water truck for 1.5 days and one teamster for 1.5 days.

- This activity will require 2 surveyors for 1 day

7) Task #7 - Catchment Area

Technical specification sections 02710 and 02714

7.1) Plan/Scope - Catchment Area

- Place and survey non-impacted granular layer and geotextile in the catchment area
- Construction survey

7.2) Quantification - Catchment Area

The following are estimated quantities for the construction contractor:

- Placement of the non-impacted granular layer and geotextile in the catchment area will require 1 CAT D6 LGP bulldozer, 1 operator, 2 Volvo A-30 trucks, 2 teamsters and 4 laborers.

8) Task #8 - Video Inspection of HDPE Pipe

Technical specification section 02605

8.1) Plan/Scope – Video Inspection of HDPE Pipe

- Video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by a specialty contractor

- This activity covers the initial videotaping of leachate lines between valve houses and inlet boxes in Cell 5.

8.2) Quantification - Video Inspection of HDPE Pipe

The following are estimated quantities for the construction contractor:

- Video inspection will take a specialty contractor 1 day with 2 technicians.

9) Task #9 - Horizontal Monitoring Well #6

9.1) Plan/Scope - Horizontal Monitoring Well #6

- Horizontal monitoring wells must be installed and operating a minimum of 12 months prior to placement of the 12" impacted protective layer in OSDF Cell liner #6.

- Receive, store, inspect HDPE pipe (perforated and solid), geotextile and drainage material

- Place/install HDPE pipe, geotextile, and drainage layer

- Tie-in with HDPE pipe outside Valve House #6 and perform hydro testing the solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system.

- Construction survey

- Dust control

9.2) Quantification - Horizontal Monitoring Well #6

The following are estimated quantities for the construction contractor:

- Receive, store and inspect HDPE pipe (perforated and solid), geotextile and drainage material for OSDF Cell #6 horizontal monitoring wells will take ½ of one day and require 2 laborers and 1 operator.

- Placement/ installation of the HDPE pipe, geotextile material an drainage layer stone for OSDF Cell #6 horizontal monitoring wells will take 6 weeks and require 1 CAT 330 excavator, 1 CAT D6 bulldozer (4 weeks), 1 CAT 825 sheep's foot roller (2 weeks), 2.5 operators, 1 laborer, and 2 pipefitters. This activity will require 2 surveyors 1 day.

- Tie-in of the HDPE pipe to stub-outs from valve houses #6 will take 2 days and require 2 pipefitters (backfill is included in the placement task)

- Dust control will require 1 CAT 613 waterwagon and one teamster for ½ of the time

10) Task #10 - Closeout

10.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

10.2) Quantification - Close-out

Not applicable.

1.5.10 CCPLF – OSDF Cell #5 Cap

The scope of work for this charge number is the construction of the OSDF Cell #5 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

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Construction of Cell #5 cap will be performed by ~~Fluor Fernald, Inc. (self-performed) with the exception of the following activities: GML installation - panel layout, welding, seaming, testing and repair of GML, sewing of geotextile and leak detection testing of GML. Specialty contractors will perform these activities~~ the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control,

safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #5 cap will be prepared by the cell.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 – Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #5 cap:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.

- Rework the drainage ditch on the west side of Cell #5

- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number

- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent

- Training, all labor must receive on-site training

- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing

- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.

- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for ½ day for dust control), 1 teamster (for ½ day) and 1 laborer.

- Rework of the 400 ft long V-drainage ditch on the west side of Cell #5 will take 3 days and will require 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for .75 days), 3.25 operators and 1 laborer. Placement of riprap in the ditch will take 2 days and will require 300 tons of type "D" riprap, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators and 2 laborers

- Removal of the 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF and excavation of sacrificial clay wedge will take 5 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 2.5 teamsters and 1 laborer

3) Task #3 - Contouring Layer

Technical specification 02240

3.1) Plan/Scope - Contouring Layer

- Remove existing silt fence (two rows) from select impacted material layer
- Survey and verify top of the existing select impacted material layer
- Grade, recompact top of select layer
- Construct access ramp with non-impacted contouring layer material

- Place non-impacted material contouring layer
- Survey and verify non-impacted material contouring layer
- Surface water management and erosion control
- Dust control

3.2) Quantification - Contouring Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Removal of existing silt fence (two rows) from select impacted material layer will take 1 day and will require 1 CAT 416 Backhoe, 1 operator and 2 laborers.

- Surveying and verification of the top of the existing select impacted material layer will take 1 day and will require 2 surveyors.

- Grading and recompacting the top of the select layer will take 5 days and will require1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster and 2 laborers.

- Construction of the access ramp will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #5 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters

- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)

- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant

- GCL, GML and geotextile deployment

- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Leak detection testing of GML by specialty contractor.

- Location survey of GML panels and seams will be performed by the cell contractor

- Construction survey

- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.

- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) Task #6 - Drainage Layer

Technical specification section 02710

6.1) Plan/Scope - Drainage Layer

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #5.
- Placing drainage layer, rolling and surveying of drainage layer surface
- Construction survey
- Dust control

6.2) Quantification - Drainage Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 30,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter.
- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers.
- Construction survey will require 2 surveyors for 1 day.
- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster.

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials
- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier.
- Place biointrusion barrier and choke stone
- Dust control

7.2) Quantification - Biointrusion Barrier

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.

- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.

- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.

- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.

- Loading, hauling, and placement of the filter layer material

- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.

- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.

- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.
- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #5
- Placement of the vegetative layer
- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.
- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.
- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.
- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #5
- Placement of the topsoil layer
- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.
- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.
- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon (for dust control), and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #5 final cover including seeding and erosion mat

11.2) Quantification - Permanent Vegetation

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #5 final cover surface that will require permanent vegetation is 7.25 acres

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

12.2) Quantification - Closeout

Not applicable

1.5.11 CCPLG – OSDF Cell #6 Liner

The scope of work for this charge number is the construction of the OSDF Cell #6 liner. Construction of the OSDF Cell #6 liner includes: submittals and procurement, site preparation, clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers, construction of perimeter clay wedges and access ramps, catchment area, video inspection of HDPE pipe, horizontal monitoring well #7 and close-out.

Construction of OSDF Cell #6 liner will be performed by the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for OSDF Cell #6 liner will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #6 liner:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization, training, installation of SWM&EC, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, access/haul roads, removal of topsoil, excavation, overexcavation, removal of existing utilities including drain tiles as shown on current (year 2001) utility drawings and subgrade preparation

- Construct OSDF sediment basin #2 and fill remaining portion of sediment basin #1

- Reroute drain line from new OSDF equipment wash facility to valve house #7
- Survey subgrade and acceptance by Fluor Fernald
- Maintain subgrade until placement of first lift of clay liner
- Installation of gravity inlet structures and reinforced concrete pipe
- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Installation of SWM&EC will require 2 laborers, 1 operator and a CAT 416 backhoe for 2 days. 1,100 lf of silt fence will be needed.
- Installation of the construction fence will require 2 laborers for 2 days and 1,000 lf of construction fence.
- Construction of OSDF sediment basin #2 and filling of sediment basin #1 will take 15 days and will require 20,000 CY of excavation and 5,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2.5 operators, 5 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 7.5 days) and 5.5 teamsters, 2 laborers
- Rerouting of the drain line from new OSDF equipment wash facility to valve house #7 will take require 1 CAT 330 excavator, 1 operator, 2 walk-behind compactors, 1 2" electric sump pump and 2 laborers for 5 days. This activity will require 500 lf of 12" HDPE pipe, 1 HDPE welding machine and 2 pipefitters for 10 days.
- Surveying of existing conditions will require 2 surveyors, one week (40 hours each)
- Construction of a portion of the OSDF haul road (approximately 440 lf of road, adjacent and to the west of OSDF Cell 6) will be constructed of crushed stone and will require 1,000 cy of fill, 500 tons of #304 stone. Construction will take 5 days. Construction will require 2 Volvo 30-ton trucks, 1 waterwagon, 3 teamsters, 1 CAT 825 sheep's foot roller, 1 CAT 966 loader, 1 CAT D-6 bulldozer, 3 operators, and 2 laborers.
- Preparation of the construction area

- Excavation of liner #6 will be 4,000 cy and will take 10 days to complete. Required equipment and labor will be 1 water truck, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-6 bulldozer, 1 CAT D-8 bulldozer, 1 CAT 330 excavator, 3 operators. Excavation will progress from east to west.

- Over-excavation of unsuitable material will be 2,000 cy and will take 5 days to complete. This activity will require 1 CAT 613 waterwagon, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller and 3 operators

- Removal of existing utilities is included with excavation.

- Removal of topsoil is included in other activities

- Surveying of the liner #6 subgrade will take 2 surveyors 2 days to complete

- Maintaining the liner #6 subgrade prior to placement of the clay liner will require 2 laborers, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 1 operator and 1 3" pump. Total duration will be 2 days.

- Installation of the gravity inlet structure and the reinforced concrete pipe will take 5 days to complete. Installation will require 2 laborers, 1 CAT 330 excavator, 1 operator, 60 lf of 12" RCP and gravel material to bed and surround the RCP.

3) <u>Task #3 - Clay Liner</u>

Technical specification section 02225

3.1) <u>Plan/Scope - Clay Liner</u>

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. Consists of installing stop signs and removing stop signs after completion of the clay wedge.

- Load clay liner material from OSDF Borrow Area stockpiles and haul to OSDF Cell #6

- Placement, compaction, maintenance and survey of the clay surface

- The clay liner will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Clay liner placement will progress from east to west. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

3.2) Quantification - Clay Liner

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon, 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the clay liner construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the clay liner activity.

- Traffic control at the intersection of the Borrow Area Haul Road and the North Entrance Road will require 1 laborer to install and remove stop signs, warning signs at the beginning and the end of the clay hauling activity. This activity will require 1 laborer for 8 hours.

- Loading of clay material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 25 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the clay liner will require 1 CAT D8 low-ground pressure bulldozer, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 1 CAT SS250 soil stabilizer, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 4 laborers. Of the four laborers 1will act as a spotter, 1 will act as the grade checker, and 2 will perform rock picking from the clay liner. The CAT 613 waterwagon and teamster will also support stone delivery at the construction laydown area and other concurrent clean work. Clay liner construction will require 33,000 ICY of clay.

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

4) Task #4 - Primary and Secondary Geosynthetic Liners

Technical specification sections 02605, 02714, 02770 and 02772

4.1) Plan/Scope - Primary and Secondary Geosynthetic Liners

- Receiving, unloading, inspecting, storing geosynthetic liner material (GCL, GML and geotextile), liner penetration boxes and HDPE pipe (solid wall and perforated). The geosynthetic material will be stored south of the OSDF Cell #6 liner area.

- Top of clay liner surface acceptance by the cell contractor, Fluor Fernald, GML specialty contractor, and CQC consultant

- Primary and secondary GCL, GML and geotextile placement and installation of 6 inner penetration boxes

- Hydro test penetration boxes and solid wall HDPE pipes between penetration boxes and valve house #4 for the leachate detection system, leachate collection system, and redundant leachate collection system

- Movement of the GCL, GML, and geotextile from the storage location to the OSDF Cell #6 liner and deployment of the material will be performed by the cell contractor. Deployment of the GCL, GML and geotextile will be from east to west.

- Panel layout, welding, seaming, tie-in of penetration boxes, non-destructive GML testing and repair of GML to be performed by specialty contractor. Sewing of geotextile to be performed by the cell contractor.

- Leak detection testing of primary GML will be performed by the cell contractor.

- Location survey of GML panels and seams will be performed by the cell contractor.

- Trenching, placement of primary and secondary liner terminations, backfill and compaction around OSDF Cell #6 perimeter

- Construction survey

- Dust control

4.2) Quantification - Primary and Secondary Geosynthetic Liners

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 15 days over a period of two months. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Placement of the 3 secondary penetration boxes on the west side of the liner will take 12 days to complete. This activity will require 1 CAT 330 excavator, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the clay, installation and connection of the penetration boxes and hydro testing of the lines to valve house #7.

- Placement of the 3 primary penetration boxes on the west side of the liner will take 9 days to complete. This activity will require 1 posi-trac with bucket, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the gravel, installation and connection of the penetration boxes and hydro testing of the lines to valve house #7.

- Deployment of the secondary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the secondary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile will be performed by a specialty contractor. The contractor cost will include labor, material and equipment for this work.

- Deployment of the primary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the primary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile which will be performed by the cell contractor. The contractor cost will include labor, material and equipment for this work.

- Leak detection testing of the primary GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

- Trenching and placement of the secondary and primary liner terminations around the perimeter will take 5 days and require a CAT 330 excavator, 1 operator, 1 walk behind compactor and 2 laborers.

5) Task #5 - Primary and Secondary Drainage Layers

Technical specification section 02605 and 02710

5.1) Plan/Scope - Primary and Secondary Drainage Layers

- Receiving, stockpiling and inspecting the #78 and #57 stone will occur south of OSDF liner #6. There will be two periods of stockpiling stone – 1 for the secondary and 1 for the primary.

- Placing drainage layer, installation of perforated HDPE pipe, and rolling and surveying of drainage layer surfaces

- Construction survey

- Dust control

5.2) Quantification - Primary and Secondary Drainage Layers

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of the #78 and #57 stone for the secondary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Placement of the #78 and #57 stone and the perforated drainage pipe for the secondary layer will take 10 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 3 Volvo A-30 trucks, 3 teamsters, 2 pipefitters and 4 laborers. Of the 4 laborers, 1 will act as a spotter, 1 will act as a grade checker, 2 will work on grading of the stone. Handling of the pipe will be shared by these laborers.

- Receiving, stockpiling and inspection of the #78 and #57 stone for the primary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Dust control will require 1 CAT 613 waterwagon (for 10 days) and 0.5 teamster.

6) Task #6 - Construction of Perimeter Clay Wedges and Access Ramp

6.1) Plan/Scope - Construction of Perimeter Clay Wedges and Access Ramp

- Traffic control at intersection of Borrow Area Haul Road and North Entrance Road is covered under Task 3 of this charge number.

- Load from OSDF Borrow Area stockpiles and haul to OSDF Cell #6 perimeter clay wedges
- Placement, compaction, maintenance and survey of the OSDF Cell #6 perimeter clay wedges
- Placement of sacrificial geomembrane
- Construction of OSDF Cell #6 access ramp
- Construction survey
- Dust control

6.2) Quantification - Construction of Perimeter Clay Wedges and Access Ramp

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Loading, hauling, placement and compaction of clay material for OSDF Cell #6 perimeter wedges will take 10 days and require 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller, 1 CAT D6 bulldozer, 2.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon, 5 teamsters and 2 laborers. This activity will also require 2 surveyors for 1 day.
- Placement of the sacrificial geomembrane will take 2 days and will require 4 laborers
- Construction of the OSDF Cell #6 Access Ramp will take 3 days and will require 1 CAT D6 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 3 teamsters, and 1 laborer. This activity will also require one water truck for 1.5 days and one teamster for 1.5 days.
- This activity will require 2 surveyors for 1 day

7) Task #7 - Catchment Area

Technical specification sections 02710 and 02714

7.1) Plan/Scope - Catchment Area

- Place and survey non-impacted granular layer and geotextile in the catchment area
- Construction survey

7.2) Quantification - Catchment Area

The following are estimated quantities for the construction contractor:

- Placement of the non-impacted granular layer and geotextile in the catchment area will require 1 CAT D6 LGP bulldozer, 1 operator, 2 Volvo A-30 trucks, 2 teamsters and 4 laborers.

8) Task #8 - Video Inspection of HDPE Pipe

Technical specification section 02605

8.1) Plan/Scope - Video Inspection of HDPE Pipe

- Video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by a specialty contractor
- This activity covers the initial videotaping of leachate lines between valve houses and inlet boxes in Cell 6.

8.2) Quantification - Video Inspection of HDPE Pipe

The following are estimated quantities for the construction contractor:

- Video inspection will take a specialty contractor 1 day with 2 technicians.

9) Task #9 - Horizontal Monitoring Well (HMW) #7

9.1) Plan/Scope - Horizontal Monitoring Well (HMW) #7

- Horizontal monitoring wells must be installed and operating a minimum of 12 months prior to placement of the 12" impacted protective layer in OSDF Cell liner #7.

- Receive, store, inspect HDPE pipe (perforated and solid), geotextile and drainage material

- Place/install HDPE pipe, geotextile, and drainage layer

- Tie-in with HDPE pipe outside Valve House #7 and perform hydro testing the solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system.

- Construction survey

- Dust control

9.2) Quantification - Horizontal Monitoring Well (HMW) #7

The following are estimated quantities for the construction contractor:

- Receive, store and inspect HDPE pipe (perforated and solid), geotextile and drainage material for OSDF Cell #7 horizontal monitoring wells will take ½ of one day and require 2 laborers and 1 operator.

- Placement/ installation of the HDPE pipe, geotextile material an drainage layer stone for OSDF Cell #7 horizontal monitoring wells will take 6 weeks and require 1 CAT 330 excavator, 1 CAT D6 bulldozer (4 weeks), 1 CAT 825 sheep's foot roller (2 weeks), 2.5 operators, 1 laborer, and 2 pipefitters. This activity will require 2 surveyors 1 day.

- Tie-in of the HDPE pipe to stub-outs from valve houses #7 will take 2 days and require 2 pipefitters (backfill is included in the placement task)

- Dust control will require 1 CAT 613 waterwagon and one teamster for ½ of the time

10) Task #10 - Closeout

10.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

10.2) Quantification - Closeout

Not applicable

1.5.12 CCPLH – OSDF Cell #6 Cap

The scope of work for this charge number is the construction of the OSDF Cell #6 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

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Construction of Cell #6 cap will be performed by ~~Fluor Fernald, Inc. (self-performed) with the exception of the following activities: GML installation - panel layout, welding, seaming, testing and repair of GML, sewing of geotextile and leak detection testing of GML. Specialty contractors will perform these activities~~ the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #6 cap will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #6 cap:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721 -

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.
- Rework the drainage ditch on the west side of Cell #6
- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number
- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent
- Training, all labor must receive on-site training
- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing
- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.
- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for ½ day for dust control), 1 teamster (for ½ day) and 1 laborer.
- Rework of the 400 ft long V-drainage ditch on the west side of Cell #6 will take 3 days and will require 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for .75 days), 3.25 operators and 1 laborer. Placement of riprap in the ditch will take 2 days and will require 300 tons of type "D" riprap, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators and 2 laborers
- Removal of the 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF and excavation of sacrificial clay wedge will take 5 days and will require

1 CAT D6 LGP bulldozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 2.5 teamsters and 1 laborer

3) Task #3 - Contouring Layer

Technical specification 02240

3.1) Plan/Scope - Contouring Layer

- Remove existing silt fence (two rows) from select impacted material layer
- Survey and verify top of the existing select impacted material layer
- Grade, recompact top of select layer
- Construct access ramp with non-impacted contouring layer material
- Place non-impacted material contouring layer
- Survey and verify non-impacted material contouring layer
- Surface water management and erosion control
- Dust control

3.2) Quantification - Contouring Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Removal of existing silt fence (two rows) from select impacted material layer will take 1 day and will require 1 CAT 416 Backhoe, 1 operator and 2 laborers.

- Surveying and verification of the top of the existing select impacted material layer will take 1 day and will require 2 surveyors.

- Grading and recompacting the top of the select layer will take 5 days and will require1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster and 2 laborers.

- Construction of the access ramp will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #6 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters

- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)

- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant

- GCL, GML and geotextile deployment

- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Leak detection testing of GML by specialty contractor.

- Location survey of GML panels and seams will be performed by the cell contractor

- Construction survey

- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.

- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) Task #6 - Drainage Layer

Technical specification section 02710

6.1) Plan/Scope - Drainage Layer

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #6.

- Placing drainage layer, rolling and surveying of drainage layer surface

- Construction survey

- Dust control

6.2) Quantification - Drainage Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 30,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter.
- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers.

- Construction survey will require 2 surveyors for 1 day.

- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster.

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials

- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier.

- Place biointrusion barrier and choke stone

- Dust control

7.2) Quantification - Biointrusion Barrier

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.

- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.

- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.

- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.
- Loading, hauling, and placement of the filter layer material
- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.
- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.
- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.
- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #6
- Placement of the vegetative layer
- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.

- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.
- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road

- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.

- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #6

- Placement of the topsoil layer

- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner

construction) labor and equipment will be used on an as needed basis and taken from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.

- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.

- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon (for dust control), and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #6 final cover including seeding and erosion mat

11.2) Quantification - Permanent Vegetation

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill, 1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #6 final cover surface that will require permanent vegetation is 7.25 acres

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

12.2) Quantification - Closeout

Not applicable

1.5.13 CCPLJ – OSDF Cell #7 Liner

The scope of work for this charge number is the construction of the OSDF Cell #7 liner. Construction of the OSDF Cell #7 liner includes: submittals and procurement, site preparation, clay liner, primary and secondary geosynthetic liners, primary and secondary drainage layers, construction of perimeter clay wedges and access ramps, catchment area, video inspection of HDPE pipe.

Construction of OSDF Cell #7 liner will be performed by the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for OSDF Cell #7 liner will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #7 liner:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization, training, installation of SWM&EC, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, access/haul roads, removal of topsoil, excavation, overexcavation, removal of existing utilities including drain tiles as shown on current (year 2001) utility drawings and subgrade preparation

- Survey subgrade and acceptance by Fluor Fernald

- Maintain subgrade until placement of first lift of clay liner

- Installation of gravity inlet structures and reinforced concrete pipe

- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Installation of SWM&EC will require 2 laborers, 1 operator and a CAT 416 backhoe for 2 days. 1,100 lf of silt fence will be needed.

- Installation of the construction fence will require 2 laborers for 2 days and 1,000 lf of construction fence.

- Surveying of existing conditions will require 2 surveyors, one week (40 hours each)

- Construction of a portion of the OSDF haul road (approximately 440 lf of road, adjacent and to the west of OSDF Cell 7) will be constructed of crushed stone and will require 1,000 cy of fill, 500 tons of #304 stone. Construction will take 5 days. Construction will require 2 Volvo 30-ton trucks, 1 waterwagon, 3 teamsters, 1 CAT 825 sheep's foot roller, 1 CAT 966 loader, 1 CAT D-6 bulldozer, 3 operators, and 2 laborers.

- Preparation of the construction area

- Excavation of liner #7 will be 4,000 cy and will take 10 days to complete. Required equipment and labor will be 1 water truck, 4 Volvo A-30 trucks, 5 teamsters, 1 CAT D-6 bulldozer, 1 CAT D-8 bulldozer, 1 CAT 330 excavator, 3 operators. Excavation will progress from east to west.

- Over-excavation of unsuitable material will be 2,000 cy and will take 5 days to complete. This activity will require 1 CAT 613 waterwagon, 4 Volvo A-30 trucks,

5 teamsters, 1 CAT D-8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller and 3 operators

- Removal of existing utilities is included with excavation.

- Removal of topsoil is included in other activities
- Surveying of the liner #7 subgrade will take 2 surveyors 2 days to complete

- Maintaining the liner #7 subgrade prior to placement of the clay liner will require 2 laborers, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 1 operator and 1 3" pump. Total duration will be 2 days.

- Installation of the gravity inlet structure and the reinforced concrete pipe will take 5 days to complete. Installation will require 2 laborers, 1 CAT 330 excavator, 1 operator, 60 lf of 12" RCP and gravel material to bed and surround the RCP.

3) Task #3 - Clay Liner

Technical specification section 02225

3.1) Plan/Scope - Clay Liner

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. Consists of installing stop signs and removing stop signs after completion of the clay wedge.

- Load clay liner material from OSDF Borrow Area stockpiles and haul to OSDF Cell #7

- Placement, compaction, maintenance and survey of the clay surface

- The clay liner will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Clay liner placement will progress from east to west. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

3.2) Quantification - Clay Liner

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon, 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the clay liner construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the clay liner activity.

- Traffic control at the intersection of the Borrow Area Haul Road and the North Entrance Road will require 1 laborer to install and remove stop signs, warning signs at the beginning and the end of the clay hauling activity. This activity will require 1 laborer for 8 hours.

- Loading of clay material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 25 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the clay liner will require 1 CAT D8 low-ground pressure bulldozer, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 1 CAT SS250 soil stabilizer, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 4 laborers. Of the four laborers 1will act as a spotter, 1 will act as the grade checker, and 2 will perform rock picking from the clay liner. The CAT 613 waterwagon and teamster will also support stone delivery at the construction laydown area and other concurrent clean work. Clay liner construction will require 33,000 ICY of clay.

- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon, and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

4) <u>Task #4 - Primary and Secondary Geosynthetic Liners</u>

Technical specification sections 02605, 02714, 02770 and 02772

4.1) <u>Plan/Scope - Primary and Secondary Geosynthetic Liners</u>

- Receiving, unloading, inspecting, storing geosynthetic liner material (GCL, GML and geotextile), liner penetration boxes and HDPE pipe (solid wall and perforated). The geosynthetic material will be stored south of the OSDF Cell #7 liner area.

- Top of clay liner surface acceptance by the cell contractor, Fluor Fernald, GML specialty contractor, and CQC consultant

- Primary and secondary GCL, GML and geotextile placement and installation of 6 liner penetration boxes

- Hydro test penetration boxes and solid wall HDPE pipes between penetration boxes and valve house #7 for the leachate detection system, leachate collection system, and redundant leachate collection system

- Movement of the GCL, GML, and geotextile from the storage location to the OSDF Cell #7 liner and deployment of the material will be performed by the cell contractor. Deployment of the GCL, GML and geotextile will be from east to west.

- Panel layout, welding, seaming, tie-in of penetration boxes, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by cell contractor.

- Leak detection testing of primary GML will be performed by the cell contractor

- Location survey of GML panels and seams will be performed by the cell contractor

- Trenching, placement of primary and secondary liner terminations, backfill and compaction around OSDF Cell #7 perimeter
- Construction survey

- Dust control

4.2) Quantification - Primary and Secondary Geosynthetic Liners

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 15 days over a period of two months. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Placement of the 3 secondary penetration boxes on the west side of the liner will take 12 days to complete. This activity will require 1 CAT 330 excavator, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the clay, installation and connection of the penetration boxes and hydro testing of the lines to valve house #7.

- Placement of the 3 primary penetration boxes on the west side of the liner will take 9 days to complete. This activity will require 1 posi-trac with bucket, 1 operator, 2 walk behind plate compactors, 2 laborers, and 2 pipefitters. This activity includes the excavation of the gravel, installation and connection of the penetration boxes and hydro testing of the lines to valve house #7.

- Deployment of the secondary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the secondary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile will be performed by a specialty contractor. The contractor cost will include labor, material and equipment for this work.

- Deployment of the primary GCL, GML and geotextile will take 15 days and will require 1 posi-trac, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Installation of the primary liner includes panel layout, welding, seaming, tie-in of penetration boxes to the liners, non-destructive testing, repair of GML and sewing of geotextile which will be performed by the cell contractor. The contractor cost will include labor, material and equipment for this work.

- Leak detection testing of the primary GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the specialty contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

- Trenching and placement of the secondary and primary liner terminations around the perimeter will take 5 days and require a CAT 330 excavator, 1 operator, 1 walk behind compactor and 2 laborers.

5) <u>Task #5 - Primary and Secondary Drainage Layers</u>

Technical specification section 02605 and 02710)

5.1)

5.2) Plan/Scope - Primary and Secondary Drainage Layers

- Receiving, stockpiling and inspecting the #78 and #57 stone will occur south of OSDF liner #7. There will be two periods of stockpiling stone – 1 for the secondary and 1 for the primary.

- Placing drainage layer, installation of perforated HDPE pipe, and rolling and surveying of drainage layer surfaces

- Construction survey

- Dust control

5.3) Quantification - Primary and Secondary Drainage Layers

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of the #78 and #57 stone for the secondary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter
- Placement of the #78 and #57 stone and the perforated drainage pipe for the secondary layer will take 10 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 3 Volvo A-30 trucks, 3 teamsters, 2 pipefitters and 4 laborers. Of the 4 laborers, 1 will act as a spotter, 1 will act as a grade checker, 2 will work on grading of the stone. Handling of the pipe will be shared by these laborers.

- Receiving, stockpiling and inspection of the #78 and #57 stone for the primary layer will take 20 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter

- Dust control will require 1 CAT 613 waterwagon (for 10 days) and 0.5 teamster.

6) Task #6 - Construction of Perimeter Clay Wedges and Access Ramp

6.1) Pan/Scope - Construction of Perimeter Clay Wedges and Access Ramp

- Traffic control at intersection of Borrow Area Haul Road and North Entrance Road is covered under Task 3 of this charge number.

- Load from OSDF Borrow Area stockpiles and haul to OSDF Cell #7 perimeter clay wedges

- Placement, compaction, maintenance and survey of the OSDF Cell #7 perimeter clay wedges
- Placement of sacrificial geomembrane
- Construction of OSDF Cell #7 access ramp
- Construction survey
- Dust control

6.2) Quantification - Construction of Perimeter Clay Wedges and Access Ramp

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Loading, hauling, placement and compaction of clay material for OSDF Cell #7 perimeter wedges will take 10 days and require 1 CAT 330 excavator, 1 CAT 825 sheep's foot roller, 1 CAT D6 bulldozer, 2.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon, 5 teamsters and 2 laborers. This activity will also require 2 surveyors for 1 day.
- Placement of the sacrificial geomembrane will take 2 days and will require 4 laborers
- Construction of the OSDF Cell #7 Access Ramp will take 3 days and will require 1 CAT D6 bulldozer, 1 CAT 966 loader, 2 operators, 3 Volvo A-30 trucks, 3 teamsters, and 1 laborer. This activity will also require one water truck for 1.5 days and one teamster for 1.5 days.
- This activity will require 2 surveyors for 1 day

7) Task #7 - Catchment Area

Technical specification sections 02710 and 02714

7.1) Plan/Scope - Catchment Area

- Place and survey non-impacted granular layer and geotextile in the catchment area
- Construction survey

7.2) Quantification - Catchment Area

The following are estimated quantities for the construction contractor:

- Placement of the non-impacted granular layer and geotextile in the catchment area will require 1 CAT D6 LGP bulldozer, 1 operator, 2 Volvo A-30 trucks, 2 teamsters and 4 laborers.

8) Task #8 - Video Inspection of HDPE Pipe

Technical specification section 02605

8.1) Plan/Scope - Video Inspection of HDPE Pipe

- Video inspection of solid wall HDPE pipes for leachate detection system, leachate collection system, and redundant leachate collection system will be performed by a specialty contractor

- This activity covers the initial videotaping of leachate lines between valve houses and inlet boxes in Cell 7.

8.2) Quantification - Video Inspection of HDPE Pipe

The following are estimated quantities for the construction contractor:

- Video inspection will take a specialty contractor 1 day with 2 technicians.

9) Task #9 - Closeout

9.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

9.2) Quantification - Closeout

Not applicable

1.5.14 CCPLK – OSDF Cell #7 Cap

The scope of work for this charge number is the construction of the OSDF Cell #7 cap which includes: submittals and procurement, site preparation, contouring layer, clay cap, geosynthetic cap, drainage layer, biointrusion barrier with choking layer, filter layer, vegetative layer, topsoil, vegetation and close-out.

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Construction of Cell #7 cap will be performed by ~~Fluor Fernald, Inc. (self-performed) with the exception of the following activities: GML installation - panel layout, welding, seaming,~~

~~testing and repair of GML, sewing of geotextile and leak detection testing of GML. Specialty contractors will perform these activities~~ the cell contractor.

1) Task #1 - Submittals and Procurement

1.1) Subtask #1 - Submittals

1.1)1 Plan/Scope - Submittals

Prepare work plans, technical submittals and the submittal register. Work plans and technical submittals will be prepared by the cell contractor. Work plans include surface water management and erosion control plan, earthwork work plan, fugitive dust control, safe work plan, traffic control plan, project specific health and safety plan and QA plan. The construction schedule for Cell #7 cap will be prepared by the cell contractor.

1.1)2 Quantification - Submittals

Not applicable

1.2) Subtask #2 - Procurement

1.2)1 Plan/Scope - Procurement

The following material will be procured by Fluor Fernald, Inc. for the OSDF Cell #7 cap:

Material: GCL, GML with welding rod, geotextile.
Equipment: None.
Labor: None
Subcontractor/Services: None.

1.2)2 Quantification - Procurement

Not applicable

2) Task #2 - Site Preparation

Technical specification sections 02100, 02110, 02150, 02200, 02230, 02270, 02721

2.1) Plan/Scope - Site Preparation

- Mobilization of equipment, perform safety checks, training, installation of surface water management and erosion controls, construction fence, verification of existing conditions (including field surveys), clearing and grubbing, excavation, and culvert installation

- Construction of an access/service road on the west side of the OSDF. This activity will require fill and gravel surfacing. The gravel will be delivered to the site from outside suppliers.
- Rework the drainage ditch on the west side of Cell #7
- Excavation of the sacrificial clay wedges and removal of 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF. Placement of impacted material into the OSDF from road removal is covered by CCPL3. Stockpiling of non-impacted material from road removal is covered under this charge number
- Extend the access corridor south of OSDF Cells #6 and #7 and tie in with the south entrance road
- Complete final alignment of the fence south of the OSDF.
- Dust control

2.2) Quantification - Site Preparation

The following are estimated quantities for the construction contractor:

- Mobilization of equipment will take 2 weeks and require 1 mechanic, and 1 superintendent
- Training, all labor must receive on-site training
- Relocation of Rad fencing will take 1 week and will require 2 laborers and 1,600 lf of fencing
- Construction of the access road/ service road on the west side of the OSDF will require 600 cy of fill. This activity will take 2 days and will require 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 2 operators, 3 Volvo A-30 truck, 1 CAT 613 waterwagon (for 1 day for dust control), 3.5 teamsters and 1 laborer. This activity will require placement of 500 tons of #304 stone for the service road.
- Placement of the #304 stone for the access road/ service road will take 1 day and will require 5,200 CY of stone, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for ½ day for dust control), 1 teamster (for ½ day) and 1 laborer.
- Rework of the 400 ft long V-drainage ditch on the west side of Cell #7 will take 3 days and will require 2,000 cy of fill, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for .75 days), 3.25 operators and 1 laborer. Placement of riprap in

the ditch will take 2 days and will require 300 tons of type "D" riprap, 1 CAT 330 excavator, 1 CAT D6 bulldozer, 2 operators and 2 laborers

- Removal of the 20 foot wide x 400 foot long OSDF haul road from the west side of the OSDF and excavation of sacrificial clay wedge will take 5 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 330 excavator, 2 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 2.5 teamsters and 1 laborer

- Extension of the access corridor south of OSDF Cells #6 and #7 to tie in with the south entrance road will take 5 days and will require 1 CAT 330 excavator, 1 CAT D6 bulldozer, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 3 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 2.5 days), 3.5 teamsters and 1 laborer. The access road extension will be 1,200 lf and will require 2,000 cy of fill.

- Completion of the final alignment of the fence south of the OSDF will require removal of 2,400 lf of chain link fence, installation of 2,400 lf of new chain link fence and 2 gates. Removal of the existing fence will take 5 days and will require 1 CAT 416 backhoe, 1 operator and 4 laborers. Installation of the new fence and gates will take 5 days and will require 1 Bobcat with auger attachment, 2 ironworkers and 3 laborers.

3) Task #3 - Contouring Layer

Technical specification 02240

3.1) Plan/Scope - Contouring Layer

- Remove existing silt fence (two rows) from select impacted material layer
- Survey and verify top of the existing select impacted material layer
- Grade, recompact top of select layer
- Construct access ramp with non-impacted contouring layer material
- Place non-impacted material contouring layer
- Survey and verify non-impacted material contouring layer
- Surface water management and erosion control
- Dust control

3.2) Quantification - Contouring Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Removal of existing silt fence (two rows) from select impacted material layer will take 1 day and will require 1 CAT 416 Backhoe, 1 operator and 2 laborers.

- Surveying and verification of the top of the existing select impacted material layer will take 1 day and will require 2 surveyors.

- Grading and recompacting the top of the select layer will take 5 days and will require1 CAT D6 bulldozer, 1 CAT 563 smooth drum roller, 2 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster and 2 laborers.

- Construction of the access ramp will take 2 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller, 3 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 1 day for dust control), 6.5 teamsters, and 1 laborer

- Placement of the non-impacted material contouring layer will take 10 days and will require 1 CAT 330 excavator, 1 CAT D6 LGP bulldozer, 1 CAT 825 sheep's foot roller (for 5 days), 2.5 operators, 6 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 5 days for dust control), 6.5 teamsters and 2 laborers.

- Survey and verification of the top of the contouring layer will take 1 day and will require 2 surveyors for 1 day.

4) Task #4 - Clay Cap

Technical specification section 02225

4.1) Plan/Scope - Clay Cap

- Maintain the Borrow Area Haul Road

- Provide traffic control at intersection of Borrow Area Haul Road and North Entrance Road. This activity consists of installing stop signs and removing stop signs after completion of hauling of the material from the Borrow Area.

- Excavate, load and haul clay cap material from OSDF Borrow Area stockpiles and haul to OSDF Cell #7 cap

- Placement, compaction, maintenance and survey of the clay surface. The clay cap will be overbuilt 0.1" to 0.3" to allow for possible desiccation cracking of the clay surface. Approximately 0.1" to 0.2" of the excess material will be removed as installation of GCL progresses from east to west.

- Construction survey

- Dust control

4.2) Quantification - Clay Cap

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Excavation, loading and hauling of the clay from the Borrow Area stockpiles will take 20 days and will require 1 CAT 330 excavator, 1 operator, 6 Volvo A-30 trucks and 6 teamsters

- Placement, compaction of 18,000 ICY of clay will take 20 days and will require 1 CAT D6 LGP bulldozer, 1 CAT SS250 soil stabilizer, 1 CAT 563 smooth drum roller, 1 CAT 825 sheep's foot roller, 3.5 operators, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 3 laborers
- Removal of excess clay will require 1 CAT D8 LGP bulldozer, 1 CAT 330 excavator, 1 CAT 563 smooth drum roller, 2.5 operators, 2 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), and 3 teamsters. This activity will take 5 days.

- Survey of the finished clay surface will require 2 surveyors for 1 day.

5) Task #5 - Geosynthetic Cap

Technical specification sections 02714, 02770 and 02772

5.1) Plan/Scope - Geosynthetic Cap

- Receiving, unloading, inspecting, storing geosynthetic cap materials (GCL, GML and geotextile)

- Top of clay liner surface acceptance by Fluor Fernald, GML specialty contractor, and CQC consultant

- GCL, GML and geotextile deployment

- Panel layout, welding, seaming, non-destructive GML testing and repair of GML to be performed by the cell contractor. Sewing of geotextile to be performed by the cell contractor. Movement of the GCL, GML and geotextile from the storage area will be performed concurrently with deployment of the material.

- Leak detection testing of GML by specialty contractor.

- Location survey of GML panels and seams will be performed by the cell contractor

- Construction survey

- Dust control

5.2) Quantification - Geosynthetic Cap

Refer to Tables 1.5.A and 1.5.B for material procurement and/placement quantities. The following are estimated quantities for the construction contractor:

- Receiving, unloading, inspecting and storing geosynthetic liner material will take 8 days over a period of one month. This activity will require 1 CAT TH83 forklift, 1 operator and 2 laborers.

- Acceptance of the top of clay liner will require 2 surveyors for 1 day.

- Deployment of the GCL, GML and geotextile will take 17 days and will require 1 posi-trac, 1 CAT 563 smooth drum roller, 1 CAT TH83 forklift, 2.5 operators and 10 laborers. Installation of the liner includes panel layout, welding, seaming, non-destructive testing, repair of GML and sewing of geotextile.

- Leak detection testing of the GML will be performed by the cell contractor and will take 5 days. This activity will require 1 posi-trac, 1 operator, 2 laborers and a 2" gas powered pump.

- Placement of geotextile will be by the cell contractor. This activity will take 5 days and require 1 posi-trac, 1 CAT TH83 forklift, 2 operators and 6 laborers. The sewing of the geotextile will be by the cell contractor.

- Location survey of the GML panels and seams will require 2 surveyors for one day.

6) Task #6 - Drainage Layer

Technical specification section 02710

6.1) Plan/Scope - Drainage Layer

- Receiving, stockpiling and inspecting the #78 stone will occur west of OSDF Cell #7.

- Placing drainage layer, rolling and surveying of drainage layer surface

- Construction survey

- Dust control

6.2) Quantification - Drainage Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 32,000 tons of #78 stone for the drainage layer will take 25 days and will require 1 CAT D8 LGP bulldozer, 1 operator and 1 laborer to act as a spotter.

- Placement of the #78 stone will take 20 days. This activity will require 2 CAT D6 bulldozers, 1 CAT 966 loader, 1 CAT 563 smooth drum roller, 3 operators, 4 Volvo A-30 trucks, 4 teamsters, and 2 laborers.

- Construction survey will require 2 surveyors for 1 day.

- Dust control for receiving and placement will require 1 CAT 613 waterwagon (for 11 days) and 0.5 teamster.

7) Task #7 - Biointrusion Barrier

Technical specification section 02280

7.1) Plan/Scope - Biointrusion Barrier

- Receiving, unloading, inspecting and storing biointrusion barrier and choke stone materials

- Survey and verify top of drainage layer elevation prior to placement of biointrusion barrier.

- Place biointrusion barrier and choke stone

- Dust control

7.2) Quantification - Biointrusion Barrier

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving, stockpiling and inspection of 57,000 tons of riprap for the biointrusion barrier and 4,500 tons of choke stone will take 40 days and will require 1 CAT D8 LGP bulldozer, 1 operator, 1 CAT 613 waterwagon (for 10 days for dust control), 0.25 teamster, and 1 laborer to act as a spotter.

- Verification and survey of the top of the drainage layer will take 1 day and will require 2 surveyors.

- Placement of the riprap and choke stone will take 30 days. This activity will require 2 CAT D8 LGP bulldozers, 1 CAT 966 loader, 1 CAT 330 excavator, 1 CAT

563 smooth drum roller, 4.5 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for dust control), 4.5 teamsters, and 2 laborers.

8) Task #8 - Filter Layer

Technical specification section 02712

8.1) Plan/Scope - Filter Layer

- Receive and stockpile filter layer material (sand) from off site supplier.
- Survey and verify top of biointrusion barrier elevation prior to placement of filter layer.
- Loading, hauling, and placement of the filter layer material
- Dust control

8.2) Quantification - Filter Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Receiving and stockpiling 12,000 tons of filter layer material will take 12 days and will require 1 CAT D8 bulldozer, 1 operator, 1 CAT 613 waterwagon (for 3 days for dust control), 0.25 teamster and 1 laborer.
- Survey of the biointrusion barrier will take 1 day and will require 2 surveyors.
- Loading, hauling, and placement of the filter layer material will take 10 days and will require 1 CAT D6 LGP bulldozer, 1 CAT 966 loader, 2 operators, 4 Volvo A-30 trucks, 1 CAT 613 waterwagon (for 3 days), 4.25 teamsters, and 1 laborer.

9) Task #9 - Vegetative Layer

Technical specification section 02930

9.1) Plan/Scope - Vegetative Layer

- Maintain the Borrow Area Haul Road
- Survey and verify top of filter layer elevation prior to placement of the vegetative layer.

- Load vegetative layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #7

- Placement of the vegetative layer
- Dust control

9.2) Quantification - Vegetative Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during cap construction) labor and equipment will be used on an as needed basis and taken from the vegetative layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the vegetative layer activity.

- Survey of the top of filter layer elevation will require 2 surveyors for 1 day.

- Loading of vegetative layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 20 days to complete. Dust control will be performed by the CAT 613 waterwagon and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the vegetative layer will take 20 days to complete and will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon, and 1 teamster, and 3 laborers.

10) Task #10 - Topsoil Layer

Technical specification section 02920

10.1) Plan/Scope - Topsoil Layer

- Maintain the Borrow Area Haul Road

- Survey and verify top of vegetative layer elevation prior to placement of the topsoil layer.

- Load topsoil layer material from OSDF Borrow Area stockpiles and haul to OSDF Cell #7

- Placement of the topsoil layer
- Dust control

10.2) Quantification - Topsoil Layer

Refer to Table 1.5.C for material excavated/placed quantities. The following are estimated quantities for the construction contractor:

- Maintaining the Borrow Area haul road will require intermittent use of 1 CAT D6 bulldozer, 1 CAT 613 waterwagon (for dust control), 1 operator and 1 teamster. Because the work is intermittent (less than 2 hours per week during liner construction) labor and equipment will be used on an as needed basis and taken from the topsoil layer construction activity. Therefore, costs associated with maintaining the borrow area haul road are included in the topsoil layer activity.

- Survey of the top of vegetative layer elevation will require 2 surveyors for 1 day.

- Loading of topsoil layer material from the Borrow Area stockpiles will require 1 CAT 330 excavator and 1 operator. Hauling of the material will require 6 Volvo A-30 trucks and 6 teamsters. The activity will take 2 days to complete. Dust control will be performed by the CAT 613 waterwagon (for dust control) and the teamster covered by the Borrow Area Development (charge number CCPL2).

- Placement of the topsoil layer will require 1 CAT D6 low-ground pressure bulldozers, 1 CAT 825 sheep's foot roller, 1 CAT 563 smooth drum roller, 4 operators, 1 CAT 613 waterwagon (for dust control), and 1 teamster, and 3 laborers.

11) Task #11 - Permanent Vegetation

Technical specification section 02930

11.1) Plan/Scope - Permanent Vegetation

- Plant permanent vegetation on the Cell #7 final cover including seeding and erosion mat

11.2) Quantification - Permanent Vegetation

The following are estimated quantities for the construction contractor:

- Permanent vegetation and installation of erosion mat will take 15 days and will require 1 CAT D6 bulldozer, 1 farm tractor with disc, 1 mechanical seed drill,

1 operator, 1 CAT 613 waterwagon (for dust control), 1 teamster, and 5 laborers. Cell #7 final cover surface that will require permanent vegetation is 7.25 acres

12) Task #12 - Closeout

12.1) Plan/Scope - Closeout

- Completion of project punchlist
- Final survey and redlines
- Demobilization

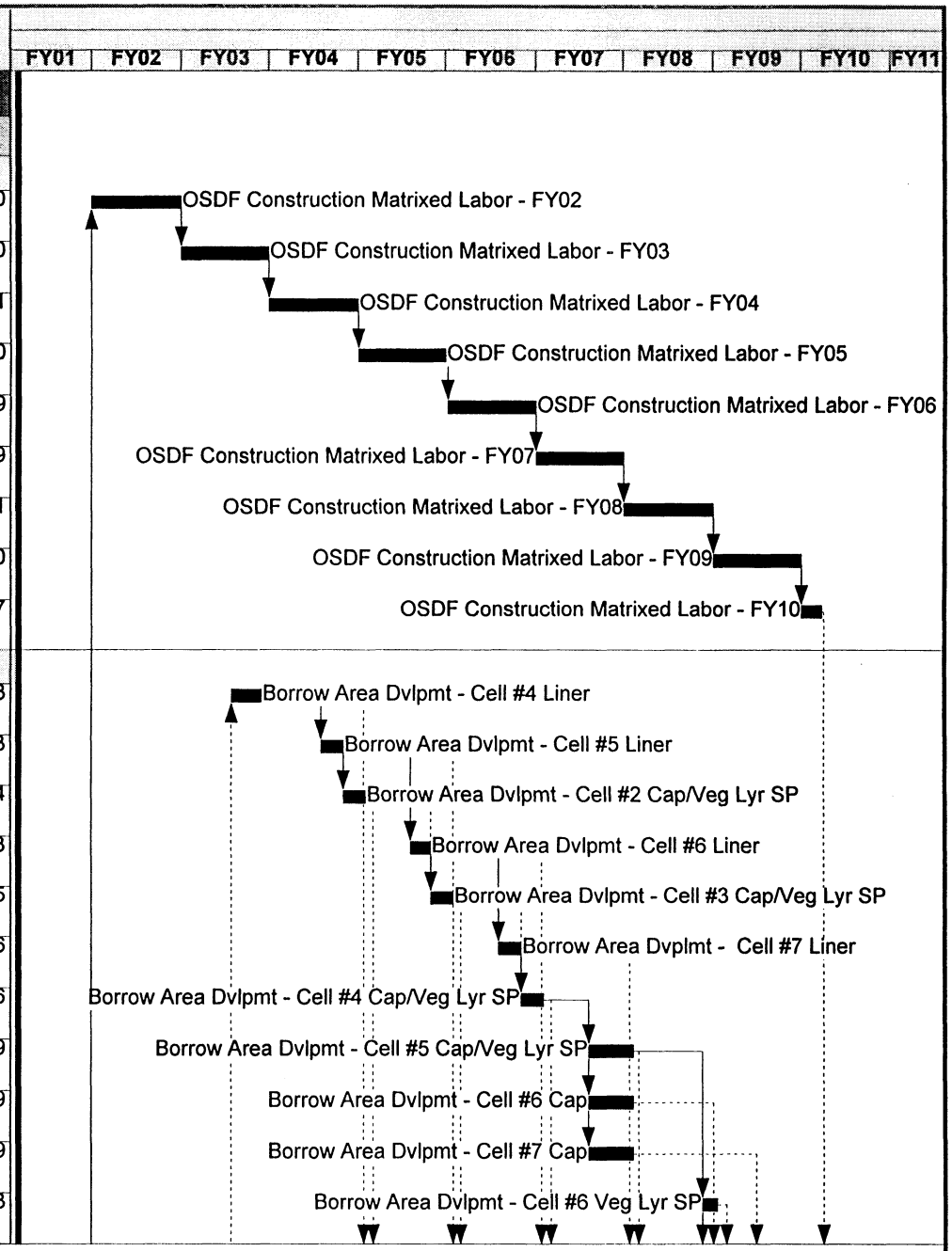
12.2) Quantification - Closeout

Not applicable

SECTION 4

2.0 SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
C PBS 03 - ON SITE DISPOSAL FACILITY				
1.1.C.D CONSTRUCTION				
CCPL1 OSDF CONSTRUCTION, MATRIXED LABOR				
CCCPL10020	OSDF Construction Matrixed Labor - FY02	01OCT01	30SEP02	250
CCCPL10030	OSDF Construction Matrixed Labor - FY03	01OCT02	30SEP03	250
CCCPL10040	OSDF Construction Matrixed Labor - FY04	01OCT03	30SEP04	251
CCCPL10050	OSDF Construction Matrixed Labor - FY05	01OCT04	30SEP05	250
CCCPL10060	OSDF Construction Matrixed Labor - FY06	03OCT05	29SEP06	249
CCCPL10070	OSDF Construction Matrixed Labor - FY07	02OCT06	28SEP07	249
CCCPL10080	OSDF Construction Matrixed Labor - FY08	01OCT07	30SEP08	251
CCCPL10090	OSDF Construction Matrixed Labor - FY09	01OCT08	30SEP09	250
CCCPL10100	OSDF Construction Matrixed Labor - FY10	01OCT09	23DEC09	57
CCPL2 OSDF BORROW AREA DEVELOPMENT				
CCCPL20080	Borrow Area Dvlpmt - Cell #4 Liner	01MAY03*	27AUG03	83
CCCPL20090	Borrow Area Dvlpmt - Cell #5 Liner	03MAY04	30JUL04	63
CCCPL20120	Borrow Area Dvlpmt - Cell #2 Cap/Veg Lyr SP	02AUG04	29OCT04	64
CCCPL20100	Borrow Area Dvlpmt - Cell #6 Liner	02MAY05	29JUL05	63
CCCPL20130	Borrow Area Dvlpmt - Cell #3 Cap/Veg Lyr SP	01AUG05	31OCT05	65
CCCPL20110	Borrow Area Dvplmt - Cell #7 Liner	01MAY06	02AUG06	66
CCCPL20140	Borrow Area Dvlpmt - Cell #4 Cap/Veg Lyr SP	03AUG06	03NOV06	66
CCCPL20150	Borrow Area Dvlpmt - Cell #5 Cap/Veg Lyr SP	04MAY07	05NOV07	129
CCCPL20160	Borrow Area Dvlpmt - Cell #6 Cap	04MAY07	05NOV07	129
CCCPL20170	Borrow Area Dvlpmt - Cell #7 Cap	04MAY07	05NOV07	129
CCCPL20180	Borrow Area Dvlpmt - Cell #6 Veg Lyr SP	15AUG08	15OCT08	43



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Start Date	01DEC00
Finish Date	27DEC09
Data Date	01DEC00
Run Date	10SEP01 15:41

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Sheet 1 of 6

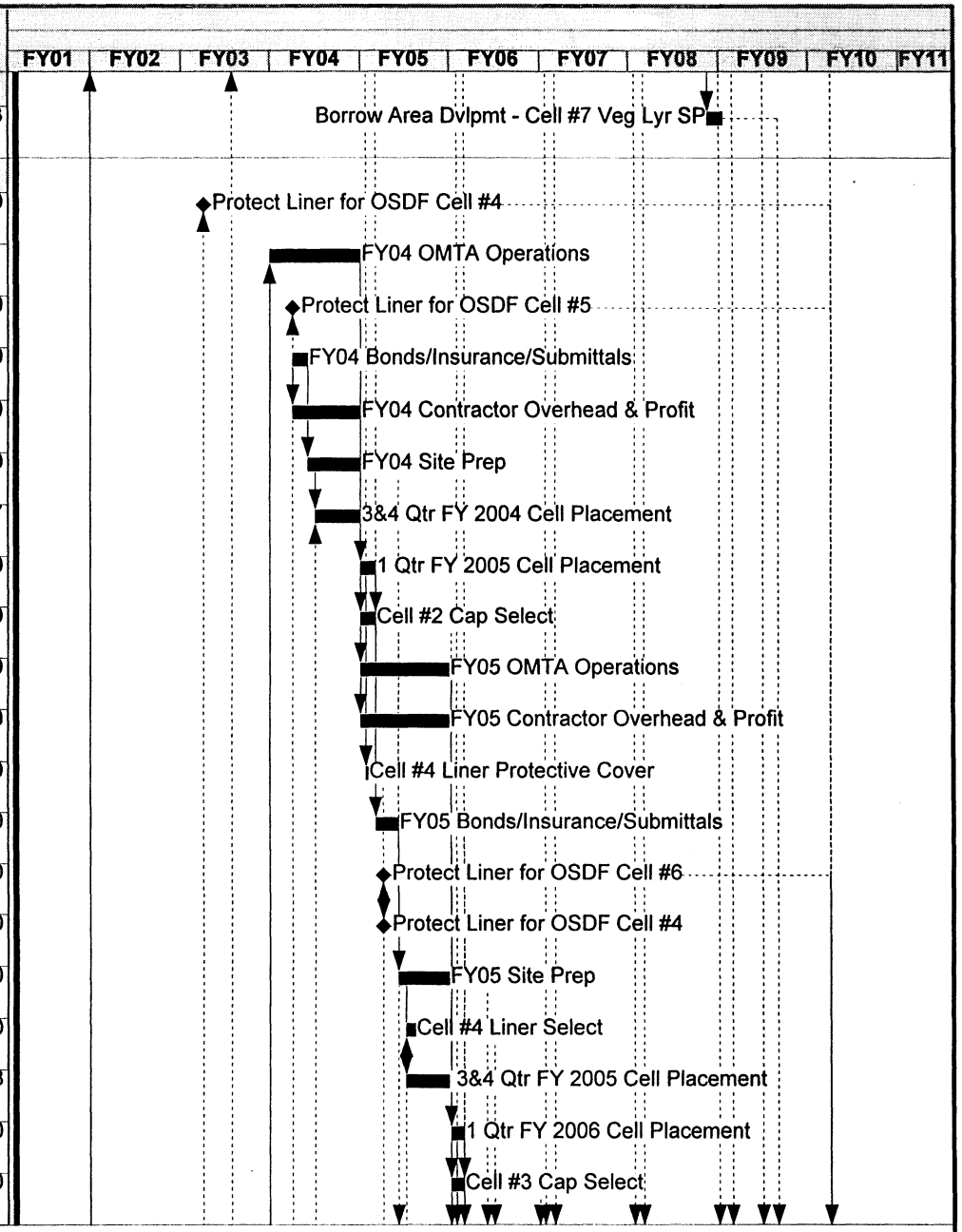
ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CCPL2 OSDF BORROW AREA DEVELOPMENT				
CCCPL20190	Borrow Area Dvlpmt - Cell #7 Veg Lyr SP	15AUG08	15OCT08	43
CCPL3 OSDF PLACEMENT				
CCCPL3EPA4	Protect Liner for OSDF Cell #4		31DEC02*	0
CCCPL30020	FY04 OMTA Operations	01OCT03*	30SEP04	251
CCCPL3EPA5	Protect Liner for OSDF Cell #5		31DEC03*	0
CCCPL30030	FY04 Bonds/Insurance/Submittals	02JAN04*	27FEB04	40
CCCPL30210	FY04 Contractor Overhead & Profit	02JAN04	30SEP04	190
CCCPL30200	FY04 Site Prep	01MAR04	30SEP04	150
CCCPL30040	3&4 Qtr FY 2004 Cell Placement	01APR04	30SEP04	127
CCCPL30050	1 Qtr FY 2005 Cell Placement	01OCT04	30NOV04	40
CCCPL30460	Cell #2 Cap Select	01OCT04	30NOV04	40
CCCPL30220	FY05 OMTA Operations	01OCT04	30SEP05	250
CCCPL30270	FY05 Contractor Overhead & Profit	01OCT04	30SEP05	250
CCCPL30060	Cell #4 Liner Protective Cover	22OCT04	04NOV04	10
CCCPL30320	FY05 Bonds/Insurance/Submittals	01DEC04	28FEB05	60
CCCPL3EPA6	Protect Liner for OSDF Cell #6		31DEC04*	0
CCCPL3M004	Protect Liner for OSDF Cell #4		31DEC04*	0
CCCPL30370	FY05 Site Prep	01MAR05	30SEP05	150
CCCPL30090	Cell #4 Liner Select	01APR05	12MAY05	30
CCCPL30070	3&4 Qtr FY 2005 Cell Placement	01APR05	30SEP05	128
CCCPL30080	1 Qtr FY 2006 Cell Placement	03OCT05	30NOV05	40
CCCPL30470	Cell #3 Cap Select	03OCT05	30NOV05	40



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ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

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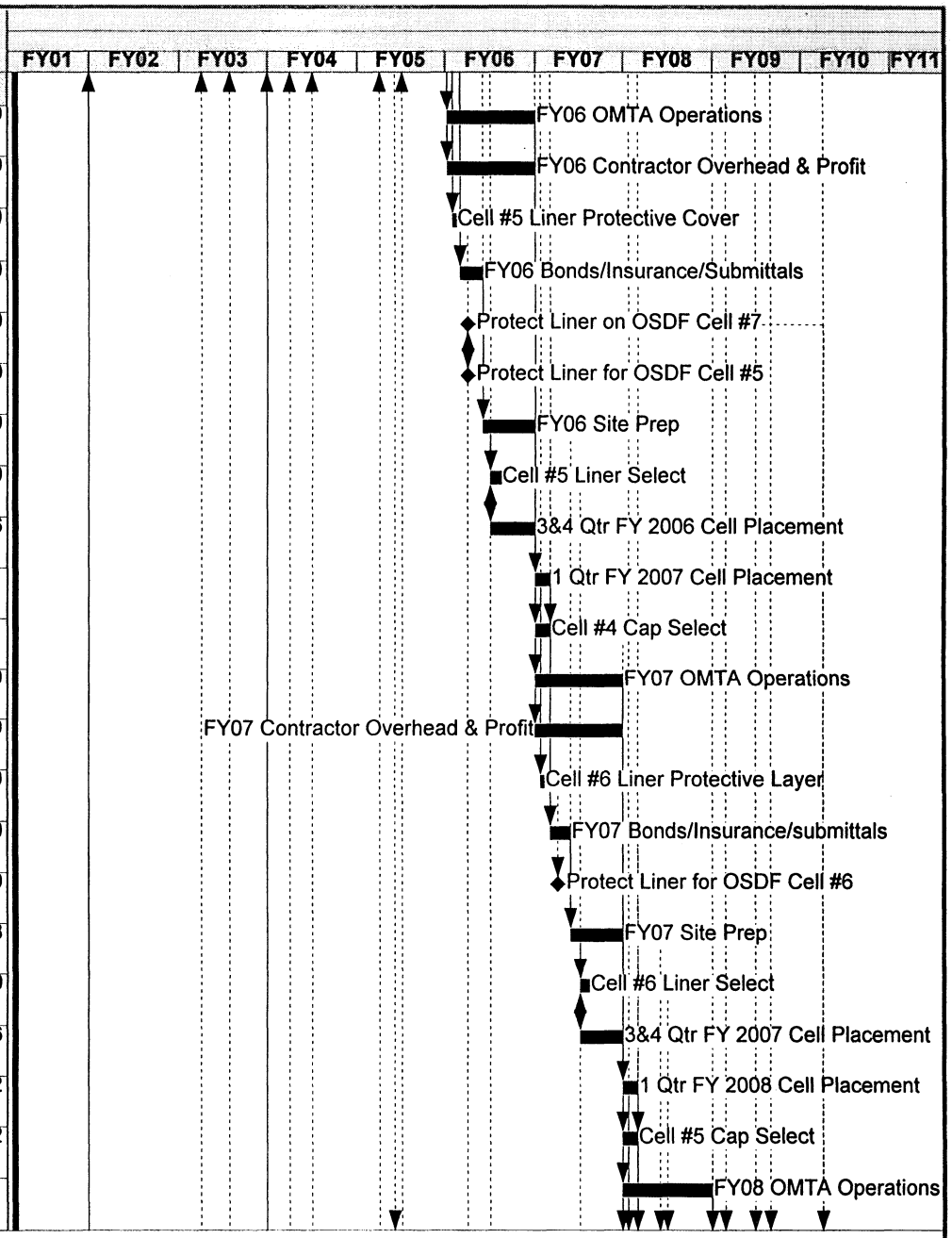
Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CCPL3 OSDF PLACEMENT				
CCCPL30230	FY06 OMTA Operations	03OCT05	29SEP06	249
CCCPL30280	FY06 Contractor Overhead & Profit	03OCT05	29SEP06	249
CCCPL30430	Cell #5 Liner Protective Cover	28OCT05	10NOV05	10
CCCPL30330	FY06 Bonds/Insurance/Submittals	01DEC05	28FEB06	60
CCCPL3EPA7	Protect Liner on OSDF Cell #7		31DEC05*	0
CCCPL3M005	Protect Liner for OSDF Cell #5		31DEC05*	0
CCCPL30380	FY06 Site Prep	01MAR06	29SEP06	149
CCCPL30440	Cell #5 Liner Select	03APR06	15MAY06	30
CCCPL30100	3&4 Qtr FY 2006 Cell Placement	03APR06	29SEP06	126
CCCPL30110	1 Qtr FY 2007 Cell Placement	02OCT06	30NOV06	41
CCCPL30480	Cell #4 Cap Select	02OCT06	30NOV06	41
CCCPL30240	FY07 OMTA Operations	02OCT06	28SEP07	249
CCCPL30290	FY07 Contractor Overhead & Profit	02OCT06	28SEP07	249
CCCPL30120	Cell #6 Liner Protective Layer	24OCT06	06NOV06	10
CCCPL30340	FY07 Bonds/Insurance/submittals	01DEC06	28FEB07	60
CCCPL3M006	Protect Liner for OSDF Cell #6		31DEC06*	0
CCCPL30390	FY07 Site Prep	01MAR07	28SEP07	148
CCCPL30450	Cell #6 Liner Select	02APR07	14MAY07	30
CCCPL30130	3&4 Qtr FY 2007 Cell Placement	02APR07	28SEP07	126
CCCPL30140	1 Qtr FY 2008 Cell Placement	01OCT07	30NOV07	42
CCCPL30490	Cell #5 Cap Select	01OCT07	30NOV07	42
CCCPL30250	FY08 OMTA Operations	01OCT07	30SEP08	251



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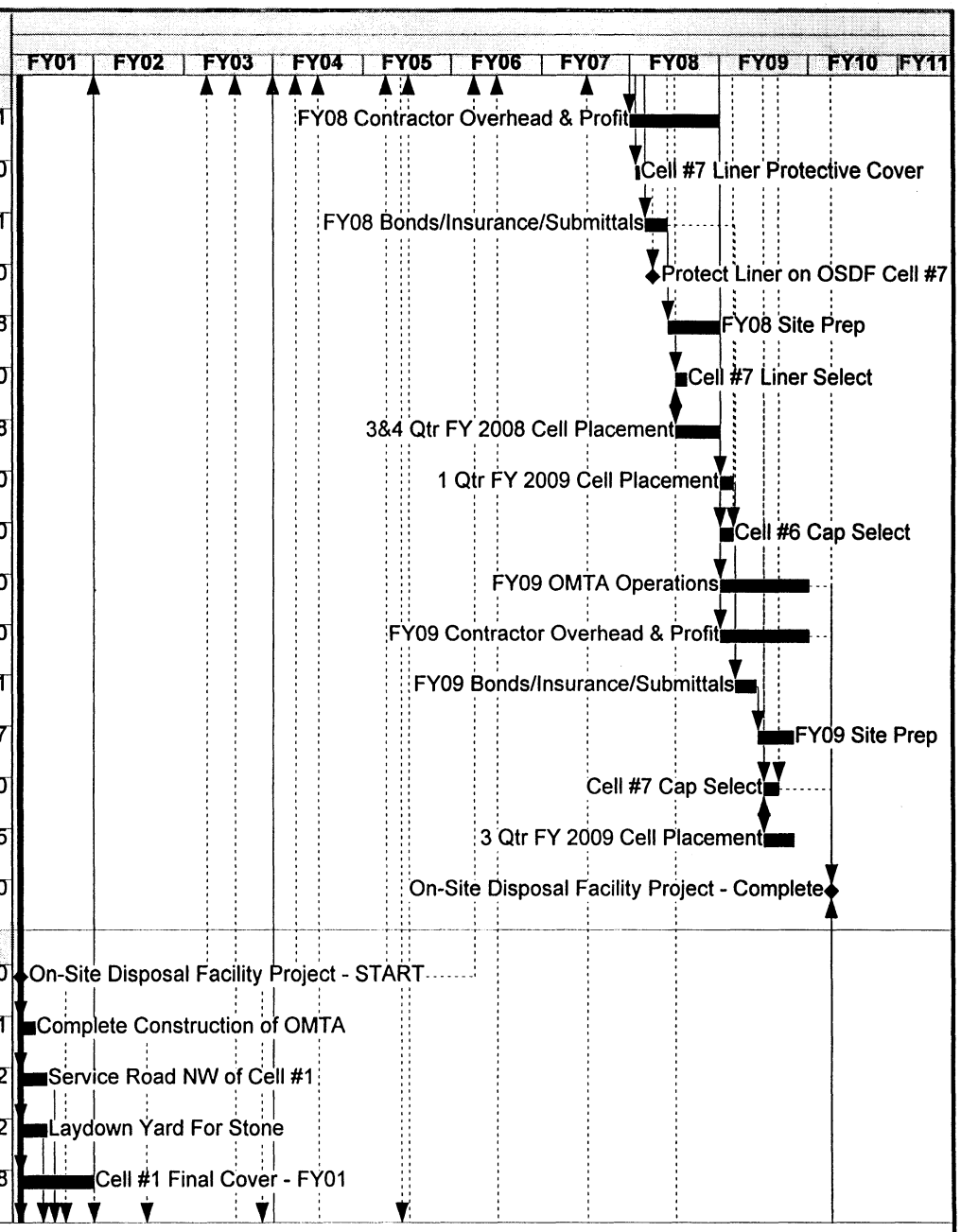
ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CCPL3 OSDF PLACEMENT				
CCCPL30300	FY08 Contractor Overhead & Profit	01OCT07	30SEP08	251
CCCPL30520	Cell #7 Liner Protective Cover	23OCT07	05NOV07	10
CCCPL30350	FY08 Bonds/Insurance/Submittals	03DEC07	29FEB08	61
CCCPL3M007	Protect Liner on OSDF Cell #7		31DEC07*	0
CCCPL30400	FY08 Site Prep	03MAR08	30SEP08	148
CCCPL30180	Cell #7 Liner Select	01APR08	12MAY08	30
CCCPL30160	3&4 Qtr FY 2008 Cell Placement	01APR08	30SEP08	128
CCCPL30170	1 Qtr FY 2009 Cell Placement	01OCT08	26NOV08	40
CCCPL30500	Cell #6 Cap Select	01OCT08	26NOV08	40
CCCPL30260	FY09 OMTA Operations	01OCT08	30SEP09	250
CCCPL30310	FY09 Contractor Overhead & Profit	01OCT08	30SEP09	250
CCCPL30360	FY09 Bonds/Insurance/Submittals	01DEC08	27FEB09	61
CCCPL30410	FY09 Site Prep	02MAR09	31JUL09	107
CCCPL30510	Cell #7 Cap Select	01APR09	28MAY09	40
CCCPL30190	3 Qtr FY 2009 Cell Placement	01APR09	31JUL09	85
CCCPL3M00F	On-Site Disposal Facility Project - Complete		27DEC09	0
CCPL4 COMPLETE CELL #1 CAP/CELLS 2&3 TEMP COVERS				
CCCPL4M00S	On-Site Disposal Facility Project - START	01DEC00		0
CCCPL40130	Complete Construction of OMTA	01DEC00	31JAN01	41
CCCPL40040	Service Road NW of Cell #1	01DEC00	16MAR01	72
CCCPL40050	Laydown Yard For Stone	01DEC00	16MAR01	72
CCCPL40010	Cell #1 Final Cover - FY01	01DEC00	28SEP01	208



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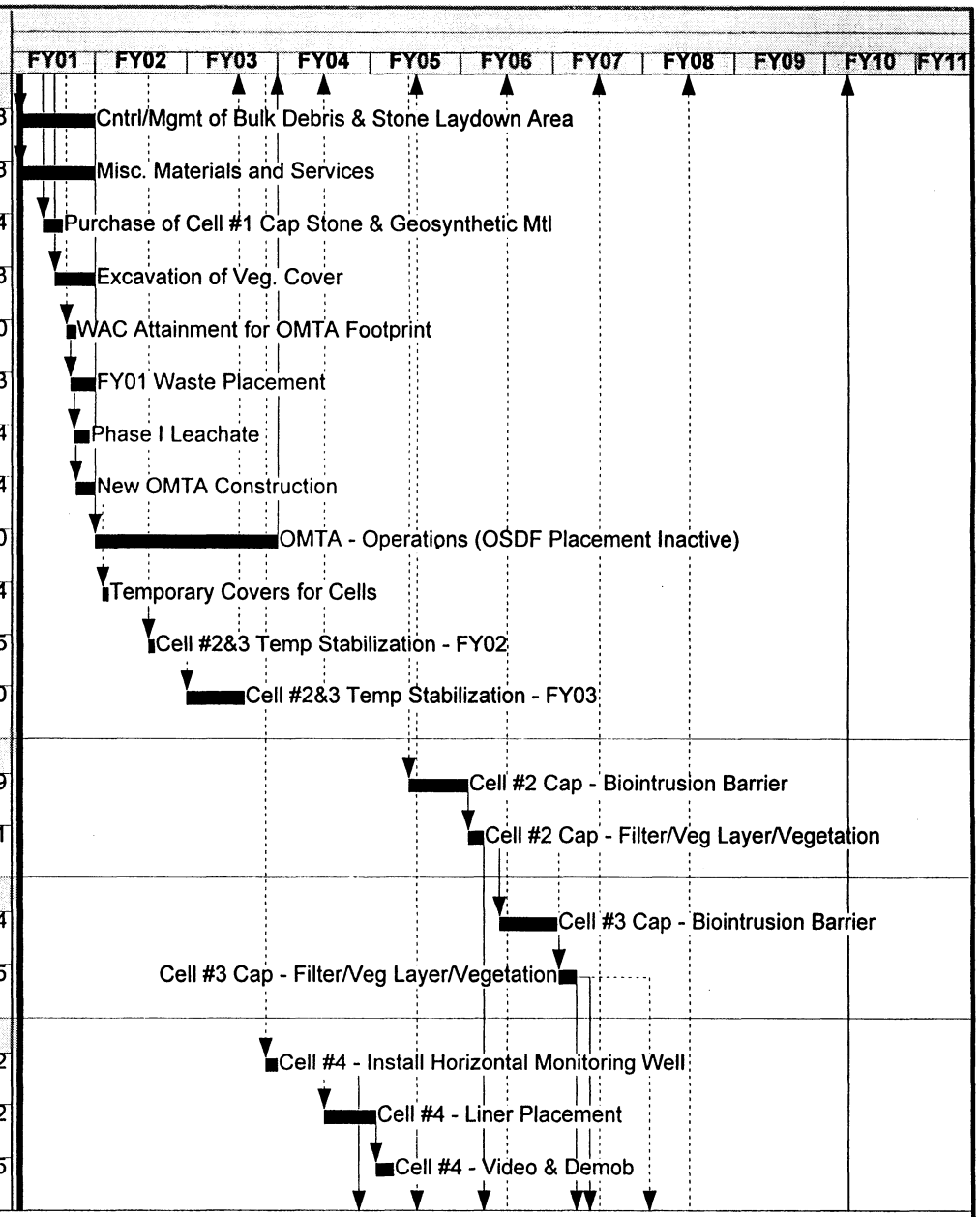
ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CCPL4 COMPLETE CELL #1 CAP/CELLS 2&3 TEMP COVERS				
CCCPL40060	Cntrl/Mgmt of Bulk Debris & Stone Laydown Area	01DEC00	28SEP01	208
CCCPL40090	Misc. Materials and Services	01DEC00	28SEP01	208
CCCPL40070	Purchase of Cell #1 Cap Stone & Geosynthetic Mtl	05MAR01	18MAY01	54
CCCPL40080	Excavation of Veg. Cover	16APR01	24SEP01	113
CCCPL40110	WAC Attainment for OMTA Footprint	01JUN01*	13JUL01	30
CCCPL40100	FY01 Waste Placement	18JUN01	28SEP01	73
CCCPL40140	Phase I Leachate	02JUL01	31AUG01	44
CCCPL40150	New OMTA Construction	16JUL01	28SEP01	54
CCCPL40160	OMTA - Operations (OSDF Placement Inactive)	01OCT01	30SEP03	500
CCCPL40120	Temporary Covers for Cells	01NOV01*	21NOV01	14
CCCPL40020	Cell #2&3 Temp Stabilization - FY02	01MAY02*	21MAY02	15
CCCPL40030	Cell #2&3 Temp Stabilization - FY03	01OCT02*	22MAY03	160
CCPLA OSDF CELL #2 CAP				
CCCPLA0010	Cell #2 Cap - Biointrusion Barrier	01MAR05*	27OCT05	169
CCCPLA0020	Cell #2 Cap - Filter/Veg Layer/Vegetation	28OCT05	30DEC05	41
CCPLB OSDF CELL #3 CAP				
CCCPLB0010	Cell #3 Cap - Biointrusion Barrier	01MAR06	20OCT06	164
CCCPLB0020	Cell #3 Cap - Filter/Veg Layer/Vegetation	23OCT06	29DEC06	45
CCPLC OSDF CELL #4 LINER				
CCCPLC0010	Cell #4 - Install Horizontal Monitoring Well	15AUG03*	30SEP03	32
CCCPLC0020	Cell #4 - Liner Placement	01APR04*	21OCT04	142
CCCPLC0030	Cell #4 - Video & Demob	22OCT04	30DEC04	45



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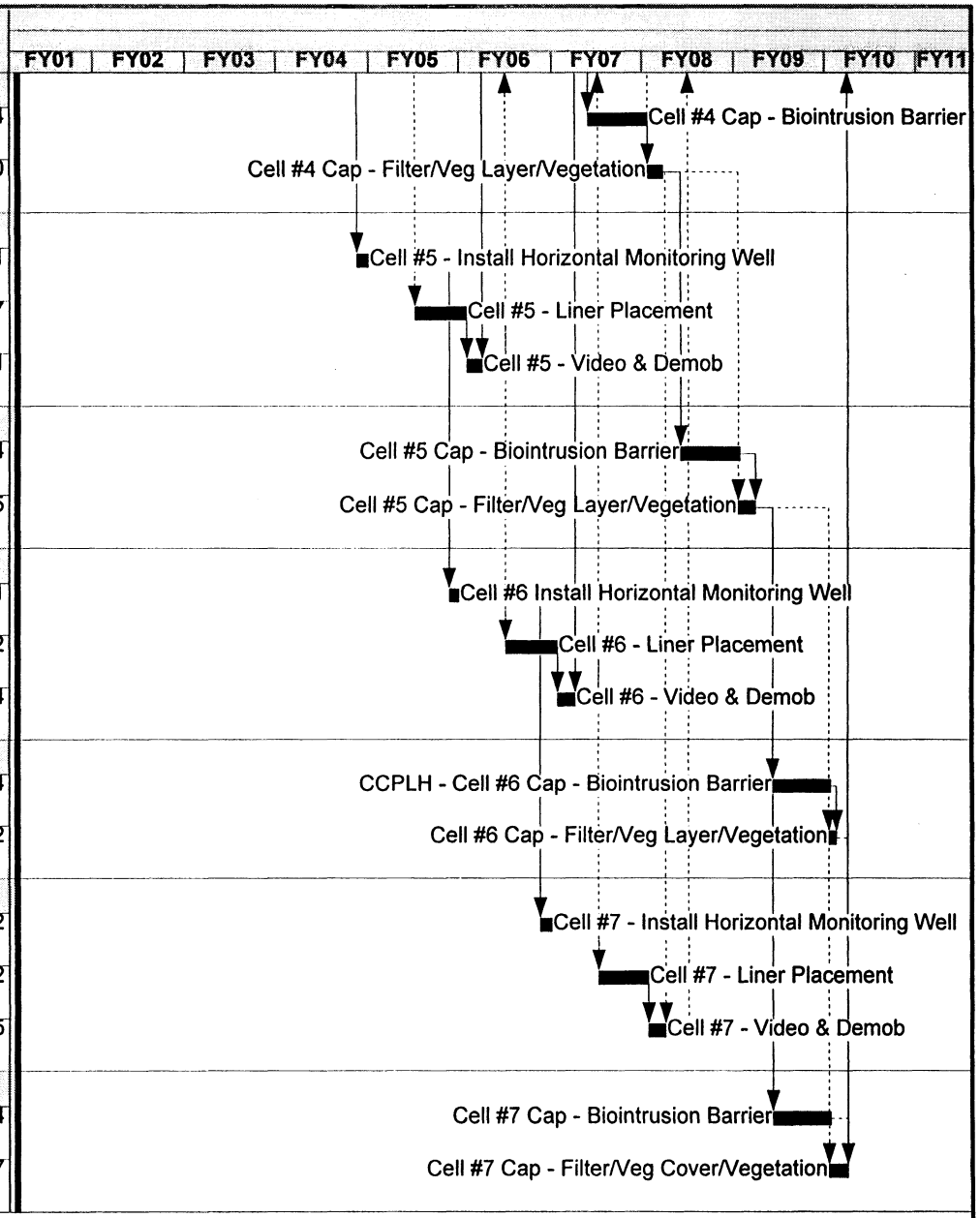
ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur
CCPLD OSDF CELL #4 CAP				
CCCPLD0010	Cell #4 Cap - Biointrusion Barrier	01MAR07	22OCT07	164
CCCPLD0020	Cell #4 Cap - Filter/Veg Layer/Vegetation	23OCT07	20DEC07	40
CCPLE OSDF CELL #5 LINER				
CCCPLE0010	Cell #5 - Install Horizontal Monitoring Well	18AUG04*	30SEP04	31
CCCPLE0020	Cell #5 - Liner Placement	01APR05*	27OCT05	147
CCCPLE0030	Cell #5 - Video & Demob	28OCT05	30DEC05	41
CCPLF OSDF CELL #5 CAP				
CCCPLF0010	Cell #5 Cap - Biointrusion Barrier	03MAR08	22OCT08	164
CCCPLF0020	Cell #5 Cap - Filter/Veg Layer/Vegetation	16OCT08	22DEC08	45
CCPLG OSDF CELL #6 LINER				
CCCPLG0010	Cell #6 Install Horizontal Monitoring Well	18AUG05*	30SEP05	31
CCCPLG0020	Cell #6 - Liner Placement	03APR06*	23OCT06	142
CCCPLG0030	Cell #6 - Video & Demob	24OCT06	29DEC06	44
CCPLH OSDF CELL #6 CAP				
CCCPLH0010	CCPLH - Cell #6 Cap - Biointrusion Barrier	02MAR09	21OCT09	164
CCCPLH0020	Cell #6 Cap - Filter/Veg Layer/Vegetation	15OCT09	16NOV09	22
CCPLJ OSDF CELL #7 LINER				
CCCPLJ0010	Cell #7 - Install Horizontal Monitoring Well	16AUG06*	29SEP06	32
CCCPLJ0020	Cell #7 - Liner Placement	02APR07*	22OCT07	142
CCCPLJ0030	Cell #7 - Video & Demob	23OCT07	31DEC07	45
CCPLK OSDF CELL #7 CAP				
CCCPLK0010	Cell #7 Cap - Biointrusion Barrier	02MAR09	21OCT09	164
CCCPLK0020	Cell #7 Cap - Filter/Veg Cover/Vegetation	16OCT09	27DEC09	47



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ON-SITE DISPOSAL FACILITY

1.1.C.D CONSTRUCTION

Early Bar
Progress Bar
Critical Activity

Date	Revision	hecked	Approved
	R1-F03-009		

SECTION 4

3.0 MANPOWER PLANS

Manpower Planning Sheet (CR2)

MPS # 1CD03 OSDF CONSTRUCTION MATRIXED LABOR

DRIVERS	START DATE	END DATE	TOT	FY 2001 Q1	FY 2001 Q2	FY 2001 Q3	FY 2001 Q4	FY 2002 Q1	FY 2002 Q2	FY 2002 Q3	FY 2002 Q4	FY 2003 Q1	FY 2003 Q2	FY 2003 Q3	FY 2003 Q4	FY 2004 Q1	FY 2004 Q2	FY 2004 Q3	FY 2004 Q4	FY 2005 Q1	FY 2005 Q2	FY 2005 Q3	FY 2005 Q4	FY 2006 Q1	FY 2006 Q2	FY 2006 Q3	FY 2006 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009																xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001		xx	xxx	xxx	xxx																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																			x	xxx	xxx	xxx			
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006																							x	xxx	xxx
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004													xx	xxx	xxx	xxx	xxx	xxx							
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007																									
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																	xx	xxx	xxx	xxx	xxx	xxx			
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008																									
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006																					xx	xxx	xxx	xxx	xxx
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009																									
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001						xx																			
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007																									xx
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009																									
321 OSDF Cell Placement	10/01/2003	06/30/2009														xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Environmental Safety & H	Rad Tech		60.60	3	3	3	2	1	0	0	0	0	0	0	0	0.5	0.1	2	2	2	1	2	2	2	1	3	3
QA/QC	QA/QC Tech.		41.50	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1.5	1.5	1.5	0	2	2	2	0	3	3
Environmental	Environmental Scientist Rep.		12.90	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	1	0	1	1
Environmental Safety & H	Safety Engineer		19.50	1	1	1	1	1	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0	1	1
Environmental Safety & H	Industrial Hygienist		10.10	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.3	0.3	0.3	0	1	1
Environmental	Environmental Scientist Tech.		4.00	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.3	0.3
Maintenance	Maintenance Rep.		3.90	0	0	0	0	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.2	0.2
		Sheet Totals:	152.50	4.00	4.00	4.00	3.00	2.10	0.00	0.10	0.10	0.20	0.20	1.90	1.90	2.40	0.10	4.40	4.40	4.40	1.00	5.10	5.10	6.00	1.10	9.50	9.50

Manpower Planning Sheet (CR2)

MPS # 1CD03 OSDF CONSTRUCTION MATRIXED LABOR

DRIVERS	START DATE	END DATE	FY 2007 Q1	FY 2007 Q2	FY 2007 Q3	FY 2007 Q4	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3	FY 2009 Q4	FY 2010 Q1	FY 2010 Q2	FY 2010 Q3	FY 2010 Q4	FY 2011 Q1	FY 2011 Q2	FY 2011 Q3	FY 2011 Q4
301 OSDF Summary Schedule	04/01/2004	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
302 OSDF CELL 1 - Cap	11/09/2000	09/28/2001																				
303 OSDF CELL 2 - Cap	03/01/2005	12/30/2005																				
305 OSDF CELL 3 - Cap	03/01/2006	12/29/2006	xxx																			
306 OSDF CELL 4 - Site Prep and Liner	08/15/2003	12/30/2004																				
308 OSDF CELL 4 - Cap	03/01/2007	12/20/2007		x	xxx	xxx	xxx															
309 OSDF CELL 5 - Site Prep and Liner	08/18/2004	12/30/2005																				
311 OSDF CELL 5 - Cap	03/03/2008	12/22/2008						x	xxx	xxx	xxx											
312 OSDF CELL 6 - Site Prep and Liner	08/18/2005	12/29/2006	xxx																			
314 OSDF CELL 6 - Cap	03/02/2009	11/16/2009										x	xxx	xxx	xx							
315 OSDF Monitoring & Maintenance	10/02/2000	12/23/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx							
317 WASTE ACCEPTANCE ORGANIZATION	10/01/2003	09/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
318 Interim Cap for Cells 2&3	11/01/2001	11/21/2001																				
319 OSDF CELL 7 - Liner	08/16/2006	12/31/2007	xxx	xxx	xxx	xxx	xxx															
320 OSDF CELL 7 - Cap	03/02/2009	12/23/2009										x	xxx	xxx	xxx							
321 OSDF Cell Placement	10/01/2003	06/30/2009	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx									
Environmental Safety & Health	Rad Tech		3	1	3	3	3	1	3	3	3	1	2	2	0	0	0	0	0	0	0	0
QA/QC	QA/QC Tech.		3	0	3	3	2	0	3	3	2	0	2	1	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Rep.		1	0	1	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0
Environmental Safety & Health	Safety Engineer		1	0	1	1	1	0	1	1	1	0	0.5	0.5	0	0	0	0	0	0	0	0
Environmental Safety & Health	Industrial Hygienist		1	0	1	1	1	0	1	0	1	0	0.3	0.3	0	0	0	0	0	0	0	0
Environmental	Environmental Scientist Tech.		0.3	0	0.3	0.3	0.3	0	0.3	0.3	0.3	0	0.1	0.1	0	0	0	0	0	0	0	0
Maintenance	Maintenance Rep.		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0	0	0	0	0	0	0	0
		Sheet Totals:	9.50	1.20	9.50	9.50	8.50	1.20	9.50	8.50	8.50	1.10	6.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTION 4

4.0 ESTIMATE

CCPL1

OSDF CONSTRUCTION, MATRIXED LABOR

09/07/2001
10:50 AM

PBS: OHFN03
WBS: 1.1.C.D
CTRL ACCT: CCPL
CHARGE NO: CCPL1
COMMENT NO N/A

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2002-2009

Resource: ENSREP **ENVIR SCIENCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	132.6	130.4	131.2	1,552.0	1,672.0	1,671.0	1,424.0	0.0
Cum Hours:	0.0	0.0	132.6	263.0	394.2	1,946.2	3,618.2	5,289.2	6,713.2	6,713.2
Yr Total Cost:	0	0	6,203	6,460	6,885	87,012	101,622	107,046	101,374	0
Cum Total Cost:	0	0	6,203	12,663	19,548	106,560	208,182	315,228	416,602	416,602

Resource: ENSTEC **ENVIR SCIENTIST TECH** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	174.7	130.4	131.2	386.8	501.6	501.3	250.6	0.0
Cum Hours:	0.0	0.0	174.7	305.1	436.3	823.1	1,324.7	1,826.0	2,076.6	2,076.6
Yr Total Cost:	0	0	5,516	4,360	4,647	14,636	20,576	21,675	12,041	0
Cum Total Cost:	0	0	5,516	9,876	14,523	29,159	49,735	71,410	83,451	83,451

Resource: INDHYG **INDUSTRIAL HYGIENIST** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	88.3	130.4	316.2	1,276.2	1,672.0	1,110.0	805.9	0.0
Cum Hours:	0.0	0.0	88.3	218.7	534.9	1,811.1	3,483.1	4,593.1	5,399.0	5,399.0
Yr Total Cost:	0	0	4,570	7,147	18,357	79,155	112,423	78,666	63,470	0
Cum Total Cost:	0	0	4,570	11,716	30,073	109,228	221,651	300,317	363,787	363,787

Resource: MNTREP **MAINTENANCE REP** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	131.1	130.4	130.4	131.2	314.5	421.4	421.4	240.8	0.0
Cum Hours:	0.0	131.1	261.5	391.9	523.1	837.6	1,259.0	1,680.4	1,921.2	1,921.2
Yr Total Cost:	0	4,795	5,052	5,350	5,702	14,603	21,211	22,357	14,197	0
Cum Total Cost:	0	4,795	9,847	15,197	20,899	35,502	56,713	79,069	93,266	93,266

Resource: QACTEC **QA/QC TECH** **EOC:** LABOR
Res Dept: 949 **Overtime:** **Class:** SAL

INCLUDES ESCALATION COSTS

09/07/2001
10:50 AM

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	0.0	883.0	1,745.5	2,430.5	4,262.0	5,016.0	4,471.0	2,407.0	0.0
Cum Hours:	0.0	0.0	883.0	2,628.5	5,059.0	9,321.0	14,337.0	18,808.0	21,215.0	21,215.0
Yr Total Cost:	0	0	30,400	63,637	93,863	175,851	224,362	210,786	126,106	0
Cum Total Cost:	0	0	30,400	94,037	187,900	363,751	588,113	798,899	925,005	925,005

Resource: **RADTEC** **RAD TECH** **EOC:** **LABOR**
Res Dept: **949** **Overtime:** **Class:** **SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	421.0	0.0	2,020.8	3,059.0	4,697.0	5,451.0	5,449.0	3,832.0	0.0
Cum Hours:	0.0	421.0	421.0	2,441.8	5,500.8	10,197.8	15,648.8	21,097.8	24,929.8	24,929.8
Yr Total Cost:	0	15,102	0	81,308	130,377	213,882	269,086	283,515	221,568	0
Cum Total Cost:	0	15,102	15,102	96,411	226,788	440,670	709,755	993,270	1,214,838	1,214,838

Resource: **S&HENG** **SAFETY ENGINEER** **EOC:** **LABOR**
Res Dept: **949** **Overtime:** **Class:** **SAL**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	421.0	441.5	652.0	656.0	1,355.0	1,672.0	1,671.0	982.5	0.0
Cum Hours:	0.0	421.0	862.5	1,514.5	2,170.5	3,525.5	5,197.5	6,868.5	7,851.0	7,851.0
Yr Total Cost:	0	22,028	24,469	38,265	40,782	89,999	120,391	126,818	82,863	0
Cum Total Cost:	0	22,028	46,497	84,762	125,544	215,543	335,934	462,752	545,614	545,614

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Hours:	0.0	973.1	1,850.5	4,939.9	6,855.3	13,843.5	16,406.0	15,294.7	9,942.8	0.0
Cum Hours:	0.0	973.1	2,823.6	7,763.5	14,618.8	28,462.3	44,868.3	60,163.0	70,105.8	70,105.8
Yr Total Cost:	0	41,926	76,209	206,527	300,613	675,137	869,671	850,862	621,619	0
Cum Total Cost:	0	41,926	118,135	324,662	625,275	1,300,412	2,170,083	3,020,944	3,642,564	3,642,564

CAM _____ CONTROL TEAM _____

INCLUDES ESCALATION COSTS

CCPL2

OSDF BORROW AREA DEVELOPMENT

09/07/2001
10:55 AM

PBS: OHFN03
WBS: 1.1.C.D
CTRL ACCT: CCPL
CHARGE NO: CCPL2
COMMENT NO F03-009

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2003-2009

Resource: **FIELDSUB** **FIELD SUBS** **EOC:** **SUBCONTRACTORS**
Res Dept: **949** **Overtime:** **Class:** **SUB**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	0.0	0.0	900,800.0	2,078,531.9	1,836,142.4	1,820,278.0	1,839,560.2	1,107,364.3	250,723.3	0.0
Cum Units:	0.0	0.0	900,800.0	2,979,331.9	4,815,474.3	6,635,752.3	8,475,312.4	9,582,676.8	9,833,400.0	9,833,400.0
Yr Total Cost:	0	0	950,100	2,253,672	2,046,602	2,087,758	2,171,060	1,344,819	313,316	0
Cum Total Cost:	0	0	950,100	3,203,772	5,250,374	7,338,132	9,509,192	10,854,011	11,167,328	11,167,328

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Total Cost:	0	0	950,100	2,253,672	2,046,602	2,087,758	2,171,060	1,344,819	313,316	0
Cum Total Cost:	0	0	950,100	3,203,772	5,250,374	7,338,132	9,509,192	10,854,011	11,167,328	11,167,328

CAM_____ CONTROL TEAM_____

INCLUDES ESCALATION COSTS

CCPLR

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

BASIS OF ESTIMATE

SUPPORTING DOCUMENTATION:

Verbal Scope	☒	P & ID's	☐	Work Plan	☐
Drawings	☐	Equipment List	☐	Site Walk	☐
Sketches	☐	Specifications	☐	Eng. Mtg.	☒
Flow Diagrams	☐	Written Scope	☒	Estimate	☐

TYPE OF ESTIMATE:

Change Proposal	☐	Government	☐
Plan/Feasibility	☐	Conceptual	☐
Construction	☐	Title I Design	☐
Budget	☒	Independent	☐

BASIS OF ESTIMATE:

These seven estimates present the baseline cost for construction of the OSDF Borrow Area. The last digit of the estimate number above refers to the FY. The included scope is from the Baseline Closure Plan and associated supporting documents. Durations are from the OSDF schedules and are presented in Appendix D. Control and Management is not included in these estimates; it is, however, included in a separate C & M estimate.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

FY03 is by the support contractor, WISE Services. Submittals, bond and insurance, overhead and profit are not applicable to the support contractor.
All other projects, FY04 through FY09 are by the sub-contractor. Surveying by a three-person sub-contractor crew at $140/hour is included for FY04 through FY 07. Both the surveying and project staffing costs are allocated among the various simultaneous OSDF projects per the OSDF documents and an allocation chart. Equipment operating costs assume an 85% operations factor unless otherwise indicated. The support contractor uses a single rental screener. Fluor Fernald in FY04 purchases two screeners with associated stacker conveyers. A spare parts allowance has been excluded.

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

ESTIMATE ASSUMPTIONS

EXECUTION:

- ☒ This project is to be performed on a 50-hour week, 10 hours a day.
- ☐ This project is to be performed on a 40-hour week, 8 hours a day.
- ☒ Premium time allowed.

WAGE RATES:

- ☒ Wage rates within this estimate are based on Project Labor Agreement rates, effective October 2000 and are considered FY01 dollars for estimating for FY04 through FY09.
- ☒ Wage rates within this estimate are based on FF Support Contractor FSC 645 wage rates, effective January 30, 2001 and are considered FY01 dollars for estimating for FY03 only.
- ☐ Wage rates within this estimate are based on FF FTE Planning Labor Rates FY01.

ENGINEERING:

- ☒ N/A
- ☐ Engineering dollars provided by the Project Engineer.
- ☐ Engineering dollars have been factored in at the standard 12% of the total direct and indirect field costs as per request of Project Engineer.

CONSTRUCTION MANAGEMENT:

- ☐ N/A
- ☒ Construction Management staffing by discipline has been included.
- ☐ Construction Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

PROJECT MANAGEMENT:

☒ N/A
☐ Project Management dollars provided by the Project Engineer.
☐ Project Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

WASTE PROGRAM MANAGEMENT:

☒ N/A
☐ Waste Program Management dollars provided by the Project Engineer.

PRODUCTIVITY:

A productivity factor has been developed and applied to the unit man-hours derived from MEANS, Richardson, NECA, and or any other published estimating source. See attachment APPENDIX "A" and APPENDIX "B".

ESCALATION:

Escalation costs are excluded from the target estimate. The escalation costs are calculated within the Micro-Frame computer system according to the plan for rebaselining.

UNIT RATES:

Unit man-hours and material dollars are based on Richardson, MEANS, NECA, National Constructor, historical data at Fernald, and or other published rates. Some man-hours and equipment requirements are provided by engineering and CM. Equipment rental rates and hourly operating costs are from the Blue Book Volume 1.

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

G & A (HO EXPENSE):

G & A are excluded from the target estimate. The G & A cost are calculated within the Micro-Frame computer system according to the plan for rebaselining.

HEALTH PHYSICS:

See attached APPENDIX "C".

RISK BUDGET:

N/A

CONTINGENCY:

N/A

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 16, 2001

PROJECT DESCRIPTION: Baseline OSDF Borrow Area
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: C. Van Arsdale
ESTIMATOR: R. Smolin
ESTIMATE NUMBER: C2-2001-005-07-23
C2-2001-005-07-24
C2-2001-005-07-25
C2-2001-005-07-26
C2-2001-005-07-27
C2-2001-005-07-28
C2-2001-005-07-29

ESTIMATE INCLUSIONS & EXCLUSIONS

INCLUSIONS:

- Mobilization.
- Demobilization.
- Labor hours.
- Material dollars.
- Equipment rental.
- Equipment operating.
- Contractor staffing.
- Screener (2) purchase by FF.

EXCLUSIONS:

- Permits and fees.
- FF G & A (Home Office Expense).
- Escalation due to volatile petroleum costs.
- Any second tier subcontract costs.
- Project Management dollars.
- Waste Management dollars.
- Control & Management
- Landlord costs.
- Screener spare parts

SUPPORT CONTRACTOR ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO: CCPL2

	DESCRIPTION	M/H	AVG. RATE	SPT.CONT. LABOR $	FERNALD S/C / OTHER	MAT'L $	EQUIP $	TOTAL $
	Mobilization	70		$2,400	$6,300	$4,600		$10,900
	Site Preparation	560		$19,000		$8,800	$9,500	$18,300
	Screening	6,450		$238,390			$505,500	$505,500
	Demobilization	130		$4,540				
SUPPORT CONT. / FF D. F. COST TOTAL		7,210	$36.66	$264,330	$6,300	$13,400	$515,000	$534,700
SUPERVISION		1,370		$57,100				
SMALL TOOLS & CONSUMABLES						$4,000		$4,000
MISC. EQUIP.RENTAL								
JOB CLEAN-UP		82		$3,000		$1,000		$1,000
SAFETY		46		$1,700		$900		$900
HEALTH PHYSICS S/C		8		$300		$1,600		$1,600
JOB SPECIFIC TRAINING								
SUPPORT CONT. INDIRECT FIELD COST TOTAL		1,506		$62,100				
SUPPORT CONT. TOTAL BILLABLE COSTS		8,716	$37.45	$326,430				
TEMPORARY FACILITIES								
TEMPORARY UTILITY HOOK-UP								
FD FERNALD SALES TAX						$1,300	$30,900	$32,200
FF INDIRECT FIELD COSTS TOTAL						$8,800	$30,900	$39,700
FF DIRECT & INDIRECT FIELD COSTS TOTAL					$6,300	$22,200	$545,900	$574,400
FF and SUPT.CONT. DIRECT & INDIRECT FIELD COST TOTAL				$326,430	$6,300	$22,200	$545,900	$900,830
SUB-TOTAL (BASE ESTIMATE)								$900,800
TARGET ESTIMATE	**(FY 01 DOLLARS)**							$900,800

ESTIMATE PERFORMED B

SUPPORT CONTRACTOR ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCP — DATE: 16-May-01

ESTIMATE NO.: C2-2001-05-007-23 — **FACTORS** — ESTIMATOR: RIS

CLIENT: DOE — LOCATION: FERNALD

WBS NO.: 1.1.C.D — TASK NO.: CCPL2

	SUPT.CONT.	FD FERNALI					PROJECT
	LABOR $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$264,330		$6,300	$13,400	$515,000	$1,600	$800,630
IFC COST FACTOR	1.2349	1.0000	1	1.4403	1.0000	–	
SALES TAX COST FACTOR	–	–	–	1.0600	1.0600	1.0600	
BOND + OVERHEAD & PROFIT COST FACTOR	N/A	N/A	N/A	N/A	N/A	N/A	
DIRECT FIELD COST FACTOR =	1.2349	1.0000	1.0000	1.5267	1.0600	1.0600	
DIRECT BASE ESTIMATE $'s	$326,430		6300	$20,458	$545,900	$1,696	$900,784
RISK BUDGET FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
DIRECT TARGET ESTIMATE FACTOR	1.2349	1.0000	1	1.5267	1.0600	1.0600	
DIRECT TARGET ESTIMATE (FY00 DOLLARS)	$326,430		6300	$20,458	$545,900	$1,696	$900,784

NOTE:

1.) If there are no equipment rental costs in the "Directs" (0 $'s in I20) and the default allowance of $3.50 per MH has been used in the "indirects", input the indirect Equip. $'s in H62 and put a dash in H63. This will treat the Equip. $'s as direct cost and apply the sales tax factor. On page 3 below, insert the equipment $'s in any pay items that apply.

SUPPORT CONTRACTOR ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCP — DATE: 16-May-01

ESTIMATE NO.: C2-2001-05-007-23 — Direct Field Cost w/FACTORS — ESTIMATOR: RIS

CLIENT: DOE — LOCATION: FERNALD

WBS NO.: 1.1.C.D — TASK NO.: CCPL2

PAY ITEM NO.	DESCRIPTION	SUPPORT CONT. LABOR $	FF LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	PROJECT TOTAL $
	PPE						1,600	1,600
							$1,700	$1,700
	Mobilization	2,400		6,300	4,600			13,300
		$2,960		$6,300	$7,020			$16,280
	Site Preparation	19,000			8,800	9,500		37,300
		$23,460			$13,440	$10,070		$46,970
	Screening	238,390				505,500		743,890
		$294,400				$535,830		$830,230
	Demobilization	4,540						4,540
		$5,610						$5,610
SUB-TOTAL - SUPPORT CONTRACTOR		$326,430						$326,430
SUB-TOTAL - FF				$6,300	$20,460	$545,900	$1,700	$574,360
TOTAL DIRECT FIELD COSTS w/FACTORS								$900,790

NOTE: The above costs exclude any FD Fernald support costs that may appear on page 1 & 2, such as Waste Disposition, Engineering, Project Management, or Construction Management.

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

SUMMARY	QTY	UNIT	MAN-HOURS			COST / UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
			Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
Mobilization				70						$2,380	$6,270	$4,600		$13,250
Site Preparation				560						$18,990		$8,780	$9,490	$37,260
Screening				6,450						$238,390			$505,520	$743,910
Demobilization				130						$4,540				$4,540
Subtotal Direct Cost	1	LOT		7,210	$36.66					$264,300	$6,270	$13,380	$515,010	**$798,960**

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL	Mobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Heat stress / support traile 2 reqd	7.1	MO					350				$4,970			$4,970
	Portable toilets 2 ea	7.1	MTH					85				$1,210			$1,210
	Potable water, Allow 5jug/mth, $8/jug	7.1	MTH					12	40			$90	$300		$390
													$4,300		$4,300
D	Mobilize contractor equipment	20	EA	3	70	33.93					$2,380				$2,380
	Mobilization				70						$2,380	$6,270	$4,600		$13,250

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	31.81					$1,910				$1,910
D	1 operator		3	DAY	10	30	39.93					$1,200				$1,200
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	31.81					$1,270				$1,270
	Construction fence		2650	LF						$1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	31.81					$6,360				$6,360
	Surface Water Management															
D	2 laborer		2	DAY	10	40	31.81					$1,270				$1,270
D	1 operator		2	DAY	10	20	39.93					$800				$800
	Excavator Cat 330	2 day =	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day =	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day =	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	35.21					$350				$350
D	1 laborer		1	DAY	10	10	31.81					$320				$320
D	1 operator		3	DAY	10	30	39.93					$1,200				$1,200
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL	Site Prep cont'd		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set-up screener & conveyors requires screener															
D	2 laborer		3	DAY	10	60	31.81					$1,910				$1,910
D	2 operator		3	DAY	10	60	39.93					$2,400				$2,400
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Loader Cat 966	3 day =	0.14	MTH							6,820				$1,100	$1,100
	Excavator Cat 330 at		85%	HRS	26						32.15				$820	
	Loader Cat 966 at		85%	HRS	26						24.90				$630	$630
	Site Preparation		1	LOT		560						$18,990		$8,780	$9,490	$37,260

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL	Screening	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening														
D	3 teamster	86	DAY	10	2,580	35.21					$90,840				$90,840
D	3.5 operators	86	DAY	10	3,010	39.93					$120,190				$120,190
D	1 laborer	86	DAY	10	860	31.81					$27,360				$27,360
	Dozer, D8 1 reqd	3.97	MTH							13,145				$52,180	$52,180
	Tractor, Challenger 1 reqd	3.97	MTH							9,000				$35,730	$35,730
	Excavator Cat 330 1 reqd	3.97	MTH							11,490				$45,610	$45,610
	Loader Cat 966 1 reqd	3.97	MTH							6,820				$27,070	$27,070
	Truck, Volvo A30 3 reqd	3.97	MTH							7,905				$94,140	$94,140
	Screener, priced as Extec w/2 c 1 reqd	3.97	MTH							13,500				$53,590	$53,590
	2" pump 1 reqd	3.97	MTH							438				$1,740	$1,740
	Generator, 5000 kw 1 reqd	3.97	MTH							145				$580	$580
	Dozer, D8 at	85%	HRS	731						39.66				$28,990	$28,990
	Tractor, Challenger at	85%	HRS	731						20.00				$14,620	$14,620
	Excavator Cat 330 at	85%	HRS	731						32.15				$47,000	$47,000
	Loader Cat 966 at	85%	HRS	731						24.90				$18,200	$18,200
	Truck, Volvo A30, at	85%	HRS	731						27.12				$59,470	$59,470
	Screener, w/2 conv at	85%	HRS	731						34.00				$24,850	$24,850
	2" pump at	85%	HRS	731						0.80				$580	$580
	Generator, 5000 kw at	85%	HRS	731						1.60				$1,170	$1,170
	Screening	1	LOT		6,450	$36.96					$238,390			$505,520	$743,910

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO.: C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE LEVEL	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	20	EA	3	70	33.93					$2,380				$2,380
D	Demob screeners	1	EA	60	60	35.92					$2,160				$2,160
	Demobilization	1	LOT		130						$4,540				$4,540

APPENDIX " A"

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PERCENT OF INFLUENCE ON CHART MANHOURS

	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	EXCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<--- MULTIPLE SHIFTS-											
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	//// MULTIPLE-SHIFT ////			OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS						
60 HOUR WORK WEEK			OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS							
SHIFTWORK 2ND SHIFT 3RD SHIFT			3RD SHIFT		2ND SHIFT		OR ONE SHIFT ONLY			100.0% 100.0%	3.0% 5.0%	0.03 0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		105.0%	4.0%	0.042
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			80.0%	8.0%	0.064
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	90.6%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED

2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 90.6%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE's - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY	Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS/DAY)		
PPE LEVEL C / C+		$'s	*	MAN DAYS	MAT'L.$'s	LEVEL
LAUNDRY COST per CHANGE	SET	1.96	1	0	$0	C/B
TYVEK COVER-ALL w/HOOD & BOOTIES - DIS	EA	4.46	3	0	$0	C/B
TYVEK COVER-ALL w/HOOD & BOOTIES - DIS	EA	4.46	3	0	$0	C/B
GLOVE LINER - DISPOSABLE	PR	0.24	3	0	$0	C/B
GLOVE, LASTEX - DISPOSABLE	PR	0.26	3	0	$0	C/B
GLOVE, WORK - DISPOSABLE	PR	1.02	3	0	$0	C/B
APR CARTRIDGES - DISPOSABLE, CLEANING	PR	9.38	3	0	$0	C/B
SUB-TOTAL				0	$0	
				$/MD =	#DIV/0!	
PPE LEVEL mC						
RESS w/ FACE SHIELD		$'s		MAN DAYS	MAT'L.$'s	LEVEL
LAUNDRY COST per CHANGE	SET	1.96	1	0	$0	mC
LT.WT. DISPOSABLE COVERALLS W/HOOD &	PR	4.46	3	0	$0	mC
GLOVE LINER - DISPOSABLE	PR	0.24	3	0	$0	mC
GLOVE, LASTEX - DISPOSABLE	PR	0.26	3	0	$0	mC
GLOVE, WORK - DISPOSABLE	PR	1.02	3	0	$0	mC
SUB-TOTAL				0	$0	mC
				$/MD =	#DIV/0!	
PPE LEVEL D						
LAUNDRY COST per CHANGE	SET	1.96	1	721	$1,413	D

SUBCONTRACTOR REQUIRED PURCHASES	UNIT		QTY. PER WKR.	NO. OF WORKERS	MAT'L. $'s	LEVEL
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	12.70	2	8	$203	D/C/B
APR w/HALF FACE MASK - (1) PER WORKER	EA	22.30	6	0	$0	C
APR w/FULL FACE MASK - (1) PER WORKER	EA	174.00	6	0	$0	C
SCBA	EA	1894.00	2	0	$0	B
COOL VESTS	EA	137.50	6	0	$0	C/B
THERMO STRIPS	EA	50.00	6	0	$0	C/B
SUB-TOTAL					$200	C/B

Total PPE Matl $ and Laundry $	$1,600

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE. FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCLUDED.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY03
ESTIMATE NO C2-2001-05-007-23
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

-MEDICAL MONITORING -

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESC. PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $	
BASELINE PHYSICALS	1	4	0	0	$36.66	$0	
ANNUAL PHYSICALS	0	4	0	0	$36.66	$0	
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$36.66	$0	
SUB-TOTAL						$0	

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESC.	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $	
BI-MONTHLY BIOASSAY	4	1	0	0	$36.66	$0	
SUB-TOTAL						$0	

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HRS	AVG. RATE	LABOR $'s	
	4	2	8	$36.66	$300	
NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST for this PROJECT	CONSTR WORKING DAYS
2500	226	11	0.0044	7	0.0308	135

		LABOR $'s THRU SAFETY	LABOR $'s	
WORK DELAYS CAUSED BY MONITORING	0.0%	$326,130	$0	
			LABOR $'s	
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$326,130	$0	

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS - FORWARD TO ESTIMATE SUMMARY SHEET	$300	$1,600	$1,900

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE #: C2-2001-05-007-24
CLIENT: DOE
WBS #: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$61,990			$61,990
Submittals	805		$29,490		$200		$29,690
Overhead and Profit				$369,006			$369,006
Mobilization	70		$1,650	$6,620	$300		$8,570
Site Preparation	560		$13,310		$8,780	$9,490	$31,580
Screening	11,690		$286,200		$432,000	$686,310	$1,404,510
Demobilization	190		$4,630				$4,630
Survey				$13,420			$13,420
Project Staffing	2,667		$84,630				$84,630
DIRECT FIELD COSTS TOTAL	**15,982**	**$26.27**	**$419,910**	**$451,036**	**$441,280**	**$695,800**	**$2,008,026**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$5,900		$5,900
MISC. EQUIP. RENTAL	-	-	-			$22,800	$22,800
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$239,300				$239,300
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$26,800	$43,100	$69,900
INDIRECT FIELD COSTS TOTAL			**$239,300**		**$32,700**	**$65,900**	**$337,900**
DIRECT & INDIRECT FIELD COSTS TOTAL	**15,982**	**$41.25**	**$659,210**	**$451,036**	**$473,980**	**$761,700**	**$2,345,926**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$2,345,900**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F

DATE: 16-May-01

ESTIMATE NO. C2-2001-05-007-24

F A C T O R S

ESTIMATOR: RIS

CLIENT: DOE

LOCATION: FERNALD

WBS NO.: 1.1.C.D

TASK NO.: CCPL2

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$419,910	$451,036	$441,280	$695,800		$2,008,026
IFC COST FACTOR	1.5699	–	1.0134	1.0328	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	**1.5699**	**1.0000**	**1.0742**	**1.0947**	**1.0600**	
BASE ESTIMATE $'S	$659,210	$451,036	$474,011	$761,716		$2,345,973
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	**1.5699**	**1.0000**	**1.0742**	**1.0947**	**1.0600**	
FPS TARGET ESTIMATE (FY01 $)	$659,210	$451,036	$474,011	$761,716		$2,345,973

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F | **DATE:** 16-May-01

ESTIMATE NO. C2-2001-05-007-24 | **ESTIMATOR:** RIS

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL2

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		61,990				61,990
			$61,990				$61,990
	Submittals	29,490		200			29,690
		$46,300		$210			$46,510
	Overhead and Profit		369,006				369,006
			$369,010				$369,010
	Mobilization	1,650	6,620	300			8,570
		$2,590	$6,620	$320			$9,530
	Site Preparation	13,310		8,780	9,490		31,580
		$20,900		$9,430	$10,390		$40,720
	Screening	286,200		432,000	686,310		1,404,510
		$449,300		$464,040	$751,330		$1,664,670
	Demobilization	4,630					4,630
		$7,270					$7,270
	Survey		13,420				13,420
			$13,420				$13,420
	Project Staffing	84,630					84,630
		$132,860					$132,860
TOTAL DIRECT		$659,220	$451,040	$474,000	$761,720		$2,345,980

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$61,990			$61,990
	Submittals				805						$29,490		$200		$29,690
	Overhead and Profit											$369,010			$369,010
	Mobilization				70						$1,650	$6,620	$300		$8,570
	Site Preparation				560						$13,310		$8,780	$9,490	$31,580
	Survey											$13,420			$13,420
	Screening				11,690						$286,200		$432,000	$686,310	$1,404,510
	Demobilization				190						$4,630				$4,630
	Project Staffing				2,667						84,630				$84,630
	Subtotal Direct Cost		LOTS		16,982	$26.27					$419,910	$451,040	$441,280	$695,800	$2,008,030

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FYs Sub-total 2.8%							2214036				$61,990			$61,990
	Submittals														
D	Plans	6	EA	40	240	50.62					$12,150				$12,150
D	Technical submittals	30	EA	5	150	50.62					$7,590				$7,590
D	Site access & GET traing, cnstrct work force	20	EA	18	360	26.27					$8,450				$8,450
D	Health Physics				55	23.64					$1,300		$200		$1,500
	Sub-total				805						$29,490		$200		$29,690
	Overhead and Profit			20%								$369,010			$369,010

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Heat stress / support trailers 2 reqd	7.5	MO					350				$5,250			$5,250
	Portable toilets 2 ea	7.5	MTH					85				$1,280			$1,280
	Potable water, Allow 5jug/mth, $8/jug	7.5	MTH					12	40			$90	$300		$390
D	Mobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
	Mobilization				70						$1,650	$6,620	$300		$8,670

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3,500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	22.65					$910				$910
	Construction fence		2650	LF						$1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	22.65					$4,530				$4,530
	Surface Water Management															
D	2 laborer		2	DAY	10	40	22.65					$910				$910
D	1 operator		2	DAY	10	20	27.03					$540				$540
	Excavator Cat 330	2 day =	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day =	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day =	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set-up screeners & conveyors														
	requires 2 screeners														
D	2 laborer	3	DAY	10	60	22.65					$1,360				$1,360
D	2 operator	3	DAY	10	60	27.03					$1,620				$1,620
	Excavator Cat 330 3 day =	0.14	MTH							11,490				$1,850	$1,850
	Loader Cat 966 3 day =	0.14	MTH							6,820				$1,100	$1,100
	Excavator Cat 330 at	85%	HRS	26						32.15				$820	
	Loader Cat 966 at	85%	HRS	26						24.90				$630	$630
	Site Preparation		LOT		560						$13,310		$8,780	$9,490	$31,580

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Survey 9.5 mth Cost shared among OSDF projects at $140/hr for 3 man crew. Borrow area alloocation = $17,000 & adjusted for shorter duration							140				$13,420			$13,420
	Subtotal Direct Cost	1	LOT			#DIV/0!						$13,420			$13,420

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Screening		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening															
D	4 teamster		88	DAY	10	3,520	22.86					$80,460				$80,460
D	4.5 operators		88	DAY	10	3,960	27.03					$107,030				$107,030
D	2 laborer		88	DAY	10	1,760	22.65					$39,860				$39,860
	Dozer, D8	1 reqd	4.06	MTH							13,145				$53,390	$53,390
	Tractor 4WD 75HP	1 reqd	4.06	MTH							2,125				$8,630	$8,630
	Excavator Cat 330	2 reqd	4.06	MTH							11,490				$93,340	$93,340
	Loader Cat 966	1 reqd	4.06	MTH							6,820				$27,700	$27,700
	Truck, Volvo A30	4 reqd	4.06	MTH							7,905				$128,440	$128,440
	Screener, FF purchase w/2 conv	2 reqd	2.00	EA						216,000				$432,000		$432,000
	2" pump	1 reqd	4.06	MTH							438				$1,780	$1,780
	Generator, 5000 kw	1 reqd	4.06	MTH							145				$590	$590
	Dozer, D8 at		85%	HRS	748						39.66				$29,670	$29,670
	Tractor 4WD 75HP at		85%	HRS	748						7.75				$5,800	$5,800
	Excavator Cat 330 at		85%	HRS	748						32.15				$48,100	$48,100
	Loader Cat 966 at		85%	HRS	748						24.90				$18,630	$18,630
	Truck, Volvo A30, at		85%	HRS	748						27.12				$81,140	$81,140
	Screener, w/2 conv at		85%	HRS	748						34.00				$50,860	$50,860
	2" pump at		85%	HRS	748						0.80				$600	$600
	Generator, 5000 kw at		85%	HRS	748						1.60				$1,200	$1,200
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster		35	DAY	10	1,400	22.86					$32,000				$32,000
D	2 operators		35	DAY	10	700	27.03					$18,920				$18,920
D	1 laborer		35	DAY	10	350	22.65					$7,930				$7,930
	Dozer, D8	1 reqd	1.62	MTH							13,145				$21,240	$21,240
	Excavator Cat 330	1 reqd	1.62	MTH							11,490				$18,560	$18,560
	Truck, Volvo A30	4 reqd	1.62	MTH							7,905				$51,080	$51,080
	Dozer, D8 at		85%	HRS	298						39.66				$11,800	$11,800
	Excavator Cat 330 at		85%	HRS	298						32.15				$9,560	$9,560
	Truck, Volvo A30, at		85%	HRS	298						27.12				$24,200	$24,200
	TOTAL Screening			LOT		11,690	$24.48					$286,200		$432,000	$686,310	$1,404,510

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
D	Demob screeners	2	EA	60	120	24.83					$2,980				$2,980
	Demobilization	1	LOT		190						$4,630				$4,630

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Subtotal Direct cost		LOT												

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO.: C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 16-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	7.5 mth	10%	hr	1	82	54.42					$4,490				$4,490
D	General Superintendent	7.5 mth	10%	hr	1	82	37.85					$3,120				$3,120
D	Superintendent	7.5 mth	25%	hr	2	736	32.99					$24,280				$24,280
D	Project Engineer	7.5 mth	20%	hr	1	294	33.19					$9,770				$9,770
D	Quality Engineer	7.5 mth	25%	hr	2	736	28.05					$20,640				$20,640
D	Safety Engineer	7.5 mth	25%	hr	2	736	30.34					$22,330				$22,330
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedu	in overhead					25.58									
D	Clerical	in overhead					14.58									
	TOTAL					2,667	31.73					$84,630				$84,630

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO. C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC	
SUB-TOTAL		$5.98	3		$0		
				$/MD =	$0.00		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	2	8	$203	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$200		

TOTAL PPE's = MAT'L.$'s $200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO. C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.27	$0
ANNUAL PHYSICALS	0	4	0	0	$26.27	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.27	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.27	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	1	2	2	$26.27	$100

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	2	0.0085	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.3%	$419,910	$1,000

			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$419,910	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$1,100	$200	$1,300

(FORWARD TO ESTIMATE SUMMARY SHEET)

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE BORROW AREA CCPL2 FY05	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-007-25	ESTIMATOR:	RIS
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$49,720			$49,720
Submittals	694		$25,250		$200		$25,450
Overhead and Profit				$295,940			$295,940
Mobilization	70		$1,650	$8,470	$400		$10,520
Site Preparation	560		$13,310		$8,780	$9,490	$31,580
Screening	11,690		$286,200			$686,310	$972,510
Interim Restoration	600		$14,470	$28,930	$3,300	$15,100	$61,800
Demobilization	190		$4,630				$4,630
Survey				$17,000			$17,000
Project Staffing	2,634		$82,610				$82,610
DIRECT FIELD COSTS TOTAL	**16,439**	**$26.04**	**$428,120**	**$400,060**	**$12,680**	**$710,900**	**$1,551,760**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$6,000		$6,000
MISC. EQUIP. RENTAL	-	-	-			$23,600	$23,600
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$244,000				$244,000
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$1,100	$44,100	$45,200
INDIRECT FIELD COSTS TOTAL			**$244,000**		**$7,100**	**$67,700**	**$318,800**
DIRECT & INDIRECT FIELD COSTS TOTAL	**16,439**	**$40.89**	**$672,120**	**$400,060**	**$19,780**	**$778,600**	**$1,870,560**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$1,870,600**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F

DATE: 17-May-01

ESTIMATE NO. C2-2001-05-007-25

FACTORS

ESTIMATOR: RIS

CLIENT: DOE

LOCATION: FERNALD

WBS NO.: 1.1.C.D

TASK NO.: CCPL2

FIXED PRICE :	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$428,120	$400,060	$12,680	$710,900		$1,551,760
IFC COST FACTOR	1.5699	--	1.4732	1.0332	--	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.5699	1.0000	1.5616	1.0952	1.0600	
BASE ESTIMATE $'S	$672,120	$400,060	$19,801	$778,570		$1,870,551
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.5699	1.0000	1.5616	1.0952	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$672,120	$400,060	$19,801	$778,570		$1,870,551

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F
DATE: 17-May-01
ESTIMATE NO. C2-2001-05-007-25
ESTIMATOR: RIS
CLIENT: DOE
LOCATION: FERNALD
WBS NO.: 1.1.C.D
TASK NO.: CCPL2

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		49,720				49,720
			$49,720				$49,720
	Submittals	25,250		200			25,450
		$39,640		$310			$39,950
	Overhead and Profit		295,940				295,940
			$295,940				$295,940
	Mobilization	1,650	8,470	400			10,520
		$2,590	$8,470	$620			$11,680
	Site Preparation	13,310		8,780	9,490		31,580
		$20,900		$13,710	$10,390		$45,000
	Screening	286,200			686,310		972,510
		$449,320			$751,640		$1,200,960
	Interim Restoration	14,470	28,930	3,300	15,100		61,800
		$22,720	$28,930	$5,150	$16,540		$73,340
	Demobilization	4,630					4,630
		$7,270					$7,270
	Survey		17,000				17,000
			$17,000				$17,000
	Project Staffing	82,610					82,610
		$129,690					$129,690
TOTAL DIRECT		$672,130	$400,060	$19,790	$778,570		$1,870,550

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$49,720			$49,720
	Submittals				694						$25,250		$200		$25,450
	Overhead and Profit											$295,940			$295,940
	Mobilization				70						$1,650	$8,470	$400		$10,520
	Site Preparation				560						$13,310		$8,780	$9,490	$31,580
	Survey											$17,000			$17,000
	Screening				11,690						$286,200			$686,310	$972,510
	Interim Restoration				600						$14,470	$28,930	$3,300	$15,100	$61,800
	Demobilization				190						$4,630				$4,630
	Project Staffing				2,634						$82,610				$82,610
	Subtotal Direct Cost	1	LOT		16,439	$26.04					$428,120	$400,060	$12,680	$710,900	$1,551,760

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FY Sub-total 2.8%							1775640				$49,720			$49,720
	Submittals														
D	Plans	6	EA	30	180	50.62					$9,110				$9,110
D	Technical submittals	30	EA	5	150	50.62					$7,590				$7,590
D	Site access & GET traing, cnstrct work for	20	EA	18	360	26.04					$8,450				$8,450
D	Health Physics				4	23.64					$100		$200		$300
	Sub-total				694						$25,250		$200		$25,450
	Overhead and Profit			20%								$295,940			$295,940

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Heat stress / support trailers 2 reqd	9.6	MO					350				$6,720			$6,720
	Portable toilets 2 ea	9.6	MTH					85				$1,630			$1,630
	Potable water, Allow 5jug/mth, $8/jug	9.6	MTH					12	40			$120	$400		$520
D	Mobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
	Mobilization				70						$1,650	$8,470	$400		$10,520

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1,000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3,500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	22.65					$910				$910
	Construction fence		2,650	LF						1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	22.65					$4,530				$4,530
	Surface Water Management															
D	2 laborer		2	DAY	10	40	22.65					$910				$910
D	1 operator		2	DAY	10	20	27.03					$540				$540
	Excavator Cat 330	2 day =	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day =	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day =	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set-up screeners & conveyors requires 2 screeners															
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	2 operator		3	DAY	10	60	27.03					$1,620				$1,620
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Loader Cat 966	3 day =	0.14	MTH							6,820				$1,100	$1,100
	Excavator Cat 330 at		85%	HRS	26						32.15				$820	
	Loader Cat 966 at		85%	HRS	26						24.90				$630	$630
	Site Preparation		1	LOT		560						$13,310		$8,780	$9,490	$31,580

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Survey 9.5 mth Cost shared among OSDF projects at $140/hr for 3 man crew. Borrow area allocation = $17,000							140				$17,000			$17,000
	Subtotal Direct Cost	1	LOT			#DIV/0!						$17,000			$17,000

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Screening		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening															
D	4 teamster		88	DAY	10	3,520	22.86					$80,460				$80,460
D	4.5 operators		88	DAY	10	3,960	27.03					$107,030				$107,030
D	2 laborer		88	DAY	10	1,760	22.65					$39,860				$39,860
	Dozer, D8	1 reqd	4.06	MTH							13,145				$53,390	$53,390
	Tractor 4WD 75hp	1 reqd	4.06	MTH							2,125				$8,630	$8,630
	Excavator Cat 330	2 reqd	4.06	MTH							11,490				$93,340	$93,340
	Loader Cat 966	1 reqd	4.06	MTH							6,820				$27,700	$27,700
	Truck, Volvo A30	4 reqd	4.06	MTH							7,905				$128,440	$128,440
	Screener, Extec w/2 conv for	2 reqd	4.06	MTH							FF owned					
	2" pump	1 reqd	4.06	MTH							438				$1,780	$1,780
	Generator, 5000 kw	1 reqd	4.06	MTH							145				$590	$590
	Dozer, D8 at		85%	HRS	748						39.66				$29,670	$29,670
	Tractor 4WD 75hp		85%	HRS	748						7.75				$5,800	$5,800
	Excavator Cat 330 at		85%	HRS	748						32.15				$48,100	$48,100
	Loader Cat 966 at		85%	HRS	748						24.90				$18,630	$18,630
	Truck, Volvo A30, at		85%	HRS	748						27.12				$81,140	$81,140
	Screener, w/2 conv at		85%	HRS	748						34.00				$50,860	$50,860
	2" pump at		85%	HRS	748						0.80				$600	$600
	Generator, 5000 kw at		85%	HRS	748						1.60				$1,200	$1,200
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster		35	DAY	10	1,400	22.86					$32,000				$32,000
D	2 operators		35	DAY	10	700	27.03					$18,920				$18,920
D	1 laborer		35	DAY	10	350	22.65					$7,930				$7,930
	Dozer, D8	1 reqd	1.62	MTH							13,145				$21,240	$21,240
	Excavator Cat 330	1 reqd	1.62	MTH							11,490				$18,560	$18,560
	Truck, Volvo A30	4 reqd	1.62	MTH							7,905				$51,080	$51,080
	Dozer, D8 at		85%	HRS	298						39.66				$11,800	$11,800
	Excavator Cat 330 at		85%	HRS	298						32.15				$9,560	$9,560
	Truck, Volvo A30, at		85%	HRS	298						27.12				$24,200	$24,200
	Screening		1	LOTS		11,690	$24.48					$286,200			$686,310	$972,510

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Interim Restoration	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	1 operators	20	DAY	10	200	27.03					$5,410				$5,410
D	2 laborer	20	DAY	10	400	22.65					$9,060				$9,060
	Dozer, D6 LGP 1 reqd	0.92	MTH							8,245				$7,610	$7,610
	Tractor price as New Hollnd 4W 1 reqd	0.92	MTH							2,125				$1,960	$1,960
	Dozer, D6 LGP at	85%	HRS	170						24.76				$4,210	$4,210
	Tractor, 4WD, 75hp	85%	HRS	170						7.75				$1,320	$1,320
	Silt fence	1,000	LF						0.30				$300		$300
	Erosion mat -jute	5,000	SY						0.60				$3,000		$3,000
	Permanent seeding 7.5 ac	35,000	SY					0.83				$28,930			$28,930
	Interim Restoration	1	LOT		600	$24.12					$14,470	$28,930	$3,300	$15,100	$61,800

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
D	Demob screeners	2	EA	60	120	24.83					$2,980				$2,980
	Demobilization	1	LOT		190						$4,630				$4,630

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO.: C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	9.5 mth	10%	hr	1	104	54.42					$5,690				$5,690
D	General Superintendent	9.5 mth	10%	hr	1	104	37.85					$3,950				$3,950
D	Superintendent	9.5 mth	10%	hr	2	373	32.99					$12,310				$12,310
D	Project Engineer	9.5 mth	10%	hr	1	187	33.19					$6,190				$6,190
D	Quality Engineer	9.5 mth	25%	hr	2	933	28.05					$26,170				$26,170
D	Safety Engineer	9.5 mth	25%	hr	2	933	30.34					$28,300				$28,300
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedu	in overhead					25.58									
D	Clerical	in overhead					14.58									
	TOTAL					2,634	31.36					$82,610				$82,610

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO. C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		

PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC
SUB-TOTAL		$5.98	3		$0	
				$/MD =	$0.00	

SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	2	8	$203	D/C/B
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C
SCBA	EA	$1,894.00	2	0	$0	B
COOL VESTS	EA	$137.50	6	0	$0	C/B
THERMO STRIPS	EA	$50.00	6	0	$0	C/B
SUB-TOTAL					$200	

TOTAL PPE's = MAT'L.$'s $200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY05
ESTIMATE NO. C2-2001-05-007-25
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.04	$0
ANNUAL PHYSICALS	0	4	0	0	$26.04	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.04	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.04	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	1	2	2	$26.04	$100

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	2	0.0085	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$428,120	$0

			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$428,120	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$100	$200	$300

(FORWARD TO ESTIMATE SUMMARY SHEET)

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE BORROW AREA CCPL2 FY06	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-007-26	ESTIMATOR:	RIS
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$50,190			$50,190
Submittals	694		$25,250		$200		$25,450
Overhead and Profit				$298,720			$298,720
Mobilization	70		$1,650	$8,470	$4,700		$14,820
Site Preparation	560		$13,310		$8,780	$9,490	$31,580
Screening	11,690		$286,200			$694,380	$980,580
Interim Restoration	600		$14,470	$28,930	$3,150	$15,220	$61,770
Demobilization	190		$4,630				$4,630
Survey				$17,000			$17,000
Project Staffing	2,662		$83,480				$83,480
DIRECT FIELD COSTS TOTAL	**16,466**	**$26.05**	**$428,990**	**$403,310**	**$16,830**	**$719,090**	**$1,568,220**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$6,100		$6,100
MISC. EQUIP. RENTAL	-	-	-			$23,700	$23,700
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$244,500				$244,500
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$1,400	$44,600	$46,000
INDIRECT FIELD COSTS TOTAL			**$244,500**		**$7,500**	**$68,300**	**$320,300**
DIRECT & INDIRECT FIELD COSTS TOTAL	**16,466**	**$40.90**	**$673,490**	**$403,310**	**$24,330**	**$787,390**	**$1,888,520**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$1,888,500**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F

DATE: 17-May-01

ESTIMATE NO. C2-2001-05-007-26

FACTORS

ESTIMATOR: RIS

CLIENT: DOE

LOCATION: FERNALD

WBS NO.: 1.1.C.D

TASK NO.: CCPL2

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$428,990	$403,310	$16,830	$719,090		$1,568,220
IFC COST FACTOR	1.5699	–	1.3624	1.0330	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.5699	1.0000	1.4442	1.0949	1.0600	
BASE ESTIMATE $'S	$673,490	$403,310	$24,306	$787,357		$1,888,463
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.5699	1.0000	1.4442	1.0949	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$673,490	$403,310	$24,306	$787,357		$1,888,463

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F
DATE: 17-May-01
ESTIMATE NO. C2-2001-05-007-26
ESTIMATOR: RIS
CLIENT: DOE
LOCATION: FERNALD
WBS NO.: 1.1.C.D
TASK NO.: CCPL2

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		50,190				50,190
			$50,190				$50,190
	Submittals	25,250		200			25,450
		$39,640		$290			$39,930
	Overhead and Profit		298,720				298,720
			$298,720				$298,720
	Mobilization	1,650	8,470	4,700			14,820
		$2,590	$8,470	$6,790			$17,850
	Site Preparation	13,310		8,780	9,490		31,580
		$20,900		$12,680	$10,390		$43,970
	Screening	286,200			694,380		980,580
		$449,320			$760,300		$1,209,620
	Interim Restoration	14,470	28,930	3,150	15,220		61,770
		$22,720	$28,930	$4,550	$16,660		$72,860
	Demobilization	4,630					4,630
		$7,270					$7,270
	Survey		17,000				17,000
			$17,000				$17,000
	Project Staffing	83,480					83,480
		$131,060					$131,060
TOTAL DIRECT		$673,500	$403,310	$24,310	$787,350		$1,888,470

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$50,190			$50,190
	Submittals				694						$25,250		$200		$25,450
	Overhead and Profit											$298,720			$298,720
	Mobilization				70						$1,650	$8,470	$4,700		$14,820
	Site Preparation				560						$13,310		$8,780	$9,490	$31,580
	Survey											$17,000			$17,000
	Screening				11,690						$286,200			$694,380	$980,580
	Interim Restoration				600						$14,470	$28,930	$3,150	$15,220	$61,770
	Demobilization				190						$4,630				$4,630
	Project Staffing				2,662						$83,480				$83,480
	Subtotal Direct Cost	1	LOT		16,466	$26.05					$428,990	$403,310	$16,830	$719,090	$1,568,220

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FY Sub-total 2.8%							1792332				$50,190			$50,190
	Submittals														
D	Plans	6	EA	30	180	50.62					$9,110				$9,110
D	Technical submittals	30	EA	5	150	50.62					$7,590				$7,590
D	Site access & GET traing, cnstrct work	20	EA	18	360	26.05					$8,450				$8,450
D	Health Physics				4	23.64					$100		$200		$300
	Sub-total				694						$25,250		$200		$25,450
	Overhead and Profit			20%								$298,720			$298,720

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Heat stress / support trailers 2 reqd	9.6	MO					350				$6,720			$6,720
	Portable toilets 2 ea	9.6	MTH					85				$1,630			$1,630
	Potable water, Allow 5jug/mth, $8/jug	9.6	MTH					12	40			$120	$400		$520
													$4,300		$4,300
D	Mobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
	Mobilization				70						$1,650	$8,470	$4,700		$14,820

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1,000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3,500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	22.65					$910				$910
	Construction fence		2,650	LF						$1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	22.65					$4,530				$4,530
	Surface Water Management															
D	2 laborer		2	DAY	10	40	22.65					$910				$910
D	1 operator		2	DAY	10	20	27.03					$540				$540
	Excavator Cat 330	2 day	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set-up screeners & conveyors requires 2 screeners														
D	2 laborer	3	DAY	10	60	22.65					$1,360				$1,360
D	2 operator	3	DAY	10	60	27.03					$1,620				$1,620
	Excavator Cat 330 3 day =	0.14	MTH							11,490				$1,850	$1,850
	Loader Cat 966 3 day =	0.14	MTH							6,820				$1,100	$1,100
	Excavator Cat 330 at	85%	HRS	26						32.15				$820	
	Loader Cat 966 at	85%	HRS	26						24.90				$630	$630
	Site Preparation	1	LOT		560						$13,310		$8,780	$9,490	$31,580

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Survey 9.6 mth Cost shared among OSDF projects at $140/hr for 3 man crew. Borrow area alloocation = $17,000							140				$17,000			$17,000
	Subtotal Direct Costs	1	LOT			#DIV/0!						$17,000			$17,000

	Excavator Cat 330 at		85%	HRS	748											
	Loader Cat 966 at		85%	HRS	748						24.90				$18,630	$18,630
	Truck, Volvo A30, at		85%	HRS	748						27.12				$81,140	$81,140
	Screener, w/2 conv at		85%	HRS	748						34.00				$50,860	$50,860
	2" pump at		85%	HRS	748						0.80				$600	$600
	Generator, 5000 kw at		85%	HRS	748						1.60				$1,200	$1,200
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster		35	DAY	10	1,400	22.86					$32,000				$32,000
D	2 operators		35	DAY	10	700	27.03					$18,920				$18,920
D	1 laborer		35	DAY	10	350	22.65					$7,930				$7,930
	Dozer, D8	1 reqd	1.62	MTH							13,145				$21,240	$21,240
	Excavator Cat 330	1 reqd	1.62	MTH							11,490				$18,560	$18,560
	Truck, Volvo A30	4 reqd	1.62	MTH							7,905				$51,080	$51,080
	Dozer, D8 at		85%	HRS	298						39.66				$11,800	$11,800
	Excavator Cat 330 at		85%	HRS	298						32.15				$9,560	$9,560
	Truck, Volvo A30, at		85%	HRS	298						27.12				$32,270	$32,270
	Screening			LOT		11,690	$24.48					$286,200			$694,380	$980,580

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Interim Restoration		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	1 operators		20	DAY	10	200	27.03					$5,410				$5,410
D	2 laborer		20	DAY	10	400	22.65					$9,060				$9,060
	Dozer, D6 LGP	1 reqd	0.92	MTH							8,245				$7,610	$7,610
	Tractor 4WD 75hp	1 reqd	0.92	MTH							2,252				$2,080	$2,080
	Dozer, D6 LGP at		85%	HRS	170						24.76				$4,210	$4,210
	Tractor 4WD 75hp at		85%	HRS	170						7.75				$1,320	$1,320
	Silt fence		500	LF						0.30				$150		$150
	Erosion mat -jute		5000	SY						0.60				$3,000		$3,000
	Permanent seeding	7.5 ac	35000	SY					0.83				$28,930			$28,930
	Interim Restoration		1	LOT		600	$24.12					$14,470	$28,930	$3,150	$15,220	$61,770

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
D	Demob screeners	2	EA	60	120	24.83					$2,980				$2,980
	Demobilization	1	LOT		190						$4,630				$4,630

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO.: C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	9.6 mth	10%	hr	1	106	54.42					$5,740				$5,740
D	General Superintendent	9.6 mth	10%	hr	1	106	37.85					$4,000				$4,000
D	Superintendent	9.6 mth	10%	hr	2	377	32.99					$12,440				$12,440
D	Project Engineer	9.6 mth	10%	hr	1	189	33.19					$6,260				$6,260
D	Quality Engineer	9.6 mth	25%	hr	2	943	28.05					$26,440				$26,440
D	Safety Engineer	9.6 mth	25%	hr	2	943	30.34					$28,600				$28,600
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedu	in overhead					25.58									
D	Clerical	in overhead					14.58									
	TOTAL					2,662	31.36					$83,480				$83,480

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO. C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC	
SUB-TOTAL		$5.98	3		$0		
				$/MD =	$0.00		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	2	8	$203	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$200		

	MAT'L.$'s
TOTAL PPE's =	$200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY06
ESTIMATE NO. C2-2001-05-007-26
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.05	$0
ANNUAL PHYSICALS	0	4	0	0	$26.05	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.05	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.05	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s	
	1	2	2	$26.05	$100	
NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	2	0.0085	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$428,990	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$428,990	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$100	$200	$300

(FORWARD TO ESTIMATE SUMMARY SHEET)

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE BORROW AREA CCPL2 FY07	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-007-27	ESTIMATOR:	RIS
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$49,840			$49,840
Submittals	694		$25,250		$200		$25,450
Overhead and Profit				$296,670			$296,670
Mobilization	70		$1,650	$8,350	$4,700		$14,700
Site Preparation	560		$13,310		$8,780	$9,490	$31,580
Screening	11,690		$286,200			$686,310	$972,510
Interim Restoration	600		$14,470	$28,930	$3,150	$15,100	$61,650
Demobilization	190		$4,630				$4,630
Survey				$17,000			$17,000
Project Staffing	2,625		$82,330				$82,330
DIRECT FIELD COSTS TOTAL	**16,429**	**$26.04**	**$427,840**	**$400,790**	**$16,830**	**$710,900**	**$1,556,360**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$6,000		$6,000
MISC. EQUIP. RENTAL	-	-	-			$23,600	$23,600
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$243,900				$243,900
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$1,400	$44,100	$45,500
INDIRECT FIELD COSTS TOTAL			**$243,900**		**$7,400**	**$67,700**	**$319,000**
DIRECT & INDIRECT FIELD COSTS TOTAL	**16,429**	**$40.89**	**$671,740**	**$400,790**	**$24,230**	**$778,600**	**$1,875,360**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$1,875,400**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F

DATE: 17-May-01

ESTIMATE NO. C2-2001-05-007-27

FACTORS

ESTIMATOR: RIS

CLIENT: DOE

LOCATION: FERNALD

WBS NO.: 1.1.C.D

TASK NO.: CCPL2

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$427,840	$400,790	$16,830	$710,900		$1,556,360
IFC COST FACTOR	1.5701	–	1.3565	1.0332	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	**1.5701**	**1.0000**	**1.4379**	**1.0952**	**1.0600**	
BASE ESTIMATE $'S	$671,740	$400,790	$24,200	$778,570		$1,875,300
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	**1.5701**	**1.0000**	**1.4379**	**1.0952**	**1.0600**	
FPS TARGET ESTIMATE (FY01 $)	$671,740	$400,790	$24,200	$778,570		$1,875,300

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F — DATE: 17-May-01

ESTIMATE NO. C2-2001-05-007-27 — ESTIMATOR: RIS

DIRECT FIELD COST W/FACTORS

CLIENT: DOE — LOCATION: FERNALD

WBS NO.: 1.1.C.D — TASK NO.: CCPL2

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		49,840				49,840
			$49,840				$49,840
	Submittals	25,250		200			25,450
		$39,640		$290			$39,930
	Overhead and Profit		296,670				296,670
			$296,670				$296,670
	Mobilization	1,650	8,350	4,700			14,700
		$2,590	$8,350	$6,760			$17,700
	Site Preparation	13,310		8,780	9,490		31,580
		$20,900		$12,620	$10,390		$43,910
	Screening	286,200			686,310		972,510
		$449,350			$751,640		$1,200,990
	Interim Restoration	14,470	28,930	3,150	15,100		61,650
		$22,720	$28,930	$4,530	$16,540		$72,720
	Demobilization	4,630					4,630
		$7,270					$7,270
	Survey		17,000				17,000
			$17,000				$17,000
	Project Staffing	82,330					82,330
		$129,260					$129,260
TOTAL DIRECT		$671,730	$400,790	$24,200	$778,570		$1,875,290

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$49,840			$49,840
	Submittals				694						$25,250		$200		$25,450
	Overhead and Profit											$296,670			$296,670
	Mobilization				70						$1,650	$8,350	$4,700		$14,700
	Site Preparation				560						$13,310		$8,780	$9,490	$31,580
	Survey											$17,000			$17,000
	Screening				11,690						$286,200			$686,310	$972,510
	Interim Restoration				600						$14,470	$28,930	$3,150	$15,100	$61,650
	Demobilization				190						$4,630				$4,630
	Project Staffing				2,625						82,330				$82,330
	Subtotal Direct Cost	1	LOT		16,429	$26.04					$427,840	$400,790	$16,830	$710,900	$1,556,360

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FY Sub-total 2.8%							1780020				$49,840			$49,840
	Submittals														
D	Plans	6	EA	30	180	50.62					$9,110				$9,110
D	Technical submittals	30	EA	5	150	50.62					$7,590				$7,590
D	Site access & GET traing, cnstrct work f	20	EA	18	360	26.04					$8,450				$8,450
D	Health Physics				4	23.64					$100		$200		$300
	Sub-total				694						$25,250		$200		$25,450
	Overhead and Profit			20%								$296,670			$296,670

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Heat stress / support trailers 2 reqd	9.5	MO					350				$6,630			$6,630
	Portable toilets 2 ea	9.5	MTH					85				$1,610			$1,610
	Potable water, Allow 5jug/mth, $8/jug	9.5	MTH					12	40			$110	$400		$510
													$4,300		$4,300
D	Mobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
	Mobilization				70						$1,650	$8,350	$4,700		$14,700

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1,000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3,500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	22.65					$910				$910
	Construction fence		2,650	LF						$1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	22.65					$4,530				$4,530
	Surface Water Management															
D	2 laborer		2	DAY	10	40	22.65					$910				$910
D	1 operator		2	DAY	10	20	27.03					$540				$540
	Excavator Cat 330	2 day	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Set-up screeners & conveyors															
	requires 2 screeners															
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	2 operator		3	DAY	10	60	27.03					$1,620				$1,620
	Excavator Cat 330	3 day	0.14	MTH							11,490				$1,850	$1,850
	Loader Cat 966	3 day	0.14	MTH							6,820				$1,100	$1,100
	Excavator Cat 330 at		85%	HRS	26						32.15				$820	
	Loader Cat 966 at		85%	HRS	26						24.90				$630	$630
	Site Preparation			TOTAL		560						$13,310		$8,780	$9,490	$31,580

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Survey 9.5 mth Cost shared among OSDF projects at $140/hr for 3 man crew. Borrow area alloocation = $17,000							140				$17,000			$17,000
	Subtotal Direct Cost	1	LOT			#DIV/0!						$17,000			$17,000

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Screening		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening															
D	4 teamster		88	DAY	10	3,520	22.86					$80,460				$80,460
D	4.5 operators		88	DAY	10	3,960	27.03					$107,030				$107,030
D	2 laborer		88	DAY	10	1,760	22.65					$39,860				$39,860
	Dozer, D8	1 reqd	4.06	MTH							13,145				$53,390	$53,390
	Tractor 4WD 75hp	1 reqd	4.06	MTH							2,125				$8,630	$8,630
	Excavator Cat 330	2 reqd	4.06	MTH							11,490				$93,340	$93,340
	Loader Cat 966	1 reqd	4.06	MTH							6,820				$27,700	$27,700
	Truck, Volvo A30	4 reqd	4.06	MTH							7,905				$128,440	$128,440
	Screener, Extec w/2 conv	2 reqd	4.06	MTH							FF owned					
	2" pump	1 reqd	4.06	MTH							438				$1,780	$1,780
	Generator, 5000 kw	1 reqd	4.06	MTH							145				$590	$590
	Dozer, D8 at		85%	HRS	748						39.66				$29,670	$29,670
	Tractor 4WD 75hp		85%	HRS	748						7.75				$5,800	$5,800
	Excavator Cat 330 at		85%	HRS	748						32.15				$48,100	$48,100
	Loader Cat 966 at		85%	HRS	748						24.90				$18,630	$18,630
	Truck, Volvo A30, at		85%	HRS	748						27.12				$81,140	$81,140
	Screener, w/2 conv at		85%	HRS	748						34.00				$50,860	$50,860
	2" pump at		85%	HRS	748						0.80				$600	$600
	Generator, 5000 kw at		85%	HRS	748						1.60				$1,200	$1,200
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster		35	DAY	10	1,400	22.86					$32,000				$32,000
D	2 operators		35	DAY	10	700	27.03					$18,920				$18,920
D	1 laborer		35	DAY	10	350	22.65					$7,930				$7,930
	Dozer, D8	1 reqd	1.62	MTH							13,145				$21,240	$21,240
	Excavator Cat 330	1 reqd	1.62	MTH							11,490				$18,560	$18,560
	Truck, Volvo A30	4 reqd	1.62	MTH							7,905				$51,080	$51,080
	Dozer, D8 at		85%	HRS	298						39.66				$11,800	$11,800
	Excavator Cat 330 at		85%	HRS	298						32.15				$9,560	$9,560
	Truck, Volvo A30, at		85%	HRS	298						27.12				$24,200	$24,200
	Total Screening		1	LOT		11,690	$24.48					$286,200			$686,310	$972,510

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Interim Restoration		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	1 operators		20	DAY	10	200	27.03					$5,410				$5,410
D	2 laborer		20	DAY	10	400	22.65					$9,060				$9,060
	Dozer, D6 LGP	1 reqd	0.92	MTH							8,245				$7,610	$7,610
	Tractor 4WD 75hp	1 reqd	0.92	MTH							2,125				$1,960	$1,960
	Dozer, D6 LGP at		85%	HRS	170						24.76				$4,210	$4,210
	Tractor 4WD 75hp at		85%	HRS	170						7.75				$1,320	$1,320
	Silt fence		500	LF						0.30				$150		$150
	Erosion mat -jute		5000	SY						0.60				$3,000		$3,000
	Permanent seeding	7.5 ac	35000	SY					0.83				$28,930			$28,930
	Interim Restoration		1	LOT		600	$24.12					$14,470	$28,930	$3,150	$15,100	$61,650

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	20	EA	3	70	23.64					$1,650				$1,650
D	Demob screeners	2	EA	60	120	24.83					$2,980				$2,980
	Demobilization	1	LOT		190						$4,630				$4,630

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO.: C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	9.5 mth	10%	hr	1	104	54.42					$5,670				$5,670
D	General Superintendent	9.5 mth	10%	hr	1	104	37.85					$3,940				$3,940
D	Superintendent	9.5 mth	10%	hr	2	372	32.99					$12,270				$12,270
D	Project Engineer	9.5 mth	10%	hr	1	186	33.19					$6,170				$6,170
D	Quality Engineer	9.5 mth	25%	hr	2	930	28.05					$26,080				$26,080
D	Safety Engineer	9.5 mth	25%	hr	2	930	30.34					$28,200				$28,200
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedu	in overhead					25.58									
D	Clerical	in overhead					14.58									
	TOTAL					2,625	31.36					$82,330				$82,330

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO. C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC	
SUB-TOTAL		$5.98	3		$0		
				$/MD =	$0.00		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
~~RUBBER BOOT COVERS-(1)PR.PER WORKER~~	~~PR~~	~~$12.70~~	~~2~~	~~8~~	~~$203~~	~~D/C/B~~	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$200		

	MAT'L.$'s
TOTAL PPE's =	$200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY07
ESTIMATE NO. C2-2001-05-007-27
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.04	$0
ANNUAL PHYSICALS	0	4	0	0	$26.04	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.04	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.04	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	1	2	2	$26.04	$100

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	2	0.0085	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$427,840	$0

			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$427,840	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$100	$200	$300

(FORWARD TO ESTIMATE SUMMARY SHEET)

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE BORROW AREA CCPL2 FY08	DATE:	17-May-01
ESTIMATE #:	C2-01-05-07-28	ESTIMATOR:	RIS
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$26,120			$26,120
Submittals	694		$25,250		$200		$25,450
Overhead and Profit				$155,490			$155,490
Mobilization	52		$1,230	$4,790	$4,500		$10,520
Site Preparation	440		$10,330		$8,780	$5,090	$24,200
Screening	5,600		$136,610			$289,030	$425,640
Interim Restoration	600		$14,470	$28,930	$3,150	$23,530	$70,080
Demobilization	52		$1,230				$1,230
Project Staffing	1,930		$61,250				$61,250
DIRECT FIELD COSTS TOTAL	**9,368**	**$26.73**	**$250,370**	**$215,330**	**$16,630**	**$317,650**	**$799,980**
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$3,400		$3,400
MISC. EQUIP. RENTAL	-	-	-			$13,000	$13,000
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$142,700				$142,700
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$1,200	$19,800	$21,000
INDIRECT FIELD COSTS TOTAL			**$142,700**		**$4,600**	**$32,800**	**$180,100**
DIRECT & INDIRECT FIELD COSTS TOTAL	**9,368**	**$41.96**	**$393,070**	**$215,330**	**$21,230**	**$350,450**	**$980,080**
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$980,100**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F
DATE: 17-May-01
ESTIMATE NO. C2-01-05-07-28
ESTIMATOR: RIS
CLIENT: DOE
LOCATION: FERNALD
WBS NO.: 1.1.C.D
TASK NO.: CCPL2

FACTORS

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$250,370	$215,330	$16,630	$317,650		$799,980
IFC COST FACTOR	1.5700	–	1.2044	1.0409	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	**1.5700**	**1.0000**	**1.2767**	**1.1034**	**1.0600**	
BASE ESTIMATE $'S	$393,070	$215,330	$21,232	$350,489		$980,121
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	**1.5700**	**1.0000**	**1.2767**	**1.1034**	**1.0600**	
FPS TARGET ESTIMATE (FY01 $)	$393,070	$215,330	$21,232	$350,489		$980,121

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F
DATE: 17-May-01
ESTIMATE NO. C2-01-05-07-28
ESTIMATOR: RIS
CLIENT: DOE
LOCATION: FERNALD
WBS NO.: 1.1.C.D
TASK NO.: CCPL2

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		26,120				26,120
			$26,120				$26,120
	Submittals	25,250		200			25,450
		$39,640		$260			$39,900
	Overhead and Profit		155,490				155,490
			$155,490				$155,490
	Mobilization	1,230	4,790	4,500			10,520
		$1,930	$4,790	$5,750			$12,470
	Site Preparation	10,330		8,780	5,090		24,200
		$16,220		$11,210	$5,620		$33,050
	Screening	136,610			289,030		425,640
		$214,470			$318,910		$533,380
	Interim Restoration	14,470	28,930	3,150	23,530		70,080
		$22,720	$28,930	$4,020	$25,960		$81,630
	Demobilization	1,230					1,230
		$1,930					$1,930
	Survey						
	Project Staffing	61,250					61,250
		$96,160					$96,160
TOTAL DIRECT		$393,070	$215,330	$21,240	$350,490		$980,130

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$26,120			$26,120
	Submittals				694						$25,250		$200		$25,450
	Overhead and Profit											$155,490			$155,490
	Mobilization				52						$1,230	$4,790	$4,500		$10,520
	Site Preparation				440						$10,330		$8,780	$5,090	$24,200
	Screening				5,600						$136,610			$289,030	$425,640
	Interim Restoration				600						$14,470	$28,930	$3,150	$23,530	$70,080
	Demobilization				52						$1,230				$1,230
	Project Staffing				1,930						61,250				$61,250
	Subtotal Direct Cost	1	LOT		9,868	$26.73					$250,370	$215,330	$16,630	$317,650	$799,980

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FY Sub-total 2.8%							932964				$26,120			$26,120
	Submittals														
D	Plans	6	EA	30	180	50.62					$9,110				$9,110
D	Technical submittals	30	EA	5	150	50.62					$7,590				$7,590
D	Site access & GET traing, cnstrct work fo	20	EA	18	360	26.73					$8,450				$8,450
D	Health Physics				4	23.64					$100		$200		$300
	Sub-total				694						$25,250		$200		$25,450
	Overhead and Profit			20%								$155,490			$155,490

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Heat stress / support trailers 2 reqd	5.4	MO					350				$3,800			$3,800
	Portable toilets 2 ea	5.4	MTH					85				$920			$920
	Potable water, Allow 5jug/mth, $8/jug	5.4	MTH					12	40			$70	$200		$270
													$4,300		$4,300
D	Mobilize contractor equipment	15	EA	3	52	23.64					$1,230				$1,230
	Mobilization				52						$1,230	$4,790	$4,500		$10,520

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Silt fence		1,000	LF						0.30				$300		$300
D	2 laborer		3	DAY	10	60	22.65					$1,360				$1,360
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Backhoe Cat 416		0.14	MTH							2,800				$390	$390
	Backhoe Cat 416 at	85%		HRS	26						8.70				$220	$220
	Set up field trailer, 8'x12'									3,500				$3,500		$3,500
D	2 laborer		2	DAY	10	40	22.65					$910				$910
	Construction fence		2,650	LF						$1.05				$2,780		$2,780
D	2 laborer	2 wks	10	DAY	10	200	22.65					$4,530				$4,530
	Surface Water Management															
D	2 laborer		2	DAY	10	40	22.65					$910				$910
D	1 operator		2	DAY	10	20	27.03					$540				$540
	Excavator Cat 330	2 day	0.09	MTH							11,490				$1,240	$1,240
	Compactor Cat 563	2 day	0.09	MTH							4,335				$470	$470
	Compactor Walk behind	2 day	0.09	MTH							985				$110	$110
	Excavator Cat 330 at	50%		HRS	10						32.15				$320	$320
	Compactor Cat 563 at	50%		HRS	10						15.48				$150	$150
	Compactor Walk behind at	85%	17	HRS							1.80				$40	$40
	30" CMP		100	LF						21				$2,100		$2,100
	Bedding	12cy	16	TON						6				$100		$100
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Site Preparation	[illegible]	LOT	[illegible]	440	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$10,330	[illegible]	$8,780	$5,090	$24,200

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Subtotal Direct Cost														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Screening		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening															
	Nor required															
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster		70	DAY	10	2800	22.86					$64,000				$64,000
D	3 operators		70	DAY	10	2100	27.03					$56,760				$56,760
D	1 laborer		70	DAY	10	700	22.65					$15,850				$15,850
	Dozer, D8	1 reqd	3.23	MTH							13145				$42,470	$42,470
	Excavator Cat 330	1 reqd	3.23	MTH							11490				$37,120	$37,120
	Truck, Volvo A30	4 reqd	3.23	MTH							7905				$102,160	$102,160
	Dozer, D8 at		85%	HRS	595						39.66				$23,600	$23,600
	Excavator Cat 330 at		85%	HRS	595						32.15				$19,130	$19,130
	Truck, Volvo A30, at		85%	HRS	595						27.12				$64,550	$64,550
	Screening					5,600						$136,610			$289,030	$425,640

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Interim Restoration		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	1 operators		20	DAY	10	200	27.03					$5,410				$5,410
D	2 laborer		20	DAY	10	400	22.65					$9,060				$9,060
	Dozer, D6 LGP	1 reqd	0.92	MTH							8,245				$7,610	$7,610
	Tractor, Challenger	1 reqd	0.92	MTH							9,000				$8,310	$8,310
	Dozer, D6 LGP at		85%	HRS	170						24.76				$4,210	$4,210
	Tractor, Challenger at		85%	HRS	170						20.00				$3,400	$3,400
	Silt fence		500	LF						0.30				$150		$150
	Erosion mat -jute		5,000	SY						0.60				$3,000		$3,000
	Permanent seeding	7.5 ac	35,000	SY					0.83				$28,930			$28,930
	Interim Restoration		1	LOT		600	$24.12					$14,470	$28,930	$3,150	$23,530	$70,080

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	5.4 mth	10%	hr	1	60	54.42					$3,250				$3,250
D	General Superintendent	5.4 mth	10%	hr	1	60	37.85					$2,260				$2,260
D	Superintendent	5.4 mth	25%	hr	2	533	32.99					$17,570				$17,570
D	Project Engineer	5.4 mth	20%	hr	1	213	33.19					$7,070				$7,070
D	Quality Engineer	5.4 mth	25%	hr	2	533	28.05					$14,940				$14,940
D	Safety Engineer	5.4 mth	25%	hr	2	533	30.34					$16,160				$16,160
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedule	in overhead					25.58									
D	Clerical	in overhead					14.58									
	TOTAL					1,930	31.73					$61,250				$61,250

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO.: C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	5.4 mth	10%	hr	1	60	54.42					$3,250				$3,250
D	General Superintendent	5.4 mth	10%	hr	1	60	37.85					$2,260				$2,260
D	Superintendent	5.4 mth	25%	hr	2	533	32.99					$17,570				$17,570
D	Project Engineer	5.4 mth	20%	hr	1	213	33.19					$7,070				$7,070
D	Quality Engineer	5.4 mth	25%	hr	2	533	28.05					$14,940				$14,940
D	Safety Engineer	5.4 mth	25%	hr	2	533	30.34					$16,160				$16,160
D	Office Administration	In overhead					19.31									
D	Contract Administration/ Schedule	In overhead					25.58									
D	Clerical	In overhead					14.58									
	TOTAL					1,930	31.73					$61,250				$61,250

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO. C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		

PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC
SUB-TOTAL		$5.98	3		$0	
				$/MD =	$0.00	

SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL
RUBBER-BOOT-COVERS-(1)PR.PER-WORKER	PR	$12.70	2	8	$203	D/C/B
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C
SCBA	EA	$1,894.00	2	0	$0	B
COOL VESTS	EA	$137.50	6	0	$0	C/B
THERMO STRIPS	EA	$50.00	6	0	$0	C/B
SUB-TOTAL					$200	

	MAT'L.$'s
TOTAL PPE's =	$200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY08
ESTIMATE NO. C2-01-05-07-28
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.73	$0
ANNUAL PHYSICALS	0	4	0	0	$26.73	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.73	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.73	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	1	2	2	$26.73	$100

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	1	0.0043	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$250,370	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$250,370	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$100	$200	$300

(FORWARD TO ESTIMATE SUMMARY SHEET)

ESTIMATE SUMMARY SHEET

FLUOR FERNALD

PROJECT:	OSDF BASELINE BORROW AREA CCPL2 FY09	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-007-29	ESTIMATOR:	RIS
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL2

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Insurance & Bond				$4,610			$4,610
Submittals	110		$5,570		$200		$5,770
Overhead and Profit				$27,450			$27,450
Mobilization	35		$830	$390	$4,400		$5,620
Site Preparation	50		$1,270			$2,150	$3,420
Screening							
Interim Restoration	900		$21,700	$57,850	$300	$22,650	$102,500
Demobilization	35		$830				$830
Project Staffing							
DIRECT FIELD COSTS TOTAL	1,130	$26.73	$30,200	$90,300	$4,900	$24,800	$150,200
SUPERVISION - CONTRACTOR							
SMALL TOOLS & CONSUMABLES	-	-	-		$400		$400
MISC. EQUIP. RENTAL	-	-	-			$1,500	$1,500
TEMPORARY FACILITIES incl w/Mobilization							
TEMPORARY UTILITY HOOK-UP incl w/Mobilzation							
JOB CLEAN-UP incl w/Job Close-out							
PER DIEM / SUBSISTANCE	-	-	-				
HEALTH PHYSICS S/C incl w/Submittals							
CERCLA - TRAINING incl w/Submittals							
GET/SITE ACCESS & JOB SPECIFIC TRAINING w/su							
PAYROLL BURDENS & BENEFITS	-	-	$17,200				$17,200
OVERHEAD & PROFIT	-	-	-				
BOND	-	-	-				
SALES TAX	-	-	-		$300	$1,600	$1,900
INDIRECT FIELD COSTS TOTAL			$17,200		$700	$3,100	$21,000
DIRECT & INDIRECT FIELD COSTS TOTAL	1,130	$41.95	$47,400	$90,300	$5,600	$27,900	$171,200
TARGET ESTIMATE			**(FY 01 DOLLARS)**				**$171,200**

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F

DATE: 17-May-01

ESTIMATE NO. C2-2001-05-007-29

FACTORS

ESTIMATOR: RIS

CLIENT: DOE

LOCATION: FERNALD

WBS NO.: 1.1.C.D

TASK NO.: CCPL2

FIXED PRICE :	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$30,200	$90,300	$4,900	$24,800		$150,200
IFC COST FACTOR	1.5695	–	1.0816	1.0605	–	
BOND + OVERHEAD & PROFIT COST FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.5695	1.0000	1.1465	1.1241	1.0600	
BASE ESTIMATE $'S	$47,400	$90,300	$5,618	$27,878		$171,196
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.5695	1.0000	1.1465	1.1241	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$47,400	$90,300	$5,618	$27,878		$171,196

NOTE:

IF THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF BASELINE BORROW AREA CCPL2 F
ESTIMATE NO. C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

DIRECT FIELD COST W/FACTORS

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>					
	Insurance & Bond		4,610				4,610
			$4,610				$4,610
	Submittals	5,570		200			5,770
		$8,740		$230			$8,970
	Overhead and Profit		27,450				27,450
			$27,450				$27,450
	Mobilization	830	390	4,400			5,620
		$1,300	$390	$5,040			$6,730
	Site Preparation	1,270			2,150		3,420
		$1,990			$2,420		$4,410
	~~Screening~~						
	Interim Restoration	21,700	57,850	300	22,650		102,500
		$34,060	$57,850	$340	$25,460		$117,710
	Demobilization	830					830
		$1,300					$1,300
	Survey						
	Project Staffing						
TOTAL DIRECT		$47,390	$90,300	$5,610	$27,880		$171,180

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond											$4,610			$4,610
	Submittals				110						$5,570		$200		$5,770
	Overhead and Profit											$27,450			$27,450
	Mobilization				35						$830	$390	$4,400		$5,620
	Site Preparation				50						$1,270			$2,150	$3,420
	Screening														
	Interim Restoration				900						$21,700	$57,850	$300	$22,650	$102,500
	Demobilization				35						$830				$830
	Project Staffing														
	Subtotal Direct Cost		LOT		1,130	$2678					$30,200	$90,300	$4,900	$24,800	$150,200

DETAIL ESTIMATE WORKSHEETS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Insurance & Bond							COST							
	Performance bond 1.3%							THRU							
	Insurance 1.5%							OH & P							
	For both FY Sub-total 2.8%							164688				$4,610			$4,610
	Submittals														
D	Plans	2	EA	30	60	50.62					$3,040				$3,040
D	Technical submittals	10	EA	5	50	50.62					$2,530				$2,530
D	Health Physics					23.64							$200		$200
	Sub-total				110						$5,570		$200		$5,770
	Overhead and Profit			20%								$27,450			$27,450

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

	Mobilization	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Heat stress / support trailers 0 reqd	2.1	MO					350							
	Portable toilets 2 ea	2.1	MTH					85				$360			$360
	Potable water, Allow 5jug/mth, $8/jug	2.1	MTH					12	40			$30	$100		$130
													$4,300		$4,300
D	Mobilize contractor equipment	10	EA	3	35	23.64					$830				$830
	Mobilization				35						$830	$390	$4,400		$5,620

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Preparation		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Excavate ditch															
D	1 teamster		1	DAY	10	10	22.86					$230				$230
D	1 laborer		1	DAY	10	10	22.65					$230				$230
D	1 operator		3	DAY	10	30	27.03					$810				$810
	Excavator Cat 330	3 day =	0.14	MTH							11,490				$1,850	$1,850
	Haul truck		1	DAY							160				$160	$160
	Haul truck at	85%		HRS	8.5						16.05				$140	$140
	Excavator Cat 330 at	85%		HRS							32.15					
	Site Preparation															

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Site Prep cont'd	QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Site Preparation	1	LOT		50						$1,270			$2,150	$3,420

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.		QTY	UNIT	MAN-HOURS			COST/UNIT				LABOR	S/C	MAT'L	EQUIP	TOTAL
				Unit	Total	Rate	Labor	S/C	Mat'l	Equip					
	Subtotal Direct Cost	1	LOT			#DIV/0!									

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Screening		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Screening															
D	3 teamster			DAY	10		22.86									
D	4.5 operators			DAY	10		27.03									
D	2 laborer			DAY	10		22.65									
	Dozer, D8	1 reqd		MTH							13145					
	Tractor, Challenger	1 reqd		MTH							9000					
	Excavator Cat 330	2 reqd		MTH							11490					
	Loader Cat 966	1 reqd		MTH							6820					
	Truck, Volvo A30	3 reqd		MTH							7905					
	Screener, priced as Extec w/2	2 reqd		MTH							13500					
	2" pump	1 reqd		MTH							438					
	Generator, 5000 kw	1 reqd		MTH							145					
	Dozer, D8 at		85%	HRS							39.66					
	Tractor, Challenger at		85%	HRS							20.00					
	Excavator Cat 330 at		85%	HRS							32.15					
	Loader Cat 966 at		85%	HRS							24.90					
	Truck, Volvo A30, at		85%	HRS							27.12					
	Screener, w/2 conv at		85%	HRS							34.00					
	2" pump at		85%	HRS							0.80					
	Generator, 5000 kw at		85%	HRS							1.60					
	Excavate & Stockpile Contouring, Vegetative, & topsoil layers															
D	4 teamster			DAY	10		22.86									
D	3 operators			DAY	10		27.03									
D	1 laborer			DAY	10		22.65									
	Dozer, D8	1 reqd		MTH							13145					
	Dozer, D6	1 reqd		MTH							7040					
	Excavator Cat 330	1 reqd		MTH							11490					
	Truck, Volvo A30	4 reqd		MTH							7905					
	Dozer, D8 at		85%	HRS							39.66					
	Dozer, D6 at		85%	HRS							21.87					
	Excavator Cat 330 at		85%	HRS							32.15					
	Truck, Volvo A30, at		85%	HRS							27.12					
	Screening			LOT												

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Interim Restoration		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	1 operators		30	DAY	10	300	27.03					$8,110				$8,110
D	2 laborer		30	DAY	10	600	22.65					$13,590				$13,590
	Dozer, D6 LGP	1 reqd	1.38	MTH							8,245				$11,420	$11,420
	Tractor 4WD 75hp	1 reqd	1.38	MTH							2,125				$2,940	$2,940
	Dozer, D6 LGP at		85%	HRS	255						24.76				$6,310	$6,310
	Tractor 4WD 75hp at		85%	HRS	255						7.75				$1,980	$1,980
	Silt fence		1,000	LF						0.30				$300		$300
	Erosion mat -jute			SY						0.60						
	Permanent seeding	7.5 ac	70,000	SY					0.83				$57,850			$57,850
	Interim Restoration			LOT		900	$24.11					$21,700	$57,850	$300	$22,650	$102,500

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.	Demobilization	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
D	Demobilize contractor equipment	10	EA	3	35	23.64					$830				$830
	Demobilization	1	LOT		35						$830				$830

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO.: C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ITEM NO.			QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing		Shared percent													
D	Project Manager	3.4 mth		hr	1		54.42									
D	General Superintendent	3.4 mth		hr	1		37.85									
D	Superintendent	3.4 mth		hr	2		32.99									
D	Project Engineer	3.4 mth		hr	1		33.19									
D	Quality Engineer	3.4 mth		hr	2		28.05									
D	Safety Engineer	3.4 mth		hr	2		30.34									
D	Office Administration	in overhead					19.31									
D	Contract Administration/ Schedu	in overhead					25.58									
D	Clerical	in overhead					14.58									
								34.25	avg rate							
	TOTAL						#DIV/0!									

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO. C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		

PPE LEVEL mC : FULL DRESS w/ FACE SHIELD				MAN DAYS	MAT'L.$'s	PPE LEVEL
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIE	PR	$4.46	3	0	$0	mC
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	mC
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	mC
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	mC
SUB-TOTAL		$5.98	3		$0	
				$/MD =	$0.00	

SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	2	8	$203	D/C/B
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C
SCBA	EA	$1,894.00	2	0	$0	B
COOL VESTS	EA	$137.50	6	0	$0	C/B
THERMO STRIPS	EA	$50.00	6	0	$0	C/B
SUB-TOTAL					$200	

	MAT'L.$'s
TOTAL PPE's =	$200

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY09
ESTIMATE NO. C2-2001-05-007-29
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	0	0	$26.73	$0
ANNUAL PHYSICALS	0	4	0	0	$26.73	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	0	0	$26.73	$0
SUB-TOTAL						$0

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	0	0	$26.73	$0
SUB-TOTAL						$0

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	0	2	0	$26.73	$0

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	0	0.0000	135

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$30,200	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$30,200	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$0	$200	$200

(FORWARD TO ESTIMATE SUMMARY SHEET)

APPENDIX " A"

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NC C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PERCENT OF INFLUENCE ON CHART MANHOURS

	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF NFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	EXCELLEN	90.0%	12.0%	0.108
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			80.0%	20.0%	0.16
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<---- MULTIPLE SHIFTS-											
WORK WEEK						5-10s per Means R010-110				85.0%	15.0%	0.1275
60 HOUR WORK WEEK	//////////	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
	//// MULTIPLE-SHIFT ////////											
60 HOUR WORK WEEK	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
	//////////	//////////										
SHIFTWORK 2ND SHIFT 3RD SHIFT			3RD SHIFT		2ND SHIFT		OR ONE SHIFT ONLY			100.0% 100.0%	3.0% 5.0%	0.03 0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		105.0%	4.0%	0.042
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			95.0%	8.0%	0.076
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			80.0%	10.0%	0.08
											100.0%	90.4%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED
2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 90.4%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.11

EFFICIENCY FACTORS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO. C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

FLUOR FERNALD

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)	[redacted]	11.0
S/T = BASE UNIT MANHOURS		111
OVERTIME PRODUCTIVITY FACTOR	0.00%	0
(SEE DETAIL WORKSHEET BACK-UP)		111
* TASK SPECIFIC (confined space, high elevation, congestion, etc.)	0.0%	0
		111
* PPE SPECIFIC (Based on current data and estimating knowledge)		

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	5.00%	6	27.00%	30	64.00%	71	72.00%	80	96.00%	107
(AS A MULTIPLIER)/TOTAL HRS	1.05	116.6	1.27	141	1.64	182	1.72	190.9	1.96	217.6
TOTAL MULTIPLIER w/SITE PROD.	1.1655		1.4097		1.8204		1.9092		2.1756	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

12.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO. C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.95	0.79	0.71	0.71	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.95	0.79	0.611	0.582	0.51
NET PRODUCTIVITY MULTIPLIER		**1.05**	**1.27**	**1.64**	**1.72**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg.
Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per [5 - 10's		600	600	600	600	600
ADDITN'L SITE SAFETY MEETINGS NOT INCLD. IN BAS	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	2	3	4	4	4
** (2 OUT OF 8 MONTHS) 25.00%	MINUTES	10	12	15	15	15
TOTAL		5	9	15	15	15
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		570	476	425	425	410
AVAILABLE WORK TIME FACTOR		**0.95**	**0.79**	**0.71**	**0.71**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's. Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances. Changed to July & August over an 8 mth period.

APPENDIX "D"

ACTIVITY DURATIONS

FLUOR FERNALD

PROJECT: OSDF BASELINE BORROW AREA CCPL2 FY04
ESTIMATE NO. C2-2001-05-007-24
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: RIS
LOCATION: FERNALD
TASK NO.: CCPL2

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION	Days per Schedule	
						Each Year		
FY04 Wise	13-May-01	05/1/2003	17-Aug-03	12/3/2003	7.1	MONTHS	149	12.7%
FY04		15-Mar-04	07-Jul-04	29-Oct-04	7.5	MONTHS	252	
Interim Rstrn FY05		01-Nov-04	30-Nov-04	30-Dec-04	1.9	MONTHS	39	
Rest of FY 05		15-Mar-05	08-Jul-05	31-Oct-05	7.6	MONTHS	232	
Interim Rstrn FY06		01-Nov-05	30-Nov-05	30-Dec-05	1.9	MONTHS	39	
Rest of FY 06		15-Mar-06	09-Jul-06	03-Nov-06	7.7	MONTHS	236	
Interim Rstrn FY07		01-Nov-06	30-Nov-06	29-Dec-06	1.9	MONTHS	38	
Rest of FY 07		15-Mar-07	08-Jul-07	31-Oct-07	7.6	MONTHS	298	
Interim Rstrn FY08		01-Nov-07	01-Dec-07	31-Dec-07	2.0	MONTHS	38	
Rest of FY 08		17-Mar-08	09-Jul-08	31-Oct-08	7.5	MONTHS	161	
Interim Rstrn FY09		15-Oct-08	14-Nov-08	15-Dec-08	2.0	MONTHS	40	
Rest of FY 09		16-Mar-09	07-Apr-09	29-Apr-09	1.4	MONTHS	32	
TOTAL					56.1	MONTHS		
					56.0		1554	

	DATE of EST. to MID-POINT ACTIVITY DURATION	
a.	27.2	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT ACTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

CCPL3

OSDF PLACEMENT

09/07/2001
10:56 AM

PBS: OHFN03
WBS: 1.1.C.D
CTRL ACCT: CCPL
CHARGE NO: CCPL3
COMMENT NO F03-031

Fluor Fernald, Inc.

ESTIMATE SUPPORT WORKSHEET
FOR ACTIVITY BASED ESTIMATING
(1 FTE EQUALS 1747 HOURS)

DATE: 05-Sep-01
PROJECT MGR: JD Chiou
CAM: JD Chiou
PREPARED BY: W. F. Fick
FISCAL YEAR: 2004-2009

Resource: **FIELDSUB** **FIELD SUBS** **EOC:** **SUBCONTRACTORS**
Res Dept: **948** **Overtime:** **Class:** **SUB**

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Units:	0.0	0.0	0.0	2,864,840.0	3,470,640.0	7,377,790.0	5,962,930.0	5,670,340.0	2,147,160.0	0.0
Cum Units:	0.0	0.0	0.0	2,864,840.0	6,335,480.0	13,713,270.0	19,676,200.0	25,346,540.0	27,493,700.0	27,493,700.0
Yr Total Cost:	0	0	0	3,106,235	3,868,447	8,461,917	7,037,486	6,886,243	2,683,200	0
Cum Total Cost:	0	0	0	3,106,235	6,974,683	15,436,600	22,474,086	29,360,329	32,043,529	32,043,529

GRAND TOTALS:

	Oct 00-Sep 01	Oct 01-Sep 02	Oct 02-Sep 03	Oct 03-Sep 04	Oct 04-Sep 05	Oct 05-Sep 06	Oct 06-Sep 07	Oct 07-Sep 08	Oct 08-Sep 09	Oct 09-Sep 10
Yr Total Cost:	0	0	0	3,106,235	3,868,447	8,461,917	7,037,486	6,886,243	2,683,200	0
Cum Total Cost:	0	0	0	3,106,235	6,974,683	15,436,600	22,474,086	29,360,329	32,043,529	32,043,529

CAM _____ CONTROL TEAM _____

INCLUDES ESCALATION COSTS

CCPL3

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 17, 2001

PROJECT DESCRIPTION: Baseline OSDF – Cell Placement
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: W. Zebick
ESTIMATOR: T. Wagner
ESTIMATE NUMBER: C2-01-05-06 - (34, 35, 36, 37, 38, 39)

BASIS OF ESTIMATE

Verbal Scope	☒	P & ID's	☐	Work Plan	☐
Drawings	☐	Equipment List	☐	Site Walk	☐
Sketches	☐	Specifications	☐	Eng. Mtg.	☒
Flow Diagrams	☐	Written Scope	☒	Estimate	☐

TYPE OF ESTIMATE:

Change Proposal	☐	Government	☐
Plan/Feasibility	☐	Conceptual	☐
Construction	☐	Title I Design	☐
Budget	☒	Independent	☐

BASIS OF ESTIMATE:

These estimates were prepared for the 2001 Baseline cost of the OSDF Cell Placement, Charge Number CCPL3.
Work encompasses: submittals; off hour dust control; site prep.; OMTA operations (including shutdown); removal of impacted portion of haul road; placement of 12" protective layer; placement of 24" select layer; placement of 36" select layer; placement of CAT 1, CAT 2 (above & below grade), CAT 3 palletized transits, CAT 4 (above & below grade), CAT 5 friable asbestos & thorium/soil debris.
Each estimate indicates the work to be preformed for each year involved.

C2-01-05-06-34 for FY04
C2-01-05-06-35 for FY05
C2-01-05-06-36 for FY06
C2-01-05-06-37 for FY07
C2-01-05-06-38 for FY08
C2-01-05-06-39 for FY09

Fluor Fernald, Inc.

PROJECTS CONTROLS
ESTIMATING SERVICES

May 17, 2001

PROJECT DESCRIPTION: Baseline OSDF – Cell Placement
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: W. Zebick
ESTIMATOR: T. Wagner
ESTIMATE NUMBER: C2-01-05-06 - (34, 35, 36, 37, 38, 39)

ESTIMATE ASSUMPTIONS

EXECUTION:

- ☒ This project is to be performed on a 50-hour week, 10 hours a day.
- ☐ This project is to be performed on a 40-hour week, 8 hours a day.
- ☐ Premium time allowed.

WAGE RATES:

- ☒ Wage rates within this estimate are based on Project Labor Agreement rates, effective October 2000 and are considered FY01 dollars for estimating.
- ☐ Wage rates within this estimate are based on FF Support Contractor FSC 645 wage rates, effective January 30, 2001 and are considered FY01 dollars for estimating.
- ☐ Wage rates within this estimate are based on FF FTE Planning Labor Rates FY01.

ENGINEERING:

- ☒ N/A
- ☐ Engineering dollars provided by the Project Engineer.
- ☐ Engineering dollars have been factored in at the standard 12% of the total direct and indirect field costs as per request of Project Engineer.

CONSTRUCTION MANAGEMENT:

- ☒ N/A
- ☐ Construction Management dollars provided by the Project Engineer.
- ☐ Construction Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

PROJECT MANAGEMENT:

- ☒ N/A
- ☐ Project Management dollars provided by the Project Engineer.
- ☐ Project Management dollars have been factored in at the standard 30% of the total direct and indirect field costs as per request of Project Engineer.

WASTE PROGRAM MANAGEMENT:

- ☒ N/A
- ☐ Waste Program Management dollars provided by the Project Engineer.

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

May 17, 2001

PROJECT DESCRIPTION: Baseline OSDF – Cell Placement
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: W. Zebick
ESTIMATOR: T. Wagner
ESTIMATE NUMBER: C2-01-05-06 - (34, 35, 36, 37, 38, 39)

PRODUCTIVITY:

A productivity factor has been developed and applied to the unit man-hours derived from MEANS, Richardson, NECA, and or any other published estimating source. See attachment APPENDIX "A" and APPENDIX "B".

ESCALATION:

Escalation costs are excluded from the target estimate. The escalation costs are calculated within the Micro-Frame computer system according to the plan for rebaselining.

UNIT RATES:

Unit man-hours, equipment and material dollars are based on Richardson, MEANS, NECA, and or other published rates.

G & A (HO EXPENSE):

G & A are excluded from the target estimate. The G & A cost are calculated within the Micro-Frame computer system according to the plan for rebaselining.

HEALTH PHYSICS:

See attached APPENDIX "C".

RISK BUDGET:

N/A

CONTINGENCY:

N/A

Fluor Fernald, Inc.
PROJECTS CONTROLS
ESTIMATING SERVICES

May 17, 2001

PROJECT DESCRIPTION: Baseline OSDF – Cell Placement
WBS NUMBER: 1.1.C.D
PROJECT ENGINEER: W. Zebick
ESTIMATOR: T. Wagner
ESTIMATE NUMBER: C2-01-05-06 - (34, 35, 36, 37, 38, 39)

ESTIMATE INCLUSIONS & EXCLUSIONS

INCLUSIONS:

- Premobilization & Mobilization.
- Demobilization.
- Labor hours.
- Material dollars.
- Equipment dollars for operating expenses @ 85% efficiency, and rental on a monthly basis.
- Premium time.
- Labor resources, material dollars, construction equipment resources, duration, and quantities were provided by the project team.

EXCLUSIONS:

- Permits and fees.
- FF G & A (Home Office Expense).
- Construction Management.
- Any second tier subcontract costs.
- Project Management dollars.
- Waste Management dollars.
- Subcontractor's support and supervision.
- Subcontractor's training.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY04	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-006 034	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$36,100			$36,100
Submittals	1,600		$80,210				$80,210
Overhead & Profit				$463,427			$463,427
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	5,520		$161,580	$107,337	$6,230	$145,468	$420,615
OMTA Operations (including shutdown)	9,369		$250,750	$5,075		$314,678	$570,503
Removal of Impacted portion Haul Rd	141		$3,770			$5,800	$9,570
Placement of 12" Protective Layer							
Placement of 24" Select Layer							
Placement of 36" Select Layer							
Placement of CAT #1 1Q							
Placement of CAT #1 3&4Q	4,017		$108,254			$48,429	$156,683
Placement of CAT #2 & #4 Above Grade 1Q							
Placement of CAT #2 & #4 Above Grade 3&4Q	444		$10,980			$9,571	$20,551
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q							
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q							
Placement of CAT #2&#4 @ & Below Grade 1Q							
Placement of CAT #2&#4 @ & Below Grade 3&4Q	6,199		$169,649			$161,373	$331,022
Placement of CAT #5 Thorium/Soil Debris 1Q							
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	27,290	$28.77	$785,192	$631,939	$6,230	$685,319	$2,108,681
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	4,288	$33.69	$144,480				$144,480
HEALTH PHYSICS	167		$4,800		$26,100		$30,900
PAYROLL BURDENS & BENEFITS			$532,600				$532,600
SALES TAX					$1,900	$41,100	$43,000
INDIRECT FIELD COSTS TOTAL	4,455		$681,880		$28,000	$41,100	$750,980
DIRECT & INDIRECT FIELD COSTS TOTAL	31,745	$46.21	$1,467,072	$631,939	$34,230	$726,419	$2,859,661
TARGET ESTIMATE			(FY 01 DOLLARS)				$2,859,661

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

FACTORS

PROJECT:	OSDF PLACEMENT FY04	DATE:	17-May-01
ESTIMATE NO.:	C2-2001-05-006 034	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS NO.:	1.1.C.D	TASK NO.:	CCPL3

FIXED PRICE S	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$785,192	$631,939	$6,230	$685,319	$26,100	$2,134,781
IFC COST FACTOR	1.8684	--	1.0000	1.0000	--	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.8684	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$1,467,072	$631,939	$6,604	$726,439	$27,666	$2,859,720
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.8684	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$1,467,072	$631,939	$6,604	$726,439	$27,666	$2,859,720

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G62.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY04 | **DATE:** 17-May-01
ESTIMATE NO.: C2-2001-05-006 034 | **ESTIMATOR:** T.WAGNER
CLIENT: DOE | **LOCATION:** FERNALD
WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				30900	
1	Post Award Document (Bonds & Insura		36100				
			$36,100				$36,100
2	Submittals	80210					
		$149,870					$149,870
3	Overhead & Profit		463427				
			$463,430				$463,430
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	161580	107337	6230	145468	7,082.19	
		$301,900	$107,340	$6,600	$154,200	$7,510	$577,550
7	OMTA Operations (including shutdown)	250750	5075		314678	10,990.59	
		$468,510	$5,080		$333,560	$11,650	$818,800
8	Removal of Impacted portion Haul Rd	3770			5800	165.24	
		$7,040			$6,150	$180	$13,370
9	Placement of 12" Protective Layer					-	
10	Placement of 24" Select Layer					-	
11	Placement of 36" Select Layer					-	
12	Placement of CAT #1 1Q					-	
12	Placement of CAT #1 3&4Q	108253.8254			48429.34293	4,744.86	
		$202,260			$51,340	$5,030	$258,630
13	Placement of CAT #2 & #4 Above Grad					-	
13	Placement of CAT #2 & #4 Above Grad	10979.75709			9570.850202	481.25	
		$20,510			$10,150	$510	$31,170
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi					-	
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos					-	
16	Placement of CAT #2&#4 @ & Below G					-	
16	Placement of CAT #2&#4 @ & Below G	169648.8889			161373.3333	7,435.86	
		$316,980			$171,060	$7,880	$495,920
17	Placement of CAT #5 Thorium/Soil Deb					-	
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$2,864,840

CONTRACTOR - Stated in FY01 DOLLARS

Cost Allocation for Baseline Entry

1	Post Award	$36,100
2	Submittal	$149,870
	Subtotal	$185,970
3	Overhead & Profit	$463,430
4	Off Hour Dust Control	$20,000
6	Site Prep	$577,550
	Subtotal	$597,550
7	OMTA Operations (including shutdown)	$818,800
8	Removal of Impacted portion Haul Rd	$13,370
	Subtotal	$832,170
9	Placement of 12" Protective Layer	
10	Placement of 24" Select Layer	
11	Placement of 36" Select Layer	
12 thru 17	Quarter 1	
12 thru 17	Quarter 3 & 4	$785,720
	Grand Total	$2,864,840
	Verify old total	$2,864,840
	Match	100.00%

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	Post Award Document (Bonds & Insurance)											$36,100			$36,100
2	Submittals				1,600						$80,210				$80,210
3	Overhead & Profit											$463,427			$463,427
4	Off Hour Dust Control											$20,000			$20,000
5	Control & Management (separate estimate)														
6	Site Prep				5,520						$161,580	$107,337	$6,230	$145,468	$420,615
7	OMTA Operations (including shutdown)				9,369						$250,750	$5,075		$314,678	$570,503
8	Removal of Impacted portion Haul Rd				141						$3,770			$5,800	$9,570
9	Placement of 12" Protective Layer														
10	Placement of 24" Select Layer														
11	Placement of 36" Select Layer														
12	Placement of CAT #1 1Q														
12	Placement of CAT #1 3&4Q				4,017						$108,254			$48,429	$156,683
13	Placement of CAT #2 & #4 Above Grade 1Q														
13	Placement of CAT #2 & #4 Above Grade 3&4Q				444						$10,980			$9,571	$20,551
14	Placement of CAT #3 Palletized Transits 1Q														
14	Placement of CAT #3 Palletized Transits 3&4Q														
15	Placement of CAT #5 Friable Asbestos 1Q														
15	Placement of CAT #5 Friable Asbestos 3&4Q														
16	Placement of CAT #2&#4 @ & Below Grade 1Q														
16	Placement of CAT #2&#4 @ & Below Grade 3&4Q				6,199						$169,649			$161,373	$331,022
17	Placement of CAT #5 Thorium/Soil Debris 1Q														
17	Placement of CAT #5 Thorium/Soil Debris 3&4Q														
[illegible]	OSDF Placement	1	LOT		27,280	$28.77					$785,192	$631,939	$6,230	$685,319	$2,108,680

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CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	**Post Award Documents**														
	Bonds & Insurance (calculated on summary)	1	ls												
2	**Submittals** fy09 use 6ea 30 with 30 & 10 for tech														
	Plans allowance	12	ea	50.0	600	50.13					$30,080				$30,080
	Technical submittals allowance	100	ea	10.0	1000	50.13					$50,130				$50,130
					1600						$80,210				$80,210
4	**Off Hour Dust Control**														
	Off Hour Dust Control allowance	1	ls					20,000				$20,000			$20,000
5	Control & Management (separate estimate)														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	6 SITE PREP														
	Dust Control					Rate + 20%									
	CAT 613 Water wagon (2ea)	10	mo	2						3,770				$75,400	$75,400
	CAT 613 Water wagon (2ea)	2,559	hr	2						12.55				$64,218	$64,218
mD	Operator (9 months)	1,935	hr	1	2728	29.48					$80,440				$80,440
mD	Operator (5 months)	1,075	hr	1	1516	29.48					$44,690				$44,690
	Site Prep														
	Mobilization of equipment	10	hr	6	85	29.48				100.00	$2,490			$1,000	$3,490
	Office trailer purchase 8x12 w/hvac	1	ls					5,037.00				$5,037			$5,037
	Silt fence	2,000	lf						0.30				$600		$600
mD	Laborer	40	hr	1	56	24.71					$1,390				$1,390
mD	Operator	40	hr	1	56	29.48					$1,660				$1,660
	CAT 416 backhoe	40	hr	1						25.17				$1,010	$1,010
	Straw bales	312	ea						2.50				$780		$780
mD	Laborer	15	hr	2	42	24.71					$1,050				$1,050
mD	Operator	15	hr	1	21	29.48					$620				$620
	CAT 416 backhoe	15	hr	1						25.17				$380	$380
	Install check dams/SIDs														
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
mD	Operator	20	hr	1	28	29.48					$830				$830
mD	Teamster	20	hr	1	28	24.94					$700				$700
	CAT 330 TracHoe	20	hr	1						99.74				$1,990	$1,990
	Type D Rip Rap	12	tn	1					15.50				$190		$190
	Haul Truck	20	hr	1						73.62				$1,470	$1,470
	Construction/RAD fencing 4' wire w/ p	1,200	lf						2.83				$3,400		$3,400
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
	Install const/grid signage	36	ea						35.00				$1,260		$1,260
	Site prep														
mD	Laborer	30	hr	2	85	24.71					$2,090				$2,090
	Survey														
	Survey crew	1	ls					102,300				$102,300			$102,300
	Training	30	hr	18	761	30.00					$22,840				$22,840
	Training based on HlthPhys Sheet														
	Site Prep	1	LOT		5,520	$29.27					$161,580	$107,337	$6,230	$145,468	$420,615

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CONTRACTOR - Stated in FY01 DOLLARS

PAGE 3 OF 12

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	7 OMTA Operations (including Shutdown)														
	7 A apply to ea fiscal yr of FY04 - FY08														
	OMTA Operations thru shutdown period (approx. 3 mo)														
	CAT 973 Track Loader/4way bucket	552	hr	1						107.95				$59,600	$59,600
	CAT 330 Excavator/grappler	552	hr	1						99.74				$55,060	$55,060
	Tractor (farm)	552	hr							37.57				$20,740	$20,740
mD	Foreman (3 mo)	650	hr	1	916	21.59					$19,770				$19,770
mD	Laborer (3 mo)	650	hr	2	1,832	20.59					$37,710				$37,710
mD	Operator (3 mo)	650	hr	1	916	24.57					$22,500				$22,500
						Rate + 20%									
mD	Teamster (9 mo)	1,949	hr	2	5,495	29.92					$164,420				$164,420
	ROB Truck (Site Owns)	1,656	hr	1						73.62				$121,931	$121,931
	CAT TH83 (9 mo)	1,656	hr	1						34.62				$57,346	$57,346
	Purchase of office trailer (8x12) FY04	1	ls					5,075.00				$5,075			$5,075
	7 B Special for Lighting FY06 & FY07														
	Lighting double shift														
	2x5.5mx4		mo							-					
	7 B Special for FY04 - FY08														
	Training & Hiring of 5 additional personnel for night shift														
	Training	30	hr	5	212	30.00					$6,350				$6,350
	Training based on HlthPhys Sheet														
	OMTA Operations (including shutdown)				9,369						$250,750	$5,075		$314,678	$570,503
	8 Removal of impacted portion of OSDF Haul Rd (2 DAYS X 7)					Rate + 20%									
	CAT 330 excavator	20	hr	1						99.74				$1,990	$1,990
	CAT D8 dozer	20	hr	1						116.98				$2,340	$2,340
	Haul Truck	20	hr	2						73.62				$1,470	$1,470
mD	Operator	20	hr	2	56	29.48					$1,660				$1,660
mD	Teamster	20	hr	2	56	24.94					$1,410				$1,410
mD	Laborer	20	hr	1	28	24.71					$700				$700
	TOTAL FOR 1				141						$3,770			$5,800	$9,570

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	9 Placement of 12" Impacted protection cover (10days)					Rate + 20%									
	CAT 563	85	hr							40.98				$3,480	$3,480
	CAT D6 LGP dozer	85	hr							73.26				$6,230	$6,230
mD	Foreman	100	hr	0.5	71	25.91					$1,830				$1,830
mD	Laborer	100	hr	2.5	353	24.71					$8,710				$8,710
mD	Operator	100	hr	2.0	282	29.48					$8,310				$8,310
	{11,000 ICY}														
	Total for 1 of 4Liners														
	10 Placement of 24" Select Impacted (20days)					Rate + 20%									
	CAT 563	170	hr							40.98				$6,970	$6,970
	CAT D6 LGP dozer	170	hr							73.26				$12,450	$12,450
mD	Laborer	200	hr	2.5	705	24.71					$17,420				$17,420
mD	Operator	200	hr	2.0	564	29.48					$16,630				$16,630
	CAT 563 compactor 4days	34	hr	1.0						40.98				$1,390	$1,390
mD	Operator 4days	40	hr	1.0	56	29.48					$1,660				$1,660
	{22,000 ICY}														
	Total for 1 of 4Liners														
	11 Placement of 36" Select														
	CAT 563	238	hr			Rate + 20%				40.98				$9,750	$9,750
	CAT D6 LGP dozer	238	hr							73.26				$17,440	$17,440
	CAT 563 compactor (14day)	119	hr							40.98				$4,880	$4,880
mD	Operator (28day)	280	hr	2.5	987	29.48					$29,100				$29,100
mD	Laborer (28day)	280	hr	2.5	987	24.71					$24,390				$24,390
mD	Operator (14day)	140	hr	1.0	197	29.48					$5,820				$5,820
mD	Silt Fence	1,600	lf						0.30				$480		$480
mD	Laborer (5day)	50	hr	2.0	141	24.71					$3,480				$3,480
	Trencher	42.5	hr							20.48				$870	$870
	{33,000 ICY}														
	TOTAL FOR 1														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	12														
	CAT #1														
	Placement of Impacted Mat'l														
	2,222 cy/day avg. 10hrs					Rate + 20%									
	CAT D8 dozer	10	hr							116.98				$1,170	$1,170
	CAT 563 Compactor	11	hr							40.98				$450	$450
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
mD	Operator	10	hr	2.2	31	29.48					$910				$910
	CAT 330 Trac hoe	3	hr							25.17				$80	$80
mD	Operator	10	hr	2.3	32	29.48					$960				$960
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $2.48														
	Subtotal for 1unit				141						$3,800			$1,700	$5,500
	Unit rates				0.0635						$1.71017			$0.76508	$2.47525
	Double shift 5.5mo in FY06 & FY07														
	Portable light plants					Rate + 20%									
	10 Lights x 5.5m	5.5	mo	10						1,275				$70,100	$70,100
	Survey Crew	378	hr					90.00				$34,036			$34,036
	Supervisor	378	hr	1.0	533	37.85					$20,180				$20,180
	Safety	378	hr	1.0	533	30.34					$16,180				$16,180
	QA	378	hr	0.5	267	28.05					$7,480				$7,480
	Foreman	378	hr	1.0	533	25.91					$13,820				$13,820
	Operator	378	hr	3.0	1,600	29.48					$47,170				$47,170
	Laborer	378	hr	3.0	1,600	24.71					$39,530				$39,530
	Double shift Total FY06 & FY07				5,066						$144,360	$34,036		$70,100	$248,496
	1Q - cy														
	3&4Q 63,300 cy				4017						$108,254			$48,429	$156,683

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	13														
	CAT #2 & #4 ABOVE GRADE														
	Cell Placement 741 lcy					Rate + 20%									
	CAT 826	7	hr							165.35				$1,160	$1,160
	CAT D8	3	hr							116.98				$350	$350
	CAT 563 compactor	4	hr							40.98				$160	$160
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
	CAT 330 Track hoe	3	hr							99.74				$300	$300
mD	Operator	10	hr	1.7	24	24.71					$590				$590
mD	Foreman	11	hr	0.25	4	25.91					$100				$100
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $5.71														
	Subtotal for 1unit				91						$2,260			$1,970	$4,230
	Total x's 521 units				47,566						$1,177,460			$1,026,370	$2,203,830
	unit costs				0.1232						$3.049933			$2.658570	$5.708502
	1Q - cy														
	3&4Q 3,600 cy				444						$10,980			$9,571	$20,551

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	14														
	CAT #3														
	Palletized Transite Placement					Rate + 20%									
	Place pallets (10hr day) 144lcy														
mD	Operator	10	hr	1.0	14	29.484					$420				$420
mD	Laborer	10	hr	1.0	14	24.71					$350				$350
	Place Fill around & over pallets & grid														
	1708 cy (1.5day)														
	CAT D6 dozer	15	hr							63.28				$950	$950
	CAT 563 compactor	15	hr							40.98				$610	$610
mD	Laborer	15	hr	1.00	21	24.71					$520				$520
mD	Operator	15	hr	1.50	32	29.48					$940				$940
mD	Foreman	15	hr	0.25	5	25.91					$140				$140
	ICY = $27.29														
	Subtotal = 1 grid				86						$2,370			$1,560	$3,930
	Total times 41 Grids				3,541						$97,170			$63,960	$161,130
	unit costs				1						$16.4583			$10.8333	$27.2917
	1Q - cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	15														
	CAT #5														
	Friable Asbestos 334cy					Rate + 20%									
	Excavate 10 trenches (2hr/trench)														
mD	Operator	20	hr	1.0	28	29.48					$830				$830
mD	Laborer	20	hr	1.0	28	24.71					$700				$700
	CAT 330 Trakhoe	20	hr							99.74				$1,990	$1,990
	ISO	20	hr	1.50	42					73.62				$1,470	$1,470
	Trencher	20	hr							20.48				$410	$410
	Foreman	20	hr	0.25	7	25.91					$180				$180
	Placement														
	Operator	8	hr	1	11	29.48					$330				$330
	Laborer	8	hr	2.00	23	24.71					$560				$560
	CAT 416 BkHoe	2	hr							25.17				$50	$50
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Trench														
mD	Operator	8	hr	1.00	11	29.48					$330				$330
mD	Laborer	8	hr	1.00	11	24.71					$280				$280
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Backfill														
	CAT 416 BkHoe	4	hr							25.17				$100	$100
mD	Laborer	4	hr	2.00	11	24.71					$280				$280
mD	Operator	4	hr	1.25	7	29.48					$210				$210
	CAT 563 compactor	4	hr							40.98				$160	$160
	Foreman	8	hr	0.25	2	25.91					$50				$50
	ICY = $24.16														
	Subtotal for 1 grid				188						$3,890			$4,180	$8,070
	Total times 57 grids				10,723						$221,730			$238,260	$459,990
	unit costs				0.5632						$11.64671			$12.51497	$24.16168
	1Q - cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	16														
	CAT #2 & #4 At & Below Grade														
	Placement					Rate + 20%									
	1 Grid / shift = 450cy														
	CAT D8	5	hr	1.0						116.98				$580	$580
	CAT 563 compactor	5	hr	0.50						40.98				$200	$200
mD	Foreman	5	hr	0.25	1.8	25.91					$50				$50
mD	Laborer	5	hr	2	14.1	24.71					$350				$350
mD	Operator	5	hr	2	14.1	29.48					$420				$420
	ICY = $3.56														
	Subtotal for 1 grid				30.0						$820			$780	$1,600
	Total times 829 grid				24839						$679,780			$646,620	$1,326,400
	unit costs				0.0666						$1.8222			$1.7333	$3.5556
	1Q - cy														
	3&4Q 93,100 cy				6,199						$169,649			$161,373	$331,022

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	17														
	CAT #5					Rate + 20%									
	Thorium / Thorium Soil Debris														
	625 cy / grid														
	Trench method														
	Excavation 125 cy = 5 hr														
mD	Operator	5	hr	1.0	7	29.48					$210				$210
mD	Laborer	5	hr	1.0	7	24.71					$170				$170
mD	Foreman	5	hr	0.25	2	25.91					$50				$50
	CAT 330 Trakhoe	5	hr							99.74				$500	$500
	Total for 5 trenches				79						$2,150			$2,500	$4,650
	Place Thorium Debris/Soil 1.5' deep														
	CAT 330 Trakhoe	3	hr	1.0						99.74				$300	$300
mD	Foreman	3	hr	0.25	1	25.91					$30				$30
mD	Laborer	3	hr	2.0	8	24.71					$210				$210
	Total for 5 trenches				48						$1,200			$1,500	$2,700
	Backfill														
	CAT 330	4	hr							99.74				$400	$400
	CAT 563	4	hr							40.98				$160	$160
mD	Foreman	4	hr	0.25	1	25.91					$40				$40
mD	Laborer	4	hr	1.00	6	24.71					$140				$140
mD	Operator	4	hr	1.50	8	29.48					$250				$250
	Total for 5 trenches				78						$2,150			$2,800	$4,950
	ICY = $19.68														
	Subtotal for 1 grid				204.5						$5,500			$6,800	$12,300
	Total times 20 grids				4,089						$110,000			$136,000	$246,000
	unit costs				0.327120						$8.8000			$10.8800	$19.6800
	1Q - cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO.: C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 07-Sep-01
ESTIMATOR: T WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	OSDF PLACEMENT FY04	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing	Shared percent													
D	Project Manager	30.0%	hr	1	396	54.42					$21,540				$21,540
D	General Superintendent	30.0%	hr	1	396	37.85					$14,980				$14,980
D	Superintendent	37.5%	hr	2	990	32.99					$32,650				$32,650
D	Project Engineer	40.0%	hr	1	528	33.19					$17,520				$17,520
D	Quality Engineer	37.5%	hr	2	990	28.05					$27,760				$27,760
D	Safety Engineer	37.5%	hr	2	990	30.34					$30,030				$30,030
D	Office Administration	in overhead				19.31									
D	Contract Administration/ Schedul	in overhead				25.58									
D	Clerical	in overhead				14.58									
	TOTAL				4,288	33.69					$144,480				$144,480

APPENDIX "A"

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NOC2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PERCENT OF INFLUENCE ON CHART MANHOURS	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	XCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<---- MULTIPLE SHIFTS-											
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	//////// MULTIPLE-SHIFT ////////			OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
60 HOUR WORK WEEK			OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
SHIFTWORK							OR					
2ND SHIFT					2ND SHIFT		ONE SHIFT			100.0%	3.0%	0.03
3RD SHIFT			3RD SHIFT				ONLY			100.0%	5.0%	0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		100.0%	4.0%	0.04
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			90.0%	8.0%	0.072
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	91.2%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED
2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 91.2%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

CONTRACTOR - Stated in FY01 DOLLARS

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO. C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)	10%	10.0
S/T = BASE UNIT MANHOURS		110
OVERTIME PRODUCTIVITY FACTOR	0.00%	0
(SEE DETAIL WORKSHEET BACK-UP)		110
* TASK SPECIFIC (confined space,	0.0%	0
high elevation, congestion, etc.)		110

* PPE SPECIFIC (Based on current data and estimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	4.00%	4	28.00%	31	66.00%	73	74.00%	81	96.00%	106
(AS A MULTIPLIER)/TOTAL HRS	1.04	114.4	1.28	140.8	1.66	182.6	1.74	191.4	1.96	215.6
TOTAL MULTIPLIER w/SITE PROD.	1.144		1.408		1.826		1.914		2.156	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

11.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO. C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.96	0.78	0.7	0.7	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.96	0.78	0.602	0.574	0.51
NET PRODUCTIVITY MULTIPLIER		**1.04**	**1.28**	**1.66**	**1.74**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg.
Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per D 4 - 10's		600	600	600	600	600
ADDITN'L SITE SAFETY MEETINGS NOT INCLD. IN BA	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	N/A	4	4	4	4
** (4 OUT OF 12 MONTHS) 33.33%	MINUTES	N/A	15	15	15	15
TOTAL			20	20	20	20
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		575	465	420	420	405
AVAILABLE WORK TIME FACTOR		**0.96**	**0.78**	**0.7**	**0.7**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's. Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO. C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

Fluor Fernald, Inc.

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mD : FULL DRESS				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIES	PR	$4.46	3	1421	$19,008	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	1421	$1,023	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	1421	$1,108	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	1421	$4,347	mC	
SUB-TOTAL		$5.98	3		$25,486		
				$/MD =	$17.94		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	6	8	$610	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$610		

TOTAL PPE's = MAT'L.$'s $26,100

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO. C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	9	36	$28.77	$1,040
ANNUAL PHYSICALS	1	4	9	36	$28.77	$1,040
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	9	9	$28.77	$260
SUB-TOTAL						$2,340

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	9	54	$28.77	$1,550
SUB-TOTAL						$1,550

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	16	2	32	$28.77	$900

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	16	0.0684	227

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$785,192	$0

			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$785,192	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$4,800	$26,100	$30,900

(FORWARD TO ESTIMATE SUMMARY SHEET)

ACTIVITY DURATIONS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY04
ESTIMATE NO. C2-2001-05-006 034
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
CONSTRUCTION:	01-May-01	01-Oct-03	31-Mar-04	30-Sep-04	12.0	MONTHS
					0	MONTHS
TOTAL					12.0	MONTHS

	DATE of EST. to MID-POINT CTIVITY DURATION	
a.	35.0	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT CTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY05	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-006 35	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$43,800			$43,800
Submittals	1,600		$80,210				$80,210
Overhead & Profit				$561,826			$561,826
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	5,520		$161,580	$102,300	$6,230	$145,468	$415,578
OMTA Operations (including shutdown)	9,369		$250,750			$314,678	$565,428
Removal of Impacted portion Haul Rd	141		$3,770			$5,800	$9,570
Placement of 12" Protective Layer	705		$18,850			$9,710	$28,560
Placement of 24" Select Layer	1,325		$35,710			$13,840	$49,550
Placement of 36" Select Layer	2,312		$62,790		$480	$32,940	$96,210
Placement of CAT #1 1Q	2,348		$63,276			$28,308	$91,584
Placement of CAT #1 3&4Q	3,757		$101,242			$45,293	$146,535
Placement of CAT #2 & #4 Above Grade 1Q							
Placement of CAT #2 & #4 Above Grade 3&4Q	481		$11,895			$10,368	$22,263
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q	3,598		$98,750			$65,000	$163,750
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q	1,014		$20,964			$22,527	$43,491
Placement of CAT #2&#4 @ & Below Grade 1Q	1,139		$31,160			$29,640	$60,800
Placement of CAT #2&#4 @ & Below Grade 3&4Q	2,996		$82,000			$78,000	$160,000
Placement of CAT #5 Thorium/Soil Debris 1Q	981		$26,400			$32,640	$59,040
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	37,287	$28.14	$1,049,347	$727,926	$6,710	$834,212	$2,618,195
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	3,158	$33.61	$106,160				$106,160
HEALTH PHYSICS	128		$3,600		$26,100		$29,700
PAYROLL BURDENS & BENEFITS			$660,700				$660,700
SALES TAX					$2,000	$50,100	$52,100
INDIRECT FIELD COSTS TOTAL	3,286		$770,460		$28,100	$50,100	$848,660
DIRECT & INDIRECT FIELD COSTS TOTAL	40,573	$44.85	$1,819,807	$727,926	$34,810	$884,312	$3,466,855
TARGET ESTIMATE			(FY 01 DOLLARS)				$3,466,855

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

FACTORS

PROJECT:	OSDF PLACEMENT FY05	DATE:	17-May-01
ESTIMATE NO.:	C2-2001-05-006 35	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS NO.:	1.1.C.D	TASK NO.:	CCPL3

FIXED PRICE S	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$1,049,347	$727,926	$6,710	$834,212	$26,100	$2,644,295
IFC COST FACTOR	1.7342	--	1.0000	1.0000	--	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.7342	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$1,819,807	$727,926	$7,113	$884,264	$27,666	$3,466,776
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.7342	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$1,819,807	$727,926	$7,113	$884,264	$27,666	$3,466,776

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY05 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-006 35 | **ESTIMATOR:** T.WAGNER

DIRECT FIELD COST W/FACTORS

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				29700	
1	Post Award Document (Bonds & Insura		43800				
			$43,800				$43,800
2	Submittals	80210					
		$139,100					$139,100
3	Overhead & Profit		561826				
			$561,830				$561,830
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	161580	102300	6230	145468	4,951.75	
		$280,220	$102,300	$6,600	$154,200	$5,250	$548,570
7	OMTA Operations (including shutdown)	250750			314678	7,684.44	
		$434,860			$333,560	$8,150	$776,570
8	Removal of Impacted portion Haul Rd	3770			5800	115.53	
		$6,540			$6,150	$120	$12,810
9	Placement of 12" Protective Layer	18850			9710	577.67	
		$32,690			$10,290	$610	$43,590
10	Placement of 24" Select Layer	35710			13840	1,094.36	
		$61,930			$14,670	$1,160	$77,760
11	Placement of 36" Select Layer	62790		480	32940	1,924.25	
		$108,890		$510	$34,920	$2,040	$146,360
12	Placement of CAT #1 1Q	63276			28308	1,939.15	
		$109,740			$30,010	$2,060	$141,810
12	Placement of CAT #1 3&4Q	101242.1242			45292.52925	3,102.65	
		$175,580			$48,010	$3,290	$226,880
13	Placement of CAT #2 & #4 Above Grad					-	
13	Placement of CAT #2 & #4 Above Grad	11894.73684			10368.42105	364.52	
		$20,630			$10,990	$390	$32,010
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi	98750			65000	3,026.27	
		$171,260			$68,900	$3,210	$243,370
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos	20964.07186			22526.94611	642.46	
		$36,360			$23,880	$680	$60,920
16	Placement of CAT #2&#4 @ & Below G	31160			29640	954.92	
		$54,040			$31,420	$1,010	$86,470
16	Placement of CAT #2&#4 @ & Below G	82000			78000	2,512.96	
		$142,210			$82,680	$2,660	$227,550
17	Placement of CAT #5 Thorium/Soil Deb	26400			32640	809.05	
		$45,780			$34,600	$860	$81,240
							16.248
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$3,470,640

Cost Allocation for Baseline Entry

1	Post Award	$43,800
2	Submittal	$139,100
	Subtotal	$182,900
3	Overhead & Profit	$561,830
4	Off Hour Dust Control	$20,000
6	Site Prep	$548,570
	Subtotal	$568,570
7	OMTA Operations (including shutdown)	$776,570
8	Removal of Impacted portion Haul Rd	$12,810
	Subtotal	$789,380
9	Placement of 12" Protective Layer	$43,590
10	Placement of 24" Select Layer	$77,760
11	Placement of 36" Select Layer	$146,360
12 thru 17	Quarter 1	$309,520
12 thru 17	Quarter 3 & 4	$790,730
	Grand Total	$3,470,640
	Verify old total	$3,470,640
	Match %	100.00%

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	Post Award Document (Bonds & Insurance)											$43,800			$43,800
2	Submittals				1,600						$80,210				$80,210
3	Overhead & Profit											$561,826			$561,826
4	Off Hour Dust Control											$20,000			$20,000
5	Control & Management (separate estimate)														
6	Site Prep				5,520						$161,580	$102,300	$6,230	$145,468	$415,578
7	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
8	Removal of Impacted portion Haul Rd				141						$3,770			$5,800	$9,570
9	Placement of 12" Protective Layer				705						$18,850			$9,710	$28,560
10	Placement of 24" Select Layer				1,325						$35,710			$13,840	$49,550
11	Placement of 36" Select Layer				2,312						$62,790		$480	$32,940	$96,210
12	Placement of CAT #1 1Q				2,348						$63,276			$28,308	$91,584
12	Placement of CAT #1 3&4Q				3,757						$101,242			$45,293	$146,535
13	Placement of CAT #2 & #4 Above Grade 1Q														
13	Placement of CAT #2 & #4 Above Grade 3&4Q				481						$11,895			$10,368	$22,263
14	Placement of CAT #3 Palletized Transits 1Q														
14	Placement of CAT #3 Palletized Transits 3&4Q				3,598						$98,750			$65,000	$163,750
15	Placement of CAT #5 Friable Asbestos 1Q														
15	Placement of CAT #5 Friable Asbestos 3&4Q				1,014						$20,964			$22,527	$43,491
16	Placement of CAT #2&#4 @ & Below Grade 1Q				1,139						$31,160			$29,640	$60,800
16	Placement of CAT #2&#4 @ & Below Grade 3&4Q				2,996						$82,000			$78,000	$160,000
17	Placement of CAT #5 Thorium/Soil Debris 1Q				981						$26,400			$32,640	$59,040
17	Placement of CAT #5 Thorium/Soil Debris 3&4Q														
[illegible]	[illegible] OSDF Placement	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	**Post Award Documents**														
	Bonds & Insurance (calculated on summary)	1	ls												
2	**Submittals** fy09 use 6ea 30 with 30 & 10 for tech														
	Plans allowance	12	ea	50.0	600	50.13					$30,080				$30,080
	Technical submittals allowance	100	ea	10.0	1000	50.13					$50,130				$50,130
					1600						$80,210				$80,210
4	**Off Hour Dust Control**														
	Off Hour Dust Control allowance	1	ls					20,000				$20,000			$20,000
5	Control & Management (separate estimate)														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	6 SITE PREP														
	Dust Control					Rate + 20%									
	CAT 613 Water wagon (2ea)	10	mo	2						3,770				$75,400	$75,400
	CAT 613 Water wagon (2ea)	2,559	hr	2						12.55				$64,218	$64,218
mD	Operator (9 months)	1,935	hr	1	2728	29.48					$80,440				$80,440
mD	Operator (5 months)	1,075	hr	1	1516	29.48					$44,690				$44,690
	Site Prep														
	Mobilization of equipment	10	hr	6	85	29.48				100.00	$2,490			$1,000	$3,490
	Silt fence	2,000	lf						0.30				$600		$600
mD	Laborer	40	hr	1	56	24.71					$1,390				$1,390
mD	Operator	40	hr	1	56	29.48					$1,660				$1,660
	CAT 416 backhoe	40	hr	1						25.17				$1,010	$1,010
	Straw bales	312	ea						2.50				$780		$780
mD	Laborer	15	hr	2	42	24.71					$1,050				$1,050
mD	Operator	15	hr	1	21	29.48					$620				$620
	CAT 416 backhoe	15	hr	1						25.17				$380	$380
	Install check dams/SIDs														
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
mD	Operator	20	hr	1	28	29.48					$830				$830
mD	Teamster	20	hr	1	28	24.94					$700				$700
	CAT 330 TracHoe	20	hr	1						99.74				$1,990	$1,990
	Type D Rip Rap	12	tn	1					15.50				$190		$190
	Haul Truck	20	hr	1						73.62				$1,470	$1,470
	Construction/RAD fencing 4' wire w/ p	1,200	lf						2.83				$3,400		$3,400
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
	Install const/grid signage	36	ea						35.00				$1,260		$1,260
	Site prep														
mD	Laborer	30	hr	2	85	24.71					$2,090				$2,090
	Survey														
	Survey crew	1	ls					102,300				$102,300			$102,300
	Training	30	hr	18	761	30.00					$22,840				$22,840
	Training based on HlthPhys Sheet														
	Site Prep		LOT		5,520	$29.27					$161,580	$102,300	$6,230	$145,408	$415,678

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	7 OMTA Operations (including Shutdown)														
	7 A apply to ea fiscal yr of FY04 - FY08														
	OMTA Operations thru shutdown														
	period (approx. 3 mo)														
	CAT 973 Track Loader/4way bucket	552	hr	1						107.95				$59,600	$59,600
	CAT 330 Excavator/grappler	552	hr	1						99.74				$55,060	$55,060
	Tractor (farm)	552	hr							37.57				$20,740	$20,740
mD	Foreman (3 mo)	650	hr	1	916	21.59					$19,770				$19,770
mD	Laborer (3 mo)	650	hr	2	1,832	20.59					$37,710				$37,710
mD	Operator (3 mo)	650	hr	1	916	24.57					$22,500				$22,500
						Rate + 20%									
mD	Teamster (9 mo)	1,949	hr	2	5,495	29.92					$164,420				$164,420
	ROB Truck (Site Owns)	1,656	hr	1						73.62				$121,931	$121,931
	CAT TH83 (9 mo)	1,656	hr	1						34.62				$57,346	$57,346
	Purchase of office trailer (8x12) FY04		ls					5,075.00							
	7 B Special for Lighting FY06 & FY07														
	Lighting double shift														
	2x5.5mx4		mo							-					
	7 B Special for FY04 - FY08														
	Training & Hiring of 5 additional														
	personnel for night shift														
	Training	30	hr	5	212	30.00					$6,350				$6,350
	Training based on HlthPhys Sheet														
	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
	8 Removal of impacted portion														
	of OSDF Haul Rd (2 DAYS X 7)					Rate + 20%									
	CAT 330 excavator	20	hr	1						99.74				$1,990	$1,990
	CAT D8 dozer	20	hr	1						116.98				$2,340	$2,340
	Haul Truck	20	hr	2						73.62				$1,470	$1,470
mD	Operator	20	hr	2	56	29.48					$1,660				$1,660
mD	Teamster	20	hr	2	56	24.94					$1,410				$1,410
mD	Laborer	20	hr	1	28	24.71					$700				$700
	TOTAL FOR 1				141						$3,770			$5,800	$9,570

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	9 Placement of 12" Impacted protection cover (10days)					Rate + 20%									
	CAT 563	85	hr							40.98				$3,480	$3,480
	CAT D6 LGP dozer	85	hr							73.26				$6,230	$6,230
mD	Foreman	100	hr	0.5	71	25.91					$1,830				$1,830
mD	Laborer	100	hr	2.5	353	24.71					$8,710				$8,710
mD	Operator	100	hr	2.0	282	29.48					$8,310				$8,310
	{11,000 ICY}														
	Total for 1 of 4Liners				705						$18,850			$9,710	$28,560
	10 Placement of 24" Select Impacted (20days)					Rate + 20%									
	CAT 563	170	hr							40.98				$6,970	$6,970
	CAT D6 LGP dozer	170	hr							73.26				$12,450	$12,450
mD	Laborer	200	hr	2.5	705	24.71					$17,420				$17,420
mD	Operator	200	hr	2.0	564	29.48					$16,630				$16,630
	CAT 563 compactor 4days	34	hr	1.0						40.98				$1,390	$1,390
mD	Operator 4days	40	hr	1.0	56	29.48					$1,660				$1,660
	{22,000 ICY}														
	Total for 1 of 4Liners				1,325						$35,710			$13,840	$49,550
	11 Placement of 36" Select														
	CAT 563	238	hr			Rate + 20%				40.98				$9,750	$9,750
	CAT D6 LGP dozer	238	hr							73.26				$17,440	$17,440
	CAT 563 compactor (14day)	119	hr							40.98				$4,880	$4,880
mD	Operator (28day)	280	hr	2.5	987	29.48					$29,100				$29,100
mD	Laborer (28day)	280	hr	2.5	987	24.71					$24,390				$24,390
mD	Operator (14day)	140	hr	1.0	197	29.48					$5,820				$5,820
mD	Silt Fence	1,600	lf						0.30				$480		$480
mD	Laborer (5day)	50	hr	2.0	141	24.71					$3,480				$3,480
	Trencher	42.5	hr							20.48				$870	$870
	{33,000 ICY}														
	TOTAL FOR 1				2,312						$62,790		$480	$32,940	$96,210

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 12-Sep-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	12														
	CAT #1														
	Placement of Impacted Mat'l														
	2,222 cy/day avg. 10hrs					Rate + 20%									
	CAT D8 dozer	10	hr							116.98				$1,170	$1,170
	CAT 563 Compactor	11	hr							40.98				$450	$450
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
mD	Operator	10	hr	2.2	31	29.48					$910				$910
	CAT 330 Trac hoe	3	hr							25.17				$80	$80
mD	Operator	10	hr	2.3	32	29.48					$960				$960
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $2.48														
	Subtotal for 1unit				141						$3,800			$1,700	$5,500
	Unit rates				0.0635						$1.71017			$0.76508	$2.47525
	Double shift 5.5mo in FY06 & FY07														
	Portable light plants					Rate + 20%									
	10 Lights x 5.5m	5.5	mo	10						1,275				$70,100	$70,100
	Survey Crew	378	hr					90.00				$34,036			$34,036
	Supervisor	378	hr	1.0	533	37.85					$20,180				$20,180
	Safety	378	hr	1.0	533	30.34					$16,180				$16,180
	QA	378	hr	0.5	267	28.05					$7,480				$7,480
	Foreman	378	hr	1.0	533	25.91					$13,820				$13,820
	Operator	378	hr	3.0	1,600	29.48					$47,170				$47,170
	Laborer	378	hr	3.0	1,600	24.71					$39,530				$39,530
	Double shift Total FY06 & FY07				-										
	1Q **37,000 cy**				**2348**						**$63,276**			**$28,308**	**$91,584**
	3&4Q **59,200 cy**				**3757**						**$101,242.12**			**$45,292.53**	**$146,534.65**

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 12-Sep-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	13														
	CAT #2 & #4 ABOVE GRADE														
	Cell Placement 741 lcy					Rate + 20%									
	CAT 826	7	hr							165.35				$1,160	$1,160
	CAT D8	3	hr							116.98				$350	$350
	CAT 563 compactor	4	hr							40.98				$160	$160
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
	CAT 330 Track hoe	3	hr							99.74				$300	$300
mD	Operator	10	hr	1.7	24	24.71					$590				$590
mD	Foreman	11	hr	0.25	4	25.91					$100				$100
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $5.71														
	Subtotal for 1unit				91						$2,260			$1,970	$4,230
	Total x's 521 units				47,566						$1,177,460			$1,026,370	$2,203,830
	unit costs				0.1232						$3.049933			$2.658570	$5.708502
	1Q - cy														
	3&4Q 3,900 cy				481						$11,895			$10,368	$22,263

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	14														
	CAT #3														
	Palletized Transite Placement					Rate + 20%									
	Place pallets (10hr day) 144icy														
mD	Operator	10	hr	1.0	14	29.484					$420				$420
mD	Laborer	10	hr	1.0	14	24.71					$350				$350
	Place Fill around & over pallets & grid														
	1708 cy (1.5day)														
	CAT D6 dozer	15	hr							63.28				$950	$950
	CAT 563 compactor	15	hr							40.98				$610	$610
mD	Laborer	15	hr	1.00	21	24.71					$520				$520
mD	Operator	15	hr	1.50	32	29.48					$940				$940
mD	Foreman	15	hr	0.25	5	25.91					$140				$140
	ICY = $27.29														
	Subtotal = 1 grid				86						$2,370			$1,560	$3,930
	Total times 41 Grids				3,541						$97,170			$63,960	$161,130
	unit costs				1						$16.4583			$10.8333	$27.2917
	1Q - cy														
	3&4Q 6,000 cy				3,598						$98,750			$65,000	$163,750

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	15														
	CAT #5														
	Friable Asbestos 334cy					Rate + 20%									
	Excavate 10 trenches (2hr/trench)														
mD	Operator	20	hr	1.0	28	29.48					$830				$830
mD	Laborer	20	hr	1.0	28	24.71					$700				$700
	CAT 330 Trakhoe	20	hr							99.74				$1,990	$1,990
	ISO	20	hr	1.50	42					73.62				$1,470	$1,470
	Trencher	20	hr							20.48				$410	$410
	Foreman	20	hr	0.25	7	25.91					$180				$180
	Placement														
	Operator	8	hr	1	11	29.48					$330				$330
	Laborer	8	hr	2.00	23	24.71					$560				$560
	CAT 416 BkHoe	2	hr							25.17				$50	$50
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Trench														
mD	Operator	8	hr	1.00	11	29.48					$330				$330
mD	Laborer	8	hr	1.00	11	24.71					$280				$280
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Backfill														
	CAT 416 BkHoe	4	hr							25.17				$100	$100
mD	Laborer	4	hr	2.00	11	24.71					$280				$280
mD	Operator	4	hr	1.25	7	29.48					$210				$210
	CAT 563 compactor	4	hr							40.98				$160	$160
	Foreman	8	hr	0.25	2	25.91					$50				$50
	ICY = $24.16														
	Subtotal for 1 grid				188						$3,890			$4,180	$8,070
	Total times 57 grids				10,723						$221,730			$238,260	$459,990
	unit costs				0.5632						$11.64671			$12.51497	$24.16168
	1Q cy														
	3&4Q 1,800 cy				1,014						$20,964			$22,527	$43,491

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	16														
	CAT #2 & #4 At & Below Grade														
	Placement					Rate + 20%									
	1 Grid / shift = 450cy														
	CAT D8	5	hr	1.0						116.98				$580	$580
	CAT 563 compactor	5	hr	0.50						40.98				$200	$200
mD	Foreman	5	hr	0.25	1.8	25.91					$50				$50
mD	Laborer	5	hr	2	14.1	24.71					$350				$350
mD	Operator	5	hr	2	14.1	29.48					$420				$420
	ICY = $3.56														
	Subtotal for 1 grid				30.0						$820			$780	$1,600
	Total times 829 grid				24839						$679,780			$646,620	$1,326,400
	unit costs				0.0666						$1.8222			$1.7333	$3.5556
	1Q 17,100 cy				**1,139**						**$31,160**			**$29,640**	**$60,800**
	3&4Q 45,000 cy				**2,996**						**$82,000**			**$78,000**	**$160,000**

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	17														
	CAT #5					Rate + 20%									
	Thorium / Thorium Soil Debris														
	625 cy / grid														
	Trench method														
	Excavation 125 cy = 5 hr														
mD	Operator	5	hr	1.0	7	29.48					$210				$210
mD	Laborer	5	hr	1.0	7	24.71					$170				$170
mD	Foreman	5	hr	0.25	2	25.91					$50				$50
	CAT 330 Trakhoe	5	hr							99.74				$500	$500
	Total for 5 trenches				79						$2,150			$2,500	$4,650
	Place Thorium Debris/Soil 1.5' deep														
	CAT 330 Trakhoe	3	hr	1.0						99.74				$300	$300
mD	Foreman	3	hr	0.25	1	25.91					$30				$30
mD	Laborer	3	hr	2.0	8	24.71					$210				$210
	Total for 5 trenches				48						$1,200			$1,500	$2,700
	Backfill														
	CAT 330	4	hr							99.74				$400	$400
	CAT 563	4	hr							40.98				$160	$160
mD	Foreman	4	hr	0.25	1	25.91					$40				$40
mD	Laborer	4	hr	1.00	6	24.71					$140				$140
mD	Operator	4	hr	1.50	8	29.48					$250				$250
	Total for 5 trenches				78						$2,150			$2,800	$4,950
	ICY = $19.68														
	Subtotal for 1 grid				204.5						$5,500			$6,800	$12,300
	Total times 20 grids				4,089						$110,000			$136,000	$246,000
	unit costs				0.327120						$8.8000			$10.8800	$19.6800
	1Q 3,000 cy				981						$26,400			$32,640	$59,040
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO.: C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	OSDF PLACEMENT FY05	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing	Shared percent													
D	Project Manager	20.0%	hr	1	263	54.42					$14,320				$14,320
D	General Superintendent	20.0%	hr	1	263	37.85					$9,960				$9,960
D	Superintendent	40.0%	hr	2	1053	32.99					$34,730				$34,730
D	Project Engineer	20.0%	hr	1	263	33.19					$8,730				$8,730
D	Quality Engineer	25.0%	hr	2	658	28.05					$18,460				$18,460
D	Safety Engineer	25.0%	hr	2	658	30.34					$19,960				$19,960
D	Office Administration	In overhead				19.31									
D	Contract Administration/ Schedule	In overhead				25.58									
D	Clerical	In overhead				14.58									
	TOTAL				3,158	33.61					$106,160				$106,160

APPENDIX "A"

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NOC2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PERCENT OF INFLUENCE ON CHART MANHOURS	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	XCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE	<---- MULTIPLE SHIFTS-			200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	////////////// //// MULTIPLE-SHIFT //////////	//////////////	//////////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
60 HOUR WORK WEEK	////////////// //////////////	//////////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
SHIFTWORK 2ND SHIFT 3RD SHIFT			 3RD SHIFT		 2ND SHIFT		OR ONE SHIFT ONLY			 100.0% 100.0%	 3.0% 5.0%	 0.03 0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		100.0%	4.0%	0.04
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			90.0%	8.0%	0.072
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	91.2%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED
2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 91.2%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO. C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)	[redacted]	10.0
S/T = BASE UNIT MANHOURS		110
OVERTIME PRODUCTIVITY FACTOR	0.00%	0
(SEE DETAIL WORKSHEET BACK-UP)		110
* TASK SPECIFIC (confined space,	0.0%	0
high elevation, congestion, etc.)		110

* PPE SPECIFIC (Based on current data and estimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	4.00%	4	28.00%	31	66.00%	73	74.00%	81	96.00%	106
(AS A MULTIPLIER)/TOTAL HRS	1.04	114.4	1.28	140.8	1.66	182.6	1.74	191.4	1.96	215.6
TOTAL MULTIPLIER w/SITE PROD.	1.144		1.408		1.826		1.914		2.156	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

11.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO. C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.96	0.78	0.7	0.7	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.96	0.78	.0.602	0.574	0.51
NET PRODUCTIVITY MULTIPLIER		**1.04**	**1.28**	**1.66**	**1.74**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg.
Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per D 4 - 10's		600	600	600	600	600
ADDITN'L.SITE SAFETY MEETINGS NOT INCLD. IN BA	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	N/A	4	4	4	4
** (4 OUT OF 12 MONTHS) 33.33%	MINUTES	N/A	15	15	15	15
TOTAL			20	20	20	20
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		575	465	420	420	405
AVAILABLE WORK TIME FACTOR		**0.96**	**0.78**	**0.7**	**0.7**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's . Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO. C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

Fluor Fernald, Inc.

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mD : FULL DRESS				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIES	PR	$4.46	3	1421	$19,008	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	1421	$1,023	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	1421	$1,108	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	1421	$4,347	mC	
SUB-TOTAL		$5.98	3		$25,486		
				$/MD =	$17.94		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	6	8	$610	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$610		

	MAT'L.$'s
TOTAL PPE's =	$26,100

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO. C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	9	36	$28.14	$1,010
ANNUAL PHYSICALS	0	4	9	0	$28.14	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	9	9	$28.14	$250
SUB-TOTAL						$1,260

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	9	54	$28.14	$1,520
SUB-TOTAL						$1,520

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	15	2	30	$28.14	$800

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	16	0.0684	226

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$1,049,347	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$1,049,347	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$3,600	$26,100	$29,700

(FORWARD TO ESTIMATE SUMMARY SHEET)

ACTIVITY DURATIONS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY05
ESTIMATE NO. C2-2001-05-006 35
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
CONSTRUCTION:	01-May-01	01-Oct-04	01-Apr-05	30-Sep-05	12.0	MONTHS
					0	MONTHS
TOTAL					12.0	MONTHS

	DATE of EST. to MID-POINT CTIVITY DURATION	
a.	47.1	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS	-	-			0	MONTHS

DATE of EST. to MID-POINT CTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY06	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-06 36	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$93,200			$93,200
Submittals	1,600		$80,210				$80,210
Overhead & Profit				$1,194,577			$1,194,577
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	5,520		$161,580	$153,450	$6,230	$145,468	$466,728
OMTA Operations (including shutdown)	9,369		$250,750			$314,678	$565,428
Removal of Impacted portion Haul Rd	141		$3,770			$5,800	$9,570
Placement of 12" Protective Layer	705		$18,850			$9,710	$28,560
Placement of 24" Select Layer	1,325		$35,710			$13,840	$49,550
Placement of 36" Select Layer	2,312		$62,790		$480	$32,940	$96,210
Placement of CAT #1 1Q	2,475		$66,697			$29,838	$96,535
Placement of CAT #1 3&4Q	15,060		$413,712			$190,600	$604,311
Placement of CAT #2 & #4 Above Grade 1Q							
Placement of CAT #2 & #4 Above Grade 3&4Q	25,874		$640,486			$558,300	$1,198,785
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q	14,394		$395,000			$260,000	$655,000
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q	2,985		$61,728			$66,329	$128,057
Placement of CAT #2&#4 @ & Below Grade 1Q	1,438		$39,360			$37,440	$76,800
Placement of CAT #2&#4 @ & Below Grade 3&4Q	6,838		$187,142			$178,013	$365,156
Placement of CAT #5 Thorium/Soil Debris 1Q	425		$11,440			$14,144	$25,584
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	90,463	$26.85	$2,429,224	$1,461,227	$6,710	$1,857,100	$5,754,261
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	1,707	$33.62	$57,400				$57,400
HEALTH PHYSICS	130		$3,500		$26,100		$29,600
PAYROLL BURDENS & BENEFITS			$1,419,400				$1,419,400
SALES TAX					$2,000	$111,400	$113,400
INDIRECT FIELD COSTS TOTAL	1,838		$1,480,300		$28,100	$111,400	$1,619,800
DIRECT & INDIRECT FIELD COSTS TOTAL	92,300	$42.36	$3,909,524	$1,461,227	$34,810	$1,968,500	$7,374,061
TARGET ESTIMATE			(FY 01 DOLLARS)				$7,374,061

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY06 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-06 36 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

FACTORS

FIXED PRICE S	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$2,429,224	$1,461,227	$6,710	$1,857,100	$26,100	$5,780,361
IFC COST FACTOR	1.6094	–	1.0000	1.0000	–	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6094	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$3,909,524	$1,461,227	$7,113	$1,968,526	$27,666	$7,374,055
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6094	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$3,909,524	$1,461,227	$7,113	$1,968,526	$27,666	$7,374,055

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY06 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-06 36 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				29600	
1	Post Award Document (Bonds & Insura		93200				
			$93,200				$93,200
2	Submittals	80210					
		$129,090					$129,090
3	Overhead & Profit		1194577				
			$1,194,580				$1,194,580
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	161580	153450	6230	145468	2,036.07	
		$260,040	$153,450	$6,600	$154,200	$2,160	$576,450
7	OMTA Operations (including shutdown)	250750			314678	3,159.71	
		$403,550			$333,560	$3,350	$740,460
8	Removal of Impacted portion Haul Rd	3770			5800	47.51	
		$6,070			$6,150	$50	$12,270
9	Placement of 12" Protective Layer	18850			9710	237.53	
		$30,340			$10,290	$250	$40,880
10	Placement of 24" Select Layer	35710			13840	449.98	
		$57,470			$14,670	$480	$72,620
11	Placement of 36" Select Layer	62790		480	32940	791.22	
		$101,050		$510	$34,920	$840	$137,320
12	Placement of CAT #1 1Q	66697			29838	840.45	
		$107,340			$31,630	$890	$139,860
12	Placement of CAT #1 3&4Q	413711.9352			190599.55	5,213.20	
		$665,820			$202,040	$5,530	$873,390
13	Placement of CAT #2 & #4 Above Grad					-	
13	Placement of CAT #2 & #4 Above Grad	640485.83			558299.5951	8,070.78	
		$1,030,780			$591,800	$8,560	$1,631,140
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi	395000			260000	4,977.41	
		$635,700			$275,600	$5,280	$916,580
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos	61727.54491			66329.34132	777.83	
		$99,340			$70,310	$820	$170,470
16	Placement of CAT #2&#4 @ & Below G	39360			37440	495.98	
		$63,340			$39,690	$530	$103,560
16	Placement of CAT #2&#4 @ & Below G	187142.2222			178013.3333	2,358.18	
		$301,180			$188,690	$2,500	$492,370
17	Placement of CAT #5 Thorium/Soil Deb	11440			14144	144.16	
		$18,410			$14,990	$150	$33,550
							6.71
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$7,377,790

Cost Allocation for Baseline Entry

1	Post Award	$93,200
2	Submittal	$129,090
	Subtotal	$222,290
3	Overhead & Profit	$1,194,580
4	Off Hour Dust Control	$20,000
6	Site Prep	$576,450
	Subtotal	$596,450
7	OMTA Operations (including shutdown)	$740,460
8	Removal of Impacted portion Haul Rd	$12,270
	Subtotal	$752,730
9	Placement of 12" Protective Layer	$40,880
10	Placement of 24" Select Layer	$72,620
11	Placement of 36" Select Layer	$137,320
12 thru 17	Quarter 1	$276,970
12 thru 17	Quarter 3 & 4	$4,083,950
	Grand Total	$7,377,790
	Verify old total	$7,377,790
	Match %	100.00%

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	Post Award Document (Bonds & Insurance)											$93,200			$93,200
2	Submittals				1,600						$80,210				$80,210
3	Overhead & Profit											$1,194,577			$1,194,577
4	Off Hour Dust Control											$20,000			$20,000
5	Control & Management (separate estimate)														
6	Site Prep				5,520						$161,580	$153,450	$6,230	$145,468	$466,728
7	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
8	Removal of Impacted portion Haul Rd				141						$3,770			$5,800	$9,570
9	Placement of 12" Protective Layer				705						$18,850			$9,710	$28,560
10	Placement of 24" Select Layer				1,325						$35,710			$13,840	$49,550
11	Placement of 36" Select Layer				2,312						$62,790		$480	$32,940	$96,210
12	Placement of CAT #1 1Q				2,475						$66,697			$29,838	$96,535
12	Placement of CAT #1 3&4Q				15,060						$413,712			$190,600	$638,348
13	Placement of CAT #2 & #4 Above Grade 1Q														
13	Placement of CAT #2 & #4 Above Grade 3&4Q				25,874						$640,486			$558,300	$1,198,785
14	Placement of CAT #3 Palletized Transits 1Q														
14	Placement of CAT #3 Palletized Transits 3&4Q				14,394						$395,000			$260,000	$655,000
15	Placement of CAT #5 Friable Asbestos 1Q														
15	Placement of CAT #5 Friable Asbestos 3&4Q				2,985						$61,728			$66,329	$128,057
16	Placement of CAT #2&#4 @ & Below Grade 1Q				1,438						$39,360			$37,440	$76,800
16	Placement of CAT #2&#4 @ & Below Grade 3&4Q				6,838						$187,142			$178,013	$365,156
17	Placement of CAT #5 Thorium/Soil Debris 1Q				425						$11,440			$14,144	$25,584
17	Placement of CAT #5 Thorium/Soil Debris 3&4Q														
	Direct [illegible] OSDF Placement [illegible]	[illegible]	LOT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$2,429,224	$1,461,227	$6,710	$1,857,190	$5,754,351

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	**Post Award Documents**														
	Bonds & Insurance (calculated on summary)	1	ls												
2	**Submittals** fy09 use 6ea 30 with 30 & 10 for tech														
	Plans allowance	12	ea	50.0	600	50.13					$30,080				$30,080
	Technical submittals allowance	100	ea	10.0	1000	50.13					$50,130				$50,130
					1600						$80,210				$80,210
4	**Off Hour Dust Control**														
	Off Hour Dust Control allowance	1	ls					20,000				$20,000			$20,000
5	Control & Management (separate estimate)														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	6 SITE PREP														
	Dust Control					Rate + 20%									
	CAT 613 Water wagon (2ea)	10	mo	2						3,770				$75,400	$75,400
	CAT 613 Water wagon (2ea)	2,559	hr	2						12.55				$64,218	$64,218
mD	Operator (9 months)	1,935	hr	1	2728	29.48					$80,440				$80,440
mD	Operator (5 months)	1,075	hr	1	1516	29.48					$44,690				$44,690
	Site Prep														
	Mobilization of equipment	10	hr	6	85	29.48				100.00	$2,490			$1,000	$3,490
	Silt fence	2,000	lf						0.30				$600		$600
mD	Laborer	40	hr	1	56	24.71					$1,390				$1,390
mD	Operator	40	hr	1	56	29.48					$1,660				$1,660
	CAT 416 backhoe	40	hr	1						25.17				$1,010	$1,010
	Straw bales	312	ea						2.50				$780		$780
mD	Laborer	15	hr	2	42	24.71					$1,050				$1,050
mD	Operator	15	hr	1	21	29.48					$620				$620
	CAT 416 backhoe	15	hr	1						25.17				$380	$380
	Install check dams/SIDs														
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
mD	Operator	20	hr	1	28	29.48					$830				$830
mD	Teamster	20	hr	1	28	24.94					$700				$700
	CAT 330 TracHoe	20	hr	1						99.74				$1,990	$1,990
	Type D Rip Rap	12	tn	1					15.50				$190		$190
	Haul Truck	20	hr	1						73.62				$1,470	$1,470
	Construction/RAD fencing 4' wire w/ p	1,200	lf						2.83				$3,400		$3,400
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
	Install const/grid signage	36	ea						35.00				$1,260		$1,260
	Site prep														
mD	Laborer	30	hr	2	85	24.71					$2,090				$2,090
	Survey														
	Survey crew	1	ls					153,450				$153,450			$153,450
	Training	30	hr	18	761	30.00					$22,840				$22,840
	Training based on HlthPhys Sheet														
	Site Prep		LOT		5,620	$29.27					$161,580	$153,450	$6,230	$145,468	$486,728

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CONTRACTOR - Stated in FY01 DOLLARS

PAGE 3 OF 12

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	7 OMTA Operations (including Shutdown)														
	7 A apply to ea fiscal yr of FY04 - FY08														
	OMTA Operations thru shutdown period (approx. 3 mo)														
	CAT 973 Track Loader/4way bucket	552	hr	1						107.95				$59,600	$59,600
	CAT 330 Excavator/grappler	552	hr	1						99.74				$55,060	$55,060
	Tractor (farm)	552	hr							37.57				$20,740	$20,740
mD	Foreman (3 mo)	650	hr	1	916	21.59					$19,770				$19,770
mD	Laborer (3 mo)	650	hr	2	1,832	20.59					$37,710				$37,710
mD	Operator (3 mo)	650	hr	1	916	24.57					$22,500				$22,500
						Rate + 20%									
mD	Teamster (9 mo)	1,949	hr	2	5,495	29.92					$164,420				$164,420
	ROB Truck (Site Owns)	1,656	hr	1						73.62				$121,931	$121,931
	CAT TH83 (9 mo)	1,656	hr	1						34.62				$57,346	$57,346
	Purchase of office trailer (8x12) FY04		ls					5,075.00							
	7 B Special for Lighting FY06 & FY07														
	Lighting double shift														
	2x5.5mx4	22	mo							-					
	7 B Special for FY04 - FY08														
	Training & Hiring of 5 additional personnel for night shift														
	Training	30	hr	5	212	30.00					$6,350				$6,350
	Training based on HlthPhys Sheet														
	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
	8 Removal of impacted portion of OSDF Haul Rd (2 DAYS X 7)					Rate + 20%									
	CAT 330 excavator	20	hr	1						99.74				$1,990	$1,990
	CAT D8 dozer	20	hr	1						116.98				$2,340	$2,340
	Haul Truck	20	hr	2						73.62				$1,470	$1,470
mD	Operator	20	hr	2	56	29.48					$1,660				$1,660
mD	Teamster	20	hr	2	56	24.94					$1,410				$1,410
mD	Laborer	20	hr	1	28	24.71					$700				$700
	TOTAL FOR 1				141						$3,770			$5,800	$9,570

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	COST/UNIT Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	9 Placement of 12" Impacted protection cover (10days)					Rate + 20%									
	CAT 563	85	hr							40.98				$3,480	$3,480
	CAT D6 LGP dozer	85	hr							73.26				$6,230	$6,230
mD	Foreman	100	hr	0.5	71	25.91					$1,830				$1,830
mD	Laborer	100	hr	2.5	353	24.71					$8,710				$8,710
mD	Operator	100	hr	2.0	282	29.48					$8,310				$8,310
	{11,000 ICY}														
	Total for 1 of 4Liners				705						$18,850			$9,710	$28,560
	10 Placement of 24" Select Impacted (20days)					Rate + 20%									
	CAT 563	170	hr							40.98				$6,970	$6,970
	CAT D6 LGP dozer	170	hr							73.26				$12,450	$12,450
mD	Laborer	200	hr	2.5	705	24.71					$17,420				$17,420
mD	Operator	200	hr	2.0	564	29.48					$16,630				$16,630
	CAT 563 compactor 4days	34	hr	1.0						40.98				$1,390	$1,390
mD	Operator 4days	40	hr	1.0	56	29.48					$1,660				$1,660
	{22,000 ICY}														
	Total for 1 of 4Liners				1,325						$35,710			$13,840	$49,550
	11 Placement of 36" Select					Rate + 20%									
	CAT 563	238	hr							40.98				$9,750	$9,750
	CAT D6 LGP dozer	238	hr							73.26				$17,440	$17,440
	CAT 563 compactor (14day)	119	hr							40.98				$4,880	$4,880
mD	Operator (28day)	280	hr	2.5	987	29.48					$29,100				$29,100
mD	Laborer (28day)	280	hr	2.5	987	24.71					$24,390				$24,390
mD	Operator (14day)	140	hr	1.0	197	29.48					$5,820				$5,820
mD	Silt Fence	1,600	lf						0.30				$480		$480
mD	Laborer (5day)	50	hr	2.0	141	24.71					$3,480				$3,480
	Trencher	42.5	hr							20.48				$870	$870
	{33,000 ICY}														
	TOTAL FOR 1				2,312						$62,790		$480	$32,940	$96,210

CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	COST/UNIT Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	12														
	CAT #1														
	Placement of Impacted Mat'l														
	2,222 cy/day avg. 10hrs					Rate + 20%									
	CAT D8 dozer	10	hr							116.98				$1,170	$1,170
	CAT 563 Compactor	11	hr							40.98				$450	$450
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
mD	Operator	10	hr	2.2	31	29.48					$910				$910
	CAT 330 Trac hoe	3	hr							25.17				$80	$80
mD	Operator	10	hr	2.3	32	29.48					$960				$960
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	rcy = $2.48														
	Subtotal for 1unit				141						$3,800			$1,700	$5,500
	Unit rates				0.0635						$1.71017			$0.76508	$2.47525
	Double shift 5.5mo in FY06 & FY07														
	Portable light plants					Rate + 20%									
	10 Lights x 5.5m	5.5	mo	10						1,275				$70,100	$70,100
	Survey Crew	378	hr					90.00				$34,036			$34,036
	Supervisor	378	hr	1.0	533	37.85					$20,180				$20,180
	Safety	378	hr	1.0	533	30.34					$16,180				$16,180
	QA	378	hr	0.5	267	28.05					$7,480				$7,480
	Foreman	378	hr	1.0	533	25.91					$13,820				$13,820
	Operator	378	hr	3.0	1,600	29.48					$47,170				$47,170
	Laborer	378	hr	3.0	1,600	24.71					$39,530				$39,530
	Double shift Total FY06 & FY07				5,066						$144,360	$34,036		$70,100	$248,496
	1Q 39,000 cy				**2475**						**$66,697**			**$29,838**	**$96,535**
	3&4Q 157,500 cy				**15060**						**$413,711.94**			**$190,599.55**	**$638,347.85**

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	13														
	CAT #2 & #4 ABOVE GRADE														
	Cell Placement 741 lcy					Rate + 20%									
	CAT 826	7	hr							165.35				$1,160	$1,160
	CAT D8	3	hr							116.98				$350	$350
	CAT 563 compactor	4	hr							40.98				$160	$160
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
	CAT 330 Track hoe	3	hr							99.74				$300	$300
mD	Operator	10	hr	1.7	24	24.71					$590				$590
mD	Foreman	11	hr	0.25	4	25.91					$100				$100
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $5.71														
	Subtotal for 1unit				91						$2,260			$1,970	$4,230
	Total x's 521 units				47,566						$1,177,460			$1,026,370	$2,203,830
	unit costs				0.1232						$3.049933			$2.658570	$5.708502
	1Q - cy														
	3&4Q 210,000 cy				25,874						$640,486			$558,300	$1,198,785

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	COST/UNIT Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	14														
	CAT #3														
	Palletized Transite Placement					Rate + 20%									
	Place pallets (10hr day) 144lcy														
mD	Operator	10	hr	1.0	14	29.484					$420				$420
mD	Laborer	10	hr	1.0	14	24.71					$350				$350
	Place Fill around & over pallets & grid														
	1708 cy (1.5day)														
	CAT D6 dozer	15	hr							63.28				$950	$950
	CAT 563 compactor	15	hr							40.98				$610	$610
mD	Laborer	15	hr	1.00	21	24.71					$520				$520
mD	Operator	15	hr	1.50	32	29.48					$940				$940
mD	Foreman	15	hr	0.25	5	25.91					$140				$140
	ICY = $27.29														
	Subtotol = 1 grid				86						$2,370			$1,560	$3,930
	Total times 41 Grids				3,541						$97,170			$63,960	$161,130
	unit costs				1						$16.4583			$10.8333	$27.2917
	1Q - cy														
	3&4Q 24,000 cy				14,394						$395,000			$260,000	$655,000

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	15														
	CAT #5														
	Friable Asbestos 334cy					Rate + 20%									
	Excavate 10 trenches (2hr/trench)														
mD	Operator	20	hr	1.0	28	29.48					$830				$830
mD	Laborer	20	hr	1.0	28	24.71					$700				$700
	CAT 330 Trakhoe	20	hr							99.74				$1,990	$1,990
	ISO	20	hr	1.50	42					73.62				$1,470	$1,470
	Trencher	20	hr							20.48				$410	$410
	Foreman	20	hr	0.25	7	25.91					$180				$180
	Placement														
	Operator	8	hr	1	11	29.48					$330				$330
	Laborer	8	hr	2.00	23	24.71					$560				$560
	CAT 416 BkHoe	2	hr							25.17				$50	$50
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Trench														
mD	Operator	8	hr	1.00	11	29.48					$330				$330
mD	Laborer	8	hr	1.00	11	24.71					$280				$280
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Backfill														
	CAT 416 BkHoe	4	hr							25.17				$100	$100
mD	Laborer	4	hr	2.00	11	24.71					$280				$280
mD	Operator	4	hr	1.25	7	29.48					$210				$210
	CAT 563 compactor	4	hr							40.98				$160	$160
	Foreman	8	hr	0.25	2	25.91					$50				$50
	ICY = $24.16														
	Subtotal for 1 grid				188						$3,890			$4,180	$8,070
	Total times 57 grids				10,723						$221,730			$238,260	$459,990
	unit costs				0.5632						$11.64671			$12.51497	$24.16168
	1Q		cy												
	3&4Q	5,300	cy		2,985						$61,728			$66,329	$128,057

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	16														
	CAT #2 & #4 At & Below Grade														
	Placement					Rate + 20%									
	1 Grid / shift = 450cy														
	CAT D8	5	hr	1.0						116.98				$580	$580
	CAT 563 compactor	5	hr	0.50						40.98				$200	$200
mD	Foreman	5	hr	0.25	1.8	25.91					$50				$50
mD	Laborer	5	hr	2	14.1	24.71					$350				$350
mD	Operator	5	hr	2	14.1	29.48					$420				$420
	ICY = $3.56														
	Subtotal for 1 grid				30.0						$820			$780	$1,600
	Total times 829 grid				24839						$679,780			$646,620	$1,326,400
	unit costs				0.0666						$1.8222			$1.7333	$3.5556
	1Q 21,600 cy				1,438						$39,360			$37,440	$76,800
	3&4Q 102,700 cy				6,838						$187,142			$178,013	$365,156

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	17														
	CAT #5					Rate + 20%									
	Thorium / Thorium Soil Debris														
	625 cy / grid														
	Trench method														
	Excavation 125 cy = 5 hr														
mD	Operator	5	hr	1.0	7	29.48					$210				$210
mD	Laborer	5	hr	1.0	7	24.71					$170				$170
mD	Foreman	5	hr	0.25	2	25.91					$50				$50
	CAT 330 Trakhoe	5	hr							99.74				$500	$500
	Total for 5 trenches				79						$2,150			$2,500	$4,650
	Place Thorium Debris/Soil 1.5' deep														
	CAT 330 Trakhoe	3	hr	1.0						99.74				$300	$300
mD	Foreman	3	hr	0.25	1	25.91					$30				$30
mD	Laborer	3	hr	2.0	8	24.71					$210				$210
	Total for 5 trenches				48						$1,200			$1,500	$2,700
	Backfill														
	CAT 330	4	hr							99.74				$400	$400
	CAT 563	4	hr							40.98				$160	$160
mD	Foreman	4	hr	0.25	1	25.91					$40				$40
mD	Laborer	4	hr	1.00	6	24.71					$140				$140
mD	Operator	4	hr	1.50	8	29.48					$250				$250
	Total for 5 trenches				78						$2,150			$2,800	$4,950
	ICY = $19.68														
	Subtotal for 1 grid				204.5						$5,500			$6,800	$12,300
	Total times 20 grids				4,089						$110,000			$136,000	$246,000
	unit costs				0.327120						$8.8000			$10.8800	$19.6800
	1Q 1,300 cy				425						$11,440			$14,144	$25,584
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO.: C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	OSDF PLACEMENT FY06	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing	Shared percent													
D	Project Manager	20.0%	hr	1	142	54.42					$7,740				$7,740
D	General Superintendent	20.0%	hr	1	142	37.85					$5,390				$5,390
D	Superintendent	40.0%	hr	2	569	32.99					$18,780				$18,780
D	Project Engineer	20.0%	hr	1	142	33.19					$4,720				$4,720
D	Quality Engineer	25.0%	hr	2	356	28.05					$9,980				$9,980
D	Safety Engineer	25.0%	hr	2	356	30.34					$10,790				$10,790
D	Office Administration	in overhead				19.31									
D	Contract Administration/ Schedule	in overhead				25.58									
D	Clerical	in overhead				14.58									
	TOTAL				1,707	33.62					$57,400				$57,400

APPENDIX " A"

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NOC2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PERCENT OF INFLUENCE ON CHART MANHOURS	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	XCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<--- MULTIPLE SHIFTS-											
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	////////// ////// MULTIPLE-SHIFT //////////	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
60 HOUR WORK WEEK	////////// //////////	////////// //////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
SHIFTWORK 2ND SHIFT 3RD SHIFT			 3RD SHIFT		2ND SHIFT		OR ONE SHIFT ONLY			 100.0% 100.0%	 3.0% 5.0%	 0.03 0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		100.0%	4.0%	0.04
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			90.0%	8.0%	0.072
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	91.2%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED

2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 91.2%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO. C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)		10.0
S/T = BASE UNIT MANHOURS		110
OVERTIME PRODUCTIVITY FACTOR	0.00%	0
(SEE DETAIL WORKSHEET BACK-UP)		110
* TASK SPECIFIC (confined space,	0.0%	0
high elevation, congestion, etc.)		110

* PPE SPECIFIC (Based on current data and estimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	4.00%	4	28.00%	31	66.00%	73	74.00%	81	96.00%	106
(AS A MULTIPLIER)/TOTAL HRS	1.04	114.4	1.28	140.8	1.66	182.6	1.74	191.4	1.96	215.6
TOTAL MULTIPLIER w/SITE PROD.	1.144		1.408		1.826		1.914		2.156	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

11.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO. C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.96	0.78	0.7	0.7	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.96	0.78	0.602	0.574	0.51
NET PRODUCTIVITY MULTIPLIER		**1.04**	**1.28**	**1.66**	**1.74**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg.
Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per D		600	600	600	600	600
ADDITN'L SITE SAFETY MEETINGS NOT INCLD. IN BA	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	N/A	4	4	4	4
** (4 OUT OF 12 MONTHS) 33.33%	MINUTES	N/A	15	15	15	15
TOTAL			20	20	20	20
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		575	465	420	420	405
AVAILABLE WORK TIME FACTOR		**0.96**	**0.78**	**0.7**	**0.7**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's. Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO. C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

Fluor Fernald, Inc.

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mD : FULL DRESS				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIES	PR	$4.46	3	1421	$19,008	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	1421	$1,023	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	1421	$1,108	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	1421	$4,347	mC	
SUB-TOTAL		$5.98	3		$25,486		
				$/MD =	$17.94		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	6	8	$610	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$610		

TOTAL PPE's = MAT'L.$'s $26,100

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO. C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

–MEDICAL MONITORING –

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	9	36	$26.85	$970
ANNUAL PHYSICALS	0	4	9	0	$26.85	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	9	9	$26.85	$240
SUB-TOTAL						$1,210

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	9	54	$26.85	$1,450
SUB-TOTAL						$1,450

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	15	2	30	$26.85	$800

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	16	0.0684	226

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$2,429,224	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$2,429,224	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$3,500	$26,100	$29,600

(FORWARD TO ESTIMATE SUMMARY SHEET)

ACTIVITY DURATIONS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY06
ESTIMATE NO. C2-2001-05-06 36
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
CONSTRUCTION:	01-May-01	01-Oct-05	01-Apr-06	30-Sep-06	12.0	MONTHS
					0	MONTHS
TOTAL					12.0	MONTHS

	DATE of EST. to MID-POINT CTIVITY DURATION	
a.	59.1	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT CTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY07	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-006 37	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$75,300			$75,300
Submittals	1,600		$80,210				$80,210
Overhead & Profit				$965,856			$965,856
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	5,520		$161,580	$153,450	$6,230	$145,468	$466,728
OMTA Operations (including shutdown)	9,369		$250,750			$314,678	$565,428
Removal of Impacted portion Haul Rd	141		$3,770			$5,800	$9,570
Placement of 12" Protective Layer	705		$18,850			$9,710	$28,560
Placement of 24" Select Layer	1,325		$35,710			$13,840	$49,550
Placement of 36" Select Layer	2,312		$62,790		$480	$32,940	$96,210
Placement of CAT #1 1Q	3,757		$101,242			$45,293	$146,535
Placement of CAT #1 3&4Q	14,242		$391,651			$180,730	$572,381
Placement of CAT #2 & #4 Above Grade 1Q	148		$3,660			$3,190	$6,850
Placement of CAT #2 & #4 Above Grade 3&4Q	961		$23,789			$20,737	$44,526
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q	14,394		$395,000			$260,000	$655,000
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q							
Placement of CAT #2&#4 @ & Below Grade 1Q	3,256		$89,107			$84,760	$173,867
Placement of CAT #2&#4 @ & Below Grade 3&4Q	12,604		$344,947			$328,120	$673,067
Placement of CAT #5 Thorium/Soil Debris 1Q							
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	70,334	$27.91	$1,963,056	$1,214,606	$6,710	$1,445,266	$4,629,637
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	1,707	$33.62	$57,400				$57,400
HEALTH PHYSICS	129		$3,600		$26,100		$29,700
PAYROLL BURDENS & BENEFITS			$1,153,700				$1,153,700
SALES TAX					$2,000	$86,700	$88,700
INDIRECT FIELD COSTS TOTAL	1,836		$1,214,700		$28,100	$86,700	$1,329,500
DIRECT & INDIRECT FIELD COSTS TOTAL	72,171	$44.03	$3,177,756	$1,214,606	$34,810	$1,531,966	$5,959,137
TARGET ESTIMATE			(FY 01 DOLLARS)				$5,959,137

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

FACTORS

PROJECT:	OSDF PLACEMENT FY07	DATE:	17-May-01
ESTIMATE NO.:	C2-2001-05-006 37	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS NO.:	1.1.C.D	TASK NO.:	CCPL3

FIXED PRICE S	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$1,963,056	$1,214,606	$6,710	$1,445,266	$26,100	$4,655,737
IFC COST FACTOR	1.6188	--	1.0000	1.0000	--	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.6188	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$3,177,756	$1,214,606	$7,113	$1,531,982	$27,666	$5,959,122
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.6188	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$3,177,756	$1,214,606	$7,113	$1,531,982	$27,666	$5,959,122

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY07 | **DATE:** 17-May-01
ESTIMATE NO.: C2-2001-05-006 37 | **ESTIMATOR:** T.WAGNER
CLIENT: DOE | **LOCATION:** FERNALD
WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				29700	
1	Post Award Document (Bonds & Insura		75300				
			$75,300				$75,300
2	Submittals	80210					
		$129,840					$129,840
3	Overhead & Profit		965856				
			$965,860				$965,860
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	161580	153450	6230	145468	2,548.76	
		$261,560	$153,450	$6,600	$154,200	$2,700	$578,510
7	OMTA Operations (including shutdown)	250750			314678	3,955.33	
		$405,910			$333,560	$4,190	$743,660
8	Removal of Impacted portion Haul Rd	3770			5800	59.47	
		$6,100			$6,150	$60	$12,310
9	Placement of 12" Protective Layer	18850			9710	297.34	
		$30,510			$10,290	$320	$41,120
10	Placement of 24" Select Layer	35710			13840	563.29	
		$57,810			$14,670	$600	$73,080
11	Placement of 36" Select Layer	62790		480	32940	990.45	
		$101,640		$510	$34,920	$1,050	$138,120
12	Placement of CAT #1 1Q	101242			45293	1,596.99	
		$163,890			$48,010	$1,690	$213,590
12	Placement of CAT #1 3&4Q	391650.7291			180730.063	6,177.90	
		$634,000			$191,570	$6,550	$832,120
13	Placement of CAT #2 & #4 Above Grad	3660			3190	57.73	
		$5,920			$3,380	$60	$9,360
13	Placement of CAT #2 & #4 Above Grad	23789.47368			20736.84211	375.26	
		$38,510			$21,980	$400	$60,890
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi	395000			260000	6,230.73	
		$639,420			$275,600	$6,600	$921,620
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos					-	
16	Placement of CAT #2&#4 @ & Below G	89107			84760	1,405.57	
		$144,240			$89,850	$1,490	$235,580
16	Placement of CAT #2&#4 @ & Below G	344946.6667			328120	5,441.19	
		$558,390			$347,810	$5,770	$911,970
17	Placement of CAT #5 Thorium/Soil Deb					-	
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$5,962,930

Cost Allocation for Baseline Entry

1	Post Award	$75,300
2	Submittal	$129,840
	Subtotal	$205,140
3	Overhead & Profit	$965,860
4	Off Hour Dust Control	$20,000
6	Site Prep	$578,510
	Subtotal	$598,510
7	OMTA Operations (including shutdown)	$743,660
8	Removal of Impacted portion Haul Rd	$12,310
	Subtotal	$755,970
9	Placement of 12" Protective Layer	$41,120
10	Placement of 24" Select Layer	$73,080
11	Placement of 36" Select Layer	$138,120
12 thru 17	Quarter 1	$458,530
12 thru 17	Quarter 3 & 4	$2,726,600
	Grand Total	$5,962,930
	Verify old total	$5,962,930
	Match %	100.00%

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	Post Award Document (Bonds & Insurance)											$75,300			$75,300
2	Submittals				1,600						$80,210				$80,210
3	Overhead & Profit											$965,856			$965,856
4	Off Hour Dust Control											$20,000			$20,000
5	Control & Management (separate estimate)														
6	Site Prep				5,520						$161,580	$153,450	$6,230	$145,468	$466,728
7	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
8	Removal of Impacted portion Haul Rd				141						$3,770			$5,800	$9,570
9	Placement of 12" Protective Layer				705						$18,850			$9,710	$28,560
10	Placement of 24" Select Layer				1,325						$35,710			$13,840	$49,550
11	Placement of 36" Select Layer				2,312						$62,790		$480	$32,940	$96,210
12	Placement of CAT #1 1Q				3,757						$101,242			$45,293	$146,535
12	Placement of CAT #1 3&4Q				14,242						$391,651			$180,730	$606,417
13	Placement of CAT #2 & #4 Above Grade 1Q				148						$3,660			$3,190	
13	Placement of CAT #2 & #4 Above Grade 3&4Q				961						$23,789			$20,737	$44,526
14	Placement of CAT #3 Palletized Transits 1Q														
14	Placement of CAT #3 Palletized Transits 3&4Q				14,394						$395,000			$260,000	$655,000
15	Placement of CAT #5 Friable Asbestos 1Q														
15	Placement of CAT #5 Friable Asbestos 3&4Q														
16	Placement of CAT #2&#4 @ & Below Grade 1Q				3,256						$89,107			$84,760	$173,867
16	Placement of CAT #2&#4 @ & Below Grade 3&4Q				12,604						$344,947			$328,120	$673,067
17	Placement of CAT #5 Thorium/Soil Debris 1Q														
17	Placement of CAT #5 Thorium/Soil Debris 3&4Q														
al Direc	OSDF Placement		OT		70,354	$27.91					$1,963,056	$1,214,606	$6,710	$1,445,266	$4,829,638

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CONTRACTOR - Stated in FY01 DOLLARS

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DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	**Post Award Documents**														
	Bonds & Insurance (calculated on summary)	1	ls												
2	**Submittals** fy09 use 6ea 30 with 30 & 10 for tech														
	Plans allowance	12	ea	50.0	600	50.13					$30,080				$30,080
	Technical submittals allowance	100	ea	10.0	1000	50.13					$50,130				$50,130
					1600						$80,210				$80,210
4	**Off Hour Dust Control**														
	Off Hour Dust Control allowance	1	ls					20,000				$20,000			$20,000
5	Control & Management (separate estimate)														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	6 SITE PREP														
	Dust Control					Rate + 20%									
	CAT 613 Water wagon (2ea)	10	mo	2						3,770				$75,400	$75,400
	CAT 613 Water wagon (2ea)	2,559	hr	2						12.55				$64,218	$64,218
mD	Operator (9 months)	1,935	hr	1	2728	29.48					$80,440				$80,440
mD	Operator (5 months)	1,075	hr	1	1516	29.48					$44,690				$44,690
	Site Prep														
	Mobilization of equipment	10	hr	6	85	29.48				100.00	$2,490			$1,000	$3,490
	Silt fence	2,000	lf						0.30				$600		$600
mD	Laborer	40	hr	1	56	24.71					$1,390				$1,390
mD	Operator	40	hr	1	56	29.48					$1,660				$1,660
	CAT 416 backhoe	40	hr	1						25.17				$1,010	$1,010
	Straw bales	312	ea						2.50				$780		$780
mD	Laborer	15	hr	2	42	24.71					$1,050				$1,050
mD	Operator	15	hr	1	21	29.48					$620				$620
	CAT 416 backhoe	15	hr	1						25.17				$380	$380
	Install check dams/SIDs														
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
mD	Operator	20	hr	1	28	29.48					$830				$830
mD	Teamster	20	hr	1	28	24.94					$700				$700
	CAT 330 TracHoe	20	hr	1						99.74				$1,990	$1,990
	Type D Rip Rap	12	tn	1					15.50				$190		$190
	Haul Truck	20	hr	1						73.62				$1,470	$1,470
	Construction/RAD fencing 4' wire w/ p	1,200	lf						2.83				$3,400		$3,400
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
	Install const/grid signage	36	ea						35.00				$1,260		$1,260
	Site prep														
mD	Laborer	30	hr	2	85	24.71					$2,090				$2,090
	Survey														
	Survey crew	1	ls					153,450				$153,450			$153,450
	Training	30	hr	18	761	30.00					$22,840				$22,840
	Training based on HlthPhys Sheet														
	Site Prep	1	LOT		5,520	$29.27					$161,580	$153,450	$6,230	$145,468	$456,728

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CONTRACTOR - Stated in FY01 DOLLARS

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	7 OMTA Operations (including Shutdown)														
	7 A apply to ea fiscal yr of FY04 - FY08														
	OMTA Operations thru shutdown period (approx. 3 mo)														
	CAT 973 Track Loader/4way bucket	552	hr	1						107.95				$59,600	$59,600
	CAT 330 Excavator/grappler	552	hr	1						99.74				$55,060	$55,060
	Tractor (farm)	552	hr							37.57				$20,740	$20,740
mD	Foreman (3 mo)	650	hr	1	916	21.59					$19,770				$19,770
mD	Laborer (3 mo)	650	hr	2	1,832	20.59					$37,710				$37,710
mD	Operator (3 mo)	650	hr	1	916	24.57					$22,500				$22,500
						Rate + 20%									
mD	Teamster (9 mo)	1,949	hr	2	5,495	29.92					$164,420				$164,420
	ROB Truck (Site Owns)	1,656	hr	1						73.62				$121,931	$121,931
	CAT TH83 (9 mo)	1,656	hr	1						34.62				$57,346	$57,346
	Purchase of office trailer (8x12) FY04		ls					5,075.00							
	7 B Special for Lighting FY06 & FY07														
	Lighting double shift														
	2x5.5mx4	22	mo												
	7 B Special for FY04 - FY08														
	Training & Hiring of 5 additional personnel for night shift														
	Training	30	hr	5	212	30.00					$6,350				$6,350
	Training based on HlthPhys Sheet														
	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
	8 Removal of impacted portion of OSDF Haul Rd (2 DAYS X 7)					Rate + 20%									
	CAT 330 excavator	20	hr	1						99.74				$1,990	$1,990
	CAT D8 dozer	20	hr	1						116.98				$2,340	$2,340
	Haul Truck	20	hr	2						73.62				$1,470	$1,470
mD	Operator	20	hr	2	56	29.48					$1,660				$1,660
mD	Teamster	20	hr	2	56	24.94					$1,410				$1,410
mD	Laborer	20	hr	1	28	24.71					$700				$700
	TOTAL FOR 1				141						$3,770			$5,800	$9,570

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	9 Placement of 12" Impacted protection cover (10days)					Rate + 20%									
	CAT 563	85	hr							40.98				$3,480	$3,480
	CAT D6 LGP dozer	85	hr							73.26				$6,230	$6,230
mD	Foreman	100	hr	0.5	71	25.91					$1,830				$1,830
mD	Laborer	100	hr	2.5	353	24.71					$8,710				$8,710
mD	Operator	100	hr	2.0	282	29.48					$8,310				$8,310
	{11,000 ICY}														
	Total for 1 of 4Liners				705						$18,850			$9,710	$28,560
	10 Placement of 24" Select Impacted (20days)					Rate + 20%									
	CAT 563	170	hr							40.98				$6,970	$6,970
	CAT D6 LGP dozer	170	hr							73.26				$12,450	$12,450
mD	Laborer	200	hr	2.5	705	24.71					$17,420				$17,420
mD	Operator	200	hr	2.0	564	29.48					$16,630				$16,630
	CAT 563 compactor 4days	34	hr	1.0						40.98				$1,390	$1,390
mD	Operator 4days	40	hr	1.0	56	29.48					$1,660				$1,660
	{22,000 ICY}														
	Total for 1 of 4Liners				1,325						$35,710			$13,840	$49,550
	11 Placement of 36" Select					Rate + 20%									
	CAT 563	238	hr							40.98				$9,750	$9,750
	CAT D6 LGP dozer	238	hr							73.26				$17,440	$17,440
	CAT 563 compactor (14day)	119	hr							40.98				$4,880	$4,880
mD	Operator (28day)	280	hr	2.5	987	29.48					$29,100				$29,100
mD	Laborer (28day)	280	hr	2.5	987	24.71					$24,390				$24,390
mD	Operator (14day)	140	hr	1.0	197	29.48					$5,820				$5,820
mD	Silt Fence	1,600	lf						0.30				$480		$480
mD	Laborer (5day)	50	hr	2.0	141	24.71					$3,480				$3,480
	Trencher	42.5	hr							20.48				$870	$870
	{33,000 ICY}														
	TOTAL FOR 1				2,312						$62,790		$480	$32,940	$96,210

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	COST/UNIT Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	12														
	CAT #1														
	Placement of Impacted Mat'l														
	2,222 cy/day avg. 10hrs					Rate + 20%									
	CAT D8 dozer	10	hr							116.98				$1,170	$1,170
	CAT 563 Compactor	11	hr							40.98				$450	$450
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
mD	Operator	10	hr	2.2	31	29.48					$910				$910
	CAT 330 Trac hoe	3	hr							25.17				$80	$80
mD	Operator	10	hr	2.3	32	29.48					$960				$960
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $2.48														
	Subtotal for 1unit				141						$3,800			$1,700	$5,500
	Unit rates				0.0635						$1.71017			$0.76508	$2.47525
	Double shift 5.5mo in FY06 & FY07														
	Portable light plants					Rate + 20%									
	10 Lights x 5.5m	5.5	mo	10						1,275				$70,100	$70,100
	Survey Crew	378	hr					90.00				$34,036			$34,036
	Supervisor	378	hr	1.0	533	37.85					$20,180				$20,180
	Safety	378	hr	1.0	533	30.34					$16,180				$16,180
	QA	378	hr	0.5	267	28.05					$7,480				$7,480
	Foreman	378	hr	1.0	533	25.91					$13,820				$13,820
	Operator	378	hr	3.0	1,600	29.48					$47,170				$47,170
	Laborer	378	hr	3.0	1,600	24.71					$39,530				$39,530
	Double shift Total FY06 & FY07				5,066						$144,360	$34,036		$70,100	$248,496
	1Q 59,200 cy				3757						$101,242			$45,293	$146,535
	3&4Q 144,600 cy				14242						$391,650.73			$180,730.06	$606,417.16

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	13														
	CAT #2 & #4 ABOVE GRADE														
	Cell Placement 741 lcy					Rate + 20%									
	CAT 826	7	hr							165.35				$1,160	$1,160
	CAT D8	3	hr							116.98				$350	$350
	CAT 563 compactor	4	hr							40.98				$160	$160
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
	CAT 330 Track hoe	3	hr							99.74				$300	$300
mD	Operator	10	hr	1.7	24	24.71					$590				$590
mD	Foreman	11	hr	0.25	4	25.91					$100				$100
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	lcy = $5.71														
	Subtotal for 1unit				91						$2,260			$1,970	$4,230
	Total x's 521 units				47,566						$1,177,460			$1,026,370	$2,203,830
	unit costs				0.1232						$3.049933			$2.658570	$5.708502
	1Q 1,200 cy				148						$3,660			$3,190	
	3&4Q 7,800 cy				961						$23,789			$20,737	$44,526

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	14														
	CAT #3														
	Palletized Transite Placement					Rate + 20%									
	Place pallets (10hr day) 144lcy														
mD	Operator	10	hr	1.0	14	29.484					$420				$420
mD	Laborer	10	hr	1.0	14	24.71					$350				$350
	Place Fill around & over pallets & grid														
	1708 cy (1.5day)														
	CAT D6 dozer	15	hr							63.28				$950	$950
	CAT 563 compactor	15	hr							40.98				$610	$610
mD	Laborer	15	hr	1.00	21	24.71					$520				$520
mD	Operator	15	hr	1.50	32	29.48					$940				$940
mD	Foreman	15	hr	0.25	5	25.91					$140				$140
	ICY = $27.29														
	Subtotal = 1 grid				86						$2,370			$1,560	$3,930
	Total times 41 Grids				3,541						$97,170			$63,960	$161,130
	unit costs				1						$16.4583			$10.8333	$27.2917
	1Q - cy														
	3&4Q 24,000 cy				14,394						$395,000			$260,000	$655,000

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	15														
	CAT #5														
	Friable Asbestos 334cy					Rate + 20%									
	Excavate 10 trenches (2hr/trench)														
mD	Operator	20	hr	1.0	28	29.48					$830				$830
mD	Laborer	20	hr	1.0	28	24.71					$700				$700
	CAT 330 Trakhoe	20	hr							99.74				$1,990	$1,990
	ISO	20	hr	1.50	42					73.62				$1,470	$1,470
	Trencher	20	hr							20.48				$410	$410
	Foreman	20	hr	0.25	7	25.91					$180				$180
	Placement														
	Operator	8	hr	1	11	29.48					$330				$330
	Laborer	8	hr	2.00	23	24.71					$560				$560
	CAT 416 BkHoe	2	hr							25.17				$50	$50
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Trench														
mD	Operator	8	hr	1.00	11	29.48					$330				$330
mD	Laborer	8	hr	1.00	11	24.71					$280				$280
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Backfill														
	CAT 416 BkHoe	4	hr							25.17				$100	$100
mD	Laborer	4	hr	2.00	11	24.71					$280				$280
mD	Operator	4	hr	1.25	7	29.48					$210				$210
	CAT 563 compactor	4	hr							40.98				$160	$160
	Foreman	8	hr	0.25	2	25.91					$50				$50
	ICY = $24.16														
	Subtotal for 1 grid				188						$3,890			$4,180	$8,070
	Total times 57 grids				10,723						$221,730			$238,260	$459,990
	unit costs				0.5632						$11.64671			$12.51497	$24.16168
	1Q cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	COST/UNIT Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	16														
	CAT #2 & #4 At & Below Grade														
	Placement					Rate + 20%									
	1 Grid / shift = 450cy														
	CAT D8	5	hr	1.0						116.98				$580	$580
	CAT 563 compactor	5	hr	0.50						40.98				$200	$200
mD	Foreman	5	hr	0.25	1.8	25.91					$50				$50
mD	Laborer	5	hr	2	14.1	24.71					$350				$350
mD	Operator	5	hr	2	14.1	29.48					$420				$420
	ICY = $3.56														
	Subtotal for 1 grid				30.0						$820			$780	$1,600
	Total times 829 grid				24839						$679,780			$646,620	$1,326,400
	unit costs				0.0666						$1.8222			$1.7333	$3.5556
	1Q 48,900 cy				3,256						$89,107			$84,760	$173,867
	3&4Q 189,300 cy				12,604						$344,947			$328,120	$673,067

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	17														
	CAT #5					Rate + 20%									
	Thorium / Thorium Soil Debris														
	625 cy / grid														
	Trench method														
	Excavation 125 cy = 5 hr														
mD	Operator	5	hr	1.0	7	29.48					$210				$210
mD	Laborer	5	hr	1.0	7	24.71					$170				$170
mD	Foreman	5	hr	0.25	2	25.91					$50				$50
	CAT 330 Trakhoe	5	hr							99.74				$500	$500
	Total for 5 trenches				79						$2,150			$2,500	$4,650
	Place Thorium Debris/Soil 1.5' deep														
	CAT 330 Trakhoe	3	hr	1.0						99.74				$300	$300
mD	Foreman	3	hr	0.25	1	25.91					$30				$30
mD	Laborer	3	hr	2.0	8	24.71					$210				$210
	Total for 5 trenches				48						$1,200			$1,500	$2,700
	Backfill														
	CAT 330	4	hr							99.74				$400	$400
	CAT 563	4	hr							40.98				$160	$160
mD	Foreman	4	hr	0.25	1	25.91					$40				$40
mD	Laborer	4	hr	1.00	6	24.71					$140				$140
mD	Operator	4	hr	1.50	8	29.48					$250				$250
	Total for 5 trenches				78						$2,150			$2,800	$4,950
	ICY = $19.68														
	Subtotal for 1 grid				204.5						$5,500			$6,800	$12,300
	Total times 20 grids				4,089						$110,000			$136,000	$246,000
	unit costs				0.327120						$8.8000			$10.8800	$19.6800
	1Q - cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO.: C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	OSDF PLACEMENT FY07	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing	Shared percent													
D	Project Manager	20.0%	hr	1	142	54.42					$7,740				$7,740
D	General Superintendent	20.0%	hr	1	142	37.85					$5,390				$5,390
D	Superintendent	40.0%	hr	2	569	32.99					$18,780				$18,780
D	Project Engineer	20.0%	hr	1	142	33.19					$4,720				$4,720
D	Quality Engineer	25.0%	hr	2	356	28.05					$9,980				$9,980
D	Safety Engineer	25.0%	hr	2	356	30.34					$10,790				$10,790
D	Office Administration	In overhead				19.31									
D	Contract Administration/ Schedule	In overhead				25.58									
D	Clerical	In overhead				14.58									
	TOTAL				1,707	33.62					$57,400				$57,400

APPENDIX " A"

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NOC2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PERCENT OF INFLUENCE ON CHART MANHOURS	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	XCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<---- MULTIPLE SHIFTS-											
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	//////////	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
	//// MULTIPLE-SHIFT ////////											
60 HOUR WORK WEEK	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
	//////////	//////////										
SHIFTWORK							OR					
2ND SHIFT					2ND SHIFT		ONE SHIFT			100.0%	3.0%	0.03
3RD SHIFT			3RD SHIFT				ONLY			100.0%	5.0%	0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		100.0%	4.0%	0.04
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			90.0%	8.0%	0.072
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	91.2%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED

2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 91.2%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO. C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)	[redacted]	10.0
S/T = BASE UNIT MANHOURS		110
OVERTIME PRODUCTIVITY FACTOR	0.00%	0
(SEE DETAIL WORKSHEET BACK-UP)		110
* TASK SPECIFIC (confined space,	0.0%	0
high elevation, congestion, etc.)		110

* PPE SPECIFIC (Based on current data and estimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	4.00%	4	28.00%	31	66.00%	73	74.00%	81	96.00%	106
(AS A MULTIPLIER)/TOTAL HRS	1.04	114.4	1.28	140.8	1.66	182.6	1.74	191.4	1.96	215.6
TOTAL MULTIPLIER w/SITE PROD.	1.144		1.408		1.826		1.914		2.156	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

11.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO. C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.96	0.78	0.7	0.7	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.96	0.78	0.602	0.574	0.51
NET PRODUCTIVITY MULTIPLIER		**1.04**	**1.28**	**1.66**	**1.74**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg. Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per D 24 10's		600	600	600	600	600
ADDITN'L SITE SAFETY MEETINGS NOT INCLD. IN BA	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	N/A	4	4	4	4
** (4 OUT OF 12 MONTHS) 33.33%	MINUTES	N/A	15	15	15	15
TOTAL			20	20	20	20
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		575	465	420	420	405
AVAILABLE WORK TIME FACTOR		**0.96**	**0.78**	**0.7**	**0.7**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's. Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO. C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

Fluor Fernald, Inc.

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY	MAN DAYS	MAT'L.$'s	PPE LEVEL	
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		

PPE LEVEL mD : FULL DRESS				MAN DAYS	MAT'L.$'s	PPE LEVEL
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIES	PR	$4.46	3	1421	$19,008	mC
GLOVE LINER - DISPOSABLE	PR	$0.24	3	1421	$1,023	mC
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	1421	$1,108	mC
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	1421	$4,347	mC
SUB-TOTAL		$5.98	3		$25,486	
				$/MD =	$17.94	

SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	6	8	$610	D/C/B
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C/A
SCBA	EA	$1,894.00	2	0	$0	B
COOL VESTS	EA	$137.50	6	0	$0	C/B
THERMO STRIPS	EA	$50.00	6	0	$0	C/B
SUB-TOTAL					$610	

	MAT'L.$'s
TOTAL PPE's =	$26,100

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO. C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	9	36	$27.91	$1,000
ANNUAL PHYSICALS	0	4	9	0	$27.91	$0
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	9	9	$27.91	$250
SUB-TOTAL						$1,250

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	9	54	$27.91	$1,500
SUB-TOTAL						$1,500

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s	
	15	2	30	$27.91	$800	
NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	16	0.0684	226

			LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%		$1,963,056	$0
				LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%		$1,963,056	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$3,600	$26,100	$29,700

(FORWARD TO ESTIMATE SUMMARY SHEET)

ACTIVITY DURATIONS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY07
ESTIMATE NO. C2-2001-05-006 37
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
CONSTRUCTION:	01-May-01	01-Oct-06	01-Apr-07	30-Sep-07	12.0	MONTHS
					0	MONTHS
TOTAL					12.0	MONTHS

	DATE of EST. to MID-POINT CTIVITY DURATION	
a.	71.1	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT CTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY08	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-006 38	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$71,600			$71,600
Submittals	1,600		$80,210				$80,210
Overhead & Profit				$918,029			$918,029
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	5,520		$161,580	$102,300	$6,230	$145,468	$415,578
OMTA Operations (including shutdown)	9,369		$250,750			$314,678	$565,428
Removal of Impacted portion Haul Rd	141		$3,770			$5,800	$9,570
Placement of 12" Protective Layer	705		$18,850			$9,710	$28,560
Placement of 24" Select Layer	1,325		$35,710			$13,840	$49,550
Placement of 36" Select Layer	2,312		$62,790		$480	$32,940	$96,210
Placement of CAT #1 1Q	2,570		$69,262			$30,986	$100,248
Placement of CAT #1 3&4Q	6,968		$187,777			$84,005	$271,782
Placement of CAT #2 & #4 Above Grade 1Q	74		$1,830			$1,595	$3,425
Placement of CAT #2 & #4 Above Grade 3&4Q	19,467		$481,889			$420,054	$901,943
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q	9,356		$256,750			$169,000	$425,750
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q							
Placement of CAT #2&#4 @ & Below Grade 1Q	1,964		$53,756			$51,133	$104,889
Placement of CAT #2&#4 @ & Below Grade 3&4Q	4,461		$122,089			$116,133	$238,222
Placement of CAT #5 Thorium/Soil Debris 1Q							
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	65,833	$27.14	$1,787,012	$1,111,929	$6,710	$1,395,343	$4,300,994
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	4,288	$33.69	$144,480				$144,480
HEALTH PHYSICS	169		$4,600		$26,100		$30,700
PAYROLL BURDENS & BENEFITS			$1,103,600				$1,103,600
SALES TAX					$2,000	$83,700	$85,700
INDIRECT FIELD COSTS TOTAL	4,458		$1,252,680		$28,100	$83,700	$1,364,480
DIRECT & INDIRECT FIELD COSTS TOTAL	70,291	$43.24	$3,039,692	$1,111,929	$34,810	$1,479,043	$5,665,474
TARGET ESTIMATE			(FY 01 DOLLARS)				$5,665,474

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY08 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-006 38 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

FACTORS

FIXED PRICE $	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$1,787,012	$1,111,929	$6,710	$1,395,343	$26,100	$4,327,094
IFC COST FACTOR	1.7010	--	1.0000	1.0000	--	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.7010	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$3,039,692	$1,111,929	$7,113	$1,479,063	$27,666	$5,665,463
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.7010	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$3,039,692	$1,111,929	$7,113	$1,479,063	$27,666	$5,665,463

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY08 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-006 38 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				30700	
1	Post Award Document (Bonds & Insura		71600				
			$71,600				$71,600
2	Submittals	80210					
		$136,440					$136,440
3	Overhead & Profit		918029				
			$918,030				$918,030
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	161580	102300	6230	145468	2,906.32	
		$274,850	$102,300	$6,600	$154,200	$3,080	$541,030
7	OMTA Operations (including shutdown)	250750			314678	4,510.20	
		$426,520			$333,560	$4,780	$764,860
8	Removal of Impacted portion Haul Rd	3770			5800	67.81	
		$6,410			$6,150	$70	$12,630
9	Placement of 12" Protective Layer	18850			9710	339.05	
		$32,060			$10,290	$360	$42,710
10	Placement of 24" Select Layer	35710			13840	642.31	
		$60,740			$14,670	$680	$76,090
11	Placement of 36" Select Layer	62790		480	32940	1,129.39	
		$106,810		$510	$34,920	$1,200	$143,440
12	Placement of CAT #1 1Q	69262			30986	1,245.80	
		$117,810			$32,840	$1,320	$151,970
12	Placement of CAT #1 3&4Q	187776.7777			84005.40054	3,377.51	
		$319,410			$89,050	$3,580	$412,040
13	Placement of CAT #2 & #4 Above Grad	1830			1595	32.92	
		$3,110			$1,690	$30	$4,830
13	Placement of CAT #2 & #4 Above Grad	481889.3387			420053.9811	8,667.67	
		$819,690			$445,260	$9,190	$1,274,140
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi	256750			169000	4,618.12	
		$436,730			$179,140	$4,900	$620,770
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos					-	
16	Placement of CAT #2&#4 @ & Below G	53756			51133	966.89	
		$91,440			$54,200	$1,020	$146,660
16	Placement of CAT #2&#4 @ & Below G	122088.8889			116133.3333	2,195.99	
		$207,670			$123,100	$2,330	$333,100
17	Placement of CAT #5 Thorium/Soil Deb					-	
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$5,670,340

Cost Allocation for Baseline Entry

1	Post Award	$71,600
2	Submittal	$136,440
	Subtotal	$208,040
3	Overhead & Profit	$918,030
4	Off Hour Dust Control	$20,000
6	Site Prep	$541,030
	Subtotal	$561,030
7	OMTA Operations (including shutdown)	$764,860
8	Removal of Impacted portion Haul Rd	$12,630
	Subtotal	$777,490
9	Placement of 12" Protective Layer	$42,710
10	Placement of 24" Select Layer	$76,090
11	Placement of 36" Select Layer	$143,440
12 thru 17	Quarter 1	$303,460
12 thru 17	Quarter 3 & 4	$2,640,050
	Grand Total	$5,670,340
	Verify old total	$5,670,340
	Match %	100.00%

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	SUMMARY	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST / UNIT Labor	COST / UNIT S/C	COST / UNIT Mat'l	COST / UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	Post Award Document (Bonds & Insurance)											$71,600			$71,600
2	Submittals				1,600						$80,210				$80,210
3	Overhead & Profit											$918,029			$918,029
4	Off Hour Dust Control											$20,000			$20,000
5	Control & Management (separate estimate)														
6	Site Prep				5,520						$161,580	$102,300	$6,230	$145,468	$415,578
7	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
8	Removal of Impacted portion Haul Rd				141						$3,770			$5,800	$9,570
9	Placement of 12" Protective Layer				705						$18,850			$9,710	$28,560
10	Placement of 24" Select Layer				1,325						$35,710			$13,840	$49,550
11	Placement of 36" Select Layer				2,312						$62,790		$480	$32,940	$96,210
12	Placement of CAT #1 1Q				2,570						$69,262			$30,986	$100,248
12	Placement of CAT #1 3&4Q				6,968						$187,777			$84,005	$271,782
13	Placement of CAT #2 & #4 Above Grade 1Q				74						$1,830			$1,595	
13	Placement of CAT #2 & #4 Above Grade 3&4Q				19,467						$481,889			$420,054	$901,943
14	Placement of CAT #3 Palletized Transits 1Q														
14	Placement of CAT #3 Palletized Transits 3&4Q				9,356						$256,750			$169,000	$425,750
15	Placement of CAT #5 Friable Asbestos 1Q														
15	Placement of CAT #5 Friable Asbestos 3&4Q														
16	Placement of CAT #2&#4 @ & Below Grade 1Q				1,964						$53,756			$51,133	$104,889
16	Placement of CAT #2&#4 @ & Below Grade 3&4Q				4,461						$122,089			$116,133	$238,222
17	Placement of CAT #5 Thorium/Soil Debris 1Q														
17	Placement of CAT #5 Thorium/Soil Debris 3&4Q														
at Direct	OSDF Placement		LOT		65,833	$27.14					$1,787,012	$1,111,929	$6,710	$1,395,343	$4,300,994

CONTRACTOR - Stated in FY01 DOLLARS

s:\wagner\ccpl3\baseline ccpl3 osdf placement fy08.xls

DETAIL ESTIMATE WORKSHEETS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.		QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
1	**Post Award Documents**														
	Bonds & Insurance (calculated on summary)	1	ls												
2	**Submittals** fy09 use 6ea 30 with 30 & 10 for tech														
	Plans allowance	12	ea	50.0	600	50.13					$30,080				$30,080
	Technical submittals allowance	100	ea	10.0	1000	50.13					$50,130				$50,130
					1600						$80,210				$80,210
4	**Off Hour Dust Control**														
	Off Hour Dust Control allowance	1	ls					20,000				$20,000			$20,000
5	Control & Management (separate estimate)														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	6 SITE PREP														
	Dust Control					Rate + 20%									
	CAT 613 Water wagon (2ea)	10	mo	2						3,770				$75,400	$75,400
	CAT 613 Water wagon (2ea)	2,559	hr	2						12.55				$64,218	$64,218
mD	Operator (9 months)	1,935	hr	1	2728	29.48					$80,440				$80,440
mD	Operator (5 months)	1,075	hr	1	1516	29.48					$44,690				$44,690
	Site Prep														
	Mobilization of equipment	10	hr	6	85	29.48				100.00	$2,490			$1,000	$3,490
	Silt fence	2,000	lf						0.30				$600		$600
mD	Laborer	40	hr	1	56	24.71					$1,390				$1,390
mD	Operator	40	hr	1	56	29.48					$1,660				$1,660
	CAT 416 backhoe	40	hr	1						25.17				$1,010	$1,010
	Straw bales	312	ea						2.50				$780		$780
mD	Laborer	15	hr	2	42	24.71					$1,050				$1,050
mD	Operator	15	hr	1	21	29.48					$620				$620
	CAT 416 backhoe	15	hr	1						25.17				$380	$380
	Install check dams/SIDs														
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
mD	Operator	20	hr	1	28	29.48					$830				$830
mD	Teamster	20	hr	1	28	24.94					$700				$700
	CAT 330 TracHoe	20	hr	1						99.74				$1,990	$1,990
	Type D Rip Rap	12	tn	1					15.50				$190		$190
	Haul Truck	20	hr	1						73.62				$1,470	$1,470
	Construction/RAD fencing 4' wire w/ p	1,200	lf						2.83				$3,400		$3,400
mD	Laborer	20	hr	2	56	24.71					$1,390				$1,390
	Install const/grid signage	36	ea						35.00				$1,260		$1,260
	Site prep														
mD	Laborer	30	hr	2	85	24.71					$2,090				$2,090
	Survey														
	Survey crew	1	ls					102,300				$102,300			$102,300
	Training	30	hr	18	761	30.00					$22,840				$22,840
	Training based on HlthPhys Sheet														
	Site Prep		LOT		5,520	$29.27					$161,580	$102,300	$6,230	$145,468	$415,578

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	7 OMTA Operations (including Shutdown)														
	7 A apply to ea fiscal yr of FY04 - FY08														
	OMTA Operations thru shutdown period (approx. 3 mo)														
	CAT 973 Track Loader/4way bucket	552	hr	1						107.95				$59,600	$59,600
	CAT 330 Excavator/grappler	552	hr	1						99.74				$55,060	$55,060
	Tractor (farm)	552	hr							37.57				$20,740	$20,740
mD	Foreman (3 mo)	650	hr	1	916	21.59					$19,770				$19,770
mD	Laborer (3 mo)	650	hr	2	1,832	20.59					$37,710				$37,710
mD	Operator (3 mo)	650	hr	1	916	24.57					$22,500				$22,500
						Rate + 20%									
mD	Teamster (9 mo)	1,949	hr	2	5,495	29.92					$164,420				$164,420
	ROB Truck (Site Owns)	1,656	hr	1						73.62				$121,931	$121,931
	CAT TH83 (9 mo)	1,656	hr	1						34.62				$57,346	$57,346
	Purchase of office trailer (8x12) FY04		ls					5,075.00							
	7 B Special for Lighting FY06 & FY07														
	Lighting double shift														
	2x5.5mx4		mo							-					
	7 B Special for FY04 - FY08														
	Training & Hiring of 5 additional personnel for night shift														
	Training	30	hr	5	212	30.00					$6,350				$6,350
	Training based on HlthPhys Sheet														
	OMTA Operations (including shutdown)				9,369						$250,750			$314,678	$565,428
	8 Removal of Impacted portion of OSDF Haul Rd (2 DAYS X 7)					Rate + 20%									
	CAT 330 excavator	20	hr	1						99.74				$1,990	$1,990
	CAT D8 dozer	20	hr	1						116.98				$2,340	$2,340
	Haul Truck	20	hr	2						73.62				$1,470	$1,470
mD	Operator	20	hr	2	56	29.48					$1,660				$1,660
mD	Teamster	20	hr	2	56	24.94					$1,410				$1,410
mD	Laborer	20	hr	1	28	24.71					$700				$700
	TOTAL FOR 1				141						$3,770			$5,800	$9,570

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	9 Placement of 12" Impacted protection cover (10days)					Rate + 20%									
	CAT 563	85	hr							40.98				$3,480	$3,480
	CAT D6 LGP dozer	85	hr							73.26				$6,230	$6,230
mD	Foreman	100	hr	0.5	71	25.91					$1,830				$1,830
mD	Laborer	100	hr	2.5	353	24.71					$8,710				$8,710
mD	Operator	100	hr	2.0	282	29.48					$8,310				$8,310
	{11,000 ICY}														
	Total for 1 of 4Liners				705						$18,850			$9,710	$28,560
	10 Placement of 24" Select Impacted (20days)					Rate + 20%									
	CAT 563	170	hr							40.98				$6,970	$6,970
	CAT D6 LGP dozer	170	hr							73.26				$12,450	$12,450
mD	Laborer	200	hr	2.5	705	24.71					$17,420				$17,420
mD	Operator	200	hr	2.0	564	29.48					$16,630				$16,630
	CAT 563 compactor 4days	34	hr	1.0						40.98				$1,390	$1,390
mD	Operator 4days	40	hr	1.0	56	29.48					$1,660				$1,660
	{22,000 ICY}														
	Total for 1 of 4Liners				1,325						$35,710			$13,840	$49,550
	11 Placement of 36" Select														
	CAT 563	238	hr			Rate + 20%				40.98				$9,750	$9,750
	CAT D6 LGP dozer	238	hr							73.26				$17,440	$17,440
	CAT 563 compactor (14day)	119	hr							40.98				$4,880	$4,880
mD	Operator (28day)	280	hr	2.5	987	29.48					$29,100				$29,100
mD	Laborer (28day)	280	hr	2.5	987	24.71					$24,390				$24,390
mD	Operator (14day)	140	hr	1.0	197	29.48					$5,820				$5,820
mD	Silt Fence	1,600	lf						0.30				$480		$480
mD	Laborer (5day)	50	hr	2.0	141	24.71					$3,480				$3,480
	Trencher	42.5	hr							20.48				$870	$870
	{33,000 ICY}														
	TOTAL FOR 1				2,312						$62,790		$480	$32,940	$96,210

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	12														
	CAT #1														
	Placement of Impacted Mat'l														
	2,222 cy/day avg. 10hrs					Rate + 20%									
	CAT D8 dozer	10	hr							116.98				$1,170	$1,170
	CAT 563 Compactor	11	hr							40.98				$450	$450
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
mD	Operator	10	hr	2.2	31	29.48					$910				$910
	CAT 330 Trac hoe	3	hr							25.17				$80	$80
mD	Operator	10	hr	2.3	32	29.48					$960				$960
mD	Foreman	10	hr	0.5	7	25.91					$180				$180
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $2.48														
	Subtotal for 1unit				141						$3,800			$1,700	$5,500
	Unit rates				0.0635						$1.71017			$0.76508	$2.47525
	Double shift 5.5mo in FY06 & FY07														
	Portable light plants					Rate + 20%									
	10 Lights x 5.5m	5.5	mo	10						1,275				$70,100	$70,100
	Survey Crew	378	hr					90.00				$34,036			$34,036
	Supervisor	378	hr	1.0	533	37.85					$20,180				$20,180
	Safety	378	hr	1.0	533	30.34					$16,180				$16,180
	QA	378	hr	0.5	267	28.05					$7,480				$7,480
	Foreman	378	hr	1.0	533	25.91					$13,820				$13,820
	Operator	378	hr	3.0	1,600	29.48					$47,170				$47,170
	Laborer	378	hr	3.0	1,600	24.71					$39,530				$39,530
	Double shift Total FY06 & FY07				-										
	1Q 40,500 cy				2570						$69,262			$30,986	$100,248
	3&4Q 109,800 cy				6968						$187,776.78			$84,005.40	$271,782.18

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	13														
	CAT #2 & #4 ABOVE GRADE														
	Cell Placement 741 lcy					Rate + 20%									
	CAT 826	7	hr							165.35				$1,160	$1,160
	CAT D8	3	hr							116.98				$350	$350
	CAT 563 compactor	4	hr							40.98				$160	$160
mD	Laborer	10	hr	2.0	28	24.71					$700				$700
	CAT 330 Track hoe	3	hr							99.74				$300	$300
mD	Operator	10	hr	1.7	24	24.71					$590				$590
mD	Foreman	11	hr	0.25	4	25.91					$100				$100
mD	Laborer	10	hr	2.5	35	24.71					$870				$870
	ICY = $5.71														
	Subtotal for 1unit				91						$2,260			$1,970	$4,230
	Total x's 521 units				47,566						$1,177,460			$1,026,370	$2,203,830
	unit costs				0.1232						$3.049933			$2.658570	$5.708502
	1Q 600 cy				74						$1,830			$1,595	
	3&4Q 158,000 cy				19,467						$481,889			$420,054	$901,943

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	14														
	CAT #3														
	Palletized Transite Placement					Rate + 20%									
	Place pallets (10hr day) 144lcy														
mD	Operator	10	hr	1.0	14	29.484					$420				$420
mD	Laborer	10	hr	1.0	14	24.71					$350				$350
	Place Fill around & over pallets & grid														
	1708 cy (1.5day)														
	CAT D6 dozer	15	hr							63.28				$950	$950
	CAT 563 compactor	15	hr							40.98				$610	$610
mD	Laborer	15	hr	1.00	21	24.71					$520				$520
mD	Operator	15	hr	1.50	32	29.48					$940				$940
mD	Foreman	15	hr	0.25	5	25.91					$140				$140
	ICY = $27.29														
	Subtotal = 1 grid				86						$2,370			$1,560	$3,930
	Total times 41 Grids				3,541						$97,170			$63,960	$161,130
	unit costs				1						$16.4583			$10.8333	$27.2917
	1Q - cy														
	3&4Q 15,600 cy				9,356						$256,750			$169,000	$425,750

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN HOURS Unit	MAN HOURS Total	MAN HOURS Rate	COSTS Labor	COSTS S/C	COSTS Mat'l	COSTS Equip					
	15														
	CAT #5														
	Friable Asbestos 334cy					Rate + 20%									
	Excavate 10 trenches (2hr/trench)														
mD	Operator	20	hr	1.0	28	29.48					$830				$830
mD	Laborer	20	hr	1.0	28	24.71					$700				$700
	CAT 330 Trakhoe	20	hr							99.74				$1,990	$1,990
	ISO	20	hr	1.50	42					73.62				$1,470	$1,470
	Trencher	20	hr							20.48				$410	$410
	Foreman	20	hr	0.25	7	25.91					$180				$180
	Placement														
	Operator	8	hr	1	11	29.48					$330				$330
	Laborer	8	hr	2.00	23	24.71					$560				$560
	CAT 416 BkHoe	2	hr							25.17				$50	$50
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Trench														
mD	Operator	8	hr	1.00	11	29.48					$330				$330
mD	Laborer	8	hr	1.00	11	24.71					$280				$280
	Foreman	8	hr	0.25	3	25.91					$70				$70
	Backfill														
	CAT 416 BkHoe	4	hr							25.17				$100	$100
mD	Laborer	4	hr	2.00	11	24.71					$280				$280
mD	Operator	4	hr	1.25	7	29.48					$210				$210
	CAT 563 compactor	4	hr							40.98				$160	$160
	Foreman	8	hr	0.25	2	25.91					$50				$50
	ICY = $24.16														
	Subtotal for 1 grid				188						$3,890			$4,180	$8,070
	Total times 57 grids				10,723						$221,730			$238,260	$459,990
	unit costs				0.5632						$11.64671			$12.51497	$24.16168
	1Q cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	16														
	CAT #2 & #4 At & Below Grade														
	Placement					Rate + 20%									
	1 Grid / shift = 450cy														
	CAT D8	5	hr	1.0						116.98				$580	$580
	CAT 563 compactor	5	hr	0.50						40.98				$200	$200
mD	Foreman	5	hr	0.25	1.8	25.91					$50				$50
mD	Laborer	5	hr	2	14.1	24.71					$350				$350
mD	Operator	5	hr	2	14.1	29.48					$420				$420
	ICY = $3.56														
	Subtotal for 1 grid				30.0						$820			$780	$1,600
	Total times 829 grid				24839						$679,780			$646,620	$1,326,400
	unit costs				0.0666						$1.8222			$1.7333	$3.5556
	1Q 29,500 cy				**1,964**						**$53,756**			**$51,133**	**$104,889**
	3&4Q 67,000 cy				**4,461**						**$122,089**			**$116,133**	**$238,222**

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE Level	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	17														
	CAT #5					Rate + 20%									
	Thorium / Thorium Soil Debris														
	625 cy / grid														
	Trench method														
	Excavation 125 cy = 5 hr														
mD	Operator	5	hr	1.0	7	29.48					$210				$210
mD	Laborer	5	hr	1.0	7	24.71					$170				$170
mD	Foreman	5	hr	0.25	2	25.91					$50				$50
	CAT 330 Trakhoe	5	hr							99.74				$500	$500
	Total for 5 trenches				79						$2,150			$2,500	$4,650
	Place Thorium Debris/Soil 1.5' deep														
	CAT 330 Trakhoe	3	hr	1.0						99.74				$300	$300
mD	Foreman	3	hr	0.25	1	25.91					$30				$30
mD	Laborer	3	hr	2.0	8	24.71					$210				$210
	Total for 5 trenches				48						$1,200			$1,500	$2,700
	Backfill														
	CAT 330	4	hr							99.74				$400	$400
	CAT 563	4	hr							40.98				$160	$160
mD	Foreman	4	hr	0.25	1	25.91					$40				$40
mD	Laborer	4	hr	1.00	6	24.71					$140				$140
mD	Operator	4	hr	1.50	8	29.48					$250				$250
	Total for 5 trenches				78						$2,150			$2,800	$4,950
	ICY = $19.68														
	Subtotal for 1 grid				204.5						$5,500			$6,800	$12,300
	Total times 20 grids				4,089						$110,000			$136,000	$246,000
	unit costs				0.327120						$8.8000			$10.8800	$19.6800
	1Q - cy														
	3&4Q - cy														

DETAIL ESTIMATE WORKSHEETS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO.: C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ITEM NO.	OSDF PLACEMENT FY08	QTY	UNIT	MAN-HOURS Unit	MAN-HOURS Total	MAN-HOURS Rate	COST/UNIT Labor	COST/UNIT S/C	COST/UNIT Mat'l	COST/UNIT Equip	LABOR	S/C	MAT'L	EQUIP	TOTAL
	Project Staffing	Shared percent													
D	Project Manager	30.0%	hr	1	396	54.42					$21,540				$21,540
D	General Superintendent	30.0%	hr	1	396	37.85					$14,980				$14,980
D	Superintendent	37.5%	hr	2	990	32.99					$32,650				$32,650
D	Project Engineer	40.0%	hr	1	528	33.19					$17,520				$17,520
D	Quality Engineer	37.5%	hr	2	990	28.05					$27,760				$27,760
D	Safety Engineer	37.5%	hr	2	990	30.34					$30,030				$30,030
D	Office Administration	In overhead				19.31									
D	Contract Administration/ Schedule	In overhead				25.58									
D	Clerical	In overhead				14.58									
	TOTAL				4,288	33.69					$144,480				$144,480

APPENDIX " A"

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NOC2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

SITE SPECIFIC

EFFICIENCY / MULTIPLIER ANALYSIS

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PERCENT OF INFLUENCE ON CHART MANHOURS	40%	50%	60%	70%	80%	90%	100%	105%	110%	% OF INFLUENCE	WT'D VALUE	PROD. RESULT
CRAFT SKILL (NOTE 1)	POOR			FAIR			STD	V.GOOD	XCELLENT	100.0%	12.0%	0.12
CRAFT AVAIL.(NOTE 1)		POOR		FAIR			STD			100.0%	8.0%	0.08
CLIMATE (NOTE 2)	SEVERE	ICE/SNOW			RAIN		+40 TO +85			90.0%	20.0%	0.18
PLANT ELEVATION		OVER 10,000FT			5,000' TO 10,000 FT		UNDER 5,000 FT			100.0%	5.0%	0.05
WORK SPACE				200 SF	250 SF	300 SF	350 SF			100.0%	10.0%	0.1
	<--- MULTIPLE SHIFTS-											
WORK WEEK							4-10s / 5-8s			100.0%	15.0%	0.15
50 HOUR WORK WEEK	//////////	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS				0.0%	0.0%	0
	//// MULTIPLE-SHIFT ////////											
60 HOUR WORK WEEK	//////////	//////////	OVER 7 WEEKS	3 TO 7 WEEKS	UP TO 3 WEEKS					0.0%	0.0%	0
	//////////	//////////										
SHIFTWORK							OR					
2ND SHIFT					2ND SHIFT		ONE SHIFT			100.0%	3.0%	0.03
3RD SHIFT			3RD SHIFT				ONLY			100.0%	5.0%	0.05
PROJECT SIZE					400M MH AND UP	300M TO 400M MH	200M TO 300M MH	200M MH OR LESS		100.0%	4.0%	0.04
PLANT TYPE				REVAMP ONLY	REVAMP & NEW	NEW IN EXIST PLT	GRASS ROOTS			90.0%	8.0%	0.072
AREA/UNION INFLUENCE	STRONG		MILD		SOME		NONE			40.0%	10.0%	0.04
											100.0%	91.2%

NOTES.....
1. TURNOVER HAS BEEN CONSIDERED
2. FOR EXTERIOR WORK ONLY

EFFICIENCY (AS A % OFF CHART MANHOURS) 91.2%

MULTIPLIER - (TO BE APPLIED TO CHART M.H.'S TO OBTAIN SITE M.H.'S) 1.10

CONTRACTOR - Stated in FY01 DOLLARS

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO. C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

Fluor Fernald, Inc.

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

EXAMPLE:

STANDARD CHART MANHOURS =	NET	100
EFFICIENCY FACTORS:		
* SITE SPECIFIC (SEE APPENDIX A)	[redacted]	10.0
S/T = BASE UNIT MANHOURS		110
OVERTIME PRODUCTIVITY FACTOR (SEE DETAIL WORKSHEET BACK-UP)	0.00%	0
		110
* TASK SPECIFIC (confined space, high elevation, congestion, etc.)	0.0%	0
		110

* PPE SPECIFIC (Based on current data and estimating knowledge)

	PPE LEVEL									
	D		Mod.'D'		Mod. "C"		C		C+	
PRODUCTIVITY HOURS		MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's	MULTIPLIER	MH's
(AS A %) / ADD MH's	4.00%	4	28.00%	31	66.00%	73	74.00%	81	96.00%	106
(AS A MULTIPLIER)/TOTAL HRS	1.04	114.4	1.28	140.8	1.66	182.6	1.74	191.4	1.96	215.6
TOTAL MULTIPLIER w/SITE PROD.	1.144		1.408		1.826		1.914		2.156	

NOTE : Use the Default Productivity Factor of 'mC' for working in a contaminated area if the Safety Level cannot be determined.

(SEE FD FERNALD ESTIMATING SERVICES REFERENCE MANUAL IM-6006 8.10)

Total hours worked in a specific PPE level divided by 10 hour working days = (PPE) ManDays to determine material cost of PPE's.
(SEE APPENDIX C - HEALTH PHYSICS)

11.0	Man Days	14.0	Man Days	18.0	Man Days	19.0	Man Days	22.0	Man Days

THESE EFFICIENCY FACTORS WERE APPLIED INDIVIDUALLY THROUGHOUT THE ESTIMATE AT A TASK SPECIFIC LEVEL, TO OBTAIN A MORE ACCURATE ACCOUNT OF OVERALL EFFICIENCY IMPACT DUE TO PPE REQUIREMENTS IN HANDLING CONTAMINATED AND HAZARDOUS WASTE.

EFFICIENCY FACTORS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO. C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

PPE MULTIPLIER DEVELOPEMENT

		D	mD	mC	C	C+
CREW SIZE & MAKE-UP	STANDARD	7	7	7	7	7
	WORKER-BUDDY	0	0	0	0	0
	SUPPORT TEAM	0	0	0	0	0
	TOTAL CREW	7	7	7	7	7
CREW SIZE RATIO		1.00	1.00	1.00	1.00	1.00
AVAILABLE WORK TIME FACTOR		0.96	0.78	0.7	0.7	0.68
PPE LABOR PRODUCTIVITY FACTOR		1	1	0.86	0.82	0.75
NET PRODUCTIVITY RATIO		0.96	0.78	0.602	0.574	0.51
NET PRODUCTIVITY MULTIPLIER		**1.04**	**1.28**	**1.66**	**1.74**	**1.96**

These factors were based on Tables 6.1 and 6.2, Moderate Work Efforts, 66F to 85F temperature of 'Hazardous Waste Cost Control' by R.A.Selg. Modifications were made to reflect a 10 hour work day and no buddy system or support team for levels D, mC and C.
The worker-buddy and support team members, if required, may be covered under Construction Mgmt. (Rad Techs).

AVAILABLE WORK TIME FACTOR		D	mD	mC	C	C+
TOTAL WORK MINUTES per D 4 - 10's		600	600	600	600	600
ADDITN'L SITE SAFETY MEETINGS NOT INCLD. IN BA	QUANTITY	1	1	1	1	1
	MINUTES	25	25	25	25	25
TOTAL		25	25	25	25	25
PPE DON & DOFFING	QUANTITY	0	0	3	3	3
(ADJUST LEVEL D per WORK PLAN)	MINUTES	0	0	15	15	20
TOTAL			0	45	45	60
WORK BREAKS	QUANTITY	N/A	2	2	2	2
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			30	30	30	30
MOBILIZATION - ROUND TRIPS	QUANTITY	N/A	4	4	4	4
(ADJUST LEVEL D per WORK PLAN)	MINUTES	N/A	15	15	15	15
TOTAL			60	60	60	60
COOLDOWNS PER DAY	QUANTITY	N/A	4	4	4	4
** (4 OUT OF 12 MONTHS) 33.33%	MINUTES	N/A	15	15	15	15
TOTAL			20	20	20	20
AIR TANK REPLACEMENT	QUANTITY	N/A	N/A	N/A	N/A	N/A
	MINUTES	N/A	N/A	N/A	N/A	N/A
TOTAL						
AVAILABLE WORK TIME		575	465	420	420	405
AVAILABLE WORK TIME FACTOR		**0.96**	**0.78**	**0.7**	**0.7**	**0.68**

NOTE: Adjust 'Work Minutes per Day' basis to: 5 - 8's, or leave as 4 - 10's . Any other circumstances, over-ride the minutes per day.

** Assumption based on work performed in May, June, July & August, pro-rating cost over one year. Adjust % to individual circumstances.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO. C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

Fluor Fernald, Inc.

PPE"s - PERSONAL PROTECTIVE EQUIPMENT

DESCRIPTION	UNIT	UNIT COST	* NO. OF CHANGE OUTS PER WORKER PER DAY				
			Man Days (TOTAL HOURS worked in PPE's Div. by WORK HOURS / DAY)				
PPE LEVEL C / C+ / B : F/HF MASK w/RESP.&CART.			*	MAN DAYS	MAT'L.$'s	PPE LEVEL	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	
TYVEK COVER-ALL w/HOOD & BOOTIES - DISPOSABLE	EA	$4.46	3	0	$0	C / C+	(DOUBLE PPE)
GLOVE LINER - DISPOSABLE	PR	$0.24	3	0	$0	C / C+	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	0	$0	C / C+	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	0	$0	C / C+	
APR CARTRIDGES - DISPOSABLE	PR	$6.98	3	0	$0	C / C+	
SUB-TOTAL		$17.42	3		$0		
				$/MD =	$0.00		
PPE LEVEL mD : FULL DRESS				MAN DAYS	MAT'L.$'s	PPE LEVEL	
LT.WT. DISPOSABLE COVERALLS W/HOOD & BOOTIES	PR	$4.46	3	1421	$19,008	mC	
GLOVE LINER - DISPOSABLE	PR	$0.24	3	1421	$1,023	mC	
GLOVE, LASTEX - DISPOSABLE	PR	$0.26	3	1421	$1,108	mC	
GLOVE, WORK - DISPOSABLE	PR	$1.02	3	1421	$4,347	mC	
SUB-TOTAL		$5.98	3		$25,486		
				$/MD =	$17.94		
SUBCONTRACTOR REQUIRED PURCHASES			QTY. PER WKR.	NO. OF WORKERS	MAT'L.$'s	PPE LEVEL	
RUBBER BOOT COVERS-(1)PR.PER WORKER	PR	$12.70	6	8	$610	D/C/B	
APR w/HALF FACE MASK - (1) PER WORKER	EA	$22.30	6	0	$0	C	
APR w/FULL FACE MASK - (1) PER WORKER	EA	$174.00	6	0	$0	C	
SCBA	EA	$1,894.00	2	0	$0	B	
COOL VESTS	EA	$137.50	6	0	$0	C/B	
THERMO STRIPS	EA	$50.00	6	0	$0	C/B	
SUB-TOTAL					$610		

	MAT'L.$'s
TOTAL PPE's =	$26,100

(FORWARD TO PAGE 2 OF 2)

OTHER PPE's SUCH AS HARD HAT, SAFETY GLASSES/GOGGLES, STEEL TOED SAFETY SHOES, HEARING PROTECTION, ARE CONSIDERED THE SUBCONTRACTORS RESPONSIBILITY AND ARE COVERED IN HIS OVERHEAD EXPENSE.
COSTS OF FD FERNALD SUPPLIED PPE's, SUCH AS COTTON COVERALLS, EXCHANGE OF RUBBER BOOT COVERS AND RESPIRATORS FOR CHANGEOUTS AND CLEANING OF SAME IS INCURRED BY FD FERNALD AND COSTS ARE NOT INCLUDED AS PART OF PROJECT COSTS AT THIS TIME.

APPENDIX "C"

HEALTH PHYSICS

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO. C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

--MEDICAL MONITORING --

MEDICAL - PHYSICAL and IN-VIVO MONITORING - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION PHYSICAL (3hrs), IN-VIVO (1hr)	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BASELINE PHYSICALS	1	4	9	36	$27.14	$980
ANNUAL PHYSICALS	1	4	9	36	$27.14	$980
EXIT (TERMINATION) PHYSICALS (IN-VIVO)	1	1	9	9	$27.14	$240
SUB-TOTAL						$2,200

RADIATION IN-VITRO SURVEILLANCE - LOST WORKER TIME for RAD II WORKERS ONLY

DESCRIPTION	QTY	HRS	WKR	TOTAL HOURS	AVG. LABOR RATE	TOTAL LABOR $
BI-MONTHLY BIOASSAY	6	1	9	54	$27.14	$1,470
SUB-TOTAL						$1,470

RANDOM DRUG TESTING

	TESTS	HRS	TOTAL HOURS	AVG. RATE	LABOR $'s
	16	2	32	$27.14	$900

NO. OF WKRS. TESTED	TESTING DAYS PER YR.	AVG. NO. OF TESTS PER DAY	CHANCE/ DAY FOR TEST	NO. OF WKRS. FOR THIS ESTIMATE	CHANCES /DAY FOR TEST FOR PROJECT	CONSTR WORKING DAYS
2340	226	10	0.0042735	16	0.0684	227

		LABOR $'s THRU SAFETY	LABOR $'s
WORK DELAYS CAUSED BY MONITORING	0.0%	$1,787,012	$0
			LABOR $'s
WORK DELAYS CAUSED BY RAD CHECKING	0.0%	$1,787,012	$0

	TOTAL LABOR	TOTAL MAT'L.	GRAND TOTAL
TOTAL HEALTH PHYSICS	$4,600	$26,100	$30,700

(FORWARD TO ESTIMATE SUMMARY SHEET)

ACTIVITY DURATIONS

Fluor Fernald, Inc.

PROJECT: OSDF PLACEMENT FY08
ESTIMATE NO. C2-2001-05-006 38
CLIENT: DOE
WBS NO.: 1.1.C.D

DATE: 17-May-01
ESTIMATOR: T.WAGNER
LOCATION: FERNALD
TASK NO.: CCPL3

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
CONSTRUCTION:	01-May-01	01-Oct-07	31-Mar-08	30-Sep-08	12.0	MONTHS
					0	MONTHS
TOTAL					12.0	MONTHS

	DATE of EST. to MID-POINT CTIVITY DURATION	
a.	83.1	MONTHS
b.	0	MONTHS

ACTIVITY	EST. DATE	START DATE	MID POINT	COMPL. DATE	ACTIVITY	DURATION
OPERATIONS					0	MONTHS

DATE of EST. to MID-POINT CTIVITY DURATION	
0	MONTHS

ACTIVITY DURATION IS USED IN DETERMINING NUMBER of WORKERS for CERCLA/SAT TRAINING HOURS and HEALTH PHYSICS COSTS.

ESTIMATE SUMMARY SHEET

Fluor Fernald, Inc.

PROJECT:	OSDF PLACEMENT FY09	DATE:	17-May-01
ESTIMATE #:	C2-2001-05-06 39	ESTIMATOR:	T.WAGNER
CLIENT:	DOE	LOCATION:	FERNALD
WBS #:	1.1.C.D	TASK NO.:	CCPL3

ITEM DESCRIPTION	M/H	RATE	LABOR $	S/C $	MAT'L $	EQUIP. $	TOTAL $
Post Award Document (Bonds & Insurance)				$27,100			$27,100
Submittals	480		$24,060				$24,060
Overhead & Profit				$347,613			$347,613
Off Hour Dust Control				$20,000			$20,000
Control & Management (separate estimate)							
Site Prep	2,489		$72,200	$51,000	$6,230	$30,104	$159,534
OMTA Operations (including shutdown)	9,158		$244,400			$314,678	$559,078
Removal of Impacted portion Haul Rd							
Placement of 12" Protective Layer							
Placement of 24" Select Layer							
Placement of 36" Select Layer	2,312		$62,790		$480	$32,940	$96,210
Placement of CAT #1 1Q	2,716		$73,195			$32,745	$105,941
Placement of CAT #1 3&4Q	5,495		$148,101			$66,256	$214,356
Placement of CAT #2 & #4 Above Grade 1Q	74		$1,830			$1,595	$3,425
Placement of CAT #2 & #4 Above Grade 3&4Q							
Placement of CAT #3 Palletized Transits 1Q							
Placement of CAT #3 Palletized Transits 3&4Q							
Placement of CAT #5 Friable Asbestos 1Q							
Placement of CAT #5 Friable Asbestos 3&4Q							
Placement of CAT #2&#4 @ & Below Grade 1Q							
Placement of CAT #2&#4 @ & Below Grade 3&4Q							
Placement of CAT #5 Thorium/Soil Debris 1Q							
Placement of CAT #5 Thorium/Soil Debris 3&4Q							
DIRECT FIELD COSTS TOTAL	22,724	$27.57	$626,576	$445,713	$6,710	$478,318	$1,557,317
PM & GEN SUPER, SUP. ENG, QA, & SAFETY	3,158	$33.61	$106,160				$106,160
HEALTH PHYSICS	127		$3,500		$26,100		$29,600
PAYROLL BURDENS & BENEFITS			$419,700				$419,700
SALES TAX					$2,000	$28,700	$30,700
INDIRECT FIELD COSTS TOTAL	3,285		$529,360		$28,100	$28,700	$586,160
DIRECT & INDIRECT FIELD COSTS TOTAL	26,009	$44.44	$1,155,936	$445,713	$34,810	$507,018	$2,143,477
TARGET ESTIMATE				(FY 01 DOLLARS)			$2,143,477

ESTIMATE PERFORMED BY ESTIMATING SERVICES

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY09 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-06 39 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

F A C T O R S

FIXED PRICE S	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
DFC DOLLARS	$626,576	$445,713	$6,710	$478,318	$26,100	$1,583,417
IFC COST FACTOR	1.8448	--	1.0000	1.0000	--	
	1.0000	1.0000	1.0000	1.0000	1.0000	
SALES TAX	-	-	1.0600	1.0600	1.0600	
DIRECT FIELD COST FACTOR =	1.8448	1.0000	1.0600	1.0600	1.0600	
BASE ESTIMATE $'S	$1,155,936	$445,713	$7,113	$507,017	$27,666	$2,143,444
BASE FACTOR	1.0000	1.0000	1.0000	1.0000	1.0000	
TARGET ESTIMATE FACTOR	1.8448	1.0000	1.0600	1.0600	1.0600	
FPS TARGET ESTIMATE (FY01 $)	$1,155,936	$445,713	$7,113	$507,017	$27,666	$2,143,444

NOTE:

F THERE ARE NO DFC EQUIP. $, ENTER THE IFC EQUIP. $'S INTO THE DIRECT FIELD COST TOTAL AND DELETE IFC FACTOR IN G65.

ESTIMATE SUMMARY SHEET

PROJECT: OSDF PLACEMENT FY09 | **DATE:** 17-May-01

ESTIMATE NO.: C2-2001-05-06 39 | **ESTIMATOR:** T.WAGNER

CLIENT: DOE | **LOCATION:** FERNALD

WBS NO.: 1.1.C.D | **TASK NO.:** CCPL3

DIRECT FIELD COST W/FACTORS

PAY ITEM NO.	DESCRIPTION	LABOR $	S/C $	MAT'L. $	EQUIP. $	PPE $	TOTAL $
		(ASSIGN OR PRORATE PPE MAT'L.$'S)-->>				29600	
1	Post Award Document (Bonds & Insura		27100				
			$27,100				$27,100
2	Submittals	24060					
		$44,390					$44,390
3	Overhead & Profit		347613				
			$347,610				$347,610
4	Off Hour Dust Control		20000				
			$20,000				$20,000
6	Site Prep	72200	51000	6230	30104	3,546.99	
		$133,200	$51,000	$6,600	$31,910	$3,760	$226,470
7	OMTA Operations (including shutdown)	244400			314678	12,006.72	
		$450,880			$333,560	$12,730	$797,170
8	Removal of Impacted portion Haul Rd					-	
9	Placement of 12" Protective Layer					-	
10	Placement of 24" Select Layer					-	
11	Placement of 36" Select Layer	62790		480	32940	3,084.70	
		$115,840		$510	$34,920	$3,270	$154,540
12	Placement of CAT #1 1Q	73195			32745	3,595.89	
		$135,030			$34,710	$3,810	$173,550
12	Placement of CAT #1 3&4Q	148100.8101			66255.62556	7,275.80	
		$273,220			$70,230	$7,710	$351,160
13	Placement of CAT #2 & #4 Above Grad	1830			1595	89.90	
		$3,380			$1,690	$100	$5,170
13	Placement of CAT #2 & #4 Above Grad					-	
14	Placement of CAT #3 Palletized Transi					-	
14	Placement of CAT #3 Palletized Transi					-	
15	Placement of CAT #5 Friable Asbestos					-	
15	Placement of CAT #5 Friable Asbestos					-	
16	Placement of CAT #2&#4 @ & Below G					-	
16	Placement of CAT #2&#4 @ & Below G					-	
17	Placement of CAT #5 Thorium/Soil Deb					-	
17	Placement of CAT #5 Thorium/Soil Deb					-	
TOTAL DIRECT FIELD COSTS W/FACTORS		(FY01 DOLLARS)					$2,147,160

Cost Allocation for Baseline Entry

1	Post Award	$27,100
2	Submittal	$44,390
	Subtotal	$71,490
3	Overhead & Profit	$347,610
4	Off Hour Dust Control	$20,000
6	Site Prep	$226,470
	Subtotal	$246,470
7	OMTA Operations (including shutdown)	$797,170
8	Removal of Impacted portion Haul Rd	
	Subtotal	$797,170
9	Placement of 12" Protective Layer	
10	Placement of 24" Select Layer	
11	Placement of 36" Select Layer	$154,540
12 thru 17	Quarter 1	$178,720
12 thru 17	Quarter 3 & 4	$351,160
	Grand Total	$2,147,160
	Verify old total	$2,147,160
	Match %	100.00%