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## INTEROFFICE MEMORANDUM

**Date:** July 21, 2003

**To:** S. L. Austad MS 3920 6-2054

**From:** R. D. Adams/S. N. Wasley MS 3655 6-2963

**Subject:** OU 7-10 STAGED INTERIM ACTION STAGE III PROJECT – TREATMENT PROJECT SYSTEM

Estimating Services has prepared four **risk** adjusted project support (Type 5) estimates for the subject project. These estimates were based on information received June 2, 2003, through July 21, 2003.

The total costs of these options are:

Compact All with Thermal Desorption (1 + 3aP)	\$385,000,000
Compact All with Incineration (1 + 2aP)	\$447,000,000
Melt All with Thermal Desorption (2b + 3aP)	\$463,000,000
Max Treatment with Thermal Desorption (4a + 3aP)	\$551,000,000

Included in the estimate are costs for ESH&Q, engineering, procurement, construction, startup and testing, project management, escalation, and contingency. The estimated costs have been escalated per the OU 7-10 Interim Action Stage III Project LCB schedule except the Max Treatment with Thermal Desorption option; this option's schedule was redefined during the jury review. For more detailed information, please refer to the Cost Estimate Support Data Recapitulation form.

Attached for your review are the Summary Report, the Cost Estimate Support Data Recapitulation form, Project Summary Report, risk analysis charts, and Detail Item Report. This estimate assumes that Block 6 of the Nine Block Matrix applies.

Due to the minimal detail and scope definition, this estimate is considered a 'Type 5' estimate and is not intended to be used to establish a cost baseline.

If you have any questions regarding this estimate, please contact me at 526-2963 or Scott at 526-3620, or e-mail me at *radams* or Scott at *swasley*.

**RDA**

Attachments

cc: R. J. Turk, MS 3878  
 Estimate File 5974-2 *rdt*  
 R. D. Adams File (RDA-23-03)  
 S. N. Wasley File (SNW-12-03)

Uniform File Code: 8000

Disposition Authority: A16-1.5-b

Retention Schedule: Cut off at the end of each fiscal year. Destroy 15 years after cutoff.

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

## COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title: OU 7-10 STAGED INTERIM ACTION STAGE III PROJECT –  
TREATMENT PROJECT SYSTEM

Estimator: S. N. Wasley, R. D. Adams

Date: July 21, 2003

Estimate Type: Project Support

File: 5974-2

Approved By: 

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- I. **PURPOSE:** *Brief description of the intent of how the estimate is to be used, i.e., for engineering study, comparative analysis, DWP, LCB out-year planning, BCP, etc.*

There are currently six options for treating the remaining waste from Pit 9 (all waste in Pit 9 except that which is to be removed under the Pit 9 Phase II scope.) The Melt All with Incineration option and the Maximum Treatment with Incineration option were not estimated for this exercise. Only one of the remaining four options will be considered for further development. These estimates will help facilitate the down select.

- II. **SCOPE OF WORK:** *Brief statement of the project's objective. Thorough overview and description of the proposed project. Identify work to be accomplished, as well as any specific work to be excluded.*

The Stage III Treatment facilities receive material (debris and soil) from the Retrieval Project System (RPS). The treatment process consists of receiving the material, separating it into soil and debris fractions, and classifying those soil and debris fractions as TRU (>100 nCi/g) or nonTRU (<= 100nCi/g). The TRU fractions will be treated and packaged for disposal at WIPP. The nonTRU fraction will be treated to remove volatile organic compound (VOC) contamination and returned to the pit.

There are three main treatment schemes for the TRU fraction:

- Option 1 - Compact All includes: the Airlock to Characterization (that portion not included in the RPS) and the Waste Receiving and Preparation Facility (WRPF)
- Option 2b - Melt All
- Option 4a - Max Treatment includes: Thermal Desorption, Chemical Leach, and Incineration

There are also two treatment schemes for the nonTRU fraction:

- Option 2aP - Incineration
- Option 3aP - Thermal Desorption Facility (TDF)

~~COST ESTIMATE SUPPORT DATA RECAPITULATION~~

- Continued -

Project Title: OU 7- 10 STAGED INTERIM ACTION STAGE 111 PROJECT – TREATMENT PROJECT SYSTEM

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In addition to the treatment schemes, the following support and storage facilities are included in the scope of work:

- Office area
- Restroom facility
- Interim Storage Facility (ISF)

The above options are combined to give the four systems addressed by the estimates as follows:

**Compact All with Thermal Desorption** (1 + 3aP, + Office, + Restrooms, + ISF)

This option uses no chemical or thermal treatment to change the form of the waste, and focuses only on the minimum handling required to meet the Waste Isolation Pilot Plant (WIPP) waste acceptance criteria (WAC). Material (commingled waste and soil) is received from the retrieval facility and segregated into waste and soil fractions for assay. The TRU fraction is compacted where possible to reduce the volume of the material shipped to WIPP, thereby reducing the overall certification, transportation, and disposal costs. The nonTRU fraction is returned to OU 7-10. If the nonTRU portion is contaminated with VOCs, it is treated by thermal desorption to remove those VOCs before returning it to OU 7-10. This option serves as the baseline for comparison to determine cost-effectiveness of more sophisticated treatment. There are three facilities (in addition to the Retrieval Facility) associated with this option, the Waste Receiving and Preparation Facility (WRPF), the Thermal Desorption Facility (TDF), and the Interim Storage Facility (ISF).

**Compact All with Incineration** (1 + 2aP, + Office, + Restroom, + ISF)

This option is similar to the Compact All with Thermal Desorption except that the VOCs will be removed by an incineration process instead of a thermal desorption process. A trial burn process will be required for system startup.

**Melt All with Thermal Desorption** (2a + 3aP, + WRPF without drum compactor, + Office, + Restrooms)

This option employs a facility similar to the WRPF described above to receive and characterize material retrieved from OU 7-10. The TRU fraction is further processed through a high temperature electric arc melter to achieve a greater volume reduction than was possible in Option 1. As with Option 1, the nonTRU fraction is returned to OU 7-10. If the nonTRU portion is contaminated with VOCs, it is treated by thermal desorption to remove those VOCs before returning it to OU 7-10. A trial burn process will be required for system startup.

## COST ESTIMATE SUPPORT DATA RECAPITULATION

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**Max Treatment with Thermal Desorption** (4a + 3aP, + WRP without drum compactor, + Office, + Restrooms)

Option 4a provides the treatment processes that achieve the highest volume reduction of the material to be disposed of at WIPP. This option also employs a facility similar to the WRP described above to receive and characterize material retrieved from OU 7-10. The TRU soil fraction is further processed through a thermal desorption system to remove organic contaminants before it is subjected to a chemical leaching process that concentrates the TRU and produces a soil stream that is less than 100nCi/g. The concentrated TRU is added to the waste TRU fraction which is treated by incineration to reduce the overall volume. The final volume reduction in this case is estimated to be (TBD). As with Option 1, the nonTRU fraction is returned to OU 7-10. If the nonTRU portion is contaminated with VOCs, it is treated by thermal desorption to remove those VOCs before returning it to OU 7-10. Descriptions of the process and facilities needed to support these functions are provided below. A trial burn process will be required for system startup.

III. **BASIS OF THE ESTIMATE:** *Overall methodology and rationale of how the estimate was developed. Source documents to include drawings, design reports, engineers' notes and/or other documentation upon which the estimate is originated. Overall explanation of sources for resource pricing.*

- A. The estimate was developed using a bottoms-up quantifiable technique. Resources, material costs, and productivity rates were derived from these quantities.
- B. Information from the OU 7-10 Glovebox Excavator Method Project was used to establish several unit costs. See detail sheets for specifics.
- C. Vendor preliminary quotes were used for equipment as referenced in the details. Allowances for non-standard requirements or components, which have not been completely engineered at this stage of project development, were estimated by the cognizant engineer with input from the vendors. Engineering assisted in obtaining most of these vendor quotes.
- D. *Process Plant Construction Estimating Standards*, 2000 Edition, published by Richardson Engineering Services, Inc., and *RSMMeans® Facilities Construction Cost Data*, 15<sup>th</sup> Annual Edition were used for standard material and labor costs.

## COST ESTIMATE SUPPORT DATA RECAPITULATION

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- E. Using the Nine Block Matrix, developed to address the reasons and amounts that construction costs at the Site vary from average commercial construction, was used to establish adjustment factors for the standard estimating databases listed above. It ~~was~~ decided that the number six block would apply for this project. Block 6 effects would increase standard commercial costs by an average of 25%. This factor was further broken down to an increase of 35% for labor, 15% for materials, 35% for construction equipment, and 25% for subcontract or unit costs. The factor applications are shown on worksheets included in the estimate file.
- F. On equipment items where vendor quotes were not available or where the equipment was standard (tanks, pumps, hoppers, control valves, etc.), previous vendor quotes or estimating databases were used. This information may have been adjusted by the *power of .6 factor* (a widely accepted estimating tool that states that if a piece of equipment is twice as large as another piece of equipment of known value for example, the cost would only increase by  $2^{.6}$ ) to account for size or capacity differences.
- G. Drawings and equipment lists from Engineering were used for quantity takeoffs.
- H. A material handling fee of 12% has been applied against non-subcontracted material and equipment costs per the Detailed Work Plan (DWP) *System Guidance*, FY 2003-2005.
- I. The General and Administrative (G&A) rate of 38% has been applied against the material handling fee per Detailed Work Plan (DWP) *System Guidance*, FY 2003-2005. G&A adders have also been included in all BBWI INEEL personnel burdened labor rates.
- J. Current Idaho state tax of 6% was applied to all material and equipment prices.
- K. The INEEL Cost Estimating Guide, dated September 2002; GDE-112, Section 2.5, dated September 3, 2002, Rev. 07; MCP-2871, Rev. 2, dated August 2001; and DOE Manual 413.3-1, approved March 28, 2003, *Project Management for the Acquisition of Capital Assets* were used to define estimating requirements and methodologies.
- L. Cost specialists organized the cost data after extensive teaming meetings discussing the project needs and requirements.
- M. Costs were developed using Success© by U. S. Cost to a level of detail consistent with the current level of design.
- N. For consistency, a standardized work breakdown structure (WBS) was used to define the structure of the estimate.
- O. Escalation factors, as identified in the INEEL Cost Estimating Guide and DWP Systems Guidance, FY2003-2005, were applied to the project components to properly address the effects of inflation on the projected costs.

COST ESTIMATE SUPPORT DATA RECAPITULATION

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IV. **ASSUMPTIONS:** *Condition statements accepted or supposed true without proof of demonstration; statements adding clarification to scope. An assumption has a direct impact on total estimated cost.*

- A. The actual work will not exceed the proposed work scope activities and/or quantities as shown on the Cost Estimating Detail Sheets.
- B. The activities for this project will be completed as identified within the project Life Cycle Baseline (LCB) schedule. Failure to meet this schedule could result in costs not reflected in this estimate, and an evaluation of this estimate will be needed to resolve any cost delta issues created by the use of any alternative schedule.
- C. INEEL operating contractor wages will apply for the non-subcontracted portions of this work.
- D. It has been assumed that all radiological technicians, Engineering, Design, Environmental, Safety, and Quality support will be available to support this work **as** required.
- E. Mock-up and minor technical development activities are included in the conceptual design portion of the estimate. The Max Treatment with Thermal Desorption option has additional technical development money included.
- F. It has been assumed that no overhead interferences will be encountered during this project.
- G. The cost estimate does not consider or address funding restrictions. It is assumed that sufficient funding will be available in a manner allowing optimum usage of that funding as estimated and scheduled.
- H. No monies are included in the event of man-made disaster (fire, explosion, etc.), or due to an act of God.
- I. Costs have been presented in FY 2003 dollars and escalated to the projected midpoint of each major activity based on the project LCB schedule. Escalation rates are based on the rates provided by DOE-HQ, Associate Deputy Secretary for Field Management, Office of Projects, and Fixed Asset Management and found in the DWP Systems Guidance, FY 2003-2005.
- J. Assume that the time allotted in the schedule for contract development, bid, and award will be sufficient.
- K. No rock or rock excavation will be encountered or required.
- L. Provisions have not been made for a negotiated 8-A set aside contract. It is assumed that the procured portions of this project will be competitively bid within the local subcontracting community using contractors familiar with and up to date with the requirements needed to work at the INEEL. It is further assumed that in order to create a competitive business environment, a sufficient quantity of qualified respondents will participate in this bidding process.

COST ESTIMATE SUPPORT DATA RECAPITULATION

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- M. It has been assumed only one mobilization and demobilization per construction subcontract will be needed. Once the crews have moved onto the project site, no others will utilize the project area. Once the mobilization has been completed, the work will proceed continuously until it has been completed. At that time, the crews will demobilize from the project.
- N. All construction activities will be performed during a normal working schedule, with no premium time. Construction activities for this work will use the current prevailing INEEL Site Stabilization Agreement rates. No provisions have been made for premium rates for labor productivity factors due to extended or off-shift work periods. It is assumed that a schedule will be provided that will allow for normal construction periods.
- O. Assume the on-going Lockheed Martin Advanced Environmental Systems, Inc. (LMAES) litigation or site activities will not have an adverse effect on the planned construction.
- P. All LMAES structures and equipment will be removed prior to construction for Stage III.
- Q. Assume that the operating personnel will have sufficient time to properly train on the project equipment.
- R. Assume all excess excavated material will be used as fill through the remainder of the project site.
- S. No new radiological control equipment will have to be qualified for this project.
- T. WRP (Option 1) comments and assumptions:
  - 1. The building will be approximately 250' X 250' X **46'** high.
  - 2. Assume one-foot thick concrete walls with concrete columns at 25' on center.
  - 3. Floors will be 8" thick concrete.
  - 4. Assume concrete beams/girders.
  - 5. Assume 20-gauge metal roof deck.
  - 6. Assume 2 ½" polyurethane insulation board on roof with single ply CSPE/Hypalon roofing.
  - 7. Exterior walls will be covered with 1 ½" poly urethane insulation board and metal siding on "Z" girts.
  - 8. Floors, walls, and ceiling will receive an epoxy coating.
  - 9. Fire protection system will be a dry pipe system, with secondary coverage below equipment and obstructions. The estimate also includes an extra hazard foam system in WRPF.
- U. Option 2aP (Incineration) comments and assumptions:
  - 1. This building will have three main sections. 96' X 81' X 78' high, **43' X 28' X 20'** high, and 44' X 110' X 20' high.
  - 2. Floor will be 8" thick, epoxy coated concrete.
  - 3. Shell will be insulated metal sandwich panels on structural steel frame.
  - 4. Roof deck, roof insulation, and roofing will be the same as for the WRP.

COST ESTIMATE SUPPORT DATA RECAPITULATION

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5. Fire protection system will be a dry pipe system, with secondary coverage below equipment and obstructions. The estimate also includes an extra hazard foam system in the incineration facility.
- V. Option 3aP (TD) comments and assumptions:
1. This building will be 120' X 60' X 46' high.
  2. Floor will be 8" thick, epoxy coated concrete.
  3. Shell will be insulated metal sandwich panels on structural steel frame.
  4. Roof deck, roof insulation, and roofing will be the same as for the WRP.
  5. Fire protection system will be a dry pipe system, with secondary coverage below equipment and obstructions. Assume this facility will not require an extra hazard foam system.
- W. Option 2b (Melt All) comments and assumptions:
1. The melter building was broken into five areas. Melter room, 102' X 110' X 75' high; Cooling room, 50' X 116' X 30' high; Drum Storage, 95' X 116' X 30' high; Airlock/TRUPAC, 51' X 80' X 35' high; and HVAC room, 75' X 82' X 30' high.
  2. Floor will be 8" thick, epoxy coated concrete.
  3. Shell will be insulated metal sandwich panels on structural steel frame.
  4. Roof deck, roof insulation, and roofing will be the same as for the WRP.
  5. Interior walls assumed to have same basic construction as exterior walls.
  6. Fire protection system will be a dry pipe system, with secondary coverage below equipment and obstructions. The estimate also includes an extra hazard foam system in this facility.
- X. Option 4a (Max Treatment) comments and assumptions:
1. This building will be 67' X 95' X 78' high, 150' X 105' X 46' high, 35' X 36' X 46' high, 15' X 18' X 46' high, and 55' X 120' X 20' high.
  2. Floor will be 8" thick, epoxy coated concrete.
  3. Shell will be insulated metal sandwich panels on structural steel frame.
  4. Roof deck, roof insulation, and roofing will be the same as for the WRP.
  5. Interior walls assumed to have same basic construction as exterior walls.
  6. Fire protection system will be a dry pipe system, with secondary coverage below equipment and obstructions. The estimate also includes an extra hazard foam system in this facility.
  7. Per review comments, this option will require significant technical development.
  8. The schedule for this option will be longer than the other options to accommodate the increased technical development activities.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued-

Project Title: OU 7-10 STAGED INTERIM ACTION STAGE III PROJECT – TREATMENT  
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V. **CONTINGENCY GUIDELINE IMPLEMENTATION:** *Explanation of methodology used in determining overall contingency. Identify any specific drivers or items of concern.*

The intent and purpose of contingency within an estimate is to compensate for possible inaccuracies within the estimate that may cause anticipated costs to vary from actual costs. Reasons for inaccuracies include variations in unit costs and quantities, differences in craft or man-hour requirements, etc. The project team has reviewed and discussed issues and concerns relative to this estimate and has included dollar amounts for contingency within the estimate as deemed appropriate. Based on the anticipated scope of work, the assumptions applicable to that scope of work, and the amount of contingency that has been incorporated, the project team has a high level of confidence in the estimate.

Information and technique included in “Cost Uncertainty Analysis,” presented by J. W. Kirch, June 13, 2002, was used to develop BBWI’s Easy Risk tool. This tool helps determine appropriate percentage ranges to use as input to the @RISK program based on the degree of scope definition, complexity, and innovation that are perceived by the project team for each component of the project. Each of these three factors is given a score of from 1 to 5. This score represents the level of risk each factor contributes to the project. From the calculated risk, a percentage contingency range is determined from historical data on EM projects completed from 1999 to 2001.

Another risk application tool was used to arrive at the contingency used for this estimate, which linked the Success estimating software with @RISK risk analysis software. In the @RISK program, the key estimated cost summary levels were assigned a range (calculated by Easy Risk.) These values represent possible variations in the final cost of that level, and a degree of confidence in the accuracy and completeness of the information provided to the estimator. These bounding values were then run through a Latin Hypercube sampling simulation 2,000 times to arrive at the additional money required to address risk at various levels of confidence. The risk output is shown both tabularly and graphically. The calculated risk amounts, represented as percentages of the appropriate levels, were applied to the estimate levels to give the most-likely cost including risk. These risk analyses for 85% confidence level resulted in the overall contingency that is reflected in the summary sheets of the estimate.

COST ESTIMATE SUPPORT DATA RECAPITULATION

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Project Title: OU 7-10 STAGED INTERIM ACTION STAGE III PROJECT – TREATMENT  
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Significant contributors to project risk include:

- Pre-conceptual stage of design
- Lack of scope definition
- Combination of technologies not yet proven
- Remote operated facility
- Optimistic schedule
- Complexity of process equipment
- Fabrication of specialty process equipment
- Interferences with the existing LMAES facility

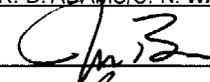
VI. **OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE:**

- A. The elements identified in the assumption portion of the estimate have addressed the conditions upon which the estimate is based. The conditions identified in these assumptions address those currently understood and known to be present or expected, as well as those specifically excluded from consideration.
- B. Due to percentage rounding, the Success reports will not reflect the exact dollars as shown in the detail reports.
- C. Due to the minimal detail and scope definition, this estimate is considered a “Project Support” estimate and is not intended to be used to establish a cost baseline.

## TPC Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Project Number: **5974-2 (1+3aP)**

<u>ESTIMATE ELEMENT</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>TOTAL</u>
<b>Total Estimated Cost (TEC)</b>	\$238,238,313	9.79% \$23,325,868	47.37% \$123,913,312	\$385,477,493
<b>Total Project Cost (TPC)</b>	\$238,238,313	9.79% \$23,325,868	47.37% \$123,913,312	\$385,477,493
<b>Rounded TPC</b> (Rounded to the nearest \$ 1000000)				<b>\$385,000,000</b>

	<i>Remarks</i>
<b>Type of Estimate:</b> <u>Project Support</u>  <b>Estimator:</b> <u>R. D. ADAMS/S. N. WASLEY</u>  <b>Checked By:</b> <u></u>  <b>Approved By:</b> <u></u>	Compact All with TD



## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Desorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Continaency</u>	<u>Continaency %</u>	<u>TOTAL</u>
<b>1.0</b>	<b>ESH&amp;Q</b>	<b>\$16,738,746</b>	<b>\$1,357,512</b>	<b>\$9,032,567</b>	<b>49.91%</b>	<b>\$27,128,826</b>
1.01	--ENVIRONMENTAL	<b>\$8,168,093</b>	<b>\$662,432</b>	<b>\$4,407,669</b>	<b>49.91%</b>	<b>\$13,238,194</b>
1.02	--SAFETY ANALYSIS	<b>\$1,324,556</b>	<b>\$107,421</b>	<b>\$714,757</b>	<b>49.91%</b>	<b>\$2,146,734</b>
1.03	--SAFETY & HEALTH	<b>\$2,376,409</b>	<b>\$192,727</b>	<b>\$1,282,358</b>	<b>49.91%</b>	<b>\$3,851,494</b>
1.04	--FIRE PROTECTION	<b>\$194,788</b>	<b>\$15,797</b>	<b>\$105,111</b>	<b>49.91%</b>	<b>\$315,696</b>
1.05	--RADIOLOGICAL CONTROLS	<b>\$714,221</b>	<b>\$57,923</b>	<b>\$385,408</b>	<b>49.91%</b>	<b>\$1,157,553</b>
1.07	--EMERGENCY PLANNING	<b>\$25,972</b>	<b>\$2,106</b>	<b>\$14,015</b>	<b>49.91%</b>	<b>\$42,093</b>
1.08	--SAFEGUARDS & SECURITY	<b>\$38,958</b>	<b>\$3,159</b>	<b>\$21,022</b>	<b>49.91%</b>	<b>\$63,139</b>
1.09	--QUALITY	<b>\$3,895,752</b>	<b>\$315,945</b>	<b>\$2,102,227</b>	<b>49.91%</b>	<b>\$6,313,924</b>
<b>2.0</b>	<b>DESIGN ENGINEERING</b>	<b>\$42,571,678</b>	<b>\$2,952,868</b>	<b>\$16,937,053</b>	<b>37.20%</b>	<b>\$62,461,599</b>
2.01	--CONCEPTUAL DESIGN	<b>\$5,194,336</b>	<b>\$135,053</b>	<b>\$1,982,757</b>	<b>37.20%</b>	<b>\$7,312,146</b>
2.02	--PRELIMINARY DESIGN	<b>\$7,791,503</b>	<b>\$418,404</b>	<b>\$3,054,432</b>	<b>37.20%</b>	<b>\$11,264,339</b>
2.03	--FINAL DESIGN	<b>\$12,985,839</b>	<b>\$1,053,152</b>	<b>\$5,223,097</b>	<b>37.20%</b>	<b>\$19,262,088</b>
2.04	--TRANSURANIC REPORTING SYSTEM (TRIPS)	<b>\$16,600,000</b>	<b>\$1,346,260</b>	<b>\$6,676,766</b>	<b>37.20%</b>	<b>524,623,026</b>
<b>3.0</b>	<b>PROCUREMENT</b>	<b>\$94,610,666</b>	<b>\$7,624,265</b>	<b>350,725 533</b>	<b>49.91%</b>	<b>\$152,360,467</b>
3.1	--PROCUREMENT MANAGEMENT	<b>\$2,103,706</b>	<b>\$170,611</b>	<b>\$1,135,101</b>	<b>49.91%</b>	<b>\$3,409,417</b>
3.2	--PROCUREMENT • EQUIPMENT	<b>\$78,849,488</b>	<b>\$6,394,693</b>	<b>\$42,544,983</b>	<b>49.91%</b>	<b>\$127,789,164</b>
3.2.01	—EQUIPMENT PROCUREMENT (WRPF)	<b>\$76,374,441</b>	<b>\$6,193,967</b>	<b>\$41,209,517</b>	<b>49.91%</b>	<b>\$123,777,925</b>
3.2.01.01	-----WRPF - EQUIPMENT	<b>\$74,944,501</b>	<b>\$6,077,999</b>	<b>\$40,437,961</b>	<b>49.91%</b>	<b>\$121,460,461</b>
3.2.01.02	-----WRPF - HVAC EQUIPMENT	<b>\$1,259,386</b>	<b>\$102,136</b>	<b>\$679,530</b>	<b>49.91%</b>	<b>\$2,041,052</b>
3.2.01.03	----WRPF - I&C PROCUREMENT	<b>\$170,554</b>	<b>\$13,832</b>	<b>\$92,026</b>	<b>49.91%</b>	<b>\$276,412</b>
3.2.02	—EQUIPMENT PROCUREMENT (TDF)	<b>\$2,448,017</b>	<b>\$198,534</b>	<b>\$1,320,882</b>	<b>49.91%</b>	<b>\$3,967,433</b>
3.2.02.01	—TDF- THERMAL DESORBER FEED SYSTEM	<b>\$81,252</b>	<b>\$6,590</b>	<b>\$43,841</b>	<b>49.91%</b>	<b>\$131,683</b>
3.2.02.02	-----TDF-SWEEP GAS SYSTEM	<b>\$95,089</b>	<b>\$7,712</b>	<b>\$51,308</b>	<b>49.91%</b>	<b>\$154,109</b>

**INEEL**

## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Desorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency%</u>	<u>TOTAL</u>
3.2.02.03	---TDF-ROTARY SCREW THERMAL DESORBER	\$278,208	\$22,563	\$150,113	49.91%	\$450,883
3.2.02.04	-----TDF-DESORBER SOIL COLLECTION SYSTEM	\$711,005	\$57,662	\$383,638	49.91%	\$1,152,305
3.2.02.05	---TDF- WATER & VOC COLLECTION & PROCESS	\$642,488	\$52,106	\$346,669	49.91%	\$1,041,263
3.2.02.06	---TDF-HVAC EQUIPMENT	\$462,690	\$37,524	\$249,655	49.91%	\$749,869
3.2.02.07	---TDF I&C PROCUREMENT	\$177,285	\$14,378	\$95,658	49.91%	\$287,321
	---EQUIP PROCURE (AIRLOCK TO CHARACTERIZATION)	\$27,030	\$2,192	\$14,505	49.91%	\$43,007
3.3	--BBWI MATERIAL HANDLING FEE	\$13,057,475	\$1,058,961	<b>\$7,045,449</b>	49.91%	\$21,161,885
4.0	<b>CONSTRUCTION</b>	<b>\$60,098,989</b>	<b>\$8,029,225</b>	<b>\$34,007,052</b>	<b>49.92%</b>	<b>\$102,135,266</b>
4.1	--CONSTRUCTION MANAGEMENT	\$9,090,087	\$1,214,436	\$5,143,632	49.92%	<b>\$15,448,155</b>
4.2	--CONSTRUCTION SUBCONTRACTS	\$51,008,902	\$6,814,789	\$28,863,420	49.92%	\$86,687,111
4.2.01	---(WRPF) WASTE RECEIVING & PREP FACILITY	\$41,520,169	\$5,547,095	\$23,494,214	49.92%	\$70,561,470
4.2.01.01	---WRPF - GENERAL CONDITIONS	\$8,751,746	\$1,169,233	\$4,952,811	49.92%	\$14,873,160
4.2.01.02	---WRPF - SITEWORK	\$3,240,341	\$432,910	\$1,833,549	49.92%	\$5,506,800
4.2.01.02.01	UTILITY & SUPPORT	\$3,026,879	\$404,391	\$1,712,762	49.92%	\$5,144,032
4.2.01.02.01.01	UTILITY & SUPPORT - FIRE PUMP HOUSE	\$172,476	\$23,043	\$97,596	49.92%	\$293,114
4.2.01.02.01.02	UTILITY & SUPPORT - POTABLE WATER SYSTEM	\$86,731	\$11,587	\$49,077	49.92%	\$147,394
4.2.01.02.01.03	UTILITY & SUPPORT - SANITARY WASTE SYSTEM	\$201,511	\$26,922	\$114,025	49.92%	\$342,458
4.2.01.02.01.04	UTILITY & SUPPORT - FIRE PIPING SYSTEM	\$1,212,046	\$161,929	\$685,837	49.92%	\$2,059,813
4.2.01.02.01.05	-----ELECTRICAL SUPPLY	\$1,354,115	\$180,910	\$766,227	49.92%	\$2,301,252
4.2.01.02.01.05.2	SITEWORK	\$3,856	\$515	\$2,182	49.92%	\$6,553
4.2.01.02.01.05.3	CONCRETE	\$26,721	\$3,570	\$15,120	49.92%	\$45,411
4.2.01.02.01.05.4	ELECTRICAL	\$1,323,538	\$176,825	\$748,925	49.92%	\$2,249,288
4.2.01.02.01.05.4.1	--- SWITCHGEAR	\$615,613	\$82,246	\$348,345	49.92%	\$1,046,203
4.2.01.02.01.05.4.2	TRANSFORMERS	\$170,709	\$22,807	\$96,596	49.92%	\$290,112
4.2.01.02.01.05.4.3	STANDBY GENERATOR	\$379,571	\$50,711	\$214,780	49.92%	\$645,062
4.2.01.02.01.05.4.4	-----CONDUCTORS AND GROUNDING	\$147,015	\$19,641	\$83,188	49.92%	\$249,844

INEEL

## Project Summary Report

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- CompactAll with Thermal Desorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency%</u>	<u>TOTAL</u>
4.2.01.02.01.05.4.5	-----TESTING	\$10,631	\$1,420	\$6,016	49.92%	\$18,067
4.2.01.02.02	-----WRPF - EARTHWORK	\$213,462	\$28,519	\$120,788	49.92%	\$362,768
4.2.01.03	-----WRPF - CONCRETE	\$5,400,985	\$721,572	\$3,056,151	49.92%	\$9,178,708
4.2.01.05	-----WRPF - METALS	\$323,847	\$43,266	\$183,249	49.92%	\$550,361
4.2.01.07	-----WRPF - THERMAL & MOISTURE PROTECTION	\$1,079,325	\$144,198	\$610,737	49.92%	\$1,834,260
4.2.01.08	-----WRPF - DOORS & WINDOWS	\$21,475	\$2,869	\$12,152	49.92%	\$36,495
4.2.01.09	-----WRPF - FINISHES	\$1,216,719	\$162,554	\$688,481	49.92%	\$2,067,754
4.2.01.11	-----WRPF - EQUIPMENT-INSTALL GFE	\$10,030,563	\$1,340,083	\$5,675,800	49.92%	\$17,046,446
4.2.01.15	-----WRPF - MECHANICAL	\$7,957,580	\$1,063,133	\$4,502,802	49.92%	\$13,523,515
4.2.01.15.01	WRP - INSTALL HVAC EQUIPMENT & DUCT	\$1,322,367	\$176,668	\$748,262	49.92%	\$2,247,297
4.2.01.15.02	WRPF - FIRE PROTECTION	\$3,872,176	\$517,323	\$2,191,074	49.92%	\$6,580,573
4.2.01.15.03	-----WRPF - PLANT AIR	\$127,500	\$17,034	\$72,146	49.92%	\$216,680
4.2.01.15.04	-----WRPF - BREATHING AIR	\$700,000	\$93,520	\$396,095	49.92%	\$1,189,615
	-----WRPF - PROCESS PIPING	\$1,935,537	\$258,588	\$1,095,225	49.92%	\$3,289,349
4.2.01.16	-----ELECTRICAL	\$3,497,588	\$467,278	\$1,979,112	49.92%	\$5,943,978
4.2.01.16.01	WRPF - GENERAL FACILITIES ELECTRICAL	\$2,347,500	\$313,626	\$1,328,334	49.92%	\$3,989,460
4.2.01.16.02	WRPF - ELECTRICAL SWITCH GEAR & PANEL BOARDS	\$907,734	\$121,273	\$513,642	49.92%	\$1,542,649
4.2.01.16.02.1	SWITCHGEAR	\$291,889	\$38,996	\$165,166	49.92%	\$496,051
4.2.01.16.02.2	-----EQUIPMENT CONTROLS	\$74,082	\$9,897	\$41,919	49.92%	\$125,899
4.2.01.16.02.3	-----RACEWAYS AND ENCLOSURES	\$112,674	\$15,053	\$63,757	49.92%	\$191,485
4.2.01.16.02.4	CONDUCTORS AND GROUNDING	\$418,457	\$55,906	\$236,784	49.92%	\$711,147
4.2.01.16.02.5	-----TESTING	\$10,631	\$1,420	\$6,016	49.92%	\$18,067
4.2.01.16.03	WRPF - MONITORING AND CONTROLS	\$80,450	\$10,748	\$45,523	49.92%	\$136,721
4.2.01.16.04	-----WRPF - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION	\$76,904	\$10,274	\$43,516	49.92%	\$130,695
4.2.01.16.05	WRPF - CCTV MONITORING SYSTEM	\$85,000	\$11,356	\$48,097	49.92%	\$144,453
<b>4.2.02</b>	<b>---(TDF) THERMAL DESORPTION BLDG.</b>	<b>\$3,522,760</b>	<b>\$470,641</b>	<b>\$1,993,356</b>	<b>49.92%</b>	<b>\$5,986,757</b>

**INEEL**

## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage 111 Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
4.2.02.01	-----TDF - GENERAL CONDITIONS	\$521,759	\$69,707	\$295,238	49.92%	\$886,704
4.2.02.02	---TDF - SITEWORK	\$21,088	\$2,817	\$11,932	49.92%	\$35,837
4.2.02.03	---TDF - CONCRETE	\$154,797	\$20,681	\$87,592	49.92%	\$263,070
4.2.02.05	-----TDF - METALS	\$214,314	\$28,632	\$121,270	49.92%	\$364,216
4.2.02.07	-----TDF - THERMAL & MOISTURE PROTECTION	\$336,819	\$44,999	\$190,590	49.92%	\$572,408
4.2.02.08	---TDF - DOORS & WINDOWS	\$34,829	\$4,653	\$19,708	49.92%	\$59,190
4.2.02.09	-----TDF - FINISHES	\$53,530	\$7,152	\$30,290	49.92%	\$90,972
4.2.02.11	---TDF - EQUIPMENT-INSTALLGFE	\$226,005	\$30,194	\$127,885	49.92%	\$384,085
4.2.02.15	---TDF - MECHANICAL	\$1,518,865	\$202,920	\$859,451	49.92%	\$2,581,237
4.2.02.15.01	-----TDF - HVAC	\$1,001,055	\$133,741	\$566,448	49.92%	\$1,701,243
4.2.02.15.01.01	TDF - INSTALL HVAC EQUIPMENT & DUCTWORK	\$464,163	\$62,012	\$262,647	49.92%	\$788,821
4.2.02.15.01.02	-----TDF - EXHAUST STACK	\$258,292	\$34,508	\$146,155	49.92%	\$438,955
4.2.02.15.01.03	TDF - EMISSIONS NOC MONITORING	\$278,600	\$37,221	\$157,646	49.92%	\$473,467
4.2.02.15.02	TDF - FIRE PROTECTION	\$125,184	\$16,725	\$70,835	49.92%	\$212,744
4.2.02.15.03	TDF - PLANT AIR	\$14,688	\$1,962	\$8,311	49.92%	\$24,962
4.2.02.15.04	TDF - BREATHING AIR	\$80,640	\$10,774	\$45,630	49.92%	\$137,044
4.2.02.15.05	TDF - PROCESS PIPING	\$297,298	\$39,719	\$168,227	49.92%	\$505,244
4.2.02.16	-----TDF - ELECTRICAL	\$440,753	\$58,885	\$249,400	49.92%	\$749,038
4.2.02.16.01	-----TDF - GENERAL FACILITIES ELECTRICAL	\$270,432	\$36,130	\$153,024	49.92%	\$459,586
4.2.02.16.03	TDF - MONITORING AND CONTROLS	\$83,625	\$11,172	\$47,319	49.92%	\$142,117
4.2.02.16.04	TDF - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION	\$76,904	\$10,274	\$43,516	49.92%	\$130,695
4.2.02.16.04	TDF - CCTV MONITORING SYSTEM	\$9,792	\$1,308	\$5,541	49.92%	\$16,641
<b>4.2.06</b>	<b>---AIRLOCK TO CHARACTERIZATION</b>	<b>\$2,692,052</b>	<b>\$359,658</b>	<b>\$1,523,299</b>	<b>49.92%</b>	<b>\$4,575,009</b>
4.2.06.01	-----AIRLOCK - GENERAL CONDITIONS	\$631,505	\$84,369	\$357,337	49.92%	\$1,073,211
4.2.06.02	-----AIRLOCK - SITEWORK	\$21,914	\$2,928	\$12,400	49.92%	\$37,243
4.2.06.03	-----AIRLOCK - CONCRETE	\$81,083	\$10,833	\$45,881	49.92%	\$137,797

**INEEL**

## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Desorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
4.2.06.05	-----AIRLOCK - METALS	\$630,246	\$84,201	\$356,625	49.92%	\$1,071,072
4.2.06.09	----AIRLOCK - FINISHES	\$13,510	\$1,805	\$7,645	49.92%	\$22,960
4.2.06.13	-----AIRLOCK - SPECIAL CONSTRUCTION	\$715,528	\$95,595	\$404,882	49.92%	\$1,216,005
4.2.06.15	----AIRLOCK - MECHANICAL	\$358,708	\$47,923	\$202,975	49.92%	\$609,607
4.2.06.15.01	-----AIRLOCK - HVAC	\$256,703	\$34,295	\$145,255	49.92%	\$436,253
4.2.06.15.02	AIRLOCK - FIRE PROTECTION	\$45,736	\$6,110	\$25,880	49.92%	\$77,725
4.2.06.15.03	-----AIRLOCK - PLANT AIR	\$8,670	\$1,158	\$4,906	49.92%	\$14,734
4.2.06.15.04	AIRLOCK - BREATHING AIR	\$47,600	\$6,359	\$26,934	49.92%	\$80,894
4.2.06.16	----AIRLOCK - ELECTRICAL	\$239,557	\$32,005	\$135,553	49.92%	\$407,114
4.2.06.16.01	-----AIRLOCK - GENERAL FACILITIES ELECTRICAL	\$159,630	\$21,327	\$90,327	49.92%	\$271,283
4.2.06.16.03	AIRLOCK - MONITORING AND CONTROLS	\$37,613	\$5,025	\$21,283	49.92%	\$63,921
4.2.06.16.04	AIRLOCK - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION	\$36,534	\$4,881	\$20,673	49.92%	\$62,088
4.2.06.16.05	AIRLOCK - CCTV MONITORING SYSTEM	\$5,780	\$772	\$3,271	49.92%	\$9,823
<b>4.2.07</b>	<b>---OFFICE/RESTROOM AREAS</b>	<b>\$547,921</b>	<b>\$73,202</b>	<b>\$310,042</b>	<b>49.92%</b>	<b>\$931,165</b>
<b>4.2.08</b>	<b>---INTERIM STORAGE FACILITY (ISF)</b>	<b>\$2,726,000</b>	<b>\$364,194</b>	<b>\$1,542,509</b>	<b>49.92%</b>	<b>\$4,632,702</b>
<b>6.0</b>	<b>TESTING &amp; TURNOVER</b>	<b>\$13,130,977</b>	<b>\$2,141,461</b>	<b>\$8,398,524</b>	<b>55.10%</b>	<b>\$23,640,962</b>
6.1	--TESTING AND TURNOVER PLANNING	\$259,717	\$41,762	\$166,114	55.10%	\$467,593
6.2	--S. O. TESTING	\$3,895,752	\$626,437	\$2,491,708	55.10%	\$7,013,897
6.3	--ORR SUPPORT	\$285,688	\$45,939	\$182,725	55.10%	\$514,352
6.4	--FACILITY ACCEPTANCE REVIEW	\$194,788	\$31,322	\$124,585	55.10%	\$350,695
6.5	--RADIOLOGICAL CONTROL SUPPORT	\$142,844	\$22,969	\$91,363	55.10%	\$257,176
6.6	--OPERATOR TRAINING	\$2,597,168	\$417,625	\$1,661,139	55.10%	\$4,675,931
6.7	--OPERATING PROCEDURES	\$571,377	\$91,877	\$365,451	55.10%	\$1,028,705
6.8	--START-UP COORDINATION	\$168,816	\$27,146	\$107,974	55.10%	\$303,936
6.9	--SPARES	\$5,014,827	\$806,384	\$3,207,465	55.10%	\$9,028,677

**INEEL**

**Project Summary Report**

Project Name: *OU 7-10 Staged Interim Action*  
*Stage III Project- Treatment- Compact All with Thermal Disorption Option*  
 Project Location: *INEEL-RWMC*  
 Estimate Number: *5974-2 (1+3aP)*

Client: *S. L. Austad*  
 Prepared By: *R. D. ADAMS/S. N. WASLEY*  
 Estimate Type: *Project Support*

<u>Level</u>	<u>DescrIption</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Continaency</u>	<u>Continaency%</u>	<u>TOTAL</u>
7.0	PROJECT MANAGEMENT	\$13,687,255	\$1,250,536	\$4,812,582	37.20%	\$17,750,373
<hr/>						
<b>Total</b>	<b>COMPACT ALL W/ THERMAL DISORPTION</b>	<b>\$238,238,313</b>	<b>\$23,325,868</b>	<b>\$123,913,312</b>	<b>47.37%</b>	<b>\$385,477,493</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>1.01 ENVIRONMENTAL</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>												
	ENVIRONMENTAL					U.C. per \$	0	0	0	0	0.063	0.063
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$8,168,093	\$8,168,093
<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$8,168,093	\$8,168,093
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEUSubcontractorOverheads</b>							0.00%	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$8,168,093
<b>Escalation</b>							\$0	\$0	\$0	\$0	\$662,432	\$662,432
<b>contingency</b>							\$0	\$0	\$0	\$0	\$4,407,669	\$4,407,669
<b>—Total 1.01 ENVIRONMENTAL</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,238,194</b>	<b>\$13,238,194</b>

**1.02 SAFETY ANALYSIS**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	SAFETY ANALYSIS					U.C. per \$	0	0	0	0	0.01	0.01
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$1,324,556	\$1,324,556
<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$1,324,556	\$1,324,556
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEUSubcontractorOverheads</b>							0.00%	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$1,324,556
<b>Escalation</b>							\$0	\$0	\$0	\$0	\$107,421	\$107,421
<b>Contingency</b>							\$0	\$0	\$0	\$0	\$714,757	\$714,757
<b>—Total 1.02 SAFETY ANALYSIS</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,146,734</b>	<b>\$2,146,734</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage 111 Project- Treatment Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS B. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>1.03 SAFETY &amp; HEALTH</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE 111 - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>												
	SAFETY & HEALTH											
		<i>U.C. per \$</i>										
		129,858,389.00	\$		0		\$0	\$0	\$0	\$0	\$0	\$0
											0.018	0.018
											\$2,376,409	\$2,376,409
<hr/>												
	Subtotal						\$0	\$0	\$0	\$0	\$2,376,409	\$2,376,409
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	Subtotal Estimate						\$0	\$0	\$0	\$0	\$192,727	\$192,727
	Escalation						\$0	\$0	\$0	\$0	\$1,282,358	\$1,282,358
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	— Total 1.03 SAFETY & HEALTH				0		\$0	\$0	\$0	\$0	\$3,051,494	\$3,051,494

**1.04 FIRE PROTECTION**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	FIRE PROTECTION											
		<i>U.C. per \$</i>										
		129,858,389.00	\$		0		\$0	\$0	\$0	\$0	\$0	\$0
											0.001	0.001
											\$194,788	\$194,788
<hr/>												
	Subtotal						\$0	\$0	\$0	\$0	\$194,788	\$194,788
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	Subtotal Estimate						\$0	\$0	\$0	\$0	\$15,797	\$15,797
	Escalation						\$0	\$0	\$0	\$0	\$105,111	\$105,111
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	— Total 1.04 FIRE PROTECTION				0		\$0	\$0	\$0	\$0	\$315,696	\$315,696

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>1.05 RADIOLOGICAL CONTROLS</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE 111- LCB, estimate# 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>												
	RADIOLOGICAL CONTROLS				0		\$0	\$0	\$0	\$0	0.006	0.006
		U.C. per \$	129,858,389.00	\$							\$714,221	\$714,221
<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$714,221	\$714,221
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEUSubcontractorOverheads</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$714,221
<b>Escalation</b>							\$0	\$0	\$0	\$0	\$57,923	\$57,923
<b>Contingency</b>							\$0	\$0	\$0	\$0	\$385,408	\$385,408
<b>---Total 1.05 RADIOLOGICAL CONTROLS</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,157,553</b>	<b>\$1,157,553</b>

**1.07 EMERGENCY PLANNING**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE 111- LCB, estimate# 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	EMERGENCY PLANNING				0		\$0	\$0	\$0	\$0	0	0
		U.C. per \$	129,858,389.00	\$							\$25,972	\$25,972
<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$25,972	\$25,972
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEUSubcontractorOverheads</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$25,972
<b>Escalation</b>							\$0	\$0	\$0	\$0	\$2,106	\$2,106
<b>Contingency</b>							\$0	\$0	\$0	\$0	\$14,015	\$14,015
<b>---Total 1.07 EMERGENCY PLANNING</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$42,093</b>	<b>\$42,093</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b><u>1.08 SAFEGUARDS &amp; SECURITY</u></b>												
Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III • LCB, estimate# 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.												
	SAFEGUARDS & SECURITY				0		\$0	\$0	\$0	\$0	\$38,958	\$38,958
		U.C. per \$	129,858,389.00 \$				0	0	0	0	0	0
Subtotal							\$0	\$0	\$0	\$0	\$38,958	\$38,958
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
											0.00%	
Subtotal Estimate												\$38,958
Escalation							\$0	\$0	\$0	\$0	\$3,159	\$3,159
Contingency							\$0	\$0	\$0	\$0	\$21,022	\$21,022
---Total 1.08 SAFEGUARDS & SECURITY					0		\$0	\$0	\$0	\$0	\$63,139	\$63,139
<b><u>1.09 QUALITY</u></b>												
Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III • LCB, estimate# 5974-1. Also considered were percentage allowances derived by the project team on the CSI/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.												
	QUALITY				0		\$0	\$0	\$0	\$0	\$3,895,752	\$3,895,752
		U.C. per \$	129,858,389.00 \$				0	0	0	0	0.03	0.03
Subtotal							\$0	\$0	\$0	\$0	\$3,895,752	\$3,895,752
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
											0.00%	
Subtotal Estimate												\$3,895,752
Escalation							\$0	\$0	\$0	\$0	\$315,945	\$315,945
Contingency							\$0	\$0	\$0	\$0	\$2,102,227	\$2,102,227
---Total 1.09 QUALITY					0		\$0	\$0	\$0	\$0	\$6,313,924	\$6,313,924

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage 111 Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>2.01 CONCEPTUAL DESIGN</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.</i>												
	CONCEPTUAL DESIGN EFFORT				0		\$0	\$0	\$0	0.04	\$0	0.04
		U.C. per \$	129,858,389.00 \$							\$5,194,336		\$5,194,336
<hr/>												
	Subtotal						\$0	\$0	\$0	\$5,194,336	\$0	\$5,194,336
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	Subtotal Estimate						\$0	\$0	\$0	\$1,350,53	\$0	\$5,194,336
	Escalation						\$0	\$0	\$0	\$1,350,53	\$0	\$135,053
	Contingency						\$0	\$0	\$0	\$1,982,757	\$0	\$1,902,757
<hr/>												
	— Total 2.01 CONCEPTUAL DESIGN				0		\$0	\$0	\$0	\$7,312,146	\$0	\$7,312,146

**2.02 PRELIMINARY DESIGN**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE 111 - LCB, estimate # 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.*

	PRELIMINARY DESIGN				0		\$0	\$0	\$0	0.06	\$0	0.06
		U.C. per \$	129,858,389.00 \$							\$7,791,503		\$7,791,503
<hr/>												
	Subtotal						\$0	\$0	\$0	\$7,791,503	\$0	\$7,791,503
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
<hr/>												
	Subtotal Estimate						\$0	\$0	\$0	\$418,404	\$0	\$7,791,503
	Escalation						\$0	\$0	\$0	\$418,404	\$0	\$418,404
	Contingency						\$0	\$0	\$0	\$3,054,432	\$0	\$3,054,432
<hr/>												
	— Total 2.02 PRELIMINARY DESIGN				0		\$0	\$0	\$0	\$11,264,339	\$0	\$11,264,339

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged interim Action**  
**Stage 111 Project - Treatment- CompactAll with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>2.03 FINAL DESIGN</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate# 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.</i>												
	FINAL DESIGN					U.C. per \$	0	0	0	0	0.1	0.1
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$,***,***	\$12,985,839
Subtotal							\$0	\$0	\$0	\$0	\$1,985,839	\$12,985,839
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$12,985,839
Escalation							\$0	\$0	\$0	\$0	\$1,053,152	\$1,053,152
Contingency							\$0	\$0	\$0	\$0	\$5,223,097	\$5,223,097
--Total 2.03 FINAL DESIGN					0		\$0	\$0	\$0	\$0	\$19,262,088	\$19,262,088

**2.04 TRANSURANIC REPORTING SYSTEM (TRIPS)**

	TRIPS DEVELOPMENT					U.C. per LS	0	0	0	0	16600000	16600000
			1.00	LS	0		\$0	\$0	\$0	\$0	\$,***,***	\$16,600,000
<i>Memo: Based on input from E. L. Peterson of historic costs incurred in the development of the Transuranic Reporting System for the 3100 Cubic Meter project. Adjustments were made to remove costs in support of operations.</i>												
Subtotal							\$0	\$0	\$0	\$0	\$16,600,000	\$16,600,000
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$16,600,000
Escalation							\$0	\$0	\$0	\$0	\$1,346,260	\$1,346,260
Contingency							\$0	\$0	\$0	\$0	\$6,676,766	\$6,676,766
--Total 2.04 TRANSURANIC REPORTING SYSTEM (TRIPS)					0		\$0	\$0	\$0	\$0	\$24,623,026	\$24,623,026

**3.1 PROCUREMENT MANAGEMENT**

	PROCUREMENT SUPPORT					U.C. per \$	0	0	0	0	0.016	0.016
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$2,103,706	\$2,103,706

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.1 PROCUREMENT MANAGEMENT</b>												
	Subtotal							\$0	\$0	\$0	\$2,103,706	\$2,103,706
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads		0.00%					\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$170,611	\$2,103,706
	Escalation							\$0	\$0	\$0	\$1,135,101	\$1,135,101
	Contingency							\$0	\$0	\$0	\$0	\$0
--Total 3.1 PROCUREMENT MANAGEMENT					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,409,417</b>	<b>\$3,409,417</b>

**3.2.01.01 WRPf - EQUIPMENT**

	Sorting table walking floor		6.00	EA	0			\$0	\$0	\$92,000	\$0	\$0	\$92,000
	Memo: Based on a 6/24/03 quote from Keith Walking Floor Systems. Copy in estimate file.												
	tbd .box dumper or walking floor		1.00	EA	0			\$0	\$0	\$513,000	\$0	\$0	\$513,000
	Memo: Assume similar to above (4 sections only) with a heavy stainless steel chute housing. See basis worksheet in estimate file												
	Sorting Deck Soils Trough Hopper		1.00	EA	0			\$0	\$0	\$89,714	\$0	\$0	\$89,714
	Memo: See basis worksheet in estimate file.												
	Sorting Deck Bridge Crane 7 5 TON		1.00	EA	0			\$0	\$0	\$434,229	\$0	\$0	\$434,229
	Memo: 2000 quote from PaR. Escalated and site-adjusted See basis worksheet in estimate file.												
	Sorting Deck Sorting Arm 2 TON		3.00	EA	0			\$0	\$0	\$804,000	\$0	\$0	\$804,000
	Memo: 7/1/2003 quote from Caterpillar. See estimate file.												
	Sorting deck Soil Collection Conveyor		1.00	EA	0			\$0	\$0	\$450,000	\$0	\$0	\$450,000
	Memo: 6/26/03 Jervis B. Webb Company quote for a 130 conveyor. Used \$3750/lf. as basis for all conveyors. See estimate file.												

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage 111 Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01 WRPf- EQUIPMENT</b>												
						<i>U.C. per EA</i>						
	Soil Screen Feed Conveyor		1.00	EA	0				485000	0	0	485000
	Memo: 6/26/03 Jervis B. Webb Company quote for a 130' conveyor. Used \$3750/ft. as basis for all conveyors. See estimate file.											
	Soil Screen Enclosure		1.00	EA	0				4694976	0	0	4694976
	Soil Screen		1.00	EA	0				50347	0	0	50347
	Memo: See estimate file											
	Soil Screen Maintenance Crane 5 TON		1.00	EA	0				264213	0	0	264213
	Memo: 9/2000 PaR quote with an allowance for a motorized hook. See estimate file.											
	Shredder Feed Conveyor		1.00	EA	0				485000	0	0	485000
	Oversize Mat'l Xfer Conveyor		1.00	EA	0				112500	0	0	112500
	Oversize Mat'l Enclosure		1.00	EA	0				9345600	0	0	9345600
	Sheaf Feed Conveyor		1.00	EA	0				37500	0	0	37500
	Oversize Mat'l Shear		1.00	EA	0				500000	0	0	500000
	Sizing Cell Crane 5 TON		1.00	EA	0				264213	0	0	264213
	Shear Discharge Conveyor		1.00	EA	0				18750	0	0	18750
	Sized Mat'l Output Station		1.00	EA	0				100700	0	0	100700
	Memo: 9/2000 quote from Engineered Conveyors, Inc., escalated to today. See estimate file.											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01 WRPf - EQUIPMENT</b>												
	Intact Drum/Specl Matl Xfer Conveyor		1.00	EA	0		\$0	\$0	37500	0	0	37500
		<i>U.C. per EA</i>					\$0	\$0	\$37,500	\$0	\$0	\$37,500
	Intact Drum & Special Matl Enclosure		1.00	EA	0		\$0	\$0	5000000	0	0	5000000
		<i>U.C. per EA</i>					\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000
	Memo: As suggested by M. Stacey based on similar arrangement for the 3100 Cubic Meter project. E-mail in estimate file.											
	Intact Drum Handler		1.00	LOT	0		\$0	\$0	5000000	0	0	5000000
		<i>U.C. per LOT</i>					\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000
	Memo: As suggested by M Stacey based on similar arrangement for the 3100 Cubic Meter project E-mail in estimate file Price includes sorting manipulator and drum contents sorting table											
	Drum Contents Collecting Conveyor		1.00	EA	0		\$0	\$0	37500	0	0	37500
		<i>U.C. per EA</i>					\$0	\$0	\$37,500	\$0	\$0	\$37,500
	Special Mat'l Output Station		1.00	EA	0		\$0	\$0	100700	0	0	100700
		<i>U.C. per EA</i>					\$0	\$0	\$100,700	\$0	\$0	\$100,700
	Container Assay Unit		3.00	EA	0		\$0	\$0	3500000	0	0	3500000
		<i>U.C. per EA</i>					\$0	\$0	\$10,500,000	\$0	\$0	\$10,500,000
	Memo: Cost were based on information received from BNFL Instruments Physics Group Lead (E-mail 6-30-03), included in estimating file.											
	Drum Contents Xfer Conveyor		1.00	EA	0		\$0	\$0	37500	0	0	37500
		<i>U.C. per EA</i>					\$0	\$0	\$37,500	\$0	\$0	\$37,500
	Soil Screen Product Xfer conveyor		1.00	EA	0		\$0	\$0	337500	0	0	337500
		<i>U.C. per EA</i>					\$0	\$0	\$337,500	\$0	\$0	\$337,500
	Soil Screen Rejects Xfer conveyor		1.00	EA	0		\$0	\$0	262500	0	0	262500
		<i>U.C. per EA</i>					\$0	\$0	\$262,500	\$0	\$0	\$262,500
	Shredder Enclosure		1.00	EA	0		\$0	\$0	360076	0	0	360076
		<i>U.C. per EA</i>					\$0	\$0	\$360,076	\$0	\$0	\$360,076
	2 Stage Shredder		1.00	EA	0		\$0	\$0	1400000	0	0	1400000
		<i>U.C. per EA</i>					\$0	\$0	\$1,400,000	\$0	\$0	\$1,400,000
	Memo: 5/16/2003 quote from SSI Shredding Systems, Inc. See estimate file											
	Shredded Waste Xfer conveyor		1.00	EA	0		\$0	\$0	187500	0	0	187500
		<i>U.C. per EA</i>					\$0	\$0	\$167,500	\$0	\$0	\$167,500

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>3.2.01.01 WRPF - EQUIPMENT</u>												
						<i>U.C. per EA</i>	0	0	993933	0	0	993933
	Shredded Waste Packaging Glove Box		1.00	EA	0		\$0	\$0	\$993,933	\$0	\$0	\$993,933
	Memo: Based on two GEM project Packaging Glovebox Systems.											
						<i>U.C. per EA</i>	0	0	1300000	0	0	1300000
	Drum Filling Conveyor		2.00	EA	0		\$0	\$0	\$2,600,000	\$0	\$0	\$2,600,000
	Memo: Price by engineering											
						<i>U.C. per EA</i>	0	0	100700	0	0	100700
	Shredded Waste Output Station		2.00	EA	0		\$0	\$0	\$201,400	\$0	\$0	\$201,400
						<i>U.C. per EA</i>	0	0	167971	0	0	167971
	Shredded Waste GB Maintenance crane 1TON		1.00	EA	0		\$0	\$0	\$167,971	\$0	\$0	\$167,971
	Memo: 4/25/2003 quote from American Crane plus allowance for motorized hook rotator and site factor.											
						<i>U.C. per EA</i>	0	0	5588409	0	0	5588409
	Soil Hopper Enclosure		1.00	EA	0		\$0	\$0	\$5,588,409	\$0	\$0	\$5,588,409
						<i>U.C. per EA</i>	0	0	37500	0	0	37500
	Soil Storage Feed Conveyor		1.00	EA	0		\$0	\$0	\$37,500	\$0	\$0	\$37,500
						<i>U.C. per EA</i>	0	0	10000	0	0	10000
	Soil Storage Bin		2.00	EA	0		\$0	\$0	\$20,000	\$0	\$0	\$20,000
	Memo: Allowance.											
						<i>U.C. per EA</i>	0	0	8777	0	0	8777
	Soil Storage Bin Activator		2.00	EA	0		\$0	\$0	\$17,554	\$0	\$0	\$17,554
	Memo: From Richardson, 100-35, pg. 3-4, with adjustments for stainless steel construction, escalation and site factor.											
						<i>U.C. per EA</i>	0	0	150000	0	0	150000
	Soil Storage Bin Discharge Conveyor		2.00	EA	0		\$0	\$0	\$300,000	\$0	\$0	\$300,000
						<i>U.C. per EA</i>	0	0	30000	0	0	30000
	Assay Systems feed conveyor		1.00	EA	0		\$0	\$0	\$30,000	\$0	\$0	\$30,000
						<i>U.C. per EA</i>	0	0	18285	0	0	18285
	Assay Feed Spreader #1		2.00	EA	0		\$0	\$0	\$36,570	\$0	\$0	\$36,570

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipm</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01WRPF - EQUIPMENT</b>												
	Soil Assay System #2		2.00	EA	0		\$0	\$0	1000000	0	0	1000000
Memo	6/30/2003 quote from BNFL Instruments Conveyorized Survey Monitor as described in note 2 of their quote. See estimate file.											
	Assayed Soil Diverting Conveyoi		1.00	EA	0		\$0	\$0	112500	0	0	112500
	nonTRU Soil Xfer Conveyor		1.00	EA	0		\$0	\$0	168750	0	0	168750
	TRU Soil Xfer Conveyor		1.00	EA	0		\$0	\$0	168750	0	0	168750
	nonTRU Soil Packaging GB		1.00	EA	0		\$0	\$0	233026	0	0	233026
	nonTRU Soil Packaging GB		1.00	EA	0		\$0	\$0	233026	0	0	233026
	TRU Soil Packaging GB		1.00	EA	0		\$0	\$0	233026	0	0	233026
	TRU Soil Packaging GB		1.00	EA	0		\$0	\$0	233026	0	0	233026
	Drum Entry Airlock		1.00	EA	0		\$0	\$0	100700	0	0	100700
	TRU drum compactor enclosure		1.00	EA	0		\$0	\$0	14000000	0	0	14000000
Memo	Unrecorded observation based on compactor system used by BNFL in the AMWTF. Price includes TRU drum compactor enclosure, Drum Compactor, Drum Puck Handling Device, and Compacted Drum Pkg Enclosure.											
	100 gal drum output		1.00	EA	0		\$0	\$0	100700	0	0	100700

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact A//with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S L Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>3.2.01.01 WRPF - EQUIPMENT</u>												
	CONTAINER HANDLING TRUCK (1000LBS)		5.00	EA	0		\$0	\$0	\$15,000	\$0	\$0	\$15,000
		<i>U.C. per EA</i>							3000			3000
	TRUPACT LOADING STATION - INCL. LOADING CRANE		1.00	EA	0		\$0	\$0	\$648,000	\$0	\$0	\$648,000
		<i>U.C. per EA</i>							648000			648000
Subtotal							\$0	\$0	\$70,702,359	\$0	\$0	\$70,702,359
Sales Tax							\$0	\$0	\$4,242,142	\$0	\$0	\$4,242,142
INEEUSubcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$74,944,501
Escalation							\$0	\$0	\$6,077,999	\$0	\$0	\$6,077,999
Contingency							\$0	\$0	\$40,437,961	\$0	\$0	\$40,437,961
--Total 3.2.01.01 WRPF - EQUIPMENT					0		\$0	\$0	\$**,**,*	\$0	\$0	\$**,**,*

3.2.01.02 WRPF - HVAC EQUIPMENT

**Memo:** *Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group that contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.*

	1000 kW HEATER SECTION (PREHEAT)		1.00	EA	0		\$0	\$0	\$5,000	\$0	\$0	\$5,000
		<i>U.C. per EA</i>							5000			5000
	INLET HEPA FILTER TRAIN 6X4 (1,500 CFM/ FILTER)		2.00	EA	0		\$0	\$0	\$320,000	\$0	\$0	\$320,000
		<i>U.C. per EA</i>							160000			320000
Memo: The cost for this filter train includes; inlet isolation dampers, prefilter section, test inlet, HEPA filters, test outlet, & outlet isolation damper.												
	OUTLET HEPA FILTER TRAIN 6X4 (1,500 CFM/ FILTER)		2.00	EA	0		\$0	\$0	\$780,000	\$0	\$0	\$780,000
		<i>U.C. per EA</i>							390000			390000
Memo: The cost for this filter train includes, inlet isolation dampers, mist eliminator, TI, charcoal filter, heater section (RH control), prefilter section, test inlet, HEPA filters, test combination, & outlet isolation damper												
	MAIN EXHAUST FAN (62,500CFM- 300 HP)		1.00	EA	0		\$0	\$0	\$23,000	\$0	\$0	\$23,000
		<i>U.C. per EA</i>							23000			23000
	BACK-UP EXHAUST FAN (11,000 CFM-200 HP)		1.00	EA	0		\$0	\$0	\$11,000	\$0	\$0	\$11,000
		<i>U.C. per EA</i>							11000			11000

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMWS. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOT-L</u>
<b>3.2.01.02 WRPF - HVAC EQUIPMENT</b>												
<i>Memo: Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group that contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.</i>												
	RADIANT HEATERS 13.5KW		18.00	EA	0		\$0	\$0	\$17,100	\$0	\$0	\$17,100
		<i>U.C. per EA</i>					0	0	950	0	0	950
	COMPUTER ROOM AC UNIT (10TON GLYCOL UNIT)		1.00	EA	0		\$0	\$0	\$32,000	\$0	\$0	\$32,000
		<i>U.C. per EA</i>					0	0	32000	0	0	32000
Subtotal							\$0	\$0	\$1,188,100	\$0	\$0	\$1,188,100
Sales Tax							\$0	\$0	\$71,286	\$0	\$0	\$71,286
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$1,259,386
Escalation							\$0	\$0	\$102,136	\$0	\$0	5102,136
Contingency							\$0	\$0	\$679,530	\$0	\$0	\$679,530
---Total 3.2.01.02 WRPF - HVAC EQUIPMENT					0		\$0	\$0	\$2,041,052	\$0	\$0	\$2,041,052

**3.2.01.03 WRPF - I&C PROCUREMENT**

*Memo: I&C costs are based on information received from the BBWI engineering group. The engineering group developed a spreadsheet identifying the type and quantity of instrumentation required for each piece of equipment.*

	INSTRUMENTS & CONTROLS		1.00	LS	0		\$0	\$0	\$160,900	\$0	\$0	\$160,900
		<i>U.C. per LS</i>					0	0	160900	0	0	160900
Subtotal							\$0	\$0	\$160,900	\$0	\$0	\$160,900
Sales Tax							\$0	\$0	\$9,654	\$0	\$0	\$9,654
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$170,554
Escalation							\$0	\$0	\$13,832	\$0	\$0	\$13,832
Contingency							\$0	\$0	\$92,028	\$0	\$0	\$92,028
---Total 3.2.01.03 WRPF - I&C PROCUREMENT					0		\$0	\$0	6276,412	\$0	\$0	\$276,412

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b><u>3.2.02.01 TDF- THERMAL DESORBER FEED SYSTEM</u></b>												
		<i>U.C. per EA</i>					0	0	45713	0	0	45713
	Wet Soil Feed Hopper w/ isolation slide valve		1.00	EA			\$0	\$0	\$45,713	\$0	\$0	\$45,713
	Memo: Scaled down from 9/2000 quote from Douglas Scientific. Inc.. Includes slide isolation valve.											
		<i>U.C. per EA</i>					0	0	22552	0	0	22552
	Metering feed valve		1.00	EA			\$0	\$0	\$22,552	\$0	\$0	\$22,552
	Memo: From Richardson, 100-45, pg. 4, assuming model 203-130.											
		<i>U.C. per EA</i>					0	0	8388	0	0	8388
	Rotary Screw Auger		1.00	EA			\$0	\$0	\$8,388	\$0	\$0	\$8,388
	Memo: From Richardson.											
Subtotal							\$0	\$0	\$76,653	\$0	\$0	\$76,653
Sales Tax							\$0	\$0	\$4,599	\$0	\$0	\$4,599
INEEUSubcontractorOverheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$81,252
Escalation							\$0	\$0	\$6,590	\$0	\$0	\$6,590
Contingency							\$0	\$0	\$43,841	\$0	\$0	\$43,841
—Total 3.2.02.01 TDF- THERMAL DESORBER FEED SYSTEM					0		\$0	\$0	\$131,683	\$0	\$0	\$131,683

**3.2.02.02 TDF-SWEEP GAS SYSTEM**

		<i>U.C. per EA</i>					0	0	25111	0	0	25111
	Water Flow Control Valve		1.00	EA			\$0	\$0	\$25,111	\$0	\$0	\$25,111
	Memo: From Richardson.											
		<i>U.C. per EA</i>					0	0	17965	0	0	17965
	Steam Producing Boiler		1.00	EA			\$0	\$0	\$17,965	\$0	\$0	\$17,965
	Memo: From Means.											
		<i>U.C. per EA</i>					0	0	4224	0	0	4224
	Flow Control Valve		1.00	EA			\$0	\$0	\$4,224	\$0	\$0	\$4,224
		<i>U.C. per EA</i>					0	0	33047	0	0	33047
	Propane Tank		1.00	EA			\$0	\$0	\$33,047	\$0	\$0	\$33,047
	Memo: From Richardson.											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.02 TDF-SWEEP GAS SYSTEM</b>												
	Propane Evaporator		1.00	EA	0		\$0	\$0	\$9,360	\$0	\$0	\$9,360
	Memo: Based on a recent quote from V-1 Propane.											
	U.C. per EA											
	Subtotal						\$0	\$0	\$89,707	\$0	\$0	\$89,707
	Sales Tax						\$0	\$0	\$5,382	\$0	\$0	\$5,382
	INEEL/Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$7,712	\$0	\$0	\$95,089
	Escalation						\$0	\$0	\$51,308	\$0	\$0	\$7,712
	Contingency						\$0	\$0	\$51,308	\$0	\$0	\$51,308
	<b>—Total 3.2.02.02 TDF-SWEEP GAS SYSTEM</b>											
					0		\$0	\$0	\$154,109	\$0	\$0	\$154,109

**3.2.02.03 TDF-ROTARY SCREW THERMAL DESORBER**

	Thermal Desorber		1.00	EA	0		\$0	\$0	\$241,104	\$0	\$0	\$241,104
	Memo: 7/2/2003 quote from UNICO Services, Inc.											
	U.C. per EA											
	Fluid Reservoir		1.00	EA	0		\$0	\$0	\$265	\$0	\$0	\$265
	U.C. per EA											
	Hydraulic Fluid		1.00	EA	0		\$0	\$0	\$142	\$0	\$0	\$142
	U.C. per EA											
	Heat Exchanger		1.00	EA	0		\$0	\$0	\$14,525	\$0	\$0	\$14,525
	U.C. per EA											
	Pump		1.00	EA	0		\$0	\$0	\$2,200	\$0	\$0	\$2,200
	U.C. per EA											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.03 TDF-ROTORY SCREW THERMAL DESORBER</b>												
	Flow Control Valve		1.00	EA	0		\$0	\$0	\$4,224	\$0	\$0	\$4,224
		<i>U.C. per EA</i>					0	0	4224	0	0	4224
Subtotal							\$0	\$0	\$262,460	\$0	\$0	\$262,460
Sales Tax							\$0	\$0	\$15,748	\$0	\$0	\$15,748
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$278,208
Escalation							\$0	\$0	\$22,563	\$0	\$0	\$22,563
Contingency							\$0	\$0	\$150,113	\$0	\$0	\$150,113
--Total 3.2.02.03 TDF-ROTORY SCREW THERMAL DESORBER					0		\$0	\$0	\$450,883	\$0	\$0	\$450,883

**3.2.02.04 TDF-DESORBER SOIL COLLECTION SYSTEM**

	Slide Isolation Valve		1.00	EA	0		\$0	\$0	\$16,386	\$0	\$0	\$16,386
		<i>U.C. per EA</i>					0	0	16386	0	0	16386
	Cooling Screw Auger		1.00	EA	0		\$0	\$0	\$135,000	\$0	\$0	\$135,000
Memo: 7/2/2003 quote from UNICO Services, Inc.												
	Feed Auger		1.00	EA	0		\$0	\$0	\$8,388	\$0	\$0	\$8,388
		<i>U.C. per EA</i>					0	0	8388	0	0	8388
	Dry Soil Feed Hopper, including isolation slide valve		1.00	EA	0		\$0	\$0	\$22,597	\$0	\$0	\$22,597
		<i>U.C. per EA</i>					0	0	22597	0	0	22597
	Rotary Screw Auger		1.00	EA	0		\$0	\$0	\$8,388	\$0	\$0	\$8,388
		<i>U.C. per EA</i>					0	0	8388	0	0	8388

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.04 TDF-DESORBER SOIL COLLECTION SYSTEM</b>												
	Packaging Glovebox		1.00	EA	0		\$0	\$0	480000	0	0	480000
	Memo: Cost based on the GEM Project glovebox @ approx. \$40,000/running ft.											
	Subtotal						\$0	\$0	\$670,759	\$0	\$0	\$670,759
	Sales Tax						\$0	\$0	\$40,246	\$0	\$0	\$40,246
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$57,662	\$0	\$0	\$57,662
	Escalation						\$0	\$0	\$383,638	\$0	\$0	\$383,638
	Contingency						\$0	\$0				\$0
	<b>--Total 3.2.02.04 TDF-DESORBER SOIL COLLECTION SYSTEM</b>											
					0		\$0	\$0	\$1,152,305	\$0	\$0	\$1,152,305

**3.2.02.05 TDF- WATER & VOC COLLECTION & PROCESS**

	Tube and Shell Condenser		1.00	EA	0		\$0	\$0	31085	0	0	31085
	Memo: From Richardson.											
	Carbon Bed		2.00	EA	0		\$0	\$0	3637	0	0	3637
	Memo: 5/2001 quote on GAC material and 1997 quote from Seattle Boiler Works, Inc. for vessel. Scaled, escalated, and adjusted with site factor.											
	Off Gas Filter		1.00	EA	0		\$0	\$0	15000	0	0	15000
	Memo: 1000 sfm (1 X 1).											
	Isolation Valve (Sol.)		1.00	EA	0		\$0	\$0	4224	0	0	4224
	Memo: Assume similar to Oil/Water Coalescer in Richardson, 100-426 ,pg. 1-2.											
	Water Pump		2.00	EA	0		\$0	\$0	4000	0	0	4000
	Organic Separator		1.00	EA	0		\$0	\$0	34742	0	0	34742
	Memo: Assume similar to Oil/Water Coalescer in Richardson, 100-426 ,pg. 1-2.											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.05 TDF- WATER &amp; VOC COLLECTION&amp; PROCESS</b>												
	VOC Pump	<i>U.C. per EA</i>	2.00	EA	0		\$0	\$0	\$4,400	\$0	\$0	\$4,400
	Water Pump	<i>U.C. per EA</i>	2.00	EA	0		\$0	\$0	\$5,000	\$0	\$0	\$5,000
	VOC Storage	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$3,689	\$0	\$0	\$3,689
	VOC Transfer Pump	<i>U.C. per EA</i>	2.00	EA	0		\$0	\$0	\$4,400	\$0	\$0	\$4,400
	Oil absorber	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$500	\$0	\$0	\$500
	Carbon Bed	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$3,637	\$0	\$0	\$3,637
	Carbon Bed	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$3,637	\$0	\$0	\$3,637
	Carbon Bed	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$3,637	\$0	\$0	\$3,637
	Carbon Bed	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$3,637	\$0	\$0	\$3,637
	Water Evaporator	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$355,358	\$0	\$0	\$355,358
	Memo: Based on estimate #2684 for a replacement reheater for the HLLW system.											
	Assist Evaporator	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$70,529	\$0	\$0	\$70,529
	Memo: 5/2001 quote from Climate Technologies Corp. Scaled for larger size.											
	Evaporative cooling Tower	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$42,557	\$0	\$0	\$42,557
	Memo: Based on quote from Carrier on larger model. Scaled down accordingly.											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact Ail with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>3.2.02.05 TDF- WATER &amp; VOC COLLECTION&amp; PROCESS</u>												
	Cooling water pump		1.00	EA	0		\$0	\$0	4815 \$4,815	0 \$0	0 \$0	4815 \$4,815
	Subtotal						\$0	\$0	\$606,121	\$0	\$0	\$606,121
	Sales Tax						\$0	\$0	\$36,367	\$0	\$0	\$36,367
	INEEUSubcontractor Overheads						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											\$642,488
	Escalation						\$0	\$0	\$52,106	\$0	\$0	\$52,106
	Contingency						\$0	\$0	\$346,669	\$0	\$0	\$346,669
--Total	3.2.02.05 TDF- WATER & VOC COLLECTION & PROCESS				0		\$0	\$0	\$1,041,263	\$0	\$0	\$1,041,263

3.2.02.06 TDF-HVAC EQUIPMENT

	AIR HANDLING UNIT 20,000 CFM (ZONE I AREA)		3.00	EA	0		\$0	\$0	10000 \$30,000	0 \$0	0 \$0	10000 \$30,000
	275 kw ELECTRIC HEATER (ZONE I AREA)		1.00	EA	0		\$0	\$0	4500 \$4,500	0 \$0	0 \$0	4500 \$4,500
	HEPA FILTER (4 HIGH X 5 WIDE) 20,000 CFM (ZONE I AREA)		1.00	EA	0		\$0	\$0	300000 \$300,000	0 \$0	0 \$0	300000 \$300,000
	EXHAUST FAN 40 HP		3.00	EA	0		\$0	\$0	25000 \$75,000	0 \$0	0 \$0	25000 \$75,000
	HEPA FILTER (1 HIGH X 1 WIDE) 150 CFM (ZONE III AREA)		1.00	EA	0		\$0	\$0	15000 \$15,000	0 \$0	0 \$0	15000 \$15,000

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.06 TDF-HVAC EQUIPMENT</b>												
	EXHAUST FAN 1/2HP (ZONE III AREA)		3.00	EA	0		\$0	\$0	\$12,000	\$0	\$0	\$12,000
		<i>U.C. per EA</i>							4000			4000
							\$0	\$0	\$12,000	\$0	\$0	\$12,000
Subtotal							\$0	\$0	\$436,500	\$0	\$0	\$436,500
Sales Tax							\$0	\$0	\$26,190	\$0	\$0	\$26,190
INEEUSubcontractorOverheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												5462,690
Escalation							\$0	\$0	\$37,524	\$0	\$0	\$37,524
Continoency							\$0	\$0	\$249,655	\$0	\$0	\$249,655
—Total 3.2.02.06TDF-HVAC EQUIPMENT					0		\$0	\$0	\$749,869	\$0	\$0	5749,069

**3.2.02.07 TDF I&C PROCUREMENT**

**Memo: I&C costs are based on information recived from the BBWI engineering group. The engineering group developed a spreadsheet identifying the type and quantity of instrumentation required for each piece of equipment.**

	INSTRUMENTS& CONTROLS		1.00	LS	0		\$0	\$0	\$167,250	\$0	\$0	\$167,250
		<i>U.C. per LS</i>							167250			167250
							\$0	\$0	\$167,250	\$0	\$0	\$167,250
Subtotal							\$0	\$0	\$167,250	\$0	\$0	\$167,250
Sales Tax							\$0	\$0	\$10,035	\$0	\$0	\$10,035
INEEUSubcontractorOverheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$177,205
Escalation							\$0	\$0	\$14,378	\$0	\$0	\$14,378
Contingency							\$0	\$0	\$95,658	\$0	\$0	\$95,658
—Total 3.2.02.07 TDF I&C PROCUREMENT					0		\$0	\$0	\$287,321	\$0	\$0	5207,321

**EQUIP PROCURE (AIRLOCK TO CHARATERIZATION)**

	CCTV MONITORING SYSTEM-EQUIPMENT ONLY		4,250.00	SF	0		\$0	\$0	\$25,500	\$0	\$0	\$25,500
		<i>U.C. per SF</i>							6			6
							\$0	\$0	\$25,500	\$0	\$0	\$25,500

Memo: This unit cost is based on the GEM project. Assume the same type of equipment and quantities will be required

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquipDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>EQUIP PROCURE (AIRLOCK TO CHARATERIZATION)</u>												
	Subtotal							\$0	\$0	\$25,500	\$0	\$25,500
	Sales Tax							\$0	\$0	\$1,530	\$0	\$1,530
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$2,192	\$0	\$27,030
	Escalation							\$0	\$0	\$14,585	\$0	\$2,192
	Contingency							\$0	\$0	\$0	\$0	\$14,585
--Total	EQUIP PROCURE (AIRLOCK TO CHARATERIZATION)				0			\$0	\$0	\$43,807	\$0	\$43,807

3.3 BBWI MATERIAL HANDLING FEE

	PROCUREMENT FEE	<i>U.C. per \$</i>						0	0	0	0	0.12	0.12
			78,849,487.00\$		0			\$0	\$0	\$0	\$0	\$9,461,938	\$9,461,938
	G&A	<i>U.C. per \$</i>						0	0	0	0	0.38	0.38
			9,461,938.00\$		0			\$0	\$0	\$0	\$0	\$3,595,536	\$3,595,536
	Subtotal							\$0	\$0	\$0	\$0	\$1,305,747	\$13,057,475
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$0	\$1,058,961	\$13,057,475
	Escalation							\$0	\$0	\$0	\$0	\$7,045,449	\$1,058,961
	Contingency							\$0	\$0	\$0	\$0	\$0	\$7,045,449
—Total	3.3 BBWI MATERIAL HANDLING FEE				0			\$0	\$0	\$0	\$0	\$21,161,885	\$21,161,885

4.1 CONSTRUCTION MANAGEMENT

	CONSTRUCTION MANAGMENT	<i>U.C. per \$</i>						0	0	0	0	0.07	0.07
			129,858,389.00\$		0			\$0	\$0	\$0	\$0	\$9,090,087	\$9,090,087

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact A// with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.1 CONSTRUCTION MANAGEMENT</b>												
	Subtotal							\$0	\$0	\$0	\$9,090,087	\$9,090,087
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads		0.00%					\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$1,214,436	\$9,090,087
	Escalation							\$0	\$0	\$0	\$5,143,632	\$1,214,436
	Contingency							\$0	\$0	\$0	\$0	\$5,143,632
<b>---Total 4.1 CONSTRUCTION MANAGEMENT</b>					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,448,155</b>	<b>\$1 5,440,155</b>

**4.2.01.01 WRPf - GENERAL CONDITIONS**

	GEN	<i>U.C. per HRS</i>			<b>0.12</b>	<b>\$40.00</b>		<b>4.8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.8</b>
	SUPERVISION		250,569.00	HRS	30,068	CN-SUPR	\$1,202,731	\$0	\$0	\$0	\$0	\$0	\$1,202,731
Memo: @ 12% of labor hrs. Allow 55% of subcontract price as labor. Assume a \$40/hr rate to arrive at estimated labor hours included in subcontracted work.													
	GEN	<i>U.C. per \$</i>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0.006</b>	<b>0</b>	<b>0.006</b>
	Mobilization & Demobilization		32,768,423.00	\$	0	CN-SKWK	\$0	\$0	\$0	\$196,611	\$0	\$0	\$196,611
Memo: Mobilization/demobilization costs @ .6% of direct construction \$.													
	GEN	<i>U.C. per HRS</i>						<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
	CONSTRUCTION EQUIPMENT ALLOWANCE		250,569.00	HRS	0		\$0	\$1,002,276	\$0	\$0	\$0	\$0	\$1,002,276
Memo: @ \$2.50/LABOR HOUR.													
	GEN	<i>U.C. per \$</i>						<b>0</b>	<b>0</b>	<b>0.04</b>	<b>0</b>	<b>0</b>	<b>0.04</b>
	SMALL TOOLS & CONSUMABLES		19,612,163.00	\$	0		\$0	\$0	\$784,487	\$0	\$0	\$0	\$784,487
Memo: @ 4% of construction labor \$.													
	GEN	<i>U.C. per HRS</i>			<b>0.08</b>	<b>\$31.58</b>		<b>2.526</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.526</b>
	GENERAL CLEANUP		250,569.00	HRS	20,046	CN-LABR	\$633,038	\$0	\$0	\$0	\$0	\$0	\$633,038
Memo: @ 8% of construction labor hours.													
	GEN	<i>U.C. per HRS</i>			<b>0.05</b>	<b>\$34.52</b>		<b>1.726</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.726</b>
	CONDUCT OF OPERATIONS/CONDUCT OF MAINTENANCE		250,569.00	HRS	12,528	CN-SKWK	\$432,482	\$0	\$0	\$0	\$0	\$0	\$432,482
Memo: @ 5% of labor hours.													
	GEN	<i>U.C. per wks</i>			<b>40</b>	<b>\$70.00</b>		<b>2800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2800</b>
	QA Manager		107.00	wks	4,280	CN-MGR	\$299,600	\$0	\$0	\$0	\$0	\$0	\$299,600

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.01WRPF - GENERAL CONDITIONS</b>													
	QA Clerk	GEN			<i>U.C. per wks</i>	40	\$20.00	800	0	0	0	800	
			107.00	wks		4,280	CN-CLRK	\$85,600	\$0	\$0	\$0	\$85,600	
	QC Inspector (ave 3 inspectors)	GEN			<i>U.C. per wks</i>	120	\$40.00	4800	0	0	0	4800	
			107.00	wks		12,840	CN-SUPR	\$513,600	\$0	\$0	\$0	\$513,600	
	QA/QC Pickup (1 pickup)	GEN			<i>U.C. per wks</i>	40		0	315.2	0	0	315.2	
			107.00	wks		4,280	00E2060	\$0	\$33,726	\$0	\$0	\$33,726	
	Craning Allowance - W/ Operator & Oiler	GEN			<i>U.C. per Wk</i>	80	\$34.20	2736	1250	0	0	3986	
			107.00	Wk		8,560	CN-ENGR	\$292,752	\$133,750	\$0	\$0	\$426,502	
	CONSTRUCTION WAREHOUSE	GEN			<i>U.C. per SF</i>			0	0	0	75	75	
			15.000.00	SF		0		\$0	\$0	\$1,125,000	\$0	\$1,125,000	
Memo. Based on Means Facility Cost manual adjusted by our Nine-Block Matrix factors assuming a #6 or 7 on the Matrix. Assumption of 15,000sf was included													
Subtotal								\$3,459,803	\$1,169,752	\$784,487	\$1,321.61	\$0	\$6,735,652
Sales Tax								\$0	\$0	\$47,069	\$0	\$0	\$47,069
INEEL/Subcontractor Overheads							29.03%	\$1,004,381	\$339,579	\$241,401	\$383,664	\$0	\$1,969,024
Subtotal Estimate													\$8,751,746
Escalation								\$596,415	\$201,647	\$143,347	\$227,825	\$0	\$1,169,233
Contingency								\$2,526,061	\$854,056	\$607,133	\$964,930	\$0	\$4,952,181
— Total 4.2.01.01WRPF - GENERAL CONDITIONS						92,602		\$7,586,660	\$2,565,034	\$1,823,436	\$2,898,029	\$0	\$14,873,160

**4.2.01.02.01.01UTILITY SUPPORT- FIRE PUMP HOUSE**

	PRE-ENGINEERED METAL BUILDING 30 X 40				<i>U.C. per sf</i>			0	0	0	143.73	143.73
			1,200.00	sf		0		\$0	\$0	\$0	\$172,476	\$172,476
Memo: Unit costs for this pre-engineered metal building is based on historical cost of a facility erected at the RWMC area in 1998, the RWMC Maintenance Facility. The reflected unit cost includes slab on grade, building structure, mechanical, and electrical. The estimate file contains the historical cost data sheet.												

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact A// with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.02.01.01 UTILITY &amp; SUPPORT - FIRE PUMP HOUSE</b>													
	Subtotal							\$0	\$0	\$0	\$172,476	\$0	\$172,476
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads		0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$23,043	\$0	\$23,043
	Escalation							\$0	\$0	\$0	\$97,596	\$0	\$97,596
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
— Total 4.2.01.02.01.01 UTILITY & SUPPORT - FIRE PUMP HOUSE					0			\$0	\$0	\$0	\$293,114	\$0	\$293,114
<b>4.2.01.02.01.02 UTILITY &amp; SUPPORT - POTABLE WATER SYSTEM</b>													
	2" POTABLE LINE	PIPE						0	0	0	15	0	75
			U.C. per LF					\$0	\$0	\$0	\$15,000	\$0	\$15,000
			1,000.00	LF	0	CN-PIPE							
	EXCAVATION FOR LINE	GEN						0	0	0	50	0	50
			U.C. per LF					\$0	\$0	\$0	\$50,000	\$0	\$50,000
			1,000.00	LF	0	CN-ENGR							
	Subtotal							\$0	\$0	\$0	\$65,000	\$0	\$65,000
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads		33.43%					\$0	\$0	\$0	\$21,731	\$0	\$21,731
	Subtotal Estimate							\$0	\$0	\$0	\$11,587	\$0	\$11,587
	Escalation							\$0	\$0	\$0	\$49,077	\$0	\$49,077
	Continaency							\$0	\$0	\$0	\$0	\$0	\$0
— Total 4.2.01.02.01.02 UTILITY & SUPPORT - POTABLE WATER SYSTEM					0			\$0	\$0	\$0	\$147,394	\$0	\$147,394
<b>4.2.01.02.01.03 UTILITY &amp; SUPPORT - SANITARY WASTE SYSTEM</b>													
	4' SANITARY WASTE LINE	PIPE						0	0	0	40	0	40
			U.C. per LF					\$0	\$0	\$0	\$40,000	\$0	\$40,000
			1,000.00	LF	0	CN-PIPE							
	SEWAGE LIFT STATION (ALLOWANCE)	PIPE						0	0	0	42500	0	42500
			U.C. per EA					\$0	\$0	\$0	\$42,500	\$0	\$42,500
			1.00	EA	0	CN-PIPE							

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.03 UTILITY &amp; SUPPORT - SANITARY WASTE SYSTEM</b>												
	ELECTRICAL ALLOWANCE	ELEC	1.00	LS	0	CN-ELEC	\$0	\$0	\$0	10000	\$0	10000
										\$10,000		\$10,000
	EXCAVATION FOR LINE	GEN	1,000.00	LF	0	CN-ENGR	\$0	\$0	\$0	50	\$0	50
										\$50,000		\$50,000
Subtotal							\$0	\$0	\$0	\$142,500	\$0	\$142,500
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEU Subcontractor Overheads							\$0	\$0	\$0	\$59,011	\$0	\$59,011
Subtotal Estimate												\$201,511
Escalation							\$0	\$0	\$0	\$26,922	\$0	\$26,922
Contingency							\$0	\$0	\$0	\$114,025	\$0	\$114,025
— Total 4.2.01.02.01 .03 UTILITY & SUPPORT - SANITARY WASTE SYSTEM					0		\$0	\$0	\$0	\$342,458	\$0	\$342,450

**4.2.01.02.01.04 UTILITY & SUPPORT - FIRE PIPING SYSTEM**

	FIRE PUMPS	FP	2.00	EA	0	CN-SPRI	\$0	\$0	\$0	64500	\$0	64500
										\$129,000		\$129,000
	MISC VALVING, EQUIPMENT, & CONTROLS	FP	1.00	LS	0	CN-SPRI	\$0	\$0	\$0	38500	\$0	38500
										\$38,500		\$38,500
Memo: Allowance @ 30% of pump costs.												
	4" FIRE MAIN	FP	1,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	50	\$0	50
										\$50,000		\$50,000
Memo: Based on a detailed take off of pipe, PIV's, hydrants, thrust blocks, coat & wrap, jumpers testing, etc.												
	6" FIRE MAIN-LOOP	FP	3,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	65.3	\$0	65.3
										\$195,900		\$195,900
Memo: Based on a detailed take off of pipe, PIV's, hydrants, thrust blocks, coat & wrap, jumpers testing, etc.												
	WATER STORAGE TANK 40' DIA X 40' HIGH	FP	1.00	EA	0	CN-SPRI	\$0	\$0	\$0	130000	\$0	130000
										\$130,000		\$130,000
Memo: Costs are based on Richardsons 2000 API Cone Roof Storage tank sec. 100-370 page 3.												

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<u>4.2.01.02.01.04 UTILITY &amp; SUPPORT - FIRE PIPING SYSTEM</u>													
	TANK INSULATION	INSUL											
			<i>U.C. per SF</i>										
			6,284.00	SF	0	CN-ASBE	\$0	\$0	\$0	14.7	0	14.7	
							\$0	\$0	\$0	\$92,375	\$0	\$92,375	
	TANK FOUNDATION	GEN											
			<i>U.C. per LS</i>										
			1.00	LS	0	CN-ENGR	\$0	\$0	\$0	40000	0	40000	
							\$0	\$0	\$0	\$40,000	\$0	\$40,000	
	Memo: Allowance @ 30% of tank cost.												
	EXCAVATION FOR LINE	GEN											
			<i>U.C. per LF</i>										
			4,000.00	LF	0	CN-ENGR	\$0	\$0	\$0	50	0	50	
							\$0	\$0	\$0	\$200,000	\$0	\$200,000	
Subtotal							\$0	\$0	\$0	\$875,775	\$0	5875,775	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractor Overheads										38.40%	\$0	\$0	\$336,271
Subtotal Estimate													\$1,212,046
Escalation							\$0	\$0	\$0		\$161,929	\$0	\$161,929
Contingency							\$0	\$0	\$0		\$685,837	\$0	\$685,837
---Total 4.2.01.02.01.04 UTILITY & SUPPORT - FIRE PIPING SYSTEM					0		\$0	\$0	\$0	\$2,059,813	\$0	\$2,059,813	

4.2.01.02.01.05.2 SITEWORK

	Excavate for Concrete Pad	DIRT	<i>U.C. per CY</i>									
			44.00	CY	0.39	\$34.75	13.553	1.27	0	0	0	14.823
					17	CN-EQMD	\$596	\$56	\$0	\$0	\$0	\$652
	1 2 of Pitrun for Equipment Pad	DIRT	<i>U.C. per CY</i>									
			33.00	CY	0.032	\$34.75	1.098	0.711	8	0	0	9.809
					1	CN-EQMD	\$36	\$23	\$264	\$0	\$0	\$324
	4" of Compacted Crushed Gravel	DIRT	<i>U.C. per CY</i>									
			11.00	CY	1.09	\$34.75	37.877	30	27	0	0	94.877
					12	CN-EQMD	\$417	\$330	\$297	\$0	\$0	\$1,044

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RW/MC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS B. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.05.2 SITEWORK</b>												
	Surveyors	DIRT			20	\$33.17	663.4	0	0	0	0	663.4
			1.00	Day	20	CN-SURV	\$663	\$0	\$0	\$0	\$0	\$663
	U.C. per Day											
<b>Subtotal</b>							\$1,713	\$409	\$561	\$0	\$0	\$2,683
<b>Sales Tax</b>							\$0	\$0	\$34	\$0	\$0	\$34
<b>INEEUSubcontractorOverheads</b>							\$718	\$172	\$249	\$0	\$0	\$1,139
<b>Subtotal Estimate</b>												\$3,856
<b>Escalation</b>							\$325	\$78	\$113	\$0	\$0	\$515
<b>Contingency</b>							\$1,375	\$329	\$478	\$0	\$0	\$2,182
<b>—Total 4.2.01.02.01.05.2 SITEWORK</b>					<b>50</b>		<b>\$4,131</b>	<b>\$987</b>	<b>\$1,434</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,553</b>

**4.2.01.02.01.05.3 CONCRETE**

	Form & Strip 8' Concrete Pad	CONC	240.00	LF	0.07	\$35.81	2.507	0	0.22	0	0	2.727
					17	CN-CARP	\$602	\$0	\$53	\$0	\$0	\$654
	Tie Rebar For Transformer Pad	CONC	4,000.00	Lbs	0.02	\$35.81	0.716	0	0.3	0	0	1.076
					80	CN-RODM	\$2,865	\$0	\$1,200	\$0	\$0	\$4,065
	Place & Finish Concrete For Transformer Pad	CONC	40.00	CY	0.591	\$33.08	19.55	0	85	0	0	104.55
					24	CN-CONC	\$782	\$0	\$3,400	\$0	\$0	\$4,182

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>4.2.01.02.01.05.3 CONCRETE</u>												
	CONC	U.C. per ea			2	\$31.58	63.16	0	130	0	0	193.16
	Install Guard Post around Transformer Pad		48.00	ea	96	CN-LABR	\$3,032	\$0	\$6,240	\$0	\$0	\$9,272
Subtotal							\$7,280	\$0	\$10,893	\$0	\$0	\$18,173
Sales Tax							\$0	\$0	\$654	\$0	\$0	\$654
INEEUSubcontractor Overheads							41.93%	\$3,053	\$0	\$4,842	\$0	\$7,895
Subtotal Estimate												\$26,721
Escalation							\$1,380	\$0	\$2,189	\$0	\$0	\$3,570
Contingency							\$5,847	\$0	\$9,273	\$0	\$0	\$15,120
— Total 4.2.01.02.01.05.3 CONCRETE					216		\$17,560	\$0	\$27,851	\$0	\$0	\$45,411

4.2.01.02.01.05.4.1 SWITCHGEAR

	ELEC	U.C. per Ea			160	\$35.89	5742.4	5000	382000	0	0	392742.4	
	2000 AMP NEMA 3R WALK-IN 5KV DOUBLE ENDED SWITCHGEAR		1.00	Ea	160	CN-ELEC	\$5,742	\$5,000	\$382,000	\$0	\$0	\$392,742	
Memo: Cost for switchgear is factored from INTEC, EUSU, Sub 60 costs in 1997. This gear was 3000 amp Nema 1. This estimate assumes 14% escalation on \$375,000= \$427,500. Then factors to 66% because of the 2000 amp bus rating of this gear. The estimate adds \$100,00 to the estimate for the Neam3R enclosure.													
Subtotal							\$5,742	\$5,000	\$382,000	\$0	\$0	\$392,742	
Sales Tax							\$0	\$0	\$22,920	\$0	\$0	\$22,920	
INEEUSubcontractor Overheads							48.10%	\$2,762	\$2,405	\$194,783	\$0	\$0	\$199,950
Subtotal Estimate												\$615,613	
Escalation							\$1,136	\$989	\$80,120	\$0	\$0	\$82,246	
Contingency							\$4,812	\$4,190	\$339,342	\$0	\$0	\$348,345	
— Total 4.2.01.02.01.05.4.1 SWITCHGEAR					160		\$14,453	\$12,585	\$1,019,165	\$0	\$0	\$1,046,203	

4.2.01.02.01.05.4.2 TRANSFORMERS

	ELEC	U.C. per Ea			30	\$35.89	1076.7	500	17000	0	0	18576.7
	500 kVA 4160-277/480 DRY TRANSFORMER		1.00	Ea	30	CN-ELEC	\$1,077	\$500	\$17,000	\$0	\$0	\$18,577
Memo: Transformer and labor costs are based on R. S. Means.												

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Optlon**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.02.01.05.4.2 TRANSFORMERS</b>													
	ELEC	<i>U.C. per Ea</i>			<i>80</i>	<i>\$35.89</i>	<i>2871.2</i>	<i>5000</i>	<i>37700</i>	<i>0</i>	<i>0</i>	<i>45571.2</i>	
	2000 kVA 4160-277/480 DRY TRANSFORMER		2.00	Ea	160	CN-ELEC	\$5,742	\$10,000	\$75,400	\$0	\$0	\$91,142	
Subtotal							\$6,819	\$10,500	\$92,400	\$0	\$0	\$109,719	
Sales Tax							\$0	\$0	\$5,544	\$0	\$0	\$5,544	
INEEUSubcontractorOverheads							48.10%	\$3,280	\$5,051	\$47,115	\$0	\$0	\$55,446
Subtotal Estimate												\$170,709	
Escalation							\$1,349	\$2,078	\$19,380	\$0	\$0	\$22,807	
Contingency							\$5,715	\$8,799	\$82,082	\$0	\$0	\$96,596	
—Total 4.2.01.02.01.05.4.2 TRANSFORMERS					190		\$17,163	\$26,428	\$246,521	\$0	\$0	\$290,112	

**4.2.01.02.01.05.4.3 STANDBY GENERATOR**

	ELEC	<i>U.C. per Ea</i>			<i>120</i>	<i>\$35.89</i>	<i>4306.8</i>	<i>5000</i>	<i>233000</i>	<i>0</i>	<i>0</i>	<i>242306.8</i>	
	1000kW DIESEL GENERATOR		1.00	Ea	120	CN-ELEC	\$4,307	\$5,000	\$233,000	\$0	\$0	\$242,307	
Memo. Pricing is based on a verbal ROM quote from Western States Equipment in Boise, 6/30/03. Price includes louvers, day tank, and maint fuel tank.													
Subtotal							\$4,307	\$5,000	\$233,000	\$0	\$0	\$242,307	
Sales Tax							\$0	\$0	\$13,980	\$0	\$0	\$13,980	
INEEUSubcontractorOverheads							48.10%	\$2,072	\$2,405	\$118,807	\$0	\$0	\$123,284
Subtotal Estimate												\$379,571	
Escalation							\$852	\$989	\$48,869	\$0	\$0	\$50,711	
Contingency							\$3,609	\$4,190	\$206,981	\$0	\$0	\$214,780	
—Total 4.2.01.02.01.05.4.3 STANDBY GENERATOR					120		\$10,840	\$12,585	\$621,637	\$0	\$0	\$645,062	

**4.2.01.02.01.05.4.4 CONDUCTORS AND GROUNDING**

	ELEC	<i>U.C. per Lf</i>			<i>0.07</i>	<i>\$35.89</i>	<i>2.512</i>	<i>0</i>	<i>4.5</i>	<i>0</i>	<i>0</i>	<i>7.012</i>
	500 MCM 5 kV POWER CABLE, ASSUME 6 PER PHASE, 200 LF run		3,600.00	Lf	252	CN-ELEC	\$9,044	\$0	\$16,200	\$0	\$0	\$25,244

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.02.01.05.4.4 CONDUCTORS AND GROUNDING</b>													
	1/0 GROUND WIRE	ELEC	U.C. per Lf		0.03	\$35.89	1,077	0	0.8	0	0	1,877	
			3,200.00	Lf	96	CN-ELEC	\$3,445	\$0	\$2,560	\$0	\$0	\$6,005	
	500 MCM 600 VOLT CABLE	ELEC	U.C. per Lf		0.05	\$35.89	1,795	0	2.37	0	0	4,165	
			13,500.00	Lf	675	CN-ELEC	\$24,226	\$0	\$31,995	\$0	\$0	\$56,221	
Memo. Assume distribution transformers are located 500 Lf from the 5 kV switchgear.													
	2/0 BARE COPPER GROUND FOR SWITCHGEAR PAD	ELEC	U.C. per Lf		0.03	\$35.89	1,077	0	0.8	0	0	1,877	
			600.00	Lf	18	CN-ELEC	\$646	\$0	\$480	\$0	\$0	\$1,126	
	3/0 BARE COPPER GROUND FOR SWITCHGEAR PAD	ELEC	U.C. per Lf		0.032	\$35.89	1,148	0	1	0	0	2,148	
			500.00	Lf	16	CN-ELEC	\$574	\$0	\$500	\$0	\$0	\$1,074	
	CADWELDS	ELEC	U.C. per Ea		1.5	\$35.89	53,835	0	17	0	0	70,835	
			70.00	Ea	105	CN-ELEC	\$3,768	\$0	\$1,190	\$0	\$0	\$4,958	
	GROUND RODS	ELEC	U.C. per Ea		1	\$35.89	35.89	0	35	0	0	70.89	
			20.00	Ea	20	CN-ELEC	\$718	\$0	\$700	\$0	\$0	\$1,410	
Subtotal							\$42,422	\$0	\$53,625	\$0	\$0	\$96,047	
Sales Tax							\$0	\$0	\$3,210	\$0	\$0	\$3,210	
INEEUSubcontractorOverheads							48.10%	\$20,407	\$0	\$27,344	\$0	\$0	\$47,750
Subtotal Estimate												\$147,015	
Escalation							\$8,394	\$0	\$11,247	\$0	\$0	\$19,641	
Contingency							\$35,552	\$0	\$47,637	\$0	\$0	\$83,189	
-Total 4.2.01.02.01.05.4.4 CONDUCTORS AND GROUNDING					1,182		\$106,774	\$0	\$143,070	\$0	\$0	\$249,844	

**4.2.01.02.01.05.4.5 TESTING**

	Testing of systems and equipment	ELEC	U.C. per Is		200	\$35.89	7,178	0	0	0	0	7,178
			1.00	Is	200	CN-ELEC	\$7,178	\$0	\$0	\$0	\$0	\$7,178

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.05.4.5 TESTING</b>												
	Subtotal						\$7,178	\$0	\$0	\$0	\$0	\$7,178
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads	<b>48.10%</b>					\$3,453	\$0	\$0	\$0	\$0	\$3,453
	Subtotal Estimate											\$10,631
	Escalation						\$1,420	\$0	\$0	\$0	\$0	\$1,420
	Contingency						\$6,016	\$0	\$0	\$0	\$0	\$6,016
— Total 4.2.01.02.01.05.4.5 TESTING					200		\$18,067	\$0	\$0	\$0	\$0	\$18,067

**4.2.01.02.02 WRPf- EARTHWORK**

	DIRT	<i>U.C. per CY</i>					0	0	0	3.51	0	3.51
	FOUNDATION EXCAVATION		9,259.00	CY	0		\$0	\$0	\$0	\$32,499	\$0	\$32,499
	DIRT	<i>U.C. per CY</i>					0	0	0	13.87	0	13.87
	FOUNDATION BACKFILL & COMPACT		8,387.00	CY	0		\$0	\$0	\$0	\$1,163,328	\$0	\$1,163,328
	DIRT	<i>U.C. per CY</i>					0	0	0	1.8	0	1.8
	SPREAD EXCESS EXCAVATED MATERIAL		872.00	CY	0		\$0	\$0	\$0	\$1,570	\$0	\$1,570
	Subtotal						\$0	\$0	\$0	\$150,396	\$0	\$150,396
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads	<b>41.93%</b>					\$0	\$0	\$0	\$63,066	\$0	\$63,066
	Subtotal Estimate											\$213,462
	Escalation						\$0	\$0	\$0	\$28,519	\$0	\$28,519
	Contingency						\$0	\$0	\$0	\$120,788	\$0	\$120,788
— Total 4.2.01.02.02 WRPf- EARTHWORK					0		\$0	\$0	\$0	\$362,768	\$0	\$362,768

**4.2.01.03 WRPf- CONCRETE**

	GEN	<i>U.C. per CY</i>					0	0	0	430	0	430
	FOUNDATION WALLS & FTGS.		662.00	CY	0		\$0	\$0	\$0	\$284,660	\$0	\$284,660

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.03WRPF - CONCRETE</b>												
	MISC. & EQUIP. FDNS.	GEN	210.00	CY	0		\$0	\$0	\$0	430	\$0	430
										\$90,300		\$90,300
	FLOORS	GEN	1,544.00	CY	0		\$0	\$0	\$0	430	\$0	430
										\$663,920		\$663,920
	WALLS	GEN	2,389.00	CY	15,811	\$34.52	545,803	0	191.31	79.26	0	816,373
					37,773	CN-SKWK	\$1,303,922	\$0	\$457,040	\$189,352	\$0	\$1,950,314
	COLUMNS	GEN	866.00	CY	8,525	\$34.52	294,283	0	131.8	306.18	0	732,263
					7,383	CN-SKWK	\$254,849	\$0	\$114,139	\$265,152	\$0	\$634,140
	BEAMS & GIRDERS	GEN	741.00	CY	9,404	\$34.52	324,626	0	143.8	235.81	0	704,236
					6,968	CN-SKWK	\$240,548	\$0	\$106,556	\$174,735	\$0	\$521,839
<b>Subtotal</b>							\$1,799,319	\$0	\$677,734	\$1,668,119	\$0	\$4,145,173
<b>Sales Tax</b>							\$0	\$0	\$40,664	\$0	\$0	\$40,664
<b>INEEL/Subcontractor Overheads</b>							29.03%	\$522,342	\$0	\$208,551	\$484,255	\$1,215,148
<b>Subtotal Estimate</b>												\$5,400,985
<b>Escalation</b>							\$310,174	\$0	\$123,840	\$287,557	\$0	\$721,572
<b>Contingency</b>							\$1,313,714	\$0	\$524,515	\$1,217,922	\$0	\$3,056,151
<b>—Total 4.2.01.03WRPF - CONCRETE</b>					<b>52,124</b>		<b>\$3,945,550</b>	<b>\$0</b>	<b>\$1,575,305</b>	<b>\$3,657,854</b>	<b>\$0</b>	<b>\$9,178,708</b>

**4.2.01.05WRPF - METALS**

	ROOF DECK	STEEL	62,500.00	SF	0.012	542.71	0.519	0.288	2.683	0	0	3.49
					759	STEEL1	\$32,435	\$17,985	\$167,688	\$0	\$0	\$218,107

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.05 WRPf - METALS</b>												
	Subtotal						\$32,435	\$17,985	\$167,688	\$0	\$0	\$218,107
	Sales Tax						\$0	\$0	\$10,061	\$0	\$0	\$10,061
	INEEUSubcontractor Overheads	41.93%					\$13,601	\$7,541	\$74,535	\$0	\$0	\$95,678
	<b>Subtotal Estimate</b>											<b>\$323,847</b>
	Escalation						\$6,150	\$3,410	\$33,705	\$0	\$0	\$43,266
	Continoency						\$26,050	\$14,444	\$142,755	\$0	\$0	\$183,249
<b>—Total 4.2.01.05 WRPf - METALS</b>					<b>759</b>		<b>\$78,237</b>	<b>\$43,380</b>	<b>\$428,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$550,361</b>

**4.2.01.07 WRPf -THERMAL & MOISTURE PROTECTION**

	ROOF INSULATION	ROOF	U.C. per SF	62,500.00	SF	0		0	0	1.931	0	1.931
							\$0	\$0	\$0	\$120,706	\$0	\$120,706
	ROOFING	ROOF	U.C. per SF	62,500.00	SF	0		0	0	2.938	0	2.938
							\$0	\$0	\$0	\$183,594	\$0	\$183,594
	EXTERIOR WALL INSULATION	INSUL	U.C. per SF	51,060.00	SF	0		0	0	1.71	0	1.71
							\$0	\$0	\$0	\$87,313	\$0	\$87,313
	EXTERIOR WALL METAL SIDING	STEEL	U.C. per SF	51,060.00	SF	0.068 3,447	\$36.82 CN-SHEE	2.485	0	4.47	0	6.955
							\$126,902	\$0	\$228,238	\$0	\$0	\$355,140
	Subtotal						\$126,902	\$0	\$228,238	\$391,613	\$0	\$746,753
	Sales Tax						\$0	\$0	\$13,694	\$0	\$0	\$13,694
	INEEUSubcontractor Overheads	41.93%					\$53,214	\$0	\$1,014,500	\$164,215	\$0	\$318,878
	<b>Subtotal Estimate</b>											<b>\$1,079,325</b>
	Escalation						\$24,063	\$0	\$45,876	\$74,259	\$0	\$144,198
	Contingency						\$101,919	\$0	\$194,303	\$314,515	\$0	\$610,737
<b>—Total 4.2.01.07 WRPf -THERMAL &amp; MOISTURE PROTECTION</b>					<b>3,447</b>		<b>\$306,098</b>	<b>\$0</b>	<b>\$583,561</b>	<b>\$944,601</b>	<b>\$0</b>	<b>\$1,834,260</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.08 WRPF - DOORS &amp; WINDOWS</b>													
	PERSONNEL DOORS 3'X7'	GEN	7.00	EA	6.885 48	\$35.81 CN-CARP	246.551 \$1,726	0 \$0	903.89 \$6,327	0 \$0	0 \$0	1150.441 \$8,053	
	PERSONNEL DOORS 6'X7'	GEN	3.00	EA	14.58 44	\$35.81 CN-CARP	522.11 \$1,566	0 \$0	2089.37 \$6,268	0 \$0	0 \$0	2611.48 \$7,834	
Subtotal							\$3,292	\$0	\$12,595	\$0	\$0	\$15,888	
Sales Tax							\$0	\$0	\$756	\$0	\$0	\$756	
INEEUSubcontractorOverheads							29.03%	\$956	\$0	\$3,876	\$0	\$0	\$4,832
Subtotal Estimate												\$21,475	
Escalation							\$568	\$0	\$2,302	\$0	\$0	\$2,869	
Contingency							\$2,404	\$0	\$9,748	\$0	\$0	\$12,152	
— Total 4.2.01.08 WRPF - DOORS & WINDOWS					92		\$7,219	\$0	\$29,276	\$0	\$0	\$36,495	
<b>4.2.01.09 WRPF - FINISHES</b>													
	EPOXY FLOOR COATING	PAINT	62,500.00	SF	0.108 6,750	\$38.00 CN-PNTS	4.104 \$256,500	0 \$0	1.07 \$66,875	0 \$0	0 \$0	5.174 \$323,375	
	EPOXY WALL & CEILING COATING	PAINT	126,992.00	SF	0.078 9,905	\$38.00 CN-PNTS	2.964 \$376,404	0 \$0	1.14 \$144,771	0 \$0	0 \$0	4.104 \$521,175	
Subtotal							\$632,904	\$0	\$211,646	\$0	\$0	\$844,550	
Sales Tax							\$0	\$0	\$12,699	\$0	\$0	\$12,699	
INEEUSubcontractorOverheads							41.93%	\$265,396	\$0	\$94,074	\$0	\$0	\$359,470
Subtotal Estimate												\$1,216,719	
Escalation							\$120,013	\$0	\$42,541	\$0	\$0	\$162,554	
Contingency							\$508,304	\$0	\$180,178	\$0	\$0	\$688,481	
— Total 4.2.01.09 WRPF - FINISHES					16,655		\$1,526,617	\$0	\$541,137	\$0	\$0	\$2,067,754	

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.11 WRPF - EQUIPMENT-INSTALL GFE</b>												
<i>Memo: From "Plant Design and Economics for Chemical Engineers," the average installation costs are about 25% of purchase price. Due to the very specialized nature of some of these systems (and the very high system purchase prices), assume installation will be one-half the average or 12.5% of purchase price. This factor will only apply to the non-HVAC and non-I&amp;C equipment. HVAC and I&amp;C equipment installation will be detailed separately.</i>												
	EQUIPMENT INSTALLATION					U.C. per \$	0.125	0	0	0	0	0.125
			80,244,501.00	\$	0		\$10,030,563	\$0	\$0	\$0	\$0	\$10,030,563
Subtotal							\$10,030,563	\$0	\$0	\$0	\$0	\$10,030,563
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$10,030,563
Escalation							\$1,340,083	\$0	\$0	\$0	\$0	\$1,340,083
Continaency							\$5,675,800	\$0	\$0	\$0	\$0	\$5,675,800
--Total 4.2.01.11 WRPF - EQUIPMENT-INSTALL GFE					0		\$17,046,446	\$0	\$0	\$0	\$0	\$17,046,446

**4.2.01.15.01 WRP - INSTALL HVAC EQUIPMENT & DUCT**

	PIPE	U.C. per EA	60	\$36.82	2209.2	0	0	0	0	0	2209.2	
1000 KW HEATER SECTION (PREHEAT)	1.00	EA	60	CN-SHEE	\$2,209	\$0	\$0	\$0	\$0	\$0	\$2,209	
	PIPE	U.C. per EA	160	\$36.82	5891.2	0	0	0	0	0	5891.2	
INLET HEPA FILTER TRAIN 6X4 (1,500CFM/ FILTER)	2.00	EA	320	CN-SHEE	\$11,782	\$0	\$0	\$0	\$0	\$0	\$11,782	
<i>Memo: The cost for this filter train includes; inlet isolation dampers, prefilter section, test inlet, HEPA filters, test outlet, &amp; outlet isolation damper.</i>												
	PIPE	U.C. per EA	160	\$36.82	5891.2	0	0	0	0	0	5891.2	
OUTLET HEPA FILTER TRAIN 6X4 (1,500CFM/ FILTER)	2.00	EA	320	CN-SHEE	\$11,782	\$0	\$0	\$0	\$0	\$0	\$11,782	
<i>Memo: The cost for this filter train includes; inlet isolation dampers, mist eliminator, TI, charcoal filter, heater section (RH control), prefilter section, test inlet, HEPA filters, test combination, &amp; outlet isolation damper.</i>												
	PIPE	U.C. per EA	150	\$36.82	5523	0	0	0	0	0	5523	
MAIN EXHAUST FAN (62,500CFM- 300 HP)	1.00	EA	150	CN-SHEE	\$5,523	\$0	\$0	\$0	\$0	\$0	\$5,523	
	PIPE	U.C. per EA	120	\$36.82	4418.4	0	0	0	0	0	4418.4	
BACK-UP EXHAUST FAN (11,000CFM-200 HP)	1.00	EA	120	CN-SHEE	\$4,418	\$0	\$0	\$0	\$0	\$0	\$4,418	
	PIPE	U.C. per EA	8	\$36.82	294.56	0	0	0	0	0	294.56	
RADIANT HEATERS 13.5KW	18.00	EA	144	CN-SHEE	\$5,302	\$0	\$0	\$0	\$0	\$0	\$5,302	

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.15.01 WRP - INSTALL HVAC EQUIPMENT &amp; DUCT</b>													
	PIPE	<i>U.C. per EA</i>			60	\$36.82	2209.2	0	0	0	0	2209.2	
	COMPUTER ROOM AC UNIT (10TON GLYCOL UNIT)		1.00	EA	60	CN-SHEE	\$2,209	\$0	\$0	\$0	\$0	\$2,209	
	HVAC	<i>U.C. per LBS</i>			0.2	\$36.82	7.364	0.3	2	0	0	9.664	
	STAINLESS STEEL DUCTWORK (BASED ON 1 LBS/SF)		62,500.00	LBS	12,500	CN-SHEE	\$460,250	\$18,750	\$125,000	\$0	\$0	5604,000	
	HVAC	<i>U.C. per LBS</i>			0.08	\$36.82	2.946	0.3	0.75	0	0	3.996	
	GALVANIZED STEEL DUCTWORK (BASED ON 1 LBS/SF)		62,500.00	LBS	5,000	CN-SHEE	\$184,100	\$18,750	\$46,875	\$0	\$0	\$249,725	
Subtotal							\$607,577	\$37,500	\$171,875	\$0	\$0	\$896,952	
Sales Tax							\$0	\$0	\$10,313	\$0	\$0	\$10,313	
INEEUSubcontractor Overheads							45.75%	\$314,847	\$17,113	\$83,142	\$0	\$0	\$415,102
Subtotal Estimate												\$1,322,367	
Escalation							\$133,924	\$7,296	\$35,448	\$0	\$0	\$176,668	
Contingency							\$567,222	\$30,903	\$150,137	\$0	\$0	\$748,262	
---Total 4.2.01.15.01 WRP - INSTALL HVAC EQUIPMENT & DUCT					18,674		\$1,703,569	\$92,813	\$450,915	\$0	\$0	\$2,247,297	

**4.2.01.15.02 WRP - FIRE PROTECTION**

**Memo:** *Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.*

	FP	<i>U.C. per SF</i>			0		0	0	0	3.4	0	3.4
	WRPF-FACILITY FIRE SYSTEM CONTROLS		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$212,500	\$0	5212.500
	FP	<i>U.C. per SF</i>			0		0	0	0	3.65	0	3.65
	WRPF-DRY PIPE FIRE PROTECTION		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$228,125	\$0	\$228,125
	FP	<i>U.C. per SF</i>			0		0	0	0	3.65	0	3.65
	WRPF-DRY PIPE FIRE PROTECTION (SECONDARY COVERAGE UNDER EQUIPMENT)		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$228,125	\$0	\$228,125
	FP	<i>U.C. per LF</i>			0		0	0	0	65.3	0	65.3
	WRPF- FEED MAINS		1,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	\$65,300	\$0	\$65,300

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact Ail with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.15.02 WRPf - FIRE PROTECTION</b>													
<i>Memo: Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.</i>													
	FP					<i>U.C. per LS</i>							
	WRPF-EXTRA HAZARD FOAM SYSTEM (EQUIPMENT ONLY)		1.00	LS	0	CN-SPRI	\$0	\$0	\$0	100000	\$0	100000	
	FP					<i>U.C. per SF</i>							
	WRPF-EXTRA HAZARD FOAM PIPING DISTRIBUTION SYSTEM		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	4.35	\$0	4.35	
	FP					<i>U.C. per EA</i>							
	WRPF-EXTRA HAZARD FOAM MONITOR NOZZLES		6.00	EA	0	CN-SPRI	\$0	\$0	\$0	10 m	\$0	10000	
	WRPF-GLOVEBOX MIST SYSTEM		73,495.00	CF	0		\$0	\$0	\$0	30.17	\$0	30.77	
<i>Memo: Cost per cubic foot is based on the GEM facility glovebox fire protection misting system. Due to the extremely large sized gloveboxes an economy of scale factor was used @ 50% of GEM project.</i>													
Subtotal							\$0	\$0	\$0	\$3,383,269	\$0	\$3,383,269	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	
INEEUSubcontractorOverheads										14.45%	\$0	388,907	
Subtotal Estimate												\$3,072,176	
Escalation							\$0	\$0	\$0		\$517,323	\$0	\$517,323
Contingency							\$0	\$0	\$0		\$2,191,074	\$0	\$2,191,074
--Total 4.2.01.15.02 WRPf - FIRE PROTECTION					0		\$0	\$0	\$0	\$6,500,573	\$0	\$6,500,573	

**4.2.01.15.03 WRPf - PLANT AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.*

	WRPF-PLANT AIR DIST. SYSTEM		62,500.00	SF	0		\$0	\$0	\$0	2.04	\$0	2.04
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**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.15.03WRPF - PLANT AIR</b>													
<i>Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.</i>													
	Subtotal							\$0	\$0	\$0	\$127,500	\$0	\$127,500
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$17,034	\$0	\$17,034
	Escalation							\$0	\$0	\$0	\$72,146	\$0	\$72,146
	Continaency							\$0	\$0	\$0	\$0	\$0	\$0
—Total	4.2.01.15.03WRPF - PLANT AIR				0			\$0	\$0	\$0	\$216,680	\$0	\$216,680

**4.2.01.15.04WRPF - BREATHING AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. No costs for the breathing air compressor have been included, assume provided to the project by the BBWI equipment pool at no cost to this project.*

	WRPF-BREATHING AIR DIST. SYSTEM	U.C. per SF	62,500.00	SF	0			\$0	\$0	\$0	\$700,000	\$0	\$700,000
	Subtotal							\$0	\$0	\$0	\$700,000	\$0	\$700,000
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$93,520	\$0	\$93,520
	Escalation							\$0	\$0	\$0	\$396,095	\$0	\$396,095
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
—Total	4.2.01.15.04WRPF - BREATHING AIR				0			\$0	\$0	\$0	\$1,189,615	\$0	\$1,189,615

**WRPF - PROCESS PIPING**

*Memo: Allowance is based on previous detail take-off process piping system.*

	PIPE	U.C. per SF	31,250.00	SF	0.182	\$39.33	7.158	0	32.7	0	0	39.858	
	PROCESS PIPING ALLOWANCE (assume 50% reduction due to the equipment type)		31,250.00	SF	5,688	CN-PIPE	\$223,689	\$0	\$1,021,875	\$0	\$0	\$0	\$1,245,564

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>WRPF - PROCESS PIPING</u>												
<i>Memo: Allowance is based on previous detail take-off process piping system.</i>												
	Subtotal						\$223,689	\$0	\$1,021,675	\$0	\$0	\$1,245,564
	Sales Tax						\$0	\$0	\$61,313	\$0	\$0	\$61,313
	INEEUSubcontractorOverheads	48.10%					\$1,07,604	\$0	\$521,057	\$0	\$0	\$628,660
	Subtotal Estimate											\$1,935,537
	Escalation						\$44,261	\$0	\$214,327	\$0	\$0	5258,588
	Contingency						\$1,87,462	\$0	\$907,763	\$0	\$0	\$1,095,225
—Total	WRPF - PROCESS PIPING				5,688		\$563,016	\$0	\$2,726,334	\$0	\$0	\$3,289,349

4.2.01.16.01WRPF - GENERAL FACILITIES ELECTRICAL

*Memo: Costs are based on the GEM project calculated square footage.*

	FACILITY RACEWAYS		62,500.00	SF	0		\$0	\$0	\$0	17	\$0	\$1,062,500
		<i>U.C.per SF</i>					0	0	0	0	0	77
	FACILITY WIRE & CABLE		62,500.00	SF	0		\$0	\$0	\$0	6.36	\$0	\$397,500
		<i>U.C.per SF</i>					0	0	0	0	0	6.36
	FACILITY LIGHTING		62,500.00	SF	0		\$0	\$0	\$0	8.75	\$0	\$546,875
		<i>U.C.per SF</i>					0	0	0	0	0	8.75
	FACILITY MISC. (TELEPHONE, LIGHTNING PROTECTION, ETC.)		62,500.00	SF	0		\$0	\$0	\$0	5.45	\$0	\$340,625
		<i>U.C.per SF</i>					0	0	0	0	0	5.45
	Subtotal						\$0	\$0	\$0	\$2,347,500	\$0	\$2,347,500
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											\$2,347,500
	Escalation						\$0	\$0	\$0	\$313,626	\$0	531,3,626
	Continaency						\$0	\$0	\$0	\$1,326,334	\$0	\$1,328,334
—Total	4.2.01.16.01WRPF - GENERAL FACILITIES ELECTRICAL				0		\$0	\$0	\$0	\$3,989,460	\$0	\$3,989,460

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<u>4.2.01.16.02.1 SWITCHGEAR</u>													
	MCC-2000, 4000 AMP	ELEC				<i>U.C. per Ea</i>							
			1.00	Ea	160	\$35.89	5742.4	5000	56000	0	0	66742.4	
					160	CN-ELEC	\$5,742	\$5,000	\$56,000	\$0	\$0	\$66,742	
Memo	Estimate is based on R. S Means and G E. Buy Log for material pricing. The estimate assumes this gear will have a HPS for a main breaker, will require metering, and will be gfci protected. All panel pricing is based on the above listed sources.												
	SMCC-0082, 600 AMP	ELEC				<i>U.C. per Ea</i>							
			1.00	Ea	24	\$35.89	861.36	0	6500	0	0	7361.36	
					24	CN-ELEC	\$861	\$0	\$6,500	\$0	\$0	\$7,361	
	PP-2000,600 AMP	ELEC				<i>U.C. per Ea</i>							
			1.00	Ea	24	\$35.89	861.36	0	6500	0	0	7361.36	
					24	CN-ELEC	\$861	\$0	\$6,500	\$0	\$0	\$7,361	
Memo	Assume this will be a 4000 amp switchboard. 5000 amp is a non standard unit and pricing is not available.												
	480 VOLT DISTRIBUTION PANELS	ELEC				<i>U.C. per Ea</i>							
			13.00	Ea	16	\$35.89	574.24	0	5000	0	0	5574.24	
					208	CN-ELEC	\$7,465	\$0	\$65,000	\$0	\$0	\$72,465	
	120/208 PANELS	ELEC				<i>U.C. per Ls</i>							
			1.00	Ls	80	\$35.89	2871.2	0	10000	0	0	12871.2	
					80	CN-ELEC	\$2,871	\$0	\$10,000	\$0	\$0	\$12,871	
	ALLOWANCE FOR DISCONNECTS AND SMALL STRATERS	ELEC				<i>U.C. per Ls</i>							
			1.00	Ls	120	\$35.89	4306.8	0	10000	0	0	14306.8	
					120	CN-ELEC	\$4,307	\$0	\$10,000	\$0	\$0	\$14,307	
	ALLOWANCE FOR SMALL STEP DOWN TRANSFORMERS	ELEC				<i>U.C. per Ls</i>							
			1.00	Ls	40	\$35.89	1435.6	0	5000	0	0	6435.6	
					40	CN-ELEC	\$1,436	\$0	\$5,000	\$0	\$0	\$6,436	
Subtotal								\$23,544	\$5,000	\$159,000	\$0	\$0	\$187,544
Sales Tax								\$0	\$0	\$9,540	\$0	\$0	\$9,540
INEEL/Subcontractor Overheads							48.10%	\$11,326	\$2,405	\$81,074	\$0	\$0	\$94,805
Subtotal Estimate													\$291,889
Escalation								\$4,659	\$989	\$33,348	\$0	\$0	\$38,996
Contingency								\$19,731	\$4,190	\$141,245	\$0	\$0	\$165,166
— Total 4.2.01.16.02.1 SWITCHGEAR					656		\$59,259	\$12,585	\$424,207	\$0	\$0	\$496,051	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Descridion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EauiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.16.02.2 EQUIPMENT CONTROLS</b>													
	ELEC				<b>360</b>	<b>\$35.89</b>	<b>12920.4</b>		<b>0</b>	<b>35000</b>	<b>0</b>	<b>0</b>	<b>47920.4</b>
	PLC CONTROLLER, INCLUDING I/O's, SIGNAL POINTS, TRANSMITTERS		1.00	Ls	360	CN-ELEC	\$12,920	\$0	\$35,000	\$0	\$0	\$47,920	
Subtotal							\$12,920	\$0	\$35,000	\$0	\$0	\$47,920	
Sales Tax							\$0	\$0	\$2,100	\$0	\$0	\$2,100	
INEEL Subcontractor Overheads							\$6,215	\$0	\$17,847	\$0	\$0	\$24,062	
Subtotal Estimate												\$74,082	
Escalation							\$2,557	\$0	\$7,341	\$0	\$0	\$9,897	
Contingency							\$10,828	\$0	\$31,092	\$0	\$0	\$41,919	
--Total 4.2.01.16.02.2 EQUIPMENT CONTROLS					360		\$32,520	\$0	\$93,379	\$0	\$0	\$125,899	
<b>4.2.01.16.02.3 RACEWAYS AND ENCLOSURES</b>													
	ELEC				<b>40</b>	<b>\$35.89</b>	<b>1435.6</b>		<b>0</b>	<b>2000</b>	<b>0</b>	<b>0</b>	<b>3435.6</b>
	ALLOWANCE FOR LARGE JUNCTION BOXES AND GUTTER		1.00	Ls	40	CN-ELEC	\$1,436	\$0	\$2,000	\$0	\$0	\$3,436	
	ELEC				<b>0.24</b>	<b>\$35.89</b>	<b>8.614</b>		<b>0</b>	<b>3.31</b>	<b>0</b>	<b>0</b>	<b>11.924</b>
	2" GRC WITH FITTINGS AND SUPPORTS		5,100.00	Lf	1,224	CN-ELEC	\$43,929	\$0	\$16,881	\$0	\$0	\$60,810	
Memo: The estimate assumes an average size of branch feeder conduits will be 2", and that the average length of the conduit run will be 150 lf.													
	ELEC				<b>0.16</b>	<b>\$35.89</b>	<b>5.742</b>		<b>0</b>	<b>0.52</b>	<b>0</b>	<b>0</b>	<b>6.262</b>
	1/0 THHN COPPER WIRE		1,700.00	Lf	272	CN-ELEC	\$9,762	\$0	\$884	\$0	\$0	\$10,646	
Subtotal							\$55,127	\$0	\$19,765	\$0	\$0	\$74,892	
Sales Tax							\$0	\$0	\$1,186	\$0	\$0	\$1,186	
INEEL/Subcontractor Overheads							\$26,518	\$0	\$10,078	\$0	\$0	\$36,597	
Subtotal Estimate												\$112,674	
Escalation							\$10,908	\$0	\$4,145	\$0	\$0	\$15,053	
Contingency							\$46,199	\$0	\$17,558	\$0	\$0	\$63,757	
--Total 4.2.01.16.02.3 RACEWAYS AND ENCLOSURES					1,536		\$138,752	\$0	\$52,732	\$0	\$0	\$191,485	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment Compact A// with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS, B. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.16.02.4 CONDUCTORS AND GROUNDING</b>													
	ELEC	<i>U.C. per Lf</i>			<i>0.4</i>	<i>\$35.89</i>	<i>14.356</i>	<i>0</i>	<i>1.22</i>	<i>0</i>	<i>0</i>	<i>15.576</i>	
	250 MCM THHN COPPER WIRE FEEDERS		17,000.00	Lf	6,800	CN-ELEC	\$244,052	\$0	\$20,740	\$0	\$0	\$264,792	
	ELEC	<i>U.C. per Ea</i>			<i>8</i>	<i>\$35.89</i>	<i>287.12</i>	<i>0</i>	<i>150</i>	<i>0</i>	<i>0</i>	<i>437.12</i>	
	ALLOWANCE FOR MOTOR CONNECTIONS AND TESTING		37.00	Ea	296	CN-ELEC	\$10,623	\$0	\$5,550	\$0	\$0	\$16,173	
Subtotal							\$254,675	\$0	\$26,290	\$0	\$0	\$280,965	
Sales Tax							\$0	\$0	\$1,577	\$0	\$0	\$1,577	
INEEU Subcontractor Overheads							48.10%	\$122,509	\$0	\$13,405	\$0	\$0	\$135,914
Subtotal Estimate												\$418,457	
Escalation							\$50,392	\$0	\$5,514	\$0	\$0	\$55,906	
Contingency							\$213,430	\$0	\$23,354	\$0	\$0	\$236,784	
--Total 4.2.01.16.02.4 CONDUCTORS AND GROUNDING					7,096		<b>\$641,006</b>	<b>\$0</b>	<b>\$70,141</b>	<b>\$0</b>	<b>\$0</b>	<b>\$711,147</b>	

<b>4.2.01.16.02.5 TESTING</b>												
	ELEC	<i>U.C. per ls</i>			<i>200</i>	<i>\$35.89</i>	<i>7178</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7178</i>
	Testing of systems and equipment		1.00	ls	200	CN-ELEC	\$7,178	\$0	\$0	\$0	\$0	\$7,170
Subtotal							\$7,178	\$0	\$0	\$0	\$0	\$7,178
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							48.10%	\$3,453	\$0	\$0	\$0	\$3,453
Subtotal Estimate												\$10,631
Escalation							\$1,420	\$0	\$0	\$0	\$0	\$1,420
Contingency							\$6,016	\$0	\$0	\$0	\$0	\$6,016
--Total 4.2.01.16.02.5 TESTING					200		<b>\$18,067</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$18,067</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment Compact A// with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.16.03 WRPF - MONITORING AND CONTROLS</b>												
<i>Memo: Installation, raceways, and cabling @ 50% of I&amp;C procurement cost.</i>												
	I&C INSTALLATION, RACEWAYS, & CABLING	<i>U.C. per LS</i>	1.00	LS	0		\$0	\$0	\$0	80450	\$0	80450
							\$0	\$0	\$0	\$80,450	\$0	\$80,450
<b>Subtotal</b>							\$0	\$0	\$0	\$80,450	\$0	\$80,450
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$80,450
Escalation							\$0	\$0	\$0	\$10,748	\$0	\$10,748
Contingency							\$0	\$0	\$0	\$45,523	\$0	\$45,523
<b>—Total 4.2.01.16.03 WRPF - MONITORING AND CONTROLS</b>					<b>0</b>		\$0	\$0	\$0	\$136,721	\$0	\$136,721
<b>4.2.01.16.04 WRPF - CRITICALITY &amp; RAD MONITORING SYSTEMS INSTALLATION</b>												
	CRITICALITY SYSTEM INSTALLATION	<i>U.C. per EA</i>	3.00	EA	0		\$0	\$0	\$0	20185	\$0	20185
<i>Memo: Based on the GEM project installation costs for criticality equipment.</i>							\$0	\$0	\$0	\$60,555	\$0	\$60,555
	RADIOLOGICAL MONITORING EQUIPMENT INSTALLATION	<i>U.C. per LS</i>	1.00	LS	0		\$0	\$0	\$0	16349	\$0	16349
							\$0	\$0	\$0	\$16,349	\$0	\$16,349
<b>Subtotal</b>							\$0	\$0	\$0	\$76,904	\$0	\$76,904
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$76,904
Escalation							\$0	\$0	\$0	\$10,274	\$0	\$10,274
Contingency							\$0	\$0	\$0	\$43,516	\$0	\$43,516
<b>—Total 4.2.01.16.04 WRPF - CRITICALITY &amp; RAD MONITORING SYSTEMS INSTALLATION</b>					<b>0</b>		\$0	\$0	\$0	\$130,695	\$0	\$130,695

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact A//with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<u>4.2.01.16.05 WRPF - CCTV MONITORING SYSTEM</u>													
<i>Memo: Costs are based on the GEM project calculated square footage.</i>													
	CCTV MONITORING SYSTEM-INSTALLATION LABOR		62,500.00	SF	0					1.36		1.36	
							\$0	\$0	\$0	\$85,000	\$0	\$85,000	
<i>Memo: Unit costs are based on the GEM project. Camera equipment costs are included in the procurement WBS.</i>													
Subtotal							\$0	\$0	\$0	\$85,000	\$0	\$85,000	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0	
												0.00%	
Subtotal Estimate													\$85,000
Escalation							\$0	\$0	\$0	\$11,356	\$0	\$11,356	
Contingency							\$0	\$0	\$0	\$48,097	\$0	\$48,097	
—Total 4.2.01.16.05 WRPF • CCTV MONITORING SYSTEM					0		\$0	\$0	\$0	\$144,453	\$0	\$144,453	

4.2.02.01 TDF - GENERAL CONDITIONS

	SUPERVISION	GEN	25,604.00	HRS	3,072	CN-SUPR	\$122,899	\$0	\$0	\$0	\$0	\$122,899
												4.8
												0.12 \$40.00
<i>Memo: @ 12% of labor hrs.</i>												
	Mobilization & Demobilization	GEN	3,001,000.00	\$	0	CN-SKWK	\$0	\$0	\$0	\$18,006	\$0	\$18,006
												0.006
<i>Memo: Mobilization/demobilization costs @ .6% of direct construction \$.</i>												
	CONSTRUCTION EQUIPMENT ALLOWANCE	GEN	25,604.00	HRS	0		\$0	\$102,416	\$0	\$0	\$0	\$102,416
												4
<i>Memo: @ \$2.50/LABOR HOUR.</i>												
	SMALL TOOLS & CONSUMABLES	GEN	1,230,439.00	\$	0		\$0	\$0	\$49,218	\$0	\$0	\$49,218
												0.04
<i>Memo: @ 4% of construction labor \$.</i>												
	GENERAL CLEANUP	GEN	25,604.00	HRS	2,048	CN-LABR	\$64,686	\$0	\$0	\$0	\$0	\$64,686
												2.526
<i>Memo: @ 8% of construction labor hours</i>												

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.02.01 TDF - GENERAL CONDITIONS</b>													
	GEN				<i>U.C. per HRS</i>								
	CONDUCT OF OPERATIONS/CONDUCT OF MAINTENANCE		25,604.00	HRS	0.05	\$34.52	1,726	0	0	0	0	1,726	
					1.280	CN-SKWK	\$44,193	\$0	\$0	\$0	\$0	\$44,193	
Memo: @ 5% of labor hours.													
Subtotal							\$231,778	\$102,416	\$49,218	\$18,006	\$0	\$401,417	
Sales Tax							\$0	\$0	\$2,953	\$0	\$0	\$2,953	
INEEL/Subcontractor Overheads							29.03%	\$67,285	\$29,731	\$15,145	\$5,227	\$117,389	
Subtotal Estimate												\$521,759	
Escalation							\$39,955	\$17,655	\$8,993	\$3,104	\$0	\$69,707	
Contingency							\$169,225	\$74,776	\$38,091	\$13,146	\$0	\$295,238	
—Total 4.2.02.01 TDF - GENERAL CONDITIONS					6,401		\$508,242	<b>\$224,578</b>	\$114,400	\$39,404	\$0	<b>\$886,704</b>	
<b>4.2.02.02 TDF - SITEWORK</b>													
	DIRT				<i>U.C. per CY</i>								
	FOUNDATION EXCAVATION		925.00	CY	0		0	0	0	3.51	0	3.51	
							\$0	\$0	\$0	\$3,247	\$0	\$3,247	
	DIRT				<i>U.C. per CY</i>								
	FOUNDATION BACKFILL & COMPACT		824.00	CY	0		0	0	0	13.87	0	13.87	
							\$0	\$0	\$0	\$11,429	\$0	\$11,429	
	DIRT				<i>U.C. per CY</i>								
	SPREAD EXCESS EXCAVATED MATERIAL		101.00	CY	0		0	0	0	1.8	0	1.8	
							\$0	\$0	\$0	\$182	\$0	\$182	
Subtotal							\$0	\$0	\$0	\$14,857	\$0	\$14,857	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							41.93%	\$0	\$0	\$0	\$6,230	\$0	\$6,230
Subtotal Estimate												\$21,088	
Escalation							\$0	\$0	\$0	\$2,817	\$0	\$2,817	
Contingency							\$0	\$0	\$0	\$11,932	\$0	\$11,932	
—Total 4.2.02.02 TDF - SITEWORK					0		\$0	<b>\$0</b>	\$0	\$35,037	\$0	<b>\$35,837</b>	

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment- Compact AN with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b><u>4.2.02.03 TDF - CONCRETE</u></b>													
	FOUNDATION WALLS	GEN	<i>U.C. per CY</i> 45.00	CY	0		0 \$0	0 \$0	0 \$0	430 \$19,350	0 \$0	430 \$19,350	
	COLUMN FOOTINGS	GEN	<i>U.C. per CY</i> 56.00	CY	0		0 \$0	0 \$0	0 \$0	430 \$24,080	0 \$0	430 \$24,080	
	FLOORS	GEN	<i>U.C. per CY</i> 178.00	CY	0		0 \$0	0 \$0	0 \$0	430 \$76,540	0 \$0	430 \$76,540	
Subtotal							\$0	\$0	\$0	\$119,970	\$0	\$119,970	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractorOverheads							29.03%	\$0	\$0	\$0	\$34,827	\$0	\$34,827
<b>Subtotal Estimate</b>												<b>\$154,797</b>	
Escalation							\$0	\$0	\$0	\$20,681	\$0	\$20,681	
Contingency							\$0	\$0	\$0	\$87,592	\$0	\$87,592	
<b>—Total 4.2.02.03 TDF - CONCRETE</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$263,070</b>	<b>\$0</b>	<b>\$263,070</b>	

**4.2.02.05 TDF - METALS**

STRUCTURAL STEEL	STEEL	<i>U.C. per TONS</i>	51.00	TONS	10.2 520	\$42.71 STEEL1	435.676 \$22,219	241.57 \$12,320	1668 \$85,068	0 \$0	0 \$0	2345.246 \$119,608
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**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment Compact AN with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.02.05TDF - METALS</b>													
	ROOF DECK	STEEL		<i>U.C. per SF</i>		<i>0.012</i>	<i>\$42.71</i>		<i>0.288</i>		<i>2.683</i>	<i>3.49</i>	
			7,200.00	SF	87	STEEL1	\$3,737	\$2,072	\$19,318	\$0	\$0	\$25,126	
Subtotal							\$25,956	\$14,392	\$104,386	\$0	\$0	\$144,734	
Sales Tax							\$0	\$0	\$6,263	\$0	\$0	\$6,263	
INEEL/Subcontractor Overheads							41.93%	\$10,884	\$6,035	\$46,398	\$0	\$0	\$63,317
Subtotal Estimate												\$214,314	
Escalation							\$4,922	\$2,729	\$20,981	\$0	\$0	\$28,632	
Contingency							\$20,846	\$11,559	\$88,865	\$0	\$0	\$121,270	
—Total 4.2.02.05TDF - METALS					608		<b>\$62,608</b>	\$34,714	\$266,894	<b>\$0</b>	\$0	\$364,216	
<b>4.2.02.07TDF - THERMAL &amp; MOISTURE PROTECTION</b>													
	ROOF INSULATION	ROOF		<i>U.C. per SF</i>			0	0	0	0	<i>1.931</i>	<i>1.931</i>	
			7,200.00	SF	0		\$0	\$0	\$0	\$0	\$13,905	\$13,905	
	ROOFING	ROOF		<i>U.C. per SF</i>			0	0	0	0	<i>2.938</i>	<i>2.938</i>	
			7,200.00	SF	0		\$0	\$0	\$0	\$0	\$21,150	\$21,150	
	SANDWICH WALL PANELS	STEEL		<i>U.C. per SF</i>		<i>0.068</i>	<i>\$42.71</i>		<i>1.599</i>		<i>13.94</i>	<i>18.422</i>	
			11,040.00	SF	745	STEEL1	\$31,830	\$17,649	\$153,898	\$0	\$0	\$203,376	
Subtotal							\$31,830	\$17,649	\$153,898	\$0	\$35,055	\$238,432	
Sales Tax							\$0	\$0	\$9,234	\$0	\$0	\$9,234	
INEEL Subcontractor Overheads							36.00%	\$13,347	\$7,401	\$68,406	\$0	\$0	\$89,154
Subtotal Estimate												\$336,819	
Escalation							\$6,036	\$3,347	\$30,933	\$0	\$4,683	\$44,999	
Contingency							\$25,564	\$14,174	\$131,016	\$0	\$19,836	\$190,590	
—Total 4.2.02.07TDF - THERMAL & MOISTURE PROTECTION					745		<b>\$76,776</b>	\$42,570	<b>\$393,486</b>	<b>\$0</b>	\$59,575	<b>\$572,408</b>	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage #1 Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.08 TDF - DOORS &amp; WINDOWS</b>												
	PERSONNEL DOORS 3'X7'	GEN	10.00	EA	6.885 69	\$35.81 CN-CARP	246.552 \$2,466	0 50	903.89 \$9,039	0 \$0	0 \$0	1150.442 511,504
	8'X12' OH DOOR W/ MOTOR OPERATOR	GEN	3.00	EA	0		0 \$0	0 50	0 \$0	3643.75 \$10,931	0 \$0	3643.75 \$10,931
	12'X12' OH DOOR W/ OPERATOR	GEN	1.00	EA	0		0 \$0	0 \$0	0 \$0	4014.75 \$4,015	0 \$0	4014.75 \$4,015
Subtotal							\$2,466	\$0	\$9,039	\$14,946	\$0	\$26,450
Sales Tax							\$0	\$0	5542	\$0	\$0	\$542
INEEU Subcontractor Overheads							29.03%	\$716	\$0	\$2,781	\$4,339	\$7,836
Subtotal Estimate								\$0	\$1,652	\$2,576	\$0	\$34,829
Escalation								\$425	\$0	\$1,652	\$2,576	\$4,653
Contingency								51,800	\$0	\$6,995	\$10,912	\$19,708
— Total 4.2.02.08 TDF - DOORS & WINDOWS					69		\$5,406	\$0	\$21,010	\$32,774	\$0	\$59,190
<b>4.2.02.09 TDF - FINISHES</b>												
	EPOXY FLOOR COATING	PAINT	7,200.00	SF	0.108 778	\$38.00 CN-PNTS	4.104 \$29,549	0 50	1.07 \$7,704	0 \$0	0 50	5.174 \$37,253
Subtotal							\$29,549	\$0	\$7,704	\$0	\$0	\$37,253
Sales Tax							\$0	\$0	\$462	\$0	\$0	\$462
INEEU Subcontractor Overheads							41.93%	\$12,391	\$0	\$3,424	\$0	\$15,815
Subtotal Estimate								\$0	\$1,549	\$0	\$0	\$53,530
Escalation								55,603	\$0	\$1,549	\$0	\$7,152
Contingency								\$23,731	50	\$6,559	\$0	\$530,290
— Total 4.2.02.09 TDF - FINISHES					778		\$71,274	\$0	\$19,698	\$0	\$0	\$90,972

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.11 TDF - EQUIPMENT-INSTALLGFE</b>												
<i>Memo: From "Plant Design and Economics for Chemical Engineers," the average installation costs are about 25% of purchase price. Due to the very specialized nature of some of these systems (and the very high system purchase prices), assume installation will be one-half the average or 12.5% of purchase price. This factor will only apply to the non-HVAC and non-I&amp;C equipment. HVAC and I&amp;C equipment installation will be detailed separately.</i>												
	EQUIPMENT INSTALLATION		1,808,042.00	\$	0		\$226,005	\$0	\$0	\$0	\$0	\$226,005
	Subtotal						\$226,005	\$0	\$0	\$0	\$0	\$226,005
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											\$226,005
	Escalation						\$30,194	\$0	\$0	\$0	\$0	\$30,194
	Contingency						\$127,885	\$0	\$0	\$0	\$0	\$127,885
—Total 4.2.02.1 1 TDF - EQUIPMENT-INSTALL GFE					0		\$384,085	\$0	\$0	\$0	\$0	\$384,085

**4.2.02.15.01.01 TDF - INSTALL HVAC EQUIPMENT & DUCTWORK**

	HVAC	U.C. per LBS			0.2	\$36.82	7.364	0.3	2	0	0	9.664
	STAINLESS STEEL DUCTWORK (BASED ON 3 LBS/SF)		21,600.00	LBS	4,320	CN-SHEE	\$159,062	\$6,480	\$43,200	\$0	\$0	\$208,742
	HVAC	U.C. per LBS			0.08	\$36.82	2.946	0.3	0.75	0	0	3.996
	GALVANIZED STEEL DUCTWORK (BASED ON 3 LBS/SF)		21,600.00	LBS	1,728	CN-SHEE	\$63,625	\$6,480	\$16,200	\$0	\$0	\$86,305
	HVAC	U.C. per EA			54	\$36.82	1988.28	0	0	0	0	1988.28
	AIR HANDLING UNIT 20,000 CFM (ZONE I AREA)		3.00	EA	162	CN-SHEE	\$5,965	\$0	\$0	\$0	\$0	\$5,965
	HVAC	U.C. per EA			10	\$36.82	368.2	0	0	0	0	368.2
	275 kw ELECTRIC HEATER (ZONE I AREA)		1.00	EA	10	CN-SHEE	\$368	\$0	\$0	\$0	\$0	\$368
	HVAC	U.C. per EA			140	\$36.82	5154.8	0	0	0	0	5154.8
	HEPA FILTER (4 HIGH X 5 WIDE) 20,000 CFM (ZONE I AREA)		1.00	EA	140	CN-SHEE	\$5,155	\$0	\$0	\$0	\$0	\$5,155
	HVAC	U.C. per EA			60	\$36.82	2209.2	0	0	0	0	2209.2
	EXHAUST FAN 40 HP		3.00	EA	180	CN-SHEE	\$6,628	\$0	\$0	\$0	\$0	\$6,628

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.02.15.01.01 TDF - INSTALL HVAC EQUIPMENT &amp; DUCTWORK</b>													
	HVAC	U.C. per EA			24	\$36.82	883.68	0	0	0	0	883.68	
	HEPA FILTER (1 HIGH X 1 WIDE) 150CFM (ZONE III AREA)		1.00	EA	24	CN-SHEE	\$884	\$0	\$0	\$0	\$0	\$884	
	HVAC	U.C. per EA			10	\$36.82	368.2	0	0	0	0	368.2	
	EXHAUST FAN 1/2 HP (ZONE III AREA)		3.00	EA	30	CN-SHEE	\$1,105	\$0	\$0	\$0	\$0	\$1,105	
Subtotal							\$242,791	\$12,960	\$59,400	\$0	\$0	\$315,151	
Sales Tax							50	\$0	\$3,564	\$0	\$0	\$3,564	
INEEL/Subcontractor Overheads							45.64%	\$110,799	\$5,914	\$28,734	\$0	\$0	\$145,448
Subtotal Estimate												\$464,163	
Escalation								\$47,240	\$2,522	\$12,251	\$0	\$0	\$62,012
Continaencv								\$200,079	\$10,680	\$51,887	\$0	\$0	\$262,647
—Total 4.2.02.15.01.01 TDF - INSTALL HVAC EQUIPMENT & DUCTWORK					6,594		<b>\$600,909</b>	\$32,076	\$155,036	<b>\$0</b>	\$0	\$780,021	

**4.2.02.15.01.02 TDF - EXHAUST STACK**

	EXHAUST STACK 40" X 65 FT HIGH (C.S.) INCLUDING BASE	U.C. per LBS	41,393.00	LBS	0		0	0	0	3.94	0	3.94
							\$0	\$0	\$0	\$163.088	\$0	\$163.088

Memo: Costs are based on the exhaust stack built and installed for the GEM project, but sized accordingly to support this Stage III project. Assume the stack base to be 105" in dia. and a 40" dia for the main stack section x 65 ft high, all fabricated from carbon steel materials. Estimated weight including base to be around 41,393 lbs.

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.15.01.02 TDF - EXHAUST STACK</b>												
	INSTALLATION OF EXHAUST STACK		41,393.00	LBS	0		\$0	\$0	\$0	2.3	\$0	\$95,204
	Memo: Stack installation costs are based on the GEM project, and increased accordingly to the new stack ROM design dimensions. Estimated weight, including base 41,393 lbs											
	Subtotal						\$0	\$0	\$0	\$258,292	\$0	\$258,292
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	<b>Subtotal Estimate</b>						\$0	\$0	\$0	\$34,508	\$0	\$258,292
	Escalation						\$0	\$0	\$0	\$34,508	\$0	\$34,508
	Contingency						\$0	\$0	\$0	\$146,155	\$0	\$146,155
<b>—Total 4.2.02.15.01.02 TDF - EXHAUST STACK</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$438,955</b>	<b>\$0</b>	<b>5438,955</b>

**4.2.02.15.01.03 TDF - EMISSIONS NOC MONITORING**

Memo: Based on the GEM project design and cost. Assume the GEM project system will be sufficient, not cost adjustment needed for larger stack.

	EXHAUST STACK MONITORING EQUIPMENT		1.00	EA	0		\$0	\$0	\$160,000	0	\$0	\$160,000
	Memo: Cost are based on an allowance provided by Ryan McMurtrey, Ryan has experience in this type of system on other projects of this nature.											
	INSTALLATION OF MONITORING EQUIPMENT		1.00	LS	0		\$0	\$0	\$0	\$9,000	\$0	\$9,000
	VOC MONITORING EQUIPMENT		1.00	LS	0		\$0	\$0	\$0	\$100,000	\$0	\$100,000
	Subtotal						\$0	\$0	\$160,000	\$109,000	\$0	\$269,000
	Sales Tax						\$0	\$0	\$9,600	\$0	\$0	\$9,600
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	<b>Subtotal Estimate</b>						\$0	\$0	\$22,659	\$14,562	\$0	\$278,600
	Escalation						\$0	\$0	\$22,659	\$14,562	\$0	\$37,221
	Contingency						\$0	\$0	\$95,968	\$61,670	\$0	\$157,646
<b>—Total 4.2.02.15.01.03 TDF - EMISSIONS NOC MONITORING</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$288,227</b>	<b>\$185,240</b>	<b>\$0</b>	<b>\$473,467</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.15.02 TDF - FIRE PROTECTION</b>												
<i>Memo: Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.</i>												
	TD-FACILITY FIRE SYSTEM CONTROLS		7,200.00	SF	0		\$0	\$0	\$0	3.4	\$0	3.4
										\$24,480		\$24,480
<i>Memo: Cost are based on GEM Project and include subcontract indirects.</i>												
	TD BUILDING-DRY PIPE FIRE PROTECTION	FP	7,200.00	SF	0	CN-SPRI	\$0	\$0	\$0	3.65	\$0	3.65
										\$26,280		\$26,280
	TD BUILDING-DRY PIPE F.P. (SECONDARY COVERAGE UNDER EQUIPMENT)	FP	3,600.00	SF	0	CN-SPRI	\$0	\$0	\$0	3.65	\$0	3.65
										\$13,140		\$13,140
	TD BUILDING-FEED MAINS	FP	100.00	LF	0	CN-SPRI	\$0	\$0	\$0	65.3	\$0	65.3
										\$6,530		\$6,530
	TD GLOVEBOX F.P. MIST SYSTEM		588.00	CF	0		\$0	\$0	\$0	60.35	\$0	60.35
										\$35,486		\$35,486
<i>Memo: Cost per cubic foot is based on the GEM facility glovebox fire protection misting system, and include subcontract indirects.</i>												
Subtotal							\$0	\$0	\$0	\$105,916	\$0	\$105,916
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$1,9268	\$0	\$1,9268
Subtotal Estimate												<b>\$125,184</b>
Escalation							\$0	\$0	\$0	\$16,725	\$0	\$16,725
Contingency							\$0	\$0	\$0	\$70,835	\$0	\$70,835
--Total 4.2.02.15.02 TDF - FIRE PROTECTION					0		\$0	\$0	\$0	\$212,744	\$0	\$212,744

**4.2.02.15.03 TDF - PLANT AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.*

	TD -PLANT AIR DIST. SYSTEM		7,200.00	SF	0		\$0	\$0	\$0	2.04	\$0	2.04
										\$14,688		\$14,688

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.15.03TDF - PLANTAIR</b>												
<i>Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.</i>												
	<b>Subtotal</b>							\$0	\$0	\$14,688	\$0	\$14,688
	<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0
	<b>INEEL/Subcontractor Overheads</b>	0.00%						\$0	\$0	\$0	\$0	\$0
	<b>Subtotal Estimate</b>							\$0	\$0	\$1,962	\$0	\$1,962
	<b>Escalation</b>							\$0	\$0	\$8,311	\$0	\$8,311
	<b>Contingency</b>							\$0	\$0	\$0	\$0	\$0
<b>---Total 4.2.02.15.03TDF - PLANT AIR</b>					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$24,962</b>	<b>\$0</b>	<b>\$24,962</b>

**4.2.02.15.04TDF - BREATHINGAIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. No costs for the breathing air compressor have been included, assume provided to the project by the BBWL equipment pool at no cost to this project.*

	<b>TD -BREATHING AIR DIST. SYSTEM</b>	<i>U.C. per SF</i>	7,200.00	SF	0			\$0	\$0	\$0	\$80,640	\$0	\$80,640
	<b>Subtotal</b>							\$0	\$0	\$80,640	\$0	\$80,640	
	<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	
	<b>INEEU Subcontractor Overheads</b>	0.00%						\$0	\$0	\$0	\$0	\$0	
	<b>Subtotal Estimate</b>							\$0	\$0	\$10,774	\$0	\$10,774	
	<b>Escalation</b>							\$0	\$0	\$45,630	\$0	\$45,630	
	<b>Contingency</b>							\$0	\$0	\$0	\$0	\$0	
<b>---Total 4.2.02.15.04TDF - BREATHINGAIR</b>					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$137,044</b>	<b>\$0</b>	<b>5137,044</b>	

**4.2.02.15.05TDF - PROCESS PIPING**

*Memo: Allowance is based on previous detail rake-off process piping system.*

	<b>PIPE</b>	<i>U.C. per SF</i>	4,800.00	SF	0.182	\$39.33	7.158	0	32.7	0	0	39.858
	<b>PROCESS PIPING ALLOWANCE</b>				a74	CN-PIPE	\$34.359	\$0	\$156,960	\$0	\$0	\$191,319

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractg</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.02.15.05 TDF - PROCESS PIPING</b>												
<i>Memo: Allowance is based on previous detail take-off process piping system.</i>												
	Subtotal						\$34,359	\$0	\$156,960	\$0	\$0	\$191,319
	Sales Tax						\$0	\$0	\$9,418	\$0	\$0	\$9,418
	INEEUSubcontractor Overheads	48.10%					\$16,528	\$0	\$80,034	\$0	\$0	\$96,562
	Subtotal Estimate											\$297,298
	Escalation						\$6,798	\$0	\$32,921	\$0	\$0	\$39,719
	Contingency						\$28,794	\$0	\$139,432	\$0	\$0	\$168,227
--Total 4.2.02.15.05 TDF - PROCESS PIPING					074		\$06,479	\$0	\$418,765	\$0	\$0	\$505,244

**4.2.02.16.01 TDF - GENERAL FACILITIES ELECTRICAL**

*Memo: Costs are based on the GEM project calculated square footage.*

	FACILITY RACEWAYS		U.C. per SF	7,200.00 SF	0		0	0	0	17	0	17
							\$0	\$0	\$0	\$122,400	\$0	\$122,400
	FACILITY WIRE & CABLE		U.C. per SF	7,200.00 SF	0		0	0	0	6.36	0	6.36
							\$0	\$0	\$0	\$45,792	\$0	\$45,792
	FACILITY LIGHTING		U.C. per SF	7,200.00 SF	0		0	0	0	6.75	0	6.75
							\$0	\$0	\$0	\$63,000	\$0	\$63,000
	FACILITY MISC. (TELEPHONE, LIGHTNING PROTECTION, ETC.)		U.C. per SF	7,200.00 SF	0		0	0	0	5.45	0	5.45
							\$0	\$0	\$0	\$39,240	\$0	\$39,240
	Subtotal						\$0	\$0	\$0	\$270,432	\$0	\$270,432
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											\$270,432
	Escalation						\$0	\$0	\$0	\$36,130	\$0	\$36,130
	Contingency						\$0	\$0	\$0	\$153,024	\$0	\$153,024
--Total 4.2.02.16.01 TDF - GENERAL FACILITIES ELECTRICAL					0		\$0	\$0	\$0	\$459,586	\$0	\$459,586





**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.06.01 AIRLOCK - GENERAL CONDITIONS</b>													
	GEN				0.05	\$34.52	1.726	0	0	0	0	1.726	
	CONDUCT OF OPERATIONS/CONDUCT OF MAINTENANCE		25,272.00	HRS	1,264	CN-SKWK	\$43,619	\$0	\$0	\$0	\$0	\$43,619	
Memo: @ 5% of labor hours.													
	GEN				80	\$34.20	2736	1250	0	0	0	3986	
	Craning Allowance - W/ Operator & Oiler		26.00	Wk	2,080	CN-ENGR	\$71,136	\$32,500	\$0	\$0	\$0	\$103,636	
Subtotal							\$299,908	\$133,588	\$41,099	\$12,363	\$0	\$486,959	
Sales Tax							\$0	\$0	\$2,466	\$0	\$0	\$2,466	
INEEUSubcontractorOverheads							29.03%	\$87,063	\$38,781	\$12,647	\$3,589	\$142,080	
Subtotal Estimate												\$631,505	
Escalation								\$51,699	\$23,028	\$7,510	\$2,131	\$0	\$84,369
Continaencv								\$218,968	\$97,535	\$31,808	\$9,027	\$0	\$357,337
— Total 4.2.06.01 AIRLOCK - GENERAL CONDITIONS					8,398		\$657,639	\$292,932	\$95,530	\$27,110	\$0	\$1,073,211	
<b>4.2.06.02 AIRLOCK - SITEWORK</b>													
	DIRT						0	0	0	4	0	4	
	SF COST FROM RETRIEVAL PORTION		3,860.00	SF	0		\$0	\$0	\$0	\$15,440	\$0	\$15,440	
Subtotal							\$0	\$0	\$0	\$15,440	\$0	\$15,440	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	
INEEUSubcontractorOverheads							41.93%	\$0	\$0	\$0	\$6,474	\$0	\$6,474
Subtotal Estimate												\$21,914	
Escalation								\$0	\$0	\$0	\$2,928	\$0	\$2,928
Contingency								\$0	\$0	\$0	\$12,400	\$0	\$12,400
— Total 4.2.06.02 AIRLOCK - SITEWORK					0		\$0	\$0	\$0	\$37,243	\$0	\$37,243	
<b>4.2.06.03 AIRLOCK - CONCRETE</b>													
	GEN						0	0	0	16.28	0	16.28	
	SF COST FROM RETRIEVAL PORTION		3,860.00	SF	0		\$0	\$0	\$0	\$62,841	\$0	\$62,841	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact AN with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S L Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.06.03 AIRLOCK- CONCRETE</b>												
	Subtotal						\$0	\$0	\$0	\$62,841	\$0	\$62,841
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads		<b>29.03%</b>				\$0	\$0	\$0	\$18,243	\$0	\$18,243
	Subtotal Estimate											\$81,083
	Escalation						\$0	\$0	\$0	\$10,833	\$0	\$10,833
	Contingency						\$0	\$0	\$0	\$45,881	\$0	\$45,881
--Total 4.2.06.03 AIRLOCK- CONCRETE					0		\$0	\$0	\$0	\$137,797	\$0	\$137,797

**4.2.06.05 AIRLOCK- METALS**

	STEEL	U.C. per SF			<b>2</b>	<b>\$43.62</b>		<b>87.24</b>	<b>5.538</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>1 13.778</b>
	SF COST FROM RETRIEVAL PORTION		3,860.00	SF	7,720	E4	\$336,746	\$21,375	\$81,060	\$0	\$0	\$0	\$439,181
	Subtotal						\$336,746	\$21,375	\$81,060	\$0	\$0	\$0	6439,181
	Sales Tax						\$0	\$0	\$4,864	\$0	\$0	\$0	\$4,864
	INEEUSubcontractorOverheads		<b>41.93%</b>				\$141,208	\$8,963	\$36,030	\$0	\$0	\$0	6186,201
	Subtotal Estimate												\$630,246
	Escalation						\$63,855	\$4,053	\$16,293	\$0	\$0	\$0	\$84,201
	Contingency						\$270,451	\$17,167	\$69,008	\$0	\$0	\$0	\$356,625
--Total 4.2.06.05 AIRLOCK- METALS					7,720		\$812,260	\$51,558	\$207,255	\$0	\$0	\$0	\$1,071,072

**4.2.06.09 AIRLOCK \* FINISHES**

	SF COST FROM RETRIEVAL PORTION	U.C. per SF	3,860.00	SF	0		\$0	\$0	\$0	\$13,510	\$0	\$13,510
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**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment- CompactAll with Thermal Disorptlon Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.06.09 AIRLOCK - FINISHES</b>													
	Subtotal							\$0	\$0	\$0	\$13,510	\$0	\$13,510
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$1,805	\$0	\$13,510
	Escalation							\$0	\$0	\$0	\$7,645	\$0	\$1,805
	Contingency							\$0	\$0	\$0	\$0	\$0	\$7,645
— Total 4.2.06.09 AIRLOCK - FINISHES					0			\$0	\$0	\$0	\$22,960	\$0	\$22,960

**4.2.06.13 AIRLOCK - SPECIAL CONSTRUCTION**

		<i>U.C. per SF</i>						0	0	30	12.6	0	42.6
	ERECT-AIRLOCK CHARACTERIZATION STRUCTURE- FRAME, FABRIC		3,860.00	SF	0			\$0	\$0	\$1 15,800	\$48,636	\$0	\$164,436
		<i>U.C. per SF</i>						0	0	0	140.97	0	140.97
	ERECT-PERSONNELAIRLOCK STRUCTURE		3,860.00	SF	0			\$0	\$0	\$0	\$544,144	\$0	\$544,144
	Subtotal							\$0	\$0	\$1 15,800	\$592,780	\$0	\$708,580
	Sales Tax							\$0	\$0	\$6,948	\$0	\$0	\$6,948
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$16,399	\$79,195	\$0	\$715,528
	Escalation							\$0	\$0	\$69,457	\$335,425	\$0	\$95,595
	Contingency							\$0	\$0	\$0	\$0	\$0	\$404,882
— Total 4.2.06.13 AIRLOCK - SPECIAL CONSTRUCTION					0			\$0	\$0	\$208,604	\$1,007,401	\$0	\$1,216,005

**4.2.06.15.01 AIRLOCK - HVAC**

	HVAC	<i>U.C. per LBS</i>			0.2	\$36.82	7.364	0.3	2	0	0	0	9.664
	STAINLESS STEEL DUCTWORK (based on 3 lbs/sf)		12,750.00	LBS	2,550	CN-SHEE	\$93,891	\$3,825	\$25,500	\$0	\$0	\$0	\$123,216

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment- Compact A// with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.06.15.01 AIRLOCK - HVAC</b>													
	HVAC	<i>U.C. per LBS</i>			<i>0.08</i>	<i>\$36.82</i>	<b>2.946</b>	0.3	<b>0.75</b>	0	0	<b>3.996</b>	
	GALVANIZED STEEL DUCTWORK (based on 3 lbs/sf)		12,750.00	LBS	1,020	CN-SHEE	\$37,556	\$3,825	\$9,563	\$0	\$0	\$50,944	
Subtotal							\$131,447	\$7,650	\$35,063	\$0	\$0	\$174,160	
Sales Tax							\$0	\$0	\$2,104	\$0	\$0	\$2,104	
INEEUSubcontractorOverheads							45.64%	\$59,987	\$3,491	\$16,961	\$0	\$0	\$80,439
Subtotal Estimate												\$256,703	
Escalation							\$25,576	\$1,488	\$7,231	\$0	\$0	\$34,295	
Contingency							\$108,323	\$6,304	\$30,628	\$0	\$0	\$145,255	
—Total 4.2.06.15.01 AIRLOCK • HVAC					3,570		\$325,333	\$18,934	\$91,987	\$0	\$0	\$436,253	

**4.2.06.15.02 AIRLOCK - FIRE PROTECTION**

*Memo: Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.*

	AIRLOCK TO CHARACTERIZATIONSTRUCTURE FIRE SYSTEM CONTROLS	<i>U.C. per SF</i>	4,250.00	SF	0		0	0	0	3.4	0	3.4
							\$0	\$0	\$0	\$14,450	\$0	\$14,450
	CHARACTERIZATION AIRLOCK STRUCTURE-DRY PIPE FIRE PROTECTION	<i>FP U.C. per SF</i>	4,250.00	SF	0	CN-SPRI	0	0	0	3.65	0	3.65
							\$0	\$0	\$0	\$15,513	\$0	\$15,513

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.06.15.02 AIRLOCK - FIRE PROTECTION</b>												
<i>Memo: Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.</i>												
	FP	U.C. par LF	100.00	LF	0	CN-SPRI	\$0	\$0	\$0	65.3	0	65.3
	CHARACTERIZATION AIRLOCK- FEED MAINS						\$0	\$0	\$0	\$6,530	\$0	\$6,530
<b>Subtotal</b>							\$0	\$0	\$0	\$36,493	\$0	\$36,493
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEL/Subcontractor Overheads</b>							\$0	\$0	\$0	\$9,243	\$0	\$9,243
<b>Subtotal Estimate</b>												\$45,736
<b>Escalation</b>							\$0	\$0	\$0	\$6,110	\$0	\$6,110
<b>Contingency</b>							\$0	\$0	\$0	\$25,880	\$0	\$25,880
<b>---Total 4.2.06.15.02 AIRLOCK - FIRE PROTECTION</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$77,725</b>	<b>\$0</b>	<b>\$77,725</b>

**4.2.06.15.03 AIRLOCK - PLANT AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.*

	U.C. per SF	4,250.00	SF	0			\$0	\$0	\$0	2.04	0	2.04
	AIRLOCK TO CHARACTERIZATION-PLANT AIR DIST. SYSTEM						\$0	\$0	\$0	\$8,670	\$0	\$8,670
<b>Subtotal</b>							\$0	\$0	\$0	\$8,670	\$0	\$8,670
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEL/Subcontractor Overheads</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$8,670
<b>Escalation</b>							\$0	\$0	\$0	\$1,158	\$0	\$1,158
<b>Contingency</b>							\$0	\$0	\$0	\$4,906	\$0	\$4,906
<b>---Total 4.2.06.15.03 AIRLOCK - PLANT AIR</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$14,734</b>	<b>\$0</b>	<b>\$14,734</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage 111 Project - Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.06.15.04 AIRLOCK - BREATHING AIR</b>													
<i>Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. No costs for the breathing air compressor have been included, assume provided to the project by the BBWI equipment pool at no cost to this project.</i>													
	AIRLOCK TO CHARACTERIZATION-BREATHING AIR SYSTEM		4,250.00		0		\$0	\$0	\$0	11.2	\$47,600	\$0	\$47,600
	U.C. per						0	0	0		0	11.2	
	DIST.						\$0	\$0	\$0	\$47,600	\$0	\$47,600	
<b>Subtotal</b>							\$0	\$0	\$0	\$47,600	\$0	\$47,600	
<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0	\$0	
<b>INEEUSubcontractor Overheads</b>							0.00%	\$0	\$0	\$0	\$0	\$0	
<b>Subtotal Estimate</b>												\$47,600	
<b>Escalation</b>							\$0	\$0	\$0	\$6,359	\$0	\$6,359	
<b>Contingency</b>							\$0	\$0	\$0	\$26,934	\$0	\$26,934	
<b>---Total 4.2.06.15.04 AIRLOCK - BREATHING AIR</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$80,894</b>	<b>\$0</b>	<b>\$80,894</b>	

**4.2.06.16.01 AIRLOCK - GENERAL FACILITIES ELECTRICAL**

*Memo: Costs are based on the GEM project calculated square footage.*

	FACILITY RACEWAYS		4,250.00	SF	0		\$0	\$0	\$0	17	\$72,250	\$0	\$72,250
	U.C. per SF						0	0	0		17	0	17
	FACILITY WIRE & CABLE		4,250.00	SF	0		\$0	\$0	\$0	6.36	\$27,030	\$0	\$27,030
	U.C. per SF						0	0	0		6.36	0	6.36
	FACILITY LIGHTING		4,250.00	SF	0		\$0	\$0	\$0	8.75	\$37,188	\$0	\$37,188
	U.C. per SF						0	0	0		8.75	0	8.75

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.06.16.01 AIRLOCK • GENERAL FACILITIES ELECTRICAL</b>												
<i>Memo: Costs are based on the GEM project calculated square footage.</i>												
	FACILITY MISC. (TELEPHONE, LIGHTNING PROTECTION, ETC.)		4,250.00	SF	0		\$0	\$0	\$0	5.45	\$0	\$23,163
												5.45
												\$23,163
Subtotal							\$0	\$0	\$0	\$159,630	\$0	\$159,630
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$159,630
Escalation							\$0	\$0	\$0	\$21,327	\$0	\$21,327
Contingency							\$0	\$0	\$0	\$90,327	\$0	\$90,327
—Total 4.2.06.16.01 AIRLOCK - GENERAL FACILITIES ELECTRICAL					0		\$0	\$0	\$0	\$271,203	\$0	\$271,283

**4.2.06.16.03 AIRLOCK - MONITORING AND CONTROLS**

*Memo: Unit costs are based on the GEM project calculated square footage. This unit cost also included HVAC controls.*

	MONITORING AND CONTROLS-INSTRUMENTATION (BASED ON THE GEM PROJECTS)		4,250.00	SF	0		\$0	\$0	\$0	5.9	\$0	\$25,075
												5.9
												\$25,075
	MONITORING AND CONTROLS-CABLES (BASED ON THE GEM PROJECTS)		4,250.00	SF	0		\$0	\$0	\$0	1.5	\$0	\$6,375
												1.5
												\$6,375

*Memo. Unit costs were adjusted down by 50% from the GEM project due to the economy of scale.*

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
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**4.2.06.16.03 AIRLOCK - MONITORING AND CONTROLS**

**Memo:** Unit costs are based on the GEM project calculated square footage. This unit cost also included HVAC controls.

	<i>U.C. per SF</i>					<i>0</i>	<i>0</i>	<i>0</i>	<i>1.45</i>	<i>0</i>	<i>1.45</i>
MONITORING AND CONTROLS-RACEWAYS (BASED ON THE GEM PROJECT SF)		4,250.00	SF		0	\$0	\$0	\$0	\$6,163	\$0	\$6,163

Memo: Unit costs were adjusted down by 50% from the GEM project due to the economy of scale.

Subtotal						\$0	\$0	\$0	\$37,613	\$0	\$37,613
Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0

Subtotal Estimate											<b>\$37,613</b>
Escalation						\$0	\$0	\$0	\$5,025	\$0	\$5,025
Contingency						\$0	\$0	\$0	\$21,283	\$0	\$21,283

—Total **4.2.06.16.03 AIRLOCK - MONITORING AND CONTROLS** 0 **\$0** **\$0** **\$0** **\$63,921** **\$0** **\$63,921**

**4.2.06.16.04 AIRLOCK - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION**

	<i>U.C. per EA</i>					<i>0</i>	<i>0</i>	<i>0</i>	<i>20185</i>	<i>0</i>	<i>20185</i>
CRITICALITY SYSTEM INSTALLATION		1.00	EA		0	\$0	\$0	\$0	\$20,185	\$0	\$20,185

Memo: Based on the GEM project installation costs for criticality equipment.

	<i>U.C. per LS</i>					<i>0</i>	<i>0</i>	<i>0</i>	<i>16349</i>	<i>0</i>	<i>16349</i>
RADIOLOGICAL MONITORING EQUIPMENT INSTALLATION		1.00	LS		0	\$0	\$0	\$0	\$16,349	\$0	\$16,349

Subtotal						\$0	\$0	\$0	\$36,534	\$0	\$36,534
Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0

Subtotal Estimate											<b>\$36,534</b>
Escalation						\$0	\$0	\$0	\$4,881	\$0	\$4,881
Contingency						\$0	\$0	\$0	\$20,673	\$0	\$20,673

—Total **4.2.06.16.04 AIRLOCK - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION** 0 **\$0** **\$0** **\$0** **\$62,088** **\$0** **\$62,088**

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact A//with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S L Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.06.16.05</b>	<b>AIRLOCK - CCTV MONITORING SYSTEM</b>											
<i>Memo: Costs are based on the GEM project calculated square footage.</i>												
	CCTV MONITORING SYSTEM-INSTALLATION LABOR		4,250.00	SF	0		\$0	\$0	\$0	1.36	\$0	\$5,780
<i>Memo: Unit costs are based on the GEM project. Camera equipment costs are included in the procurement WBS</i>												
	Subtotal						\$0	\$0	\$0	\$5,780	\$0	\$5,780
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$0	\$772	\$0	\$5,780
	Escalation						\$0	\$0	\$0	\$3,271	\$0	\$772
	Contingency						\$0	\$0	\$0	\$0	\$0	\$3,271
—Total <b>4.2.06.16.05 AIRLOCK - CCTV MONITORING SYSTEM</b>					0		\$0	\$0	\$0	\$9,823	\$0	\$9,823

**4.2.07 OFFICE/RESTROOM AREAS**

*Memo: Office area costs are based on historical costs of three office buildings constructed at the INEEL. The three buildings are CFA Training Facility (5000 sf), TRA 678 office building (5000 sf), and ICPP Ops Training Facility CPP 1651. Estimate file contains historical back-up information.*

OFFICE AREAS		<i>U.C. per SF</i>	1,400.00	SF	0		\$0	\$0	\$0	178.13	\$0	178.13
							\$0	\$0	\$0	\$249,382	\$0	\$249,382
RESTROOM AREA 30' X 60'		<i>U.C. per SF</i>	1,800.00	SF	0		\$0	\$0	\$0	143.73	\$0	143.73
							\$0	\$0	\$0	\$258,714	\$0	\$258,714
<i>Memo: Unit costs for this pre-engineered metal building is based on historical cost of a facility erected at the RWMC area in 1996, the RWMC Maintenance Facility. The reflected unit cost includes slab on grade, building structure, mechanical, and electrical. The estimate file contains the historical cost data sheet.</i>												
WATER CLOSETS	PIPE	<i>U.C. per EA</i>	8.00	EA	0	CN-PIPE	\$0	\$0	\$0	1250	\$0	1250
							\$0	\$0	\$0	\$10,000	\$0	\$10,000
URINALS	PIPE	<i>U.C. per EA</i>	3.00	EA	0	CN-PIPE	\$0	\$0	\$0	750	\$0	750
							\$0	\$0	\$0	\$2,250	\$0	\$2,250
LAVATORIES	PIPE	<i>U.C. per EA</i>	5.00	EA	0	CN-PIPE	\$0	\$0	\$0	650	\$0	650
							\$0	\$0	\$0	\$3,250	\$0	\$3,250
SHOWERS	PIPE	<i>U.C. per EA</i>	8.00	EA	0	CN-PIPE	\$0	\$0	\$0	1000	\$0	1000
							\$0	\$0	\$0	\$8,000	\$0	\$8,000

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.07 OFFICE/RESTROOM AREAS</b>													
<i>Memo: Office area costs are based on historical costs of three office buildings constructed at the INEEL. The three buildings are CFA Training Facility (5000 sf), TRA 678 office building (5000 sf), and ICPP Ops Training Facility CPP 1651. Estimate file contains historical back-up information.</i>													
	WATER COOLER	PIPE	U.C. per EA	1.00	EA	0	CN-PIPE	\$0	\$0	\$0	\$990	\$0	\$990
	LOCKERS	PIPE	U.C. per EA	80.00	EA	0	CN-PIPE	\$0	\$0	\$0	\$2,400	\$0	\$2,400
Subtotal								\$0	\$0	\$0	\$534,986	\$0	\$534,986
Sales Tax								\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads								\$0	\$0	\$0	\$12,935	\$0	\$12,935
Subtotal Estimate													\$547,921
Escalation								\$0	\$0	\$0	\$73,202	\$0	\$73,202
Contingency								\$0	\$0	\$0	\$310,042	\$0	\$310,042
--Total 4.2.07 OFFICE/RESTROOM AREAS						0		\$0	\$0	\$0	\$931,165	\$0	\$931,165

**4.2.08 INTERIM STORAGE FACILITY (ISF)**

*Memo: Cost are based on actual construction cost information provided by the BBWI PCE group. A facility of this type was constructed at the RWMC facility WMF-628 and WMF-629 these costs were captured on a cost closing statement report, and is included in the estimate back-up file.*

	INTERIM STORAGE FACILITY		U.C. per LS	1.00	LS	0		\$0	\$0	\$0	\$2,726,000	\$0	\$2,726,000
Subtotal								\$0	\$0	\$0	\$2,726,000	\$0	\$2,726,000
Sales Tax								\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads								\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate													\$2,726,000
Escalation								\$0	\$0	\$0	\$364,194	\$0	\$364,194
Contingency								\$0	\$0	\$0	\$1,542,509	\$0	\$1,542,509
--Total 4.2.08 INTERIM STORAGE FACILITY (ISF)						0		\$0	\$0	\$0	\$4,632,702	\$0	\$4,632,702

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
 Stage III Project - Treatment\* CompactAll with Thermal Disorption Option  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>6.1 TESTING AND TURNOVER PLANNING</b>													
<i>Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>													
	TESTING & TURNOVER PLANNING					U.C. per \$	0	0	0	0	0.002	0.002	
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$259,717	\$259,717	
Subtotal								\$0	\$0	\$0	\$0	\$259,717	\$259,717
Sales Tax								\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractorOverheads							0.00%	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$259,717	
Escalation								\$0	\$0	\$0	\$0	\$41,762	\$41,762
Continoency								\$0	\$0	\$0	\$0	\$166,114	\$166,114
— Total 6.1 TESTING AND TURNOVER PLANNING					0		\$0	\$0	\$0	\$0	\$467,593	\$467,593	

**6.2 S. O. TESTING**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	S. O. TESTING					U.C. per \$	0	0	0	0	0.03	0.03	
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$3,895,752	\$3,895,752	
Subtotal								\$0	\$0	\$0	\$0	\$3,895,752	\$3,895,752
Sales Tax								\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$3,895,752	
Escalation								\$0	\$0	\$0	\$0	\$626,437	\$626,437
Contingency								\$0	\$0	\$0	\$0	\$2,491,708	\$2,491,708
— Total 6.2 S. O. TESTING					0		\$0	\$0	\$0	\$0	\$7,013,897	\$7,013,897	

**6.3 ORR SUPPORT**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	ORR SUPPORT					U.C. per \$	0	0	0	0	0.002	0.002
			129,858,389.00	\$	0		\$0	\$0	\$0	\$0	\$285,688	\$285,688

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project - Treatment - Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>5.3 ORR SUPPORT</b>												
<i>Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>												
	Subtotal							\$0	\$0	\$0	\$285,688	\$285,688
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$45,939	\$45,939
	Escalation							\$0	\$0	\$0	\$182,725	\$182,725
	Contingency							\$0	\$0	\$0	\$0	\$0
<b>—Total 6.3 ORR SUPPORT</b>					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$514,352</b>	<b>\$514,352</b>

**6.4 FACILITY ACCEPTANCE REVIEW**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	FACILITY ACCEPTANCE REVIEW							0	0	0	0	0.00	0.00
		U.C. per \$	129,858,389.00	\$	0			\$0	\$0	\$0	\$0	\$194,788	\$194,788
	Subtotal							\$0	\$0	\$0	\$194,788	\$194,788	
	Sales Tax							\$0	\$0	\$0	\$0	\$0	
	INEEL/Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	
	Subtotal Estimate							\$0	\$0	\$0	\$31,322	\$31,322	
	Escalation							\$0	\$0	\$0	\$124,585	\$124,585	
	Contingency							\$0	\$0	\$0	\$0	\$0	
<b>--Total 6.4 FACILITY ACCEPTANCE REVIEW</b>					<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$350,695</b>	<b>\$350,695</b>	

**6.5 RADIOLOGICAL CONTROL SUPPORT**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	RAD CONTROL SUPPORT							0	0	0	0	0.001	0.001
		U.C. per \$	129,858,389.00	\$	0			\$0	\$0	\$0	\$0	\$142,844	\$142,844

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage 1fl Project- Treatment- Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>6.5 RADIOLOGICAL CONTROL SUPPORT</b>												
<i>Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>												
	Subtotal							\$0	\$0	\$0	\$142,844	\$142,844
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$22,969	\$22,969
	Escalation							\$0	\$0	\$0	\$91,363	\$91,363
	Contingency							\$0	\$0	\$0	\$0	\$0
-Total 6.5 RADIOLOGICAL CONTROL SUPPORT						0		\$0	\$0	\$0	\$257,176	5257,176

**6.6 OPERATOR TRAINING**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	OPERATOR TRAINING		U.C. per 5	129,858,389.00 \$	0			0	0	0	0	0.02	0.02
	Subtotal							\$0	\$0	\$0	\$2,597,168	\$2,597,168	
	Sales Tax							\$0	\$0	\$0	\$0	\$0	
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0	
	Subtotal Estimate							\$0	\$0	\$0	\$417,625	\$417,625	
	Escalation							\$0	\$0	\$0	\$1,661,139	\$1,661,139	
	Contingency							\$0	\$0	\$0	\$0	\$0	
-Total 6.6 OPERATOR TRAINING						0		\$0	\$0	\$0	\$4,675,931	\$4,675,931	

**5.7 OPERATING PROCEDURES**

*Memo: Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.*

	OPERATING PROEDURES		U.C. per \$	129,858,389.00 \$	0			0	0	0	0	0.004	0.004
	Subtotal							\$0	\$0	\$0	\$571,377	\$571,377	
	Sales Tax							\$0	\$0	\$0	\$0	\$0	
	INEEUSubcontractorOverheads	0.00%						\$0	\$0	\$0	\$0	\$0	
	Subtotal Estimate							\$0	\$0	\$0	\$0	\$0	
	Escalation							\$0	\$0	\$0	\$0	\$0	
	Contingency							\$0	\$0	\$0	\$0	\$0	
-Total 5.7 OPERATING PROCEDURES						0		\$0	\$0	\$0	\$0	\$0	

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Treatment Compact All with Thermal Disorption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>6.7 OPERATING PROCEDURES</b>												
<i>Memo: Percentage allowances derived by the project team on the CSiX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>												
	Subtotal							\$0	\$0	\$0	\$571,377	\$571,377
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$91,877	\$91,877
	Escalation							\$0	\$0	\$0	\$365,451	\$365,451
	Contingency							\$0	\$0	\$0	\$0	\$0
--Total 6.7 OPERATING PROCEDURES					0			\$0	\$0	\$0	\$1,028,705	\$1,028,705

<b>6.8 START-UP COORDINATION</b>												
<i>Memo: Percentage allowances derived by the project team on the CSiX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>												
	STARTUP COORDINATION											
		U.C. per \$						0	0	0	0	0.001
		129,858,389.00\$			0			\$0	\$0	\$0	\$0	\$168,816
	Subtotal							\$0	\$0	\$0	\$168,816	\$168,816
	Sales Tax							\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$27,146	\$27,146
	Escalation							\$0	\$0	\$0	\$107,974	\$107,974
	Contingency							\$0	\$0	\$0	\$0	\$0
--Total 6.8 START-UP COORDINATION					0			\$0	\$0	\$0	\$303,936	\$303,936

<b>6.9 SPARES</b>												
<i>Memo: In support of start-up and testing only. Percentage allowances derived by the project team on the CSiX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>												
	SPARES											
		U.C. per \$						0	0	0.06	0	0.06
		78,849,487.00\$			0			\$0	\$0	\$4,730,969	\$0	\$4,730,969
Memo. Calculated at 6% of procurement.												

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Treatment- Compact All with Thermal Disruption Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+3aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>6.9 SPARES</b>													
<i>Memo: In support of start-up and testing only. Percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000.</i>													
	Subtotal							\$0	\$0	\$4,730,969	\$0	\$0	\$4,730,969
	Sales Tax							\$0	\$0	\$283,858	\$0	\$0	\$283,858
	INEEU Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$806,384	\$0	\$0	\$5,014,827
	Escalation							\$0	\$0	\$3,207,465	\$0	\$0	\$806,384
	Contingency							\$0	\$0	\$0	\$0	\$0	\$3,207,465
—Total 6.9 SPARES					0			\$0	\$0	\$9,028,677	\$0	\$0	\$9,028,677

**7.0 PROJECT MANAGEMENT**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.*

	PROJECT MANAGEMENT SUPPORT							0	0	0	0	0.09	0.09
		U.C. per \$						\$0	\$0	\$0	\$0	\$1,687,255	\$1,687,255
		129,858,389.00 \$											
	Subtotal							\$0	\$0	\$0	\$0	\$1,687,255	\$1,687,255
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$0	\$1,250,536	\$1,250,536
	Escalation							\$0	\$0	\$0	\$0	\$4,812,582	\$1,250,536
	Contingency							\$0	\$0	\$0	\$0	\$0	\$4,812,582
—Total 7.0 PROJECT MANAGEMENT					0			\$0	\$0	\$0	\$0	\$17,750,373	\$17,750,373

**DETAIL ITEM REPORT**

Project Name: *OU 7-10 Staged Interim Action*  
*Stage III Project- Treatment- Compact All with Thermal Disorption Option*  
 Project Location: *INEEL-RWMC*  
 Estimate Number: *5974-2 (1+3aP)*

Client: *S. L. Austad*  
 Prepared By: *R. D. ADAMS/S. N. WASLEY*  
 Estimate Type: *Project Support*

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<hr/>												
	Subtotal	<b>COMPACT ALL W/ THERMAL DISORPTION</b>					\$19,018,226	\$1,561,176	\$84,379,575	\$30,041,259	\$90,414,313	\$**,***,***
	Sales Tax						\$0	\$0	\$5,062,775	\$0	\$0	\$5,062,775
	INEEL/Subcontractor Overheads						\$3,008,314	\$476,988	\$2,154,192	\$2,121,496	\$0	\$7,760,990
<hr/>												
	Subtotal Estimate											\$**,***,***
	Escalation						\$2,942,746	\$272,299	\$8,234,103	\$3,115,492	\$8,761,228	\$23,325,868
	Contingency						\$12,463,732	\$1,153,296	\$50,127,734	\$15,888,460	\$44,280,090	\$**,***,***
<hr/>												
	Total	COMPACT ALL W/ THERMAL DISORPTION			237,764		\$37,433,017	\$3,463,759	\$149,958,378	\$51,166,708	\$143,455,631	\$385,477,493

**TPC Summary Report**

Project Name: **OU 7-10 Staged InterIm Actlon**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Project Number: **5974-2 (1+2aP)**

<u>ESTIMATE ELEMENT</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Continaency</u>	<u>TOTAL</u>
<b>Total Estimated Cost (TEC)</b>	\$254,558,516	9.86% \$25,093,849	59.87% \$167,425,041	\$447,077,407
<b>Total Project Cost (TPC)</b>	\$254,558,516	9.86% \$25,093,849	59.87% \$167,425,041	\$447,077,407
<b>Rounded TPC</b> (Rounded to the nearest \$ 100000)				\$447,000,000

	Remarks
Type of Estimate: <u>Project Support</u> Estimator: <u>R. D. ADAMS/S. N. WASLEY</u> Checked By: <u></u> Approved By: <u></u>	



## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Continaency</u>	<u>Continaency%</u>	<u>TOTAL</u>
4.0	<b>ESH&amp;Q</b>	\$17,650,916	\$4,431,489	\$14,063,995	73.70%	\$33,146,400
1.01	--ENVIRONMENTAL	\$8,613,209	\$698,531	\$6,862,880	73.70%	\$16,174,621
1.02	--SAFETY ANALYSIS	\$1,396,737	\$113,275	\$1,112,900	73.70%	\$2,622,911
1.03	--SAFETY & HEALTH	\$2,505,910	\$203,229	\$1,996,673	73.70%	\$4,705,812
1.04	--FIRE PROTECTION	\$205,402	\$16,658	\$163,662	73.70%	\$385,722
1.05	--RADIOLOGICAL CONTROLS	\$753,142	\$61,080	\$600,093	73.70%	\$1,414,315
1.07	--EMERGENCY PLANNING	\$27,387	\$2,221	\$21,822	73.70%	\$51,430
1.08	--SAFEGUARDS & SECURITY	\$41,080	\$3,332	\$32,732	73.70%	\$77,144
1.09	--QUALITY	\$4,108,049	\$333,163	\$3,273,234	73.70%	\$7,714,445
2.0	<b>DESIGN ENGINEERING</b>	\$43,986,992	\$3,040,419	\$28,935,079	61.53%	\$75,962,491
2.01	--CONCEPTUAL DESIGN	\$5,477,398	\$142,412	\$3,457,764	61.53%	\$9,077,574
2.02	--PRELIMINARY DESIGN	\$8,216,098	\$441,204	\$5,326,675	61.53%	\$13,983,977
2.03	--FINAL DESIGN	\$13,693,496	\$1,110,543	\$9,108,646	61.53%	\$23,912,684
2.04	--TRANSURANIC REPORTING SYSTEM (TRIPS)	\$16,600,000	\$1,346,260	\$11,041,995	61.53%	\$28,988,255
3.0	<b>PROCUREMENT</b>	\$101,274,672	\$8,213,376	\$67,363,404	61.53%	\$176,851,452
3.1	--PROCUREMENT MANAGEMENT	\$2,218,346	\$179,908	\$1,475,545	61.53%	\$3,873,799
3.2	--PROCUREMENT - EQUIPMENT	\$84,714,344	\$6,870,333	\$56,348,211	61.53%	\$147,932,887
3.2.01	—EQUIPMENT PROCUREMENT (WRPF)	\$76,374,441	\$6,193,967	\$50,800,878	61.53%	\$133,369,286
3.2.01.01	----WRPF EQUIPMENT	\$74,944,501	\$6,077,999	\$49,849,746	61.53%	\$130,872,245
3.2.01.02	----WRPF-HVAC EQUIPMENT	\$1,259,386	\$102,136	\$37,688	61.53%	\$2,199,210
3.2.01.03	----WRPF I&C PROCUREMENT	\$170,554	\$13,832	\$113,445	61.53%	\$297,831
3.2.02	—EQUIPMENT PROCUREMENT (INCINERATOR)	\$8,312,873	\$674,174	\$5,529,353	61.53%	\$14,516,400
3.2.02.01	—INCINERATION EQUIPMENT	\$3,117,436	\$252,824	\$2,073,579	61.53%	\$5,443,839
3.2.02.02	—INCINERATOR OFF GAS EQUIPMENT	\$2,690,376	\$218,190	\$1,709,519	61.53%	\$4,698,085

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## Project Summary Report

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Continaency %</u>	<u>TOTAL</u>
3.2.02.03	---INCINERATOR VENTILATION SYSTEM	\$2,213,614	\$179,524	\$1,472,397	61.53%	\$3,865,535
3.2.02.04	---INCINERATOR INSTRUMENTS & CONTROLS	\$291,447	\$23,636	\$193,858	61.53%	\$508,941
<b>3.2.03</b>	---EQUIPMENT PROCUREMENT (AIRLOCK TO CHARACTERIZATION)	<b>\$27,030</b>	<b>\$2,192</b>	<b>\$17,979</b>	<b>61.53%</b>	<b>\$47,201</b>
<b>3.3</b>	--BBWI MATERIAL HANDLING FEE	<b>\$14,341,982</b>	<b>\$1,163,135</b>	<b>\$9,539,648</b>	<b>61.53%</b>	<b>\$25,044,766</b>
<b>4.0</b>	<b>CONSTRUCTION</b>	<b>\$61,806,065</b>	<b>\$8,257,290</b>	<b>\$34,571,594</b>	<b>49.34%</b>	<b>\$104,634,949</b>
4.1	--CONSTRUCTION MANAGEMENT	<b>\$9,585,447</b>	<b>\$1,280,616</b>	<b>\$5,361,678</b>	<b>49.34%</b>	<b>\$16,227,741</b>
4.2	--CONSTRUCTION SUBCONTRACTS	<b>\$52,220,617</b>	<b>\$6,976,674</b>	<b>\$29,209,917</b>	<b>49.34%</b>	<b>\$88,407,208</b>
<b>4.2.01</b>	---(WRPF) WASTE RECEIVING & PREP FACILITY	<b>\$39,329,337</b>	<b>\$5,254,399</b>	<b>\$21,999,101</b>	<b>49.34%</b>	<b>\$66,582,837</b>
4.2.01.01	---WRPF - GENERAL CONDITIONS	\$6,374,991	\$851,699	\$3,565,890	49.34%	\$10,792,580
4.2.01.02	---WRPF - SITEWORK	\$3,274,293	\$437,446	\$1,831,496	49.34%	\$5,543,234
4.2.01.02.01	UTILITY & SUPPORT	\$3,060,831	\$408,927	\$1,712,094	49.34%	\$5,181,852
4.2.01.02.01.01	FIRE PUMP HOUSE	\$172,476	\$23,043	\$96,475	49.34%	\$291,994
4.2.01.02.01.02	-----POTABLE WATER SYSTEM	\$86,731	\$11,587	\$48,513	49.34%	\$146,831
4.2.01.02.01.03	SANITARY WASTE SYSTEM	\$201,511	\$26,922	\$112,717	49.34%	\$341,150
4.2.01.02.01.04	FIRE PIPING SYSTEM	\$1,212,046	\$161,929	\$677,965	49.34%	\$2,051,941
4.2.01.02.01.05	-----ELECTRICAL SUPPLY	\$1,388,067	\$185,446	\$776,424	49.34%	\$2,349,937
4.2.01.02.01.05.02	SITEWORK	\$5,027	\$672	\$2,812	49.34%	\$8,511
4.2.01.02.01.05.03	CONCRETE	\$36,659	\$4,898	\$20,505	49.34%	\$62,062
4.2.01.02.01.05.04	ELECTRICAL	\$1,346,381	\$179,877	\$753,106	49.34%	\$2,279,364
4.2.01.02.01.05.4.1	-----SWITCHGEAR	\$615,613	\$82,246	\$344,347	49.34%	\$1,042,205
4.2.01.02.01.05.4.2	TRANSFORMERS	\$193,552	\$25,859	\$108,265	49.34%	\$327,675
4.2.01.02.01.05.4.3	-----STANDBY GENERATOR	\$379,571	\$50,711	\$212,315	49.34%	\$642,597
4.2.01.02.01.05.4.4	CONDUCTORS AND GROUNDING	\$147,015	\$19,641	\$82,234	49.34%	\$248,889
4.2.01.02.01.05.4.5	---TESTING	\$10,631	\$1,420	\$5,946	49.34%	\$17,998
4.2.01.02.02	-----WRPF EARTHWORK	\$213,462	\$28,519	\$119,401	49.34%	\$361,382

**INEEL**

## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project- Compact All with Inclination Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>DescrDtion</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Continaencv%</u>	<u>TOTAL</u>
4.2.01.03	-----WRPF - CONCRETE	\$5,400,985	\$721,572	\$3,021,074	49.34%	\$9,143,631
4.2.01.05	----WRPF - METALS	\$323,847	\$43,266	\$181,146	49.34%	\$548,258
4.2.01.07	---WRPF -THERMAL & MOISTURE PROTECTION	\$1,079,325	\$144,198	\$603,727	49.34%	\$1,827,250
4.2.01.08	-----WRPF -DOORS & WINDOWS	\$21,475	\$2,869	\$12,012	49.34%	\$36,356
4.2.01.09	---WRPF -FINISHES	\$1,216,719	\$162,554	\$680,579	49.34%	\$2,059,852
4.2.01.11	-----WRPF - EQUIPMENT-INSTALL GFE	\$10,030,563	\$1,340,083	\$5,610,656	49.34%	\$16,981,301
4.2.01.15	---WRPF - MECHANICAL	\$7,957,580	\$1,063,133	\$4,451,120	49.34%	\$13,471,833
4.2.01.15.01	-----WRPF - INSTALL HVAC EQUIPMENT & DUCT	\$1,322,367	\$176,668	\$739,674	49.34%	\$2,238,709
4.2.01.15.02	WRPF - FIRE PROTECTION	\$3,872,176	\$517,323	\$2,165,925	49.34%	\$6,555,424
4.2.01.15.03	WRPF - PLANT AIR	\$127,500	\$17,034	\$71,318	49.34%	\$215,852
4.2.01.15.04	-----WRPF - BREATHING AIR	\$700,000	\$93,520	\$391,549	49.34%	\$1,185,069
	WRPF - PROCESS PIPING	\$1,935,537	\$258,588	\$1,082,654	49.34%	\$3,276,779
4.2.01.16	----WRPF - ELECTRICAL	\$3,649,558	\$487,581	\$2,041,402	49.34%	\$6,178,542
4.2.01.16.01	WRPF -GENERAL FACILITIES ELECTRICAL	\$2,347,500	\$313,626	\$1,313,088	49.34%	\$3,974,214
4.2.01.16.02	WRPF - ELECTRICAL SWITCH GEAR & PANEL BOARDS	\$1,059,704	\$141,577	\$592,752	49.34%	\$1,794,033
4.2.01.16.02.1	-----SWITCHGEAR	16456,413	\$60,977	\$255,298	49.34%	\$772,688
4.2.01.16.02.2	EQUIPMENT CONTROLS	\$74,082	\$9,897	\$41,438	49.34%	\$125,418
4.2.01.16.02.3	RACEWAYS AND ENCLOSURES	\$112,674	\$15,053	\$63,025	49.34%	\$190,753
4.2.01.16.02.4	CONDUCTORS AND GROUNDING	\$405,904	\$54,229	\$227,045	49.34%	\$687,177
4.2.01.16.02.5	-----TESTING	\$10,631	\$1,420	\$5,946	49.34%	\$17,998
4.2.01.16.03	WRP - MONITORING AND CONTROLS	\$80,450	\$10,748	\$45,000	49.34%	\$136,198
4.2.01.16.04	WRP -CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION	\$76,904	\$10,274	\$43,017	49.34%	\$130,195
4.2.01.16.05	---WRP - CCTV MONITORING SYSTEM	\$85,000	\$11,356	\$47,545	49.34%	\$143,901
4.2.03	---INCINERATOR BLDG.	\$6,925,308	<b>\$925,221</b>	\$3,873,713	49.34%	<b>\$11,724,241</b>
4.2.03.01	---INCINERATOR -GENERAL CONDITIONS	<b>\$544,844</b>	\$72,791	\$304,762	49.34%	\$922,397
4.2.03.02	---INCINERATOR - SITEWORK	\$69,947	\$9,345	\$39,125	49.34%	\$118,416

**INEEL**

## Project Summary Report

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
4.2.03.03	---INCINERATOR - CONCRETE	\$325,685	\$43,511	\$182,174	49.34%	\$551,370
4.2.03.05	---INCINERATOR - METALS	\$456,859	\$61,036	\$255,547	49.34%	\$773,443
4.2.03.07	---INCINERATOR - THERMAL 8 MOISTURE PROTECTION	\$1,181,135	\$157,800	\$660,675	49.34%	\$1,999,610
4.2.03.08	---INCINERATOR - DOORS 8 WINDOWS	\$54,111	\$7,229	\$30,267	49.34%	\$91,607
4.2.03.09	---INCINERATOR - FINISHES	\$102,748	\$13,727	\$57,473	49.34%	\$173,948
4.2.03.11	---INCINERATOR - EQUIPMENT-INSTALLGFE	\$725,977	\$96,990	\$406,079	49.34%	\$1,229,046
4.2.03.15	---INCINERATOR - MECHANICAL	\$2,711,749	\$362,290	\$1,516,833	49.34%	\$4,590,872
4.2.03.15.01	-----INCINERATOR - HVAC	\$1,470,724	\$196,489	\$822,658	49.34%	\$2,489,871
4.2.03.15.01.01	-----INCINERATOR- INSTALL HVAC EQUIPMENT 8 DUCTWORK	\$933,832	\$124,760	\$522,344	49.34%	\$1,580,936
4.2.03.15.01.02	-----INCINERATOR - EXHAUST STACK	\$258,292	\$34,508	\$144,477	49.34%	\$437,278
4.2.03.15.01.03	-----INCINERATOR - EMISSIONS NOC MONITORING	\$278,600	\$37,221	\$155,837	49.34%	\$471,658
4.2.03.15.02	-----INCINERATOR - FIRE PROTECTION	\$472,122	\$63,076	\$264,085	49.34%	\$799,283
4.2.03.15.03	-----INCINERATOR - PLANT AIR	\$28,193	\$3,767	\$15,770	49.34%	\$47,729
4.2.03.15.04	-----INCINERATOR - BREATHING AIR	\$154,784	\$20,679	\$86,579	49.34%	\$262,043
4.2.03.15.05	-----INCINERATOR - PROCESS PIPING	\$585,926	\$78,280	\$327,741	49.34%	\$991,947
4.2.03.16	---INCINERATOR - ELECTRICAL	\$752,253	\$100,501	\$420,777	49.34%	\$1,273,532
4.2.03.16.01	-----INCINERATOR- GENERAL FACILITIES ELECTRICAL	\$519,079	\$69,349	\$290,350	49.34%	\$878,778
4.2.03.16.03	-----INCINERATOR- MONITORING AND CONTROLS	\$137,475	\$18,367	\$76,897	49.34%	\$232,739
4.2.03.16.04	-----INCINERATOR - CRITICALITY 8 RAD MONITORING SYSTEMS INSTALLATION	\$76,904	\$10,274	\$43,017	49.34%	\$130,195
4.2.03.16.05	-----INCINERATOR - CCTV MONITORING SYSTEM	\$18,795	\$2,511	\$10,513	49.34%	\$31,819
4.2.06	---AIRLOCK TO CHARACTERIZATION	\$2,692,052	\$359,658	\$1,505,815	49.34%	\$4,557,525
4.2.06.01	---AIRLOCK - GENERAL CONDITIONS	\$631,505	\$84,369	\$353,236	49.34%	\$1,069,110
4.2.06.02	---AIRLOCK - SITEWORK	\$21,914	\$2,928	\$12,258	49.34%	\$37,100
4.2.06.03	---AIRLOCK - CONCRETE	\$81,083	\$10,833	\$45,355	49.34%	\$137,271
4.2.06.05	---AIRLOCK - METALS	\$630,246	\$84,201	\$352,532	49.34%	\$1,066,979

**INEEL**

## Project Summary Report

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
4.2.06.09	---AIRLOCK - FINISHES	\$13,510	\$1,805	\$7,557	49.34%	\$22,872
4.2.06.13	----AIRLOCK - SPECIAL CONSTRUCTION	\$715,528	\$95,595	\$400,235	49.34%	\$1,211,358
4.2.06.15	----AIRLOCK - MECHANICAL	\$358,708	\$47,923	\$200,646	49.34%	\$607,277
4.2.06.15.01	-----AIRLOCK - HVAC	\$256,703	\$34,295	\$143,588	49.34%	\$434,586
4.2.06.15.02	---AIRLOCK - FIRE PROTECTION	\$45,736	\$6,110	\$25,582	49.34%	\$77,428
4.2.06.15.03	---AIRLOCK - PLANTAIR	\$8,670	\$1,158	\$4,850	49.34%	\$14,678
4.2.06.15.04	AIRLOCK - BREATHING AIR	\$47,600	\$6,359	\$26,625	49.34%	\$80,585
4.2.06.16	---AIRLOCK - ELECTRICAL	\$239,557	\$32,005	\$133,997	49.34%	\$405,559
4.2.06.16.01	AIRLOCK - GENERAL FACILITIES ELECTRICAL	\$159,630	\$21,327	\$89,290	49.34%	\$270,247
4.2.06.16.03	-----AIRLOCK - MONITORING AND CONTROLS	\$37,613	\$5,025	\$21,039	49.34%	\$63,676
4.2.06.16.04	AIRLOCK - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION	\$36,534	\$4,881	\$20,436	49.34%	\$61,850
4.2.06.16.05	-----AIRLOCK - CCTV MONITORING SYSTEM	\$5,780	\$772	\$3,233	49.34%	\$9,785
4.2.07	---OFFICE/RESTROOM AREAS	\$547,921	\$73,202	\$306,483	49.34%	\$927,606
4.2.08	---INTERIM STORAGE FACILITY	\$2,726,000	\$364,194	\$1,524,805	49.34%	\$4,614,998
6.0	<b>TESTING &amp; TURNOVER</b>	<b>\$17,515,724</b>	<b>\$2,816,528</b>	<b>\$17,473,733</b>	<b>85.94%</b>	<b>\$37,805,985</b>
6.1	--TESTING AND TURNOVER PLANNING	\$273,870	\$44,038	\$272,998	85.87%	\$590,906
6.2	--S. O. TESTING	\$7,677,506	\$1,234,543	\$7,666,848	86.03%	\$16,578,896
6.2.01	---S. O. TESTING	\$4,108,049	\$660,574	\$4,094,965	85.87%	\$8,863,588
6.2.02	---TRIAL BURN	\$3,569,457	\$590,031	\$3,571,882	85.87%	\$7,731,370
6.3	--ORR SUPPORT	\$301,257	\$48,442	\$300,297	85.87%	\$649,996
6.4	--FACILITY ACCEPTANCE REVIEW	\$205,402	\$33,029	\$204,748	85.87%	\$443,179
6.5	--RADIOLOGICAL CONTROL SUPPORT	\$150,628	\$24,221	\$150,149	85.87%	\$324,998
6.6	--OPERATOR TRAINING	\$2,738,699	\$440,383	\$2,729,977	85.87%	\$5,909,059
6.7	--OPERATING PROCEDURES	\$602,514	\$96,884	\$600,595	85.87%	\$1,299,993
6.8	--START-UP COORDINATION	\$178,015	\$28,625	\$177,449	85.87%	\$384,089

INEEL

**Project Summary Report**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Level</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Continaency</u>	<u>Continaency%</u>	<u>TOTAL</u>
6.9	--SPARES	\$5,387,832	\$866,363	\$5,370,673	85.87%	\$11,624,869
7.0	PROJECT MANAGEMENT	\$12,324,146	\$1,318,684	\$5,017,236	36.78%	\$18,660,066
<b>Total COMPACT ALL WITH INCINERATION</b>		<b>\$254,558,516</b>	<b>\$25,077,787</b>	<b>\$167,425,041</b>	<b>59.87%</b>	<b>\$447,061,344</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>1.01 ENVIRONMENTAL</b>													
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>													
	ENVIRONMENTAL					U.C. per \$ 136,934,960.00\$	0	\$0	\$0	\$0	\$0	0.063 \$8,613,209	0.063 \$8,613,209
<b>Subtotal</b>								\$0	\$0	\$0	\$0	\$8,613,209	\$8,613,209
<b>Sales Tax</b>								\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEU Subcontractor Overheads</b>								\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>													\$8,613,209
<b>Escalation</b>								\$0	\$0	\$0	\$0	\$698,531	\$698,531
<b>Contingency</b>								\$0	\$0	\$0	\$0	\$6,862,880	\$6,862,880
<b>---Total 1.01 ENVIRONMENTAL</b>					<b>0</b>		\$0	\$0	\$0	\$0	\$16,174,621	\$16,174,621	

**1.02 SAFETY ANALYSIS**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	SAFETY ANALYSIS					U.C. per \$ 136,934,960.00\$	0	\$0	\$0	\$0	\$0	0.01 \$1,396,737	0.01 \$1,396,737
<b>Subtotal</b>								\$0	\$0	\$0	\$0	\$1,396,737	\$1,396,737
<b>Sales Tax</b>								\$0	\$0	\$0	\$0	\$0	\$0
<b>INEEU Subcontractor Overheads</b>								\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>													\$1,396,737
<b>Escalation</b>								\$0	\$0	\$0	\$0	\$113,275	\$113,275
<b>Contingency</b>								\$0	\$0	\$0	\$0	\$1,112,900	\$1,112,900
<b>---Total 1.02 SAFETY ANALYSIS</b>					<b>0</b>		\$0	\$0	\$0	\$0	\$2,622,911	\$2,622,911	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>1.03 SAFETY &amp; HEALTH</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>												
	<b>SAFETY &amp; HEALTH</b>					<i>U.C. per \$</i>	0	0	0	0	0.018	0.018
						136,934,960.00\$	0	\$0	\$0	\$0	\$0	\$2,505,910
	<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$2,505,910
	<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0
	<b>INEEUSubcontractor Overheads</b>					<b>0.00%</b>		\$0	\$0	\$0	\$0	\$0
	<b>Subtotal Estimate</b>							\$0	\$0	\$0	\$0	\$2,505,910
	<b>Escalation</b>							\$0	\$0	\$0	\$203,229	\$203,229
	<b>Continaency</b>							\$0	\$0	\$0	\$1,996,673	\$1,996,673
	<b>---Total 1.03SAFETY &amp; HEALTH</b>				<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,705,812</b>

**1.04 FIRE PROTECTION**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	<b>FIRE PROTECTION</b>					<i>U.C. per \$</i>	0	0	0	0	0.002	0.002
						136,934,960.00 \$	0	\$0	\$0	\$0	\$0	\$205,402
	<b>Subtotal</b>							\$0	\$0	\$0	\$0	\$205,402
	<b>Sales Tax</b>							\$0	\$0	\$0	\$0	\$0
	<b>INEEUSubcontractor Overheads</b>					<b>0.00%</b>		\$0	\$0	\$0	\$0	\$0
	<b>Subtotal Estimate</b>							\$0	\$0	\$0	\$0	\$205,402
	<b>Escalation</b>							\$0	\$0	\$0	\$16,658	\$16,658
	<b>Contingency</b>							\$0	\$0	\$0	\$163,662	\$163,662
	<b>---Total 1.04FIRE PROTECTION</b>				<b>0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$385,722</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipm</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>1.05 RADIOLOGICAL CONTROLS</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.</i>												
	RADIOLOGICALCONTROLS				0		\$0	\$0	\$0	\$0	0.006	0.006
							136,934,960.00\$				\$753,142	\$753,142
Subtotal							\$0	\$0	\$0	\$0	\$753,142	\$753,142
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												5753,142
Escalation							\$0	\$0	\$0	\$0	\$61,080	\$61,080
Contingency							\$0	\$0	\$0	\$0	\$600,093	\$600,093
--Total 1.05RADIOLOGICALCONTROLS					0		\$0	\$0	\$0	\$0	\$1,414,315	\$1,414.315

**1.07 EMERGENCY PLANNING**

*Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate # 5974-1. Detailed input was back-calculated to arrive at a representative percentage of total construction and procurement costs. That percentage was applied to this estimated construction and procurement costs.*

	EMERGENCY PLANNING				0		\$0	\$0	\$0	\$0	0	0
							136,934,960.00\$				\$27,387	\$27,387
Subtotal							\$0	\$0	\$0	\$0	\$27,387	\$27,387
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$27,387
Escalation							\$0	\$0	\$0	\$0	\$2,221	\$2,221
Contingency							\$0	\$0	\$0	\$0	\$21,822	\$21,622
--Total 1.07EMERGENCY PLANNING					0		\$0	\$0	\$0	\$0	\$51,430	\$51,430



**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>2.01 CONCEPTUAL DESIGN</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE III - LCB, estimate# 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.</i>												
	CONCEPTUAL DESIGN EFFORT				0		\$0	\$0	\$0	\$5,477,398	\$0	\$5,477,398
	<i>Memo: Includes an allowance for mock-up and tech-d.</i>											
		U.C. per \$	136,934,960.00							0.04		0.04
	Subtotal						\$0	\$0	\$0	\$5,477,398	\$0	\$5,477,398
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$0	\$142,412	\$0	\$142,412
	Escalation						\$0	\$0	\$0	\$3,457,764	\$0	\$3,457,764
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
	<b>— Total 2.01 CONCEPTUAL DESIGN</b>											
					0		\$0	\$0	\$0	\$9,077,574	\$0	\$9,077,574
<b>2.02 PRELIMINARY DESIGN</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10PIT-9 STAGE III - LCB, estimate# 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.</i>												
	PRELIMINARY DESIGN				0		\$0	\$0	\$0	\$8,216,098	\$0	\$8,216,098
	Subtotal						\$0	\$0	\$0	\$8,216,098	\$0	\$8,216,098
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$0	\$441,204	\$0	\$441,204
	Escalation						\$0	\$0	\$0	\$5,326,675	\$0	\$5,326,675
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
	<b>— Total 2.02 PRELIMINARY DESIGN</b>											
					0		\$0	\$0	\$0	\$13,983,977	\$0	\$13,983,977

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>2.03 FINAL DESIGN</b>												
<i>Memo: Percentage of construction and procurement costs based on detailed input from the project team for the LCB effort, OU 7-10 PIT-9 STAGE III - LCB, estimate# 5974-1. Also considered were percentage allowances derived by the project team on the CSIX/TRU Grout Feasibility Study, produced by Washington Group International, December, 2000. Where large discrepancies occurred, an average of the two percentages was applied here.</i>												
	FINAL DESIGN					<i>U.C. per \$</i>						
			136,934,960.00	\$	0		\$0	\$0	\$0	\$0	\$*,***,***	\$13,693,496
	Subtotal						\$0	\$0	\$0	\$0	\$13,693,496	\$13,693,496
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	<b>0.00%</b>					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$0	\$0	\$1,110,543	\$1,110,543
	Escalation						\$0	\$0	\$0	\$0	\$9,108,646	\$9,108,646
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
	—Total 2.03 FINAL DESIGN				0		\$0	\$0	\$0	\$0	\$23,912,684	\$23,912,684

**2.04 TRANSURANIC REPORTING SYSTEM (TRIPS)**

	TRIPS DEVELOPMENT					<i>U.C. per LS</i>						
			1.00	LS	0		\$0	\$0	\$0	\$0	\$166,000,000	\$16,600,000
	<i>Memo: Based on input from B. L. Peterson of historic costs incurred in the development of the Transuranic Reporting System for the 3100 Cubic Meter project. Adjustments were made to remove costs in support of operations.</i>											
	Subtotal						\$0	\$0	\$0	\$0	\$16,600,000	\$16,600,000
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	<b>0.00%</b>					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate						\$0	\$0	\$0	\$0	\$1,346,260	\$1,346,260
	Escalation						\$0	\$0	\$0	\$0	\$11,041,995	\$11,041,995
	Contingency						\$0	\$0	\$0	\$0	\$0	\$0
	—Total 2.04 TRANSURANIC REPORTING SYSTEM (TRIPS)				0		\$0	\$0	\$0	\$0	\$28,988,255	\$28,988,255

**3.1 PROCUREMENT MANAGEMENT**

	PROCUREMENT SUPPORT					<i>U.C. per \$</i>						
			136,934,960.00	\$	0		\$0	\$0	\$0	\$0	\$0.016	\$2,218,346

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged InterIm Action**  
**StageIII Project - CompactAll with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipmen</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.1 PROCUREMENT MANAGEMENT</b>												
	Subtotal								\$0	\$0	\$2,218,346	\$2,218,346
	Sales Tax								\$0	\$0	\$0	\$0
	INEEUSubcontractor Overheads		0.00%						\$0	\$0	\$0	\$0
	Subtotal Estimate								\$0	\$0	\$1,475,545	\$1,475,545
	Escalation								\$0	\$0	\$179,908	\$179,908
	Contingency								\$0	\$0	\$1,475,545	\$1,475,545
— Total 3.1 PROCUREMENT MANAGEMENT					0				\$0	\$0	\$3,873,799	\$3,873,799

**3.2.01.01 WRPf EQUIPMENT**

		<i>U.C.per EA</i>							0	0	92000	0	0	92000
	Sorting table walking floor		6.00	EA	0				\$0	\$0	\$552,000	\$0	\$0	\$552,000
	Memo: Based on a 6/24/03 quote from Keith Walking Floor Systems. Copy in estimate file.													
		<i>U.C.per EA</i>							0	0	513000	0	0	513000
	tbd - box dumper or walking floor		1.00	EA	0				\$0	\$0	\$513,000	\$0	\$0	\$513,000
	Memo: Assume similar to above (4 sections only) with a heavy stainless steel chute housing. See basis worksheet in estimate file													
		<i>U.C.per EA</i>							0	0	89714	0	0	89714
	Sorting Deck Soils Trough Hopper		1.00	EA	0				\$0	\$0	\$89,714	\$0	\$0	\$89,714
	Memo: See basis worksheet in estimate file.													
		<i>U.C.per EA</i>							0	0	434229	0	0	434229
	Sorting Deck Bridge Crane 7.5 TON		1.00	EA	0				\$0	\$0	\$434,229	\$0	\$0	\$434,229
	Memo: 2000 quote from PaR. Escalated and site-adjusted. See basis worksheet in estimate file.													
		<i>U.C.per EA</i>							0	0	268000	0	0	268000
	Sorting Deck Sorting Arm 2 TON		3.00	EA	0				\$0	\$0	\$804,000	\$0	\$0	\$804,000
	Memo: 7/1/2003 quote from Caterpillar. See estimate file.													
		<i>U.C.per EA</i>							0	0	450000	0	0	450000
	Sorting deck Soil Collection Conveyor		1.00	EA	0				\$0	\$0	\$450,000	\$0	\$0	\$450,000
	Memo: 6/26/03 Jervis B. Webb Company quote for a 130 conveyor. Used \$3750/lf. as basis for all conveyors. See estimate file.													

**DETAIL ITEM REPORT**

Project Name: **OU 7-TU Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Eauidment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b><u>3.2.01.01 WRPf EQUIPMENT</u></b>												
						<i>U.C. per EA</i>						
	Soil Screen Feed Conveyor		1.00	EA	0		\$0	\$0	485000	0	0	485000
	Memo: 6/26/03 Jervis B. Webb Company quote for a 130' conveyor. Used \$3750/lf. as basis for all conveyors. See estimate file.											
						<i>U.C. per EA</i>						
	Soil Screen Enclosure		1.00	EA	0		\$0	\$0	4694976	0	0	4694976
	Memo: See estimate file.											
						<i>U.C. per EA</i>						
	Soil Screen		1.00	EA	0		\$0	\$0	50347	0	0	50347
	Memo: See estimate file.											
						<i>U.C. per EA</i>						
	Soil Screen Maintenance Crane 5 TON		1.00	EA	0		\$0	\$0	264213	0	0	264213
	Memo: 9/2000 PaR quote with an allowance for a motorized hook. See estimate file.											
						<i>U.C. per EA</i>						
	Shredder Feed Conveyor		1.00	EA	0		\$0	\$0	485000	0	0	485000
						<i>U.C. per EA</i>						
	Oversize Mat'l Xfer Conveyor		1.00	EA	0		\$0	\$0	112500	0	0	112500
						<i>U.C. par EA</i>						
	Oversize Mat'l Enclosure		1.00	EA	0		\$0	\$0	9345600	0	0	9345600
						<i>U.C. per EA</i>						
	Shear Feed Conveyor		1.00	EA	0		\$0	\$0	37500	0	0	37500
						<i>U.C. per EA</i>						
	Oversize Mat'l Shear		1.00	EA	0		\$0	\$0	500000	0	0	500000
						<i>U.C. per EA</i>						
	Sizing Cell Crane 5 TON		1.00	EA	0		\$0	\$0	264213	0	0	264213
						<i>U.C. per EA</i>						
	Shear Discharge Conveyor		1.00	EA	0		\$0	\$0	18750	0	0	18750
						<i>U.C. per EA</i>						
	Sized Mat'l Output Station		1.00	EA	0		\$0	\$0	100700	0	0	100700
	Memo: 9/2000 quote from Engineered Conveyors, Inc., escalated to today. See estimate file.											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01 WRPF EQUIPMENT</b>												
	Intact Drum/Speci Matl Xfer Conveyor		1.00	EA	0		\$0	\$0	\$37,500	\$0	\$0	\$37,500
		<i>U.C. per EA</i>					\$0	\$0	37500	0	0	37500
	Intact Drum & Special Matl Enclosure		1.00	EA	0		\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000
	Memo: As suggested by M. Stacey based on similar arrangement for the 3100 Cubic Meter project. E-mail in estimate file.	<i>U.C. per EA</i>					\$0	\$0	5000000	0	0	5000000
	Intact Drum Handler		1.00	LOT	0		\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000
	Memo: As suggested by M. Stacey based on similar arrangement for the 3100 Cubic Meter project. E-mail in estimate file. Price includes sorting manipulator and drum contents sorting table.	<i>U.C. per LOT</i>					\$0	\$0	5000000	0	0	5000000
	Drum Contents Collecting Conveyor		1.00	EA	0		\$0	\$0	\$37,500	\$0	\$0	\$37,500
		<i>U.C. per EA</i>					\$0	\$0	37500	0	0	37500
	Special Mat'l Output Station		1.00	EA	0		\$0	\$0	\$100,700	\$0	\$0	\$100,700
		<i>U.C. per EA</i>					\$0	\$0	100700	0	0	100700
	Container Assay Unit		3.00	EA	0		\$0	\$0	\$10,500,000	\$0	\$0	\$10,500,000
	Memo: Cost were based on information received from BNFL Instruments Physics Group Lead (E-mail 6-30-03), included in estimating file.	<i>U.C. per EA</i>					\$0	\$0	3500000	0	0	3500000
	Drum Contents Xfer Conveyor		1.00	EA	0		\$0	\$0	\$37,500	\$0	\$0	\$37,500
		<i>U.C. per EA</i>					\$0	\$0	37500	0	0	37500
	Soil Screen Product Xfer conveyor		1.00	EA	0		\$0	\$0	\$337,500	\$0	\$0	\$337,500
		<i>U.C. per EA</i>					\$0	\$0	337500	0	0	337500
	Soil Screen Rejects Xfer conveyor		1.00	EA	0		\$0	\$0	\$262,500	\$0	\$0	\$262,500
		<i>U.C. per EA</i>					\$0	\$0	262500	0	0	262500
	Shredder Enclosure		1.00	EA	0		\$0	\$0	\$360,076	\$0	\$0	\$360,076
		<i>U.C. per EA</i>					\$0	\$0	360076	0	0	360076
	2 Stage Shredder		1.00	EA	0		\$0	\$0	\$1,400,000	\$0	\$0	\$1,400,000
	Memo: 5/16/2003 quote from SSI Shredding Systems, Inc. See estimate file.	<i>U.C. per EA</i>					\$0	\$0	1400000	0	0	1400000
	Shredded Waste Xfer conveyor		1.00	EA	0		\$0	\$0	\$187,500	\$0	\$0	\$187,500
		<i>U.C. per EA</i>					\$0	\$0	187500	0	0	187500

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs.</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01 WRPF EQUIPMENT</b>												
	Shredded Waste Packaging Glove Box		1.00	EA	0		\$0	\$0	993933	0	0	993933
	Memo: Based on two GEM project Packaging Glovebox Systems.						\$0	\$0	\$993,933	\$0	\$0	\$993,933
	Drum Filling Conveyor		2.00	EA	0		\$0	\$0	1300000	0	0	1300000
	Memo: Price by engineering						\$0	\$0	\$2,600,000	\$0	\$0	\$2,600,000
	Shredded Waste Output Station		2.00	EA	0		\$0	\$0	100700	0	0	100700
							\$0	\$0	\$201,400	\$0	\$0	\$201,400
	Shredded Waste GB Maintenance crane 1TON		1.00	EA	0		\$0	\$0	167971	0	0	167971
	Memo: 4/25/2003 quote from American Crane plus allowance for motorized hook rotator and site factor.						\$0	\$0	\$167,971	\$0	\$0	\$167,971
	Soil Hopper Enclosure		1.00	EA	0		\$0	\$0	5588409	0	0	5588409
							\$0	\$0	\$5,588,409	\$0	\$0	\$5,588,409
	Soil Storage Feed Conveyor		1.00	EA	0		\$0	\$0	37500	0	0	37500
							\$0	\$0	\$37,500	\$0	\$0	\$37,500
	Soil Storage Bin		2.00	EA	0		\$0	\$0	10000	0	0	10000
	Memo: Allowance.						\$0	\$0	\$20,000	\$0	\$0	\$20,000
	Soil Storage Bin Activator		2.00	EA	0		\$0	\$0	8777	0	0	8777
	Memo: From Richardson, 100-35, pg. 3-4, with adjustments for stainless steel construction, escalation and site factor.						\$0	\$0	\$17,554	\$0	\$0	\$17,554
	Soil Storage Bin Discharge Conveyor		2.00	EA	0		\$0	\$0	150000	0	0	150000
							\$0	\$0	\$300,000	\$0	\$0	\$300,000
	Assay Systems feed conveyor		1.00	EA	0		\$0	\$0	30000	0	0	30000
							\$0	\$0	\$30,000	\$0	\$0	\$30,000
	Assay Feed Spreader #1		2.00	EA	0		\$0	\$0	18285	0	0	18285
							\$0	\$0	\$36,570	\$0	\$0	\$36,570

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact A//with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquiDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>3.2.01.01 WRPF EQUIPMENT</u>												
	Soil Assay System #2		2.00	EA	0				1000000			1000000
	Memo: 6/30/2003 quote from BNFL Instruments. Conveyorized Survey Monitor as described in note 2 of their quote. See estimate file.											
	Assayed Soil Diverting Conveyor		1.00	EA	0				112500			112500
	Memo: 6/30/2003 quote from BNFL Instruments. Conveyorized Survey Monitor as described in note 2 of their quote. See estimate file.											
	nonTRU Soil Xfer Conveyor		1.00	EA	0				168750			168750
	TRU Soil Xfer Conveyor		1.00	EA	0				168750			168750
	nonTRU Soil Packaging GB		1.00	EA	0				233026			233026
	nonTRU Soil Packaging GB		1.00	EA	0				233026			233026
	TRU Soil Packaging GB		1.00	EA	0				233026			233026
	TRU Soil Packaging GB		1.00	EA	0				233026			233026
	Drum Entry Air lock		1.00	EA	0				100700			100700
	TRU drum compactor enclosure		1.00	EA	0				1400000			1400000
	Memo: Unrecorded observation based on compactor system used by BNFL in the AMWTF. Price includes TRU drum compactor enclosure, Drum Compactor, Drum Puck Handling Device, and Compacted Drum Pkg Enclosure.											
	100 gal drum output		1.00	EA	0				100700			100700

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact AN with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.01 WRPF EQUIPMENT</b>												
	CONTAINER HANDLING TRUCK (1000 LBS)	<i>U.C. per EA</i>	5.00	EA	0		\$0	\$0	\$15,000	\$0	\$0	\$15,000
	TRUPACT LOADING STATION - INCL. LOADING CRANE	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$648,000	\$0	\$0	\$648,000
Subtotal							\$0	\$0	\$70,702,359	\$0	\$0	\$70,702,359
Sales Tax							\$0	\$0	\$4,242,142	\$0	\$0	\$4,242,142
INEEUSubcontractorOverheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												<b>\$74,944,501</b>
Escalation							\$0	\$0	\$6,077,999	\$0	\$0	\$6,077,999
Contingency							\$0	\$0	\$49,849,746	\$0	\$0	\$49,849,746
—Total 3.2.01.01 WRPF EQUIPMENT					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$** , ** , **</b>	<b>\$0</b>	<b>\$0</b>	<b>\$** , ** , **</b>

**3.2.01.02 WRPF-HVAC EQUIPMENT**

**Memo:** *Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group that contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.*

	1000 kW HEATER SECTION (PREHEAT)	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$5,000	\$0	\$0	\$5,000
	INLET HEPA FILTER TRAIN 6X4 (1,500 CFM/ FILTER)	<i>U.C. per EA</i>	2.00	EA	0		\$0	\$0	\$320,000	\$0	\$0	\$320,000
Memo: The cost for this filter train includes; inlet isolation dampers, prefilter section, test inlet, HEPA filters, test outlet, & outlet isolation damper.												
	OUTLET HEPA FILTER TRAIN 6X4 (1,500CFM/ FILTER)	<i>U.C. per EA</i>	2.00	EA	0		\$0	\$0	\$780,000	\$0	\$0	\$780,000
Memo: The cost for this filter train includes; inlet isolation dampers, mist eliminator, T1, charcoal filter, heater section (RH control), prefilter section, test inlet, HEPA filters, test combination, & outlet isolation damper.												
	MAIN EXHAUST FAN (62,500CFM- 300 HP)	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$23,000	\$0	\$0	\$23,000
	BACK-UP EXHAUST FAN (11,000 CFM-200 HP)	<i>U.C. per EA</i>	1.00	EA	0		\$0	\$0	\$11,000	\$0	\$0	\$11,000

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.01.02 WRPV-HVAC EQUIPMENT</b>												
<i>Memo: Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group that contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.</i>												
	RADIANT HEATERS 13.5 KW		18.00	EA	0		\$0	\$0	\$17,100	\$0	\$0	\$17,100
		<i>U.C. per EA</i>					0	0	950	0	0	950
	COMPUTER ROOM AC UNIT (10 TON GLYCOL UNIT)		1.00	EA	0		\$0	\$0	\$32,000	\$0	\$0	\$32,000
		<i>U.C. per EA</i>					0	0	32000	0	0	32000
<b>Subtotal</b>							\$0	\$0	\$1,188,100	\$0	\$0	\$1,188,100
<b>Sales Tax</b>							\$0	\$0	\$71,286	\$0	\$0	\$71,286
<b>INEEUSubcontractor Overheads</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$1,259,386
<b>Escalation</b>							\$0	\$0	\$102,136	\$0	\$0	\$102,136
<b>Contingency</b>							\$0	\$0	\$837,688	\$0	\$0	\$837,688
<b>---Total 3.2.01.02 WRPV-HVAC EQUIPMENT</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$2,199,210</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,199,210</b>
<b>3.2.01.03 WRPV I&amp;C PROCUREMENT</b>												
	I&C SYSTEM		1.00	LS	0		\$0	\$0	\$160,900	\$0	\$0	\$160,900
		<i>U.C. per LS</i>					0	0	160900	0	0	160900
<b>Subtotal</b>							\$0	\$0	\$160,900	\$0	\$0	\$160,900
<b>Sales Tax</b>							\$0	\$0	\$9,654	\$0	\$0	\$9,654
<b>INEEUSubcontractor Overheads</b>							\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$170,554
<b>Escalation</b>							\$0	\$0	\$13,832	\$0	\$0	\$13,832
<b>Contingency</b>							\$0	\$0	\$113,445	\$0	\$0	\$113,445
<b>---Total 3.2.01.03 WRPV I&amp;C PROCUREMENT</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$297,831</b>	<b>\$0</b>	<b>\$0</b>	<b>\$297,831</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs.</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.01 INCINERATION EQUIPMENT</b>												
	Holding Bin w/ open or closed valve		1.00	EA	0		\$0	\$0	45713 \$45,713	0 \$0	0 \$0	45773 \$45,713
	Metering Feed Valve		1.00	EA	0		\$0	\$0	27550 \$27,550	0 \$0	0 \$0	27550 \$27,550
	Propane Storage Tank		1.00	EA	0		\$0	\$0	33047 \$33,047	0 \$0	0 \$0	33047 \$33,047
	Propane Vaporizer		1.00	EA	0		\$0	\$0	9360 \$9,360	0 \$0	0 \$0	9360 \$9,360
	INCINERATOR-ALL INCLUSIVE		1.00	LS	0		\$0	\$0	2302900 \$2,302,900	0 \$0	0 \$0	2302900 \$2,302,900
Memo.	Cost for this incinerator includes all of the following components; primary combustor, Primary Burner System, air heater, combustion air blower, open/closed valve; metering feed valve, secondary combustor, combustion air blower, incinerator discharge equipment, incinerator ash cooling equipment, incinerator instruments/controls, cyclone separator/filter, off gas scrubber, ejector venturi scrubber, scrubber heat exchanger, caustic storage tank, caustic pump, high efficiency mist eliminator, off gas stack blower, off gas stack, and Continuous Emissions Monitoring.											
	Propane Tank		1.00	EA	0		\$0	\$0	33047 \$33,047	0 \$0	0 \$0	33047 \$33,047
	Propane Vaporizer		1.00	EA	0		\$0	\$0	9360 \$9,360	0 \$0	0 \$0	9360 \$9,360

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact A// with Inclination Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.01 INCINERATION EQUIPMENT</b>												
	Wood Box Loading Glovebox		1.00	EA	0		\$0	\$0	480000	\$0	\$0	480000
	Memo: Costs based on GEM Pit-9, Approx \$40,000/lineal ft.											
	Subtotal						\$0	\$0	\$2,940,977	\$0	\$0	\$2,940,977
	Sales Tax						\$0	\$0	\$176,459	\$0	\$0	\$176,459
	INEEUSubcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											\$3,117,436
	Escalation						\$0	\$0	\$252,824	\$0	\$0	\$252,824
	Contingency						\$0	\$0	\$2,073,579	\$0	\$0	\$2,073,579
-- Total	<b>3.2.02.01 INCINERATION EQUIPMENT</b>				<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$5,443,839</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,443,839</b>

**3.2.02.02 INCINERATOR OFF GAS EQUIPMENT**

	Actuated Valve		1.00	EA	0		\$0	\$0	6296	\$0	\$0	6296
	Memo: Scaled from 3aP E-3003											
	Blowdown Pump		2.00	EA	0		\$0	\$0	6,512	\$0	\$0	6,512
	Blowdown Pump		2.00	EA	0		\$0	\$0	4,350	\$0	\$0	4,350
	Blowdown Tank		1.00	EA	0		\$0	\$0	7,314	\$0	\$0	7,314
	Blowdown Tank Mixer		1.00	EA	0		\$0	\$0	11,179	\$0	\$0	11,179
	Blowdown Evaporator		1.00	EA	0		\$0	\$0	628,984	\$0	\$0	628,984
	Discharge Pump		2.00	EA	0		\$0	\$0	6,512	\$0	\$0	6,512

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.02 INCINERATOR OFF GAS EQUIPMENT</b>												
	Brine Storage Tank		1.00	EA	0		\$0	\$0	\$1,140	\$0	\$0	\$1,140
	Brine Storage Tank Mixer		1.00		0		\$0	\$0	\$3,379	\$0	\$0	\$3,379
	Brine Transfer Pump		2.00	EA	0		\$0	\$0	\$3,806	\$0	\$0	\$3,806
	Actuated Valve		1.00	EA	0		\$0	\$0	\$6,296	\$0	\$0	\$6,296
	Storage Hopper		1.00	EA	0		\$0	\$0	\$12,565	\$0	\$0	\$12,565
	Metering Valve		1.00	EA	0		\$0	\$0	\$22,552	\$0	\$0	\$22,552
	In-grum Mixer		1.00	EA	0		\$0	\$0	\$243,800	\$0	\$0	\$243,800
	Memo: Taken from WGI's CSIX/TRU study of 2000. Unrecorded observation.											
	Packaging glovebox		1.00		0		\$0	\$0	\$280,000	\$0	\$0	\$280,000
	Memo: Costs based on GEM Pit-9, Approx \$40,000/lineal ft.											
	Reheat Off Gas		1.00	EA	0		\$0	\$0	\$80,000	\$0	\$0	\$80,000
	HEPA Filter 4x4 including rough, secondary, primary		5.00	EA	0		\$0	\$0	\$1,200,000	\$0	\$0	\$1,200,000
	GAC Adsorber		1.00	EA	0		\$0	\$0	\$9,000	\$0	\$0	\$9,000

### DETAIL ITEM REPORT

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>3.2.02.02 INCINERATOR OFF GAS EQUIPMENT</b>												
	GAC Fire Suppression		1.00	EA	0		0	0	4406	0	0	4406
	<i>Memo . Based on the GEM Project glovebox fire mist system @ \$60.35/cf</i>											
	Subtotal						\$0	\$0	\$2,538,091	\$0	\$0	\$2,538,091
	Sales Tax						\$0	\$0	\$152,285	\$0	\$0	\$152,285
	INEEUSubcontractorOverheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate											<b>\$2,690,376</b>
	Escalation						\$0	\$0	\$218,190	\$0	\$0	\$218,190
	Contingency						\$0	\$0	\$1,789,519	\$0	\$0	\$1,789,519
—Total 3.2.02.02 INCINERATOR OFF GAS EQUIPMENT					0		\$0	\$0	<b>\$4,698,085</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,698,085</b>

**3.2.02.03 INCINERATOR VENTILATION SYSTEM**

*Memo: Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group. They contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.*

	HEPA filter (1H X 1W HEPA HOUSING)	<i>U.C. per EA</i>	1.00	EA	0		0	0	15000	0	0	15000
							\$0	\$0	\$15,000	\$0	\$0	\$15,000
	HEPA filter (4H X 4W HEPA HOUSING)	<i>U.C. per EA</i>	7.00	EA	0		0	0	240000	0	0	240000
							\$0	\$0	\$1,680,000	\$0	\$0	\$1,680,000
	HEPA filter (1H X 1W HEPA HOUSING)	<i>U.C. per EA</i>	5.00	EA	0		0	0	15000	0	0	15000
							\$0	\$0	\$75,000	\$0	\$0	\$75,000
	Exhaust Fan 300 CFM	<i>U.C. per EA</i>	1.00	EA	0		0	0	1800	0	0	1800
							\$0	\$0	\$1,800	\$0	\$0	\$1,800
	Exhaust Fan 300 CFM	<i>U.C. per EA</i>	1.00	EA	0		0	0	1800	0	0	1800
							\$0	\$0	\$1,800	\$0	\$0	\$1,800
	Exhaust Fan 300 CFM	<i>U.C. per EA</i>	1.00	EA	0		0	0	1800	0	0	1800
							\$0	\$0	\$1,800	\$0	\$0	\$1,800

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMWS. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Descrption</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
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3.2.02.03 INCINERATOR VENTILATION SYSTEM

**Memo:** *Costs for the majority of the HVAC equipment were obtained from the BBWL Engineering group. They contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.*

	<i>U.C. per EA</i>											
Exhaust Fan 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$52,973	\$0	\$0	\$52,973
	<i>U.C. per EA</i>					0	\$0	\$0	52973	0	0	52973
Exhaust Fan 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$52,973	\$0	\$0	\$52,973
	<i>U.C. per EA</i>					0	\$0	\$0	52973	0	0	52973
Exhaust Fan 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$52,973	\$0	\$0	\$52,973
	<i>U.C. per EA</i>					0	\$0	\$0	3122	0	0	3122
Exhaust Fan 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,122	\$0	\$0	\$3,122
	<i>U.C. per EA</i>					0	\$0	\$0	3122	0	0	3122
Exhaust Fan 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,122	\$0	\$0	\$3,122
	<i>U.C. per EA</i>					0	\$0	\$0	3122	0	0	3122
Exhaust Fan 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,122	\$0	\$0	\$3,122
	<i>U.C. per EA</i>					0	\$0	\$0	42380	0	0	42380
Air Handling Unit 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$42,380	\$0	\$0	\$42,380
	<i>U.C. per EA</i>					0	\$0	\$0	42380	0	0	42380
Air Handling Unit 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$42,380	\$0	\$0	\$42,380
	<i>U.C. per EA</i>					0	\$0	\$0	42380	0	0	42380
Air Handling Unit 55,000 CFM		1.00	EA	0		\$0	\$0	\$0	\$42,380	\$0	\$0	\$42,380
	<i>U.C. per EA</i>					0	\$0	\$0	3650	0	0	3650
Air Handling Unit 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,650	\$0	\$0	\$3,650
	<i>U.C. per EA</i>					0	\$0	\$0	3650	0	0	3650
Air Handling Unit 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,650	\$0	\$0	\$3,650
	<i>U.C. per EA</i>					0	\$0	\$0	3650	0	0	3650
Air Handling Unit 2,100 CFM		1.00	EA	0		\$0	\$0	\$0	\$3,650	\$0	\$0	\$3,650

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage 111 Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
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**3.2.02.03 INCINERATOR VENTILATION SYSTEM**

*Memo: Costs for the majority of the HVAC equipment were obtained from the BBWI Engineering group. They contacted a local HVAC vendor that provided budgetary cost information based on preliminary design information.*

	<i>U.C. per EA</i>						<i>0</i>	<i>0</i>	<i>1090</i>	<i>0</i>	<i>0</i>	<i>1090</i>	
Heater (115,000 BTU)		1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Healer (115,000 BTU)	<i>U.C. per EA</i>	1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Heater (115,000 BTU)	<i>U.C. per EA</i>	1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Heater (115,000 BTU)	<i>U.C. per EA</i>	1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Heater (115,000 BTU)	<i>U.C. per EA</i>	1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Heater (115,000 BTU)	<i>U.C. per EA</i>	1.00	EA		0		\$0	\$0	\$1,090	\$0	\$0	\$1,090	
Subtotal							\$0	\$0	\$2,088,315	\$0	\$0	\$2,088,315	
Sales Tax							\$0	\$0	\$125,299	\$0	\$0	\$125,299	
INEEL/Subcontractor Overheads							<i>0.00%</i>	\$0	\$0	\$0	\$0	\$0	
<b>Subtotal Estimate</b>													<b>\$2,213,614</b>
Escalation							\$0	\$0	\$179,524	\$0	\$0		\$179,524
Contingency							\$0	\$0	\$1,472,397	\$0	\$0		\$1,472,397
<b>--- Total 3.2.02.03 INCINERATOR VENTILATION SYSTEM</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$3,865,535</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,865,535</b>	

**3.2.02.04 INCINERATOR INSTRUMENTS & CONTROLS**

	<i>U.C. per LS</i>						<i>0</i>	<i>0</i>	<i>274950</i>	<i>0</i>	<i>0</i>	<i>274950</i>
I&C SYSTEM		1.00	LS		0		\$0	\$0	\$274,950	\$0	\$0	\$274,950

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>3.2.02.04 INCINERATOR INSTRUMENTS&amp; CONTROLS</b>													
	Subtotal							\$0	\$0	\$274,950	\$0	\$0	\$274,950
	Sales Tax							\$0	\$0	\$16,497	\$0	\$0	\$16,497
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$23,636	\$0	\$0	\$23,636
	Escalation							\$0	\$0	\$193,858	\$0	\$0	\$193,858
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
—Total 3.2.02.04 INCINERATOR INSTRUMENTS& CONTROLS					0			\$0	\$0	\$508,941	\$0	\$0	5508,941

**3.2.03 EQUIPMENT PROCUREMENT(AIRLOCKTO CHARATERIZATION)**

	CCTV MONITORINGSYSTEM-EQUIPMENT	<i>U.C. per SF</i>	4,250.00	SF	0			0	0	6	0	0	6
	Memo: This unit cost is based on the GEM project. Assume the same type of equipment and quantities will be required							\$0	\$0	\$25,500	\$0	\$0	\$25,500
	Subtotal							\$0	\$0	\$25,500	\$0	\$0	\$25,500
	Sales Tax							\$0	\$0	\$1,530	\$0	\$0	\$1,530
	INEEUSubcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$2,192	\$0	\$0	\$2,192
	Escalation							\$0	\$0	\$17,979	\$0	\$0	\$17,979
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
—Total 3.2.03 EQUIPMENT PROCUREMENT(AIRLOCK TO CHARATERIZATION)					0			\$0	\$0	\$47,201	\$0	\$0	\$47,201

**3.3 BBWI MATERIAL HANDLING FEE**

	PROCUREMENT FEE	<i>U.C. per \$</i>	84,714,344.00	\$	0			0	0	0	0	0.12	0.12
								\$0	\$0	\$0	\$0	\$*,***,***	\$10,165,721



**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs.</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.01 WRPF - GENERAL CONDITIONS</b>												
	Mobilization & Demobilization	GEN	32,954,346.00	\$	0	CN-SKWK	\$0	\$0	\$0	\$197,726	0	0.006
	Memo: Mobilization/demobilization costs @ .6% of direct construction\$.											
	CONSTRUCTION EQUIPMENT ALLOWANCE	GEN	109,364.00	HRS	0		\$0	\$437,456	\$0	\$0	\$0	4
	Memo: @ \$2.50/LABOR HOUR.											
	SMALL TOOLS & CONSUMABLES	GEN	19,610,554.00	\$	0		\$0	\$0	\$784,422	\$0	\$0	0.04
	Memo: @ 4% of construction labor \$.											
	GENERAL CLEANUP	GEN	109,364.00	HRS	8,749	CN-LABR	\$276,297	\$0	\$0	\$0	\$0	2.526
	Memo: @ 8% of construction labor hours											
	CONDUCT OF OPERATIONS/CONDUCT OF MAINTENANCE	GEN	109,364.00	HRS	5,468	CN-SKWK	\$188,762	\$0	\$0	\$0	\$0	1.726
	Memo: @ 5% of labor hours											
	QA Manager	GEN	107.00	wks	4,280	CN-MGR	\$299,600	\$0	\$0	\$0	\$0	2800
	Memo: @ 26% of construction labor hours											
	QA Clerk	GEN	107.00	wks	4,280	CN-CLRK	\$85,600	\$0	\$0	\$0	\$0	800
	Memo: @ 26% of construction labor hours											
	QC Inspector (ave 3 inspectors)	GEN	107.00	wks	12,840	CN-SUPR	\$513,600	\$0	\$0	\$0	\$0	4800
	Memo: @ 26% of construction labor hours											
	QA/QC Pickup (1 pickup)	GEN	107.00	wks	4,280	00E2060	\$0	\$33,726	\$0	\$0	\$0	315.2
	Memo: @ 26% of construction labor hours											
	Craning Allowance - W/ Operator & Oiler	GEN	107.00	Wk	8.560	CN-ENGR	\$292,752	\$133,750	\$0	\$0	\$0	1250
	Memo: @ 26% of construction labor hours											

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- CompactAll with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S L Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>4.2.01.01 WRPF - GENERAL CONDITIONS</u>												
	GEN						0	0	0	75	0	75
	CONSTRUCTION WAREHOUSE		15,000.00	SF	0		\$0	\$0	\$0	\$1,125,000	\$0	\$1,125,000
Memo: Based on Means Facility Cost manual adjusted by our Nine-Block Matrix factors assuming a #6 or 7 on the Matrix. Assumption of 15,000sf was included.												
Subtotal							\$2,181,559	\$604,932	\$784,422	\$1,322,726	\$0	\$4,893,639
Sales Tax							\$0	\$0	\$47,065	\$0	\$0	\$47,065
INEEL Subcontractor Overheads							\$633,306	\$175,612	\$241,381	\$383,987	\$0	\$1,434,287
Subtotal Estimate												\$6,374,991
Escalation							\$376,066	\$104,281	\$143,335	\$228,017	\$0	\$851,699
Contingency							\$1,574,512	\$436,602	\$600,115	\$954,660	\$0	\$3,565,890
--Total 4.2.01.01 WRPF - GENERAL CONDITIONS					57,301		\$4,765,443	\$1,321,427	<b>\$1,816,319</b>	\$2,889,391	\$0	\$10,792,580

4.2.01.02.01.01 FIRE PUMP HOUSE

							0	0	0	143.73	0	143.73
	PRE-ENGINEERED METAL BUILDING 30 X 40'		1,200.00	sf	0		\$0	\$0	\$0	\$172,476	\$0	\$172,476
Memo: Unit costs for this pre-engineered metal building is based on historical cost of a facility erected at the RWMC area in 1996, the RWMC Maintenance Facility. The reflected unit cost includes slab on grade, building structure, mechanical, and electrical. The estimate file contains the historical cost data sheet.												

Subtotal							\$0	\$0	\$0	\$172,476	\$0	\$172,476
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$172,476
Escalation							\$0	\$0	\$0	\$23,043	\$0	\$23,043
Contingency							\$0	\$0	\$0	\$96,475	\$0	\$96,475
--Total 4.2.01.02.01.01 FIRE PUMP HOUSE					0		\$0	<b>\$0</b>	\$0	\$291,994	\$0	\$291,994

4.2.01.02.01.02 POTABLE WATER SYSTEM

	PIPE						0	0	0	15	0	15
	2 POTABLE LINE		1,000.00	LF	0	CN-PIPE	\$0	\$0	\$0	\$15,000	\$0	\$15,000

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.02 POTABLEWATER SYSTEM</b>												
	EXCAVATION FOR LINE	GEN	1,000.00	LF	0	CN-ENGR	\$0	\$0	\$0	\$50,000	\$0	\$50,000
	Subtotal						\$0	\$0	\$0	\$65,000	\$0	\$65,000
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads						\$0	\$0	\$0	\$21,731	\$0	\$21,731
	<b>Subtotal Estimate</b>											<b>\$86,731</b>
	Escalation						\$0	\$0	\$0	\$11,587	\$0	\$11,587
	Contingency						\$0	\$0	\$0	\$48,513	\$0	\$48,513
<b>---Total 4.2.01.02.01.02 POTABLEWATER SYSTEM</b>					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$146,831</b>	<b>\$0</b>	<b>\$146,831</b>

**4.2.01.02.01.03 SANITARY WASTE SYSTEM**

	4" SANITARY WASTE LINE	PIPE	1,000.00	LF	0	CN-PIPE	\$0	\$0	\$0	\$40,000	\$0	\$40,000
	SEWAGE LIFT STATION (ALLOWANCE)	PIPE	1.00	EA	0	CN-PIPE	\$0	\$0	\$0	\$42,500	\$0	\$42,500
	ELECTRICAL ALLOWANCE	ELEC	1.00	LS	0	CN-ELEC	\$0	\$0	\$0	\$10,000	\$0	\$10,000

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project - Compact A//with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.03 SANITARY WASTE SYSTEM</b>												
	EXCAVATION FOR LINE	GEN	1,000.00	LF	0	CN-ENGR	\$0	\$0	\$0	\$50,000	\$0	\$50,000
	Subtotal						\$0	\$0	\$0	\$142,500	\$0	\$142,500
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEU Subcontractor Overheads						\$0	\$0	\$0	\$59,011	\$0	\$59,011
	Subtotal Estimate											\$201,511
	Escalation						\$0	\$0	\$0	\$26,922	\$0	\$26,922
	Contingency						\$0	\$0	\$0	\$112,717	\$0	\$112,717
	--Total 4.2.01.02.01.03 SANITARY WASTE SYSTEM				0		\$0	\$0	\$0	\$341,150	\$0	\$341,150

**4.2.01.02.01.04 FIRE PIPING SYSTEM**

	FIRE PUMPS	FP	2.00	EA	0	CN-SPRI	\$0	\$0	\$0	\$129,000	\$0	\$129,000
	MISC VALVING, EQUIPMENT, & CONTROLS	FP	1.00	LS	0	CN-SPRI	\$0	\$0	\$0	\$38,500	\$0	\$38,500
	Memo: Allowance @ 30% of pump costs.											
	4" FIRE MAIN	FP	1,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	\$50,000	\$0	\$50,000
	Memo: Based on a detailed take off of pipe, PIV's, hydrants, thrust blocks, coat & wrap, jumpers testing, etc.											
	6" FIRE MAIN-LOOP	FP	3,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	\$195,900	\$0	\$195,900
	Memo: Based on a detailed take off of pipe, PIV's, hydrants, thrust blocks, coat & wrap, jumpers testing, etc.											
	WATER STORAGE TANK 40 DIA X 40 HIGH	FP	1.00	EA	0	CN-SPRI	\$0	\$0	\$0	\$130,000	\$0	\$130,000
	Memo: Costs are based on Richardsons 2000 API Cone Roof Storage tank sec. 100-370 page 3.											
	TANK INSULATION	INSUL	6,284.00	SF	0	CN-ASBE	\$0	\$0	\$0	\$92,375	\$0	\$92,375

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project- Compact A//with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.02.01.04 FIRE PIPING SYSTEM</b>													
	TANK FOUNDATION	GEN											
			1.00	LS	0	CN-ENGR	\$0	\$0	\$0	40000	\$0	40000	
	Memo: Allowance @ 30% of tank cost.												
	EXCAVATION FOR LINE	GEN	4,000.00	LF	0	CN-ENGR	\$0	\$0	\$0	50	\$0	50	
										200,000	\$0	200,000	
Subtotal							\$0	\$0	\$0	\$875,775	\$0	\$875,775	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	
INEEUSubcontractor Overheads							38.40%	\$0	\$0	\$0	\$336,271	\$0	\$336,271
Subtotal Estimate												\$1,212,046	
Escalation								\$0	\$0	\$0	\$161,929	\$0	5161,929
Contingency								\$0	\$0	\$0	\$677,965	\$0	\$677,965
—Total 4.2.01.02.01.04 FIRE PIPING SYSTEM					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,051,941</b>	<b>\$0</b>	<b>\$2,051,941</b>	

**4.2.01.02.01.05.02 SITEWORK**

	Excavate for Concrete Pad	DIRT	66.00	CY	0.39	\$34.75	13.553	1.27	0	0	0	14.823
					26	CN-EQMD	\$894	\$84	\$0	\$0	\$0	\$978
	12" of Pitrun for Equipment Pad	DIRT	44.00	CY	0.032	\$34.76	1.098	0.711	8	0	0	9.809
					1	CN-EQMD	\$48	\$31	\$352	\$0	\$0	\$432
	4 of Compacted Crushed Gravel	DIRT	15.00	CY	1.09	\$34.75	37.877	30	27	0	0	94.877
					16	CN-EQMD	\$568	\$450	\$405	\$0	\$0	\$1,423

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.02.01.05.02 SITEWORK</b>													
	Surveyors	DIRT	<i>U.C. per Day</i>	1.00	Day	20	\$33.17	663.4	0	0	0	663.4	
						20	CN-SURV	\$663	\$0	\$0	\$0	\$663	
Subtotal								\$2,174	\$565	\$757	\$0	\$0	\$3,496
Sales Tax								\$0	\$0	\$45	\$0	\$0	\$45
INEEL/Subcontractor Overheads							41.93%	\$912	\$237	\$336	\$0	\$0	\$1,485
Subtotal Estimate												\$5,027	
Escalation								\$412	\$107	\$152	\$0	\$0	\$672
Contingency								\$1,726	\$449	\$637	\$0	\$0	\$2,812
--Total 4.2.01.02.01.05.02 SITEWORK					63		\$5,225	\$1,358	\$1,928	\$0	\$0	\$8,511	

**4.2.01.02.01.05.03 CONCRETE**

	Form & Strip 8" Concrete Pad	CONC	<i>U.C. per LF</i>	360.00	LF	0.07	\$35.81	2.507	0	0.22	0	0	2.727
						25	CN-CARP	\$902	\$0	\$79	\$0	\$0	\$982
	Tie Rebar For Transformer Pad	CONC	<i>U.C. per Lbs</i>	6,000.00	Lbs	0.02	\$35.81	0.716	0	0.3	0	0	1.016
						120	CN-RODM	\$4,297	\$0	\$1,800	\$0	\$0	\$6,097
	Place & Finish Concrete For Transformer Pad	CONC	<i>U.C. per CY</i>	60.00	CY	0.591	\$33.08	19.55	0	85	0	0	104.55
						35	CN-CONC	\$1,173	\$0	\$5,100	\$0	\$0	\$6,273

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact A//with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMWS. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>DescriDtion</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EcluiPMENT</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.05.03 CONCRETE</b>												
	CONC				<b>2</b>	<b>\$31.58</b>	<b>63.16</b>	<b>0</b>	<b>130</b>	<b>0</b>	<b>0</b>	<b>193.16</b>
	Install Guard Post around Transformer Pad		60.00	ea	120	CN-LABR	\$3,790	\$0	\$7,800	\$0	\$0	\$11,590
	Subtotal						\$10,162	\$0	\$14,779	\$0	\$0	\$24,941
	Sales Tax						\$0	\$0	\$887	\$0	\$0	\$887
	INEEUSubcontractorOverheads	41.93%					\$4,261	\$0	\$6,569	\$0	\$0	\$10,831
	Subtotal Estimate											\$36,659
	Escalation						\$1,927	\$0	\$2,971	\$0	\$0	\$4,898
	Contingency						\$8,068	\$0	\$12,437	\$0	\$0	\$20,505
—Total	4.2.01.02.01.05.03	CONCRETE			301		\$24,418	\$0	\$37,643	\$0	\$0	\$62,062

**4.2.01.02.01.05.4.1 SWITCHGEAR**

	ELEC				<b>160</b>	<b>\$35.89</b>	<b>5742.4</b>	<b>5000</b>	<b>382000</b>	<b>0</b>	<b>0</b>	<b>392742.4</b>
	2000 AMP NEMA 3R WALK-IN 5 kV DOUBLE ENDED SWITCHGEAR		1.00	Ea	160	CN-ELEC	\$5,742	\$5,000	\$382,000	\$0	\$0	\$392,742
Memo Cost for switchgear is factored from INTEC, EUSU, Sub 60 costs in 997. This gear was 3000 amp Nema 1. This estimate assumes 4% escalation on \$375,000 = \$427,500. Then factors to 66% because of the 2000 amp bus rating of this gear The estimate adds \$100,00 to the estimate for the Neam3R enclosure.												
	Subtotal						\$5,742	\$5,000	\$382,000	\$0	\$0	\$392,742
	Sales Tax						\$0	\$0	\$22,920	\$0	\$0	\$22,920
	INEEUSubcontractorOverheads	48.10%					\$2,762	\$2,405	\$194,783	\$0	\$0	\$199,950
	Subtotal Estimate											\$615,613
	Escalation						\$1,136	\$989	\$80,120	\$0	\$0	\$82,246
	Contingency						\$4,757	\$4,142	\$335,447	\$0	\$0	\$344,347
—Total	4.2.01.02.01.05.4.1	SWITCHGEAR			160		\$14,398	\$12,537	\$1,015,270	\$0	\$0	\$1,042,205

**4.2.01.02.01.05.4.2 TRANSFORMERS**

	ELEC				<b>80</b>	<b>\$35.89</b>	<b>2871.2</b>	<b>5000</b>	<b>37700</b>	<b>0</b>	<b>0</b>	<b>45571.2</b>
	2000kVA 4160-277/480 DRY TRANSFORMER		1.00	Ea	80	CN-ELEC	\$2,871	\$5,000	\$37,700	\$0	\$0	\$45,571

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<u>4.2.01.02.01.05.4.2 TRANSFORMERS</u>													
	ELEC	<i>U.C. per Ea</i>			30	\$35.89	1076.7	5000	42400	0	0	48476.7	
	2500 kVA 4160-277/480 DRY TRANSFORMER		1.00	Ea	30	CN-ELEC	\$1,077	\$5,000	\$42,400	\$0	\$0	\$48,477	
Memo: Transformer and labor costs are based on R. S. Means.													
	ELEC	<i>U.C. per Ea</i>			30	\$35.89	1076.7	1500	27600	0	0	30176.7	
	1000 kVA 4160-277/480 DRY TRANSFORMER		1.00	Ea	30	CN-ELEC	\$1,077	\$1,500	\$27,600	\$0	\$0	\$30,177	
Memo: Transformer and labor costs are based on R. S. Means.													
Subtotal							\$5,025	\$11,500	\$107,700	\$0	\$0	\$124,225	
Sales Tax							\$0	\$0	\$6,462	\$0	\$0	\$6,462	
INEEUSubcontractor Overheads							48.10%	\$2,417	\$5,532	\$54,916	\$0	\$0	\$62,865
Subtotal Estimate												\$193,552	
Escalation							\$994	\$2,275	\$22,589	\$0	\$0	\$25,859	
Contingency							\$4,163	\$9,527	\$94,575	\$0	\$0	\$108,265	
--Total 4.2.01.02.01.05.4.2 TRANSFORMERS					140		\$12,598	\$28,834	\$286,242	\$0	\$0	\$327,675	
<u>4.2.01.02.01.05.4.3 STANDBY GENERATOR</u>													
	ELEC	<i>U.C. per Ea</i>			120	\$35.89	4306.8	5000	233000	0	0	242306.8	
	1000 kW DIESEL GENERATOR		1.00	Ea	120	CN-ELEC	\$4,307	\$5,000	\$233,000	\$0	\$0	\$242,307	
Memo: Pricing is based on a verbal ROM quote from Western States Equipment in Boise, 6/30/03. Price includes louvers, day tank, and maint fuel tank.													
Subtotal							\$4,307	\$5,000	\$233,000	\$0	\$0	\$242,307	
Sales Tax							\$0	\$0	\$13,980	\$0	\$0	\$13,980	
INEEUSubcontractor Overheads							48.10%	\$2,072	\$2,405	\$118,807	\$0	\$0	\$123,284
Subtotal Estimate												\$379,571	
Escalation							\$852	\$989	\$48,869	\$0	\$0	\$50,710	
Contingency							\$3,568	\$4,142	\$204,605	\$0	\$0	\$212,315	
--Total 4.2.01.02.01.05.4.3 STANDBY GENERATOR					120		\$10,799	\$12,537	\$619,262	\$0	\$0	\$642,597	

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<u>4.2.01.02.01.05.4.4 CONDUCTORS AND GROUNDING</u>												
	ELEC	<i>U.C. per Lf</i>			<i>0.07</i>	<i>\$35.89</i>	<i>2.512</i>	<i>0</i>	<i>4.5</i>	<i>0</i>	<i>0</i>	<i>7.012</i>
	500 MCM 5 kV POWER CABLE, ASSUME 6 PER PHASE, 200 LF run		3,600.00	Lf	252	CN-ELEC	\$9,044	\$0	\$16,200	\$0	\$0	\$25,244
	ELEC	<i>U.C. per Lf</i>			<i>0.03</i>	<i>\$35.89</i>	<i>1.077</i>	<i>0</i>	<i>0.8</i>	<i>0</i>	<i>0</i>	<i>1.877</i>
	1/0 GROUND WIRE		3,200.00	Lf	96	CN-ELEC	\$3,445	\$0	\$2,560	\$0	\$0	\$6,005
	ELEC	<i>U.C. per Lf</i>			<i>0.05</i>	<i>\$35.89</i>	<i>1.795</i>	<i>0</i>	<i>2.37</i>	<i>0</i>	<i>0</i>	<i>4.165</i>
	500 MCM 600 VOLT CABLE		13,500.00	Lf	675	CN-ELEC	\$24,226	\$0	\$31,995	\$0	\$0	\$56,221
	Memo: Assume distribution transformers are located 500 Lf from the 5 kV switchgear.											
	ELEC	<i>U.C. per Lf</i>			<i>0.03</i>	<i>\$35.89</i>	<i>1.077</i>	<i>0</i>	<i>0.8</i>	<i>0</i>	<i>0</i>	<i>1.877</i>
	2/0 BARE COPPER GROUND FOR SWITCHGEAR PAD		600.00	Lf	18	CN-ELEC	\$646	\$0	\$480	\$0	\$0	\$1,126
	ELEC	<i>U.C. per Lf</i>			<i>0.032</i>	<i>\$35.89</i>	<i>1.148</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>2.148</i>
	3/0 BARE COPPER GROUND FOR SWITCHGEAR PAD		500.00	Lf	16	CN-ELEC	\$574	\$0	\$500	\$0	\$0	\$1,074
	ELEC	<i>U.C. per Ea</i>			<i>1.5</i>	<i>\$35.89</i>	<i>53.835</i>	<i>0</i>	<i>17</i>	<i>0</i>	<i>0</i>	<i>70.835</i>
	CADWELDS		70.00	Ea	105	CN-ELEC	\$3,768	\$0	\$1,190	\$0	\$0	\$4,958
	ELEC	<i>U.C. per Ea</i>			<i>1</i>	<i>\$35.89</i>	<i>35.89</i>	<i>0</i>	<i>35</i>	<i>0</i>	<i>0</i>	<i>70.89</i>
	GROUND RODS		20.00	Ea	20	CN-ELEC	\$718	\$0	\$700	\$0	\$0	\$1,418
	Subtotal						\$42,422	\$0	\$53,625	\$0	\$0	\$96,047
	Sales Tax						\$0	\$0	\$3,218	\$0	\$0	\$3,218
	INEEU Subcontractor Overheads	48.10%					\$20,407	\$0	\$27,344	\$0	\$0	\$47,750
	Subtotal Estimate											\$147,015
	Escalation						\$8,394	\$0	\$11,247	\$0	\$0	\$19,641
	Contingency						\$35,144	\$0	\$47,090	\$0	\$0	\$82,234
	-Total 4.2.01.02.01.05.4.4 CONDUCTORS AND GROUNDING				1,102		\$106,366	\$0	\$142,523	\$0	\$0	\$248,889

4.2.01.02.01.05.4.5 TESTING

	ELEC	<i>U.C. per ls</i>			<i>200</i>	<i>\$35.89</i>	<i>7178</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7178</i>
	Testing of systems and equipment		1.00	ls	200	CN-ELEC	\$7,178	\$0	\$0	\$0	\$0	\$7,178

**DETAIL ITEM REPORT**

Project Name: *OU 7-70 Staged Interim Action*  
*Stage III Project - Compact All with Incineration Option*  
 Project Location: *INEEL-RWMC*  
 Estimate Number: *5974-2 (1+2aP)*

Client: *S. L. Austad*  
 Prepared By: *R. D. ADAMS/S. N. WASLEY*  
 Estimate Type: *Project Support*

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.02.01.05.4.5 TESTING</b>												
	Subtotal						\$7,178	\$0	\$0	\$0	\$0	\$7,178
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	48.10%					\$3,453	\$0	\$0	\$0	\$0	\$3,453
	Subtotal Estimate											\$10,631
	Escalation						\$1,420	\$0	\$0	\$0	\$0	\$1,420
	Contingency						\$5,946	\$0	\$0	\$0	\$0	\$5,946
—Total 4.2.01.02.01.05.4.5 TESTING					200		\$17,998	\$0	\$0	\$0	\$0	\$17,998

**4.2.01.02.02 WRPF EARTHWORK**

	DIRT	<i>U.C. per CY</i>					0	0	0	3.51	0	3.51
	FOUNDATION EXCAVATION		9,259.00	CY	0		\$0	\$0	\$0	\$32,499	\$0	\$32,499
	DIRT	<i>U.C. per CY</i>					0	0	0	13.87	0	13.87
	FOUNDATION BACKFILL & COMPACT		8,387.00	CY	0		\$0	\$0	\$0	\$116,328	\$0	\$116,328
	DIRT	<i>U.C. per CY</i>					0	0	0	1.8	0	1.8
	SPREADEXCESSEXCAVATEDMATERIAL		872.00	CY	0		\$0	\$0	\$0	\$1,570	\$0	\$1,570
	Subtotal						\$0	\$0	\$0	\$150,396	\$0	\$150,396
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL Subcontractor Overheads	41.93%					\$0	\$0	\$0	\$63,066	\$0	\$63,066
	Subtotal Estimate											\$213,462
	Escalation						\$0	\$0	\$0	\$28,519	\$0	\$28,519
	Contingency						\$0	\$0	\$0	\$119,401	\$0	\$119,401
—Total 4.2.01.02.02 WRPF EARTHWORK					0		\$0	\$0	\$0	\$361,382	\$0	\$361,382

**4.2.01.03 WRPF - CONCRETE**

	GEN	<i>U.C. per CY</i>					0	0	0	430	0	430
	FOUNDATION WALLS & FTGS.		662.00	CY	0		\$0	\$0	\$0	\$284,660	\$0	\$284,660

**DETAIL ITEM REPORT**

Project Name: *OU 7-10 Staged Interim Action  
Stage III Project - Compact A//with Incineration Option*  
 Project Location: *INEEL-RWMC*  
 Estimate Number: *5974-2 (1+2aP)*

Client: *S. L. Austad*  
 Prepared By: *R. D. ADAMS/S. N. WASLEY*  
 Estimate Type: *Project Support*

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.03WRPF - CONCRETE</b>													
	MISC. & EQUIP. FDNS.	GEN	210.00	CY	0		\$0	\$0	\$0	430	\$0	430	
										\$90,300		\$90,300	
	FLOORS	GEN	1,544.00	CY	0		\$0	\$0	\$0	430	\$0	430	
										\$663,920		\$663,920	
	WALLS	GEN	2,389.00	CY	15.811 37,773	\$34.52 CN-SKWK	545.803 \$1,303,922	0	191.31 \$457,040	79.26 \$189,352	0	816.373 \$1,950,314	
	COLUMNS	GEN	866.00	CY	8.525 7,383	\$34.52 CN-SKWK	294.283 \$254,849	0	131.8 \$114,139	306.18 \$265,152	0	732.263 5634,140	
	BEAMS & GIRDERS	GEN	741.00	CY	9.404 6.968	\$34.52 CN-SKWK	324.626 \$240,548	0	143.8 \$106,556	235.81 \$174,735	0	704.236 \$521,839	
<b>Subtotal</b>							\$1,799,319	\$0	5677,734	\$1,668,119	\$0	\$4,145,173	
<b>Sales Tax</b>							\$0	\$0	\$40,664	\$0	\$0	\$40,664	
<b>INEEUSubcontractorOverheads</b>							29.03%	\$522,342	\$0	\$208,551	\$484,255	\$0	\$1,215,148
<b>Subtotal Estimate</b>												\$5,400,985	
<b>Escalation</b>							\$310,174	\$0	\$123,840	\$207,557	\$0	\$721,572	
<b>Contingency</b>							\$1,298,636	\$0	\$518,495	\$1,203,943	\$0	\$3,021,074	
<b>Total 4.2.01.03WRPF - CONCRETE</b>					<b>52,124</b>		<b>\$3,930,472</b>	<b>\$0</b>	<b>\$1,569,284</b>	<b>\$3,643,875</b>	<b>\$0</b>	<b>\$9,143,631</b>	

**4.2.01.05WRPF - METALS**

ROOF DECK	STEEL		62,500.00	SF	0.012 759	\$42.71 STEEL1	0.519 \$32,435	0.288 \$17,985	2.683 \$167,688	0 \$0	0 \$0	3.49 \$218,107
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**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage 111 Project - CompactAll with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.05WRPF - METALS</b>												
	Subtotal						\$32,435	\$17,985	\$167,680	\$0	\$0	\$218,107
	Sales Tax						\$0	\$0	\$10,061	\$0	\$0	\$10,061
	INEEUSubcontractorOverheads	41.93%					\$13,601	\$7,541	\$74,535	\$0	\$0	\$95,678
	Subtotal Estimate											<b>\$323,847</b>
	Escalation						\$6,150	\$3,410	\$33,705	\$0	\$0	\$43,266
	Contingency						\$25,751	\$14,278	\$141,117	\$0	\$0	\$181,146
--Total 4.2.01.05WRPF - METALS					759		<b>\$77,938</b>	<b>\$43,214</b>	<b>\$427,106</b>	<b>\$0</b>	<b>\$0</b>	<b>\$548,258</b>

**4.2.01.07 WRPF - THERMAL & MOISTURE PROTECTION**

	ROOF INSULATION	ROOF	U.C. per SF	62,500.00 SF	0		\$0	\$0	\$0	1.931	\$0	1.931
							\$0	\$0	\$0	\$120,706	\$0	\$120,706
	ROOFING	ROOF	U.C. per SF	62,500.00 SF	0		\$0	\$0	\$0	2.938	\$0	2.938
							\$0	\$0	\$0	\$103,594	\$0	\$183,594
	EXTERIOR WALL INSULATION	INSUL	U.C. per SF	51,060.00 SF	0		\$0	\$0	\$0	1.71	\$0	1.71
							\$0	\$0	\$0	\$87,313	\$0	\$87,313
	EXTERIOR WALL METALSIDING	STEEL	U.C. per SF	51,060.00 SF	0.068	\$36.82	2485	0	4.47	0	0	6.955
					3,447	CN-SHEE	\$126,902	\$0	\$228,238	\$0	\$0	\$355,140
	Subtotal						\$126,902	\$0	\$228,238	\$391,613	\$0	\$746,753
	Sales Tax						\$0	\$0	\$13,694	\$0	\$0	\$13,694
	INEEUSubcontractorOverheads	41.93%					\$53,214	\$0	\$101,450	\$164,215	\$0	\$318,078
	Subtotal Estimate											\$1,079,325
	Escalation						\$24,063	\$0	\$45,876	\$74,259	\$0	\$144,198
	Contingency						\$100,749	\$0	\$192,073	\$310,905	\$0	\$603,727
--Total 4.2.01.07WRPF - THERMAL & MOISTURE PROTECTION					3,447		<b>\$304,928</b>	<b>\$0</b>	<b>\$581,331</b>	<b>\$940,992</b>	<b>\$0</b>	<b>\$1,827,250</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact A// with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.08 WRPf - DOORS &amp; WINDOWS</b>												
<i>Memo: Rollup doors are included with adjoining facility.</i>												
	PERSONNEL DOORS 3'X7'	GEN	7.00	EA	6.885 48	\$35.81 CN-CARP	246.551 \$1,726	0 \$0	903.89 \$6,327	0 \$0	0 \$0	1150.441 \$8,053
	PERSONNEL DOORS 6'X7'	GEN	3.00	EA	14.58 44	\$35.81 CN-CARP	522.71 \$1,566	0 \$0	2089.37 \$6,268	0 \$0	0 \$0	2611.48 \$7,834
Subtotal							\$3,292	\$0	\$12,595	\$0	\$0	\$15,880
Sales Tax							\$0	\$0	\$756	\$0	\$0	\$756
INEEUSubcontractor Overheads							29.03%	\$956	\$0	\$3,876	\$0	\$4,832
Subtotal Estimate												\$21,475
Escalation							\$568	\$0	\$2,302	\$0	\$0	\$2,869
Contingency							\$2,376	\$0	\$9,636	\$0	\$0	\$12,012
<b>Total 4.2.01.08 WRPf - DOORS &amp; WINDOWS</b>					<b>92</b>		<b>\$7,192</b>	<b>\$0</b>	<b>\$29,164</b>	<b>\$0</b>	<b>\$0</b>	<b>\$36,356</b>
<b>4.2.01.09 WRPf - FINISHES</b>												
	EPOXY FLOOR COATING	PAINT	62,500.00	SF	0.108 6,750	\$38.00 CN-PNTS	4.104 \$256,500	0 \$0	1.07 \$66,875	0 \$0	0 \$0	5.174 \$323,375
	EPOXY WALL & CEILING COATING	PAINT	126,992.00	SF	0.078 9,905	\$38.00 CN-PNTS	2.964 \$376,404	0 \$0	1.14 \$144,771	0 \$0	0 \$0	4.104 \$521,175
Subtotal							\$632,904	\$0	\$211,646	\$0	\$0	\$844,550
Sales Tax							\$0	\$0	\$12,699	\$0	\$0	\$12,699
INEEUSubcontractor Overheads							41.93%	\$265,396	\$0	\$94,074	\$0	\$359,470
Subtotal Estimate												\$1,216,719
Escalation							\$120,013	\$0	\$42,541	\$0	\$0	\$162,554
Contingency							\$502,470	\$0	\$178,110	\$0	\$0	\$680,579
<b>Total 4.2.01.09 WRPf - FINISHES</b>					<b>16.655</b>		<b>\$1,520,782</b>	<b>\$0</b>	<b>\$539,069</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,059,852</b>

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.11 WRPF - EQUIPMENT-INSTALLGFE</b>												
<i>Memo: From "Plant Design and Economics for Chemical Engineers," the average installation costs are about 25% of purchase price. Due to the very specialized nature of some of these systems (and the very high system purchase prices), assume installation will be one-half the average or 12.5% of purchase price. This factor will only apply to the non-HVAC and non-I&amp;C equipment. HVAC and I&amp;C equipment installation will be detailed separately.</i>												
	EQUIPMENT INSTALLATION						0.125		0		0	0.125
			80,244,501.00	\$	0		\$10,030,563	\$0	\$0	\$0	\$0	\$10,030,563
Subtotal							\$10,030,563	\$0	\$0	\$0	\$0	\$10,030,563
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEUSubcontractorOverheads							0.00%	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$10,030,563
Escalation							\$1,340,083	\$0	\$0	\$0	\$0	\$1,340,083
Contingency							\$5,610,656	\$0	\$0	\$0	\$0	\$5,610,656
—Total	4.201	WRPF - EQUIPMENT-INSTALLGFE			0		\$16,981,301	\$0	\$0	\$0	\$0	\$16,981,301

**4.2.01.15.01 WRPF - INSTALL HVAC EQUIPMENT & DUCT**

	PIPE						60	\$36.82	2209.2	0	0	0	0	2209.2
	1000KW HEATER SECTION (PREHEAT)		1.00	EA			60	CN-SHEE	\$2,209	\$0	\$0	\$0	\$0	\$2,209
	PIPE						160	\$36.82	5891.2	0	0	0	0	5891.2
	INLET HEPA FILTER TRAIN 6X4 (1,500 CFM/ FILTER)		2.00	EA			320	CN-SHEE	\$11,782	\$0	\$0	\$0	\$0	\$11,782
<i>Memo: The cost for this filter train includes; inlet isolation dampers, prefilter section, test inlet, HEPA filters, test outlet, &amp; outlet isolation damper.</i>														
	PIPE						160	\$36.82	5891.2	0	0	0	0	5891.2
	OUTLET HEPA FILTER TRAIN 6X4 (1,500 CFM/ FILTER)		2.00	EA			320	CN-SHEE	\$11,782	\$0	\$0	\$0	\$0	\$11,782
<i>Memo: The cost for this filter train includes; inlet isolation dampers, mist eliminator, TI, charcoal filter, heater section (RH control), prefilter section, test inlet, HEPA filters, test combination, &amp; outlet isolation damper.</i>														
	PIPE						150	\$36.82	5523	0	0	0	0	5523
	MAIN EXHAUST FAN (62,500 CFM-300 HP)		1.00	EA			150	CN-SHEE	\$5,523	\$0	\$0	\$0	\$0	\$5,523
	PIPE						120	\$36.82	4418.4	0	0	0	0	4418.4
	BACK-UP EXHAUST FAN (11,000 CFM-200 HP)		1.00	EA			120	CN-SHEE	\$4,418	\$0	\$0	\$0	\$0	\$4,418
	PIPE						8	\$36.82	294.56	0	0	0	0	294.56
	RADIANT HEATERS 13.5 KW		18.00	EA			144	CN-SHEE	\$5,302	\$0	\$0	\$0	\$0	\$5,302

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage 1fl Project - CompactAll with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<b>4.2.01.15.01WRPF - INSTALL HVAC EQUIPMENT &amp; DUCT</b>													
	PIPE	<i>U.C. per EA</i>			60	\$36.82	2209.2	0	0	0	0	2209.2	
	COMPUTER ROOMAC UNIT (10TON GLYCOL UNIT)		1.00	EA	60	CN-SHEE	\$2,209	\$0	\$0	\$0	\$0	\$2,209	
	HVAC	<i>U.C. per LBS</i>			0.2	\$36.82	7.364	0.3	2	0	0	9.664	
	STAINLESS STEEL DUCTWORK (BASED ON 1 LBS/SF)		62,500.00	LBS	12.500	CN-SHEE	\$460,250	\$18,750	\$125,000	\$0	\$0	\$604,000	
	HVAC	<i>U.C. per LBS</i>			0.08	\$36.82	2.946	0.3	0.75	0	0	3.996	
	GALVANIZED STEEL DUCTWORK (BASED ON 1 LBS/SF)		62,500.00	LBS	5,000	CN-SHEE	\$184,100	\$18,750	\$46,875	\$0	\$0	\$249,725	
Subtotal							\$687,577	\$37,500	\$171,875	\$0	\$0	\$896,952	
Sales Tax							\$0	\$0	\$10,313	\$0	\$0	\$10,313	
INEEUSubcontractor Overheads							45.75%	\$314,847	\$17,113	\$83,142	\$0	\$0	\$415,102
Subtotal Estimate												\$1,322,367	
Escalation								\$133,924	\$7,296	\$35,448	\$0	\$0	\$176,668
Contingency								\$560,712	\$30,548	\$148,414	\$0	\$0	\$739,674
--Total 4.2.01.15.01WRPF • INSTALL HVAC EQUIPMENT & DUCT					<b>18,674</b>		<b>\$1,697,059</b>	<b>\$92,450</b>	<b>\$449,192</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,238,709</b>	

**4.2.01.15.02WRPF - FIRE PROTECTION**

**Memo:** *Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.*

	FP	<i>U.C. per SF</i>					0	0	0	3.4	0	3.4
	WRPF-FACILITY FIRE SYSTEM CONTROLS		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$212,500	\$0	\$212,500
	FP	<i>U.C. per SF</i>					0	0	0	3.65	0	3.65
	WRPF-DRY PIPE FIRE PROTECTION		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$228,125	\$0	\$228,125
	FP	<i>U.C. per SF</i>					0	0	0	3.65	0	3.65
	WRPF-DRY PIPE FIRE PROTECTION(SECONDARY COVERAGE UNDER EQUIPMENT)		62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	\$228,125	\$0	\$228,125
	FP	<i>U.C. per LF</i>					0	0	0	65.3	0	65.3
	WRPF- FEED MAINS		1,000.00	LF	0	CN-SPRI	\$0	\$0	\$0	\$65,300	\$0	\$65,300

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
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**4.2.01.15.02 WRPF - FIRE PROTECTION**

*Memo: Costs are based on contacting a local fire protection vendor that has provided many hours of time as a consultant for the INEEL. This company has also design and installed many fire protection systems at the INEEL, as well as the GEM project. Fire system control costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility.*

	FP											
	WRPF-EXTRA HAZARD FOAM SYSTEM (EQUIPMENT ONLY)	U.C. per LS	1.00	LS	0	CN-SPRI	\$0	\$0	\$0	100000	\$0	100000
										\$1 00,000		\$100,000
	WRPF-EXTRA HAZARD FOAM PIPING DISTRIBUTION SYSTEM	U.C. per SF	62,500.00	SF	0	CN-SPRI	\$0	\$0	\$0	4.35	\$0	4.35
										\$271,875		\$271,875
	WRPF-EXTRA HAZARD FOAM MONITOR NOZZLES	U.C. per EA	6.00	EA	0	CN-SPRI	\$0	\$0	\$0	10000	\$0	10000
										\$60,000		\$60,000
	WRPF-GLOVEBOX MIST SYSTEM	U.C. per CF	73,495.00	CF	0		\$0	\$0	\$0	30.17	\$0	30.17
										\$2,217,344		\$2,217,344

*Memo. Cost per cubic foot is based on the GEM facility glovebox fire protection misting system. Due to the extremely large sized gloveboxes an economy of scale factor was used @ 50% of GEM project.*

	Subtotal											
							\$0	\$0	\$0	\$3,383,269	\$0	\$3,383,269
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEUSubcontractorOverheads	14.45%					\$0	\$0	\$0	\$488,907	\$0	\$488,907
	Subtotal Estimate						\$0	\$0	\$0	\$517,323	\$0	\$3,072,176
	Escalation						\$0	\$0	\$0	\$2,165,925	\$0	\$517,323
	Contingency						\$0	\$0	\$0	\$2,165,925	\$0	\$2,165,925
<hr/>												
--Total 4.2.01.15.02 WRPF - FIRE PROTECTION					0		\$0	\$0	\$0	\$6,555,424	\$0	\$6,555,424

**4.2.01.15.03 WRPF - PLANT AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.*

	WRPF-PLANT AIR DIST. SYSTEM	U.C. per SF	62,500.00	SF	0		\$0	\$0	\$0	2.04	\$0	2.04
										\$1 27,500		\$127,500

### DETAIL ITEM REPORT

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMWS. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
4.2.01.15.03	WRPF - PLANT AIR												
<i>Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. Equipment cost for the compressor is by the retrieval project.</i>													
	Subtotal							\$0	\$0	\$0	\$127,500	\$0	\$127,500
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$17,034	\$0	\$17,034
	Escalation							\$0	\$0	\$0	\$71,318	\$0	\$71,318
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
—Total 4.2.01.15.03 WRPF - PLANT AIR					0			\$0	\$0	\$0	\$215,852	\$0	\$215,852

**4.2.01.15.04 WRPF - BREATHING AIR**

*Memo: Costs are based on the GEM Project design, assume the same type system and coverage will be required for this facility. No costs for the breathing air compressor have been included, assume provided to the project by the BBW1 equipment pool at no cost to this project.*

	WRPF-BREATHING AIR DIST. SYSTEM	U.C. per SF	62,500.00	SF	0			\$0	\$0	\$0	\$700,000	\$0	\$700,000
	Subtotal							\$0	\$0	\$0	\$700,000	\$0	\$700,000
	Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
	INEEL Subcontractor Overheads	0.00%						\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal Estimate							\$0	\$0	\$0	\$93,520	\$0	\$93,520
	Escalation							\$0	\$0	\$0	\$391,549	\$0	\$391,549
	Contingency							\$0	\$0	\$0	\$0	\$0	\$0
—Total 4.2.01.15.04 WRPF - BREATHING AIR					0			\$0	\$0	\$0	\$1,185,069	\$0	\$1,185,069

**WRPF - PROCESS PIPING**

*Memo: Allowance is based on previous detail take-off process piping system.*

	PIPE	U.C. per SF	31,250.00	SF	0.182	\$39.33	7.158		\$0	\$32.7	\$0	\$0	\$39,858
	PROCESS PIPING ALLOWANCE (assume 50% reduction due to the equipment type)				5,688	CN-PIPE	\$223,689		\$0	\$1,021,875	\$0	\$0	\$1,245,564

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>WRPF - PROCESSPIPING</b>												
<i>Memo: Allowance is based on previous detail take-off process piping system.</i>												
	Subtotal						\$223,689	\$0	\$1,021,875	\$0	\$0	\$1,245,564
	Sales Tax						\$0	\$0	\$61,313	\$0	\$0	\$61,313
	INEEU Subcontractor Overheads	48.10%					\$107,604	\$0	\$521,057	\$0	\$0	\$628,660
<b>Subtotal Estimate</b>												\$1,935,537
	Escalation						\$44,261	\$0	\$214,327	\$0	\$0	\$258,588
	Contingency						\$185,311	\$0	\$897,344	\$0	\$0	\$1,082,654
<b>—Total WRPF - PROCESS PIPING</b>					5,688		\$560,864	\$0	\$2,715,915	\$0	\$0	\$3,276,779

**4.2.01.16.01 WRPF - GENERAL FACILITIES ELECTRICAL**

*Memo: Costs are based on the GEM project calculated square footage.*

	FACILITY RACEWAYS	<i>U.C. per SF</i>	62,500.00	SF	0		\$0	\$0	\$0	17	\$0	\$1,062,500
	FACILITY WIRE & CABLE	<i>U.C. per SF</i>	62,500.00	SF	0		\$0	\$0	\$0	6.36	\$0	\$397,500
	FACILITY LIGHTING	<i>U.C. per SF</i>	62,500.00	SF	0		\$0	\$0	\$0	8.75	\$0	\$546,875
	FACILITY MISC. (TELEPHONE, LIGHTNING PROTECTION, ETC.)	<i>U.C. per SF</i>	62,500.00	SF	0		\$0	\$0	\$0	5.45	\$0	\$340,625
	Subtotal						\$0	\$0	\$0	\$2,347,500	\$0	\$2,347,500
	Sales Tax						\$0	\$0	\$0	\$0	\$0	\$0
	INEEL/Subcontractor Overheads	0.00%					\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Estimate</b>												\$2,347,500
	Escalation						\$0	\$0	\$0	\$313,626	\$0	\$313,626
	Contingency						\$0	\$0	\$0	\$1,313,088	\$0	\$1,313,088
<b>—Total 4.2.01.16.01 WRPF - GENERAL FACILITIES ELECTRICAL</b>					0		\$0	\$0	\$0	\$3,974,214	\$0	\$3,974,214

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact A// with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.16.02.1 SWITCHGEAR</b>												
	MCC-2000, 4000 AMP	ELEC				<i>U.C. per Ea</i>						
			100	Ea	160	\$35.89	5742.4	5000	56000	0	0	66742.4
					160	CN-ELEC	\$5,742	\$5,000	\$56,000	\$0	\$0	\$66,742
Memo	Estimate is based on R S Means and G E Buy Log for material pricing. The estimate assumes this gear will have a HPS for a main breaker, will require metering, and will be gfci protected. All panel pricing is based on the above listed sources.											
	SMCC-0082, 2000 AMP	ELEC				<i>U.C. per Ea</i>						
			1.00	Ea	24	\$35.89	861.36	0	24500	0	0	25361.36
					24	CN-ELEC	\$861	\$0	\$24,500	\$0	\$0	\$25,361
	PP-2000, 600 AMP	ELEC				<i>U.C. per Ea</i>						
			1.00	Ea	24	\$35.89	861.36	0	6500	0	0	7361.36
					24	CN-ELEC	\$861	\$0	\$6,500	\$0	\$0	\$7,361
Memo:	Assume this will be a 4000 amp switchboard. 5000 amp is a non standard unit and pricing is not available.											
	480 VOLT DISTRIBUTION PANELS	ELEC				<i>U.C. per Ea</i>						
			7.00	Ea	16	\$35.89	574.24	0	5000	0	0	5574.24
					112	CN-ELEC	\$4,020	\$0	\$35,000	\$0	\$0	\$39,020
	120/208 PANELS	ELEC				<i>U.C. per Ls</i>						
			1.00	Ls	80	\$35.89	2871.2	0	10000	0	0	12871.2
					80	CN-ELEC	\$2,871	\$0	\$10,000	\$0	\$0	\$12,871
	ALLOWANCE FOR DISCONNECTS AND SMALL STRATERS	ELEC				<i>U.C. per Ls</i>						
			1.00	Ls	120	\$35.89	4306.8	0	10000	0	0	14306.8
					120	CN-ELEC	\$4,307	\$0	\$10,000	\$0	\$0	\$14,307
	ALLOWANCE FOR SMALL STEP DOWN TRANSFORMERS	ELEC				<i>U.C. per Ls</i>						
			1.00	Ls	40	\$35.89	1435.6	0	5000	0	0	6435.6
					40	CN-ELEC	\$1,436	\$0	\$5,000	\$0	\$0	\$6,436
	BUS-2ap SB, 1000 AMP PANEL, FEED A	ELEC				<i>U.C. per Ea</i>						
			1.00	Ea	0		0	1500	35000	0	0	36500
						CN-ELEC	\$0	\$1,500	\$35,000	\$0	\$0	\$36,500

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
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**4.2.01.16.02.1 SWITCHGEAR**

	ELEC	<i>U.C. per Ea</i>			<b>160</b>	<b>\$35.89</b>	<b>5742.4</b>	<b>5000</b>	<b>73500</b>	<b>0</b>	<b>0</b>	<b>84242.4</b>
	BUS-2ap, 4000 AMP SWITCHBOARD, FED B		1.00	Ea	160	CN-ELEC	\$5,742	\$5,000	\$73,500	\$0	\$0	\$84,242

Memo: Estimate is based on R S Means and G E Buy Log for material pricing. The estimate assumes this gear will have a HPS for a main breaker, will require metering, and will be gfci protected All panel pricing is based on the above listed sources.

Subtotal							\$25,841	\$11,500	\$255,500	\$0	\$0	\$292,841
Sales Tax							\$0	\$0	\$15,330	\$0	\$0	\$15,330
INEEL/Subcontractor Overheads		<b>48.10%</b>					\$12,430	\$5,532	\$130,280	\$0	\$0	\$148,242

Subtotal Estimate												<b>\$456,413</b>
Escalation							\$5,113	\$2,275	\$53,588	\$0	\$0	\$60,977
Contingency							\$21,407	\$9,527	\$224,363	\$0	\$0	\$255,298

—Total **4.2.01.16.02.1 SWITCHGEAR** **720** **\$64,792** **\$20,034** **\$679,062** **\$0** **\$0** **\$772,688**

**4.2.01.16.02.2 EQUIPMENT CONTROLS**

	ELEC	<i>U.C. per Ls</i>			<b>360</b>	<b>\$35.89</b>	<b>12920.4</b>	<b>0</b>	<b>35000</b>	<b>0</b>	<b>0</b>	<b>47920.4</b>
	PLC CONTROLLER, INCLUDING I/O's, SIGNAL POINTS, TRANSMITTERS		1.00	Ls	360	CN-ELEC	\$12,920	\$0	\$35,000	\$0	\$0	\$47,920

Subtotal							\$12,920	\$0	\$35,000	\$0	\$0	\$47,920
Sales Tax							\$0	\$0	\$2,100	\$0	\$0	\$2,100
INEEL/Subcontractor Overheads		<b>48.10%</b>					\$6,215	\$0	\$17,847	\$0	\$0	\$24,062

Subtotal Estimate												<b>\$74,002</b>
Escalation							\$2,557	\$0	\$7,341	\$0	\$0	\$9,897
Contingency							\$10,704	\$0	\$30,735	\$0	\$0	\$41,438

—Total **4.2.01.16.02.2 EQUIPMENT CONTROLS** **360** **\$32,396** **\$0** **\$93,022** **\$0** **\$0** **\$125,410**

**4.2.01.16.02.3 RACEWAYS AND ENCLOSURES**

	ELEC	<i>U.C. per Ls</i>			<b>40</b>	<b>\$35.89</b>	<b>1435.6</b>	<b>0</b>	<b>2000</b>	<b>0</b>	<b>0</b>	<b>3435.6</b>
	ALLOWANCE FOR LARGE JUNCTION BOXES AND GUTTER		1.00	Ls	40	CN-ELEC	\$1,436	\$0	\$2,000	\$0	\$0	\$3,436

**DETAIL ITEM REPORT**

Project Name: **OU 7-70 Staged Interim Action**  
**Stage III Project - Compact All with Inclination Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>EquipDment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>	
<u>4.2.01.16.02.3 RACEWAYSAND ENCLOSURES</u>													
	ELEC				<i>U.C. per Lf</i>	<i>0.24</i>	<i>\$35.89</i>	<i>8.614</i>					
	2" GRC WITH FITTINGS AND SUPPORTS		5,100.00	Lf	1,224	CN-ELEC	\$43,929	\$0	\$16,881	\$0	\$0	\$11,924	
Memo: The estimate assumes an average size of branch feeder conduits will be 2", and that the average length of the conduit run will be 150 lf.													
	ELEC				<i>U.C. per Lf</i>	<i>0.16</i>	<i>\$35.89</i>	<i>5.742</i>					
	1/0 THHN COPPER WIRE		1,700.00	Lf	272	CN-ELEC	\$9,762	\$0	\$884	\$0	\$0	\$6,262	
<hr/>													
	Subtotal						\$55,127	\$0	\$19,765	\$0	\$0	\$74,892	
	Sales Tax						\$0	\$0	\$1,186	\$0	\$0	\$1,186	
	INEEU Subcontractor Overheads	48.10%					\$26,518	\$0	\$10,078	\$0	\$0	\$36,597	
<hr/>													
	Subtotal Estimate						\$10,908	\$0	\$4,145	\$0	\$0	\$15,053	
	Escalation						\$45,669	\$0	\$17,356	\$0	\$0	\$63,025	
<hr/>													
	--Total 4.2.01.1 6.02.3 RACEWAYSAND ENCLOSURES					1,536		\$138,222	\$0	\$52,531	\$0	\$0	\$190,753
<u>4.2.01.16.02.4 CONDUCTORSAND GROUNDING</u>													
	ELEC				<i>U.C. per Lf</i>	<i>0.4</i>	<i>\$35.89</i>	<i>14.356</i>					
	250 MCM THHN COPPER WIRE FEEDERS		17,000.00	Lf	6,800	CN-ELEC	\$244,052	\$0	\$20,740	\$0	\$0	\$15,576	
	ELEC				<i>U.C. per Ea</i>	<i>8</i>	<i>\$35.89</i>	<i>287.12</i>					
	ALLOWANCE FOR MOTOR CONNECTIONS AND TESTING		18.00	Ea	144	CN-ELEC	\$5,168	\$0	\$2,700	\$0	\$0	\$7,868	
<hr/>													
	Subtotal						\$249,220	\$0	\$23,440	\$0	\$0	\$272,660	
	Sales Tax						\$0	\$0	\$1,406	\$0	\$0	\$1,406	
	INEEU Subcontractor Overheads	48.10%					\$119,885	\$0	\$11,952	\$0	\$0	\$131,837	
<hr/>													
	Subtotal Estimate						\$49,312	\$0	\$4,916	\$0	\$0	\$54,229	
	Escalation						\$206,461	\$0	\$20,583	\$0	\$0	\$227,045	
<hr/>													
	--Total 4.2.01.16.02.4 CONDUCTORSAND GROUNDING					6,944		\$624,879	\$0	\$62,298	\$0	\$0	\$687,177

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action  
Stage III Project- Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMS/S. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.16.02.5 TESTING</b>												
	ELEC				200	\$35.89	7178	0	0	0	0	7178
	Testing of systems and equipment		1.00	IS	200	CN-ELEC	\$7,178	\$0	\$0	\$0	\$0	\$7,178
Subtotal							\$7,178	\$0	\$0	\$0	\$0	\$7,178
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL Subcontractor Overheads							\$3,453	\$0	\$0	\$0	\$0	\$3,453
Subtotal Estimate												<b>\$10,631</b>
Escalation							\$1,420	\$0	\$0	\$0	\$0	\$1,420
Contingency							\$5,946	\$0	\$0	\$0	\$0	\$5,946
--Total 4.2.01.16.02.5 TESTING					<b>200</b>		<b>\$17,998</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,998</b>

**4.2.01.16.03 WRP - MONITORING AND CONTROLS**

Memo: Installation, raceways, and cabling @ 50% of I&C procurement cost.

	I&C INSTALLATION, RACEWAYS, & CABLE				0		0	0	0	80450	0	80450	
			1.00	LS			\$0	\$0	\$0	\$80,450	\$0	\$80,450	
Subtotal							\$0	\$0	\$0	\$80,450	\$0	\$80,450	
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0	
Subtotal Estimate												<b>\$80,450</b>	
Escalation							\$0	\$0	\$0	\$10,748	\$0	\$10,748	
Contingency							\$0	\$0	\$0	\$45,000	\$0	\$45,000	
--Total 4.2.01.16.03 WRP - MONITORING AND CONTROLS					<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$136,198</b>	<b>\$0</b>	<b>\$136,198</b>	

**4.2.01.16.04 WRP - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION**

	CRITICALITY SYSTEM INSTALLATION				0		0	0	0	20185	0	20185
			3.00	EA			\$0	\$0	\$0	\$60,555	\$0	\$60,555
Subtotal							\$0	\$0	\$0	\$60,555	\$0	\$60,555

Memo: Based on the GEM project installation costs for criticality equipment.

**DETAIL ITEM REPORT**

Project Name: **OU 7-10 Staged Interim Action**  
**Stage III Project - Compact All with Incineration Option**  
 Project Location: **INEEL-RWMC**  
 Estimate Number: **5974-2 (1+2aP)**

Client: **S. L. Austad**  
 Prepared By: **R. D. ADAMSB. N. WASLEY**  
 Estimate Type: **Project Support**

<u>Code</u>	<u>Description</u>	<u>Contractor</u>	<u>Qty</u>	<u>UOM</u>	<u>Hrs</u>	<u>Resource</u>	<u>Labor</u>	<u>Equipment</u>	<u>Material</u>	<u>Subcontractor</u>	<u>Other</u>	<u>TOTAL</u>
<b>4.2.01.16.04 WRP - CRITICALITY &amp; RAD MONITORING SYSTEMS INSTALLATION</b>												
	RADIOLOGICAL MONITORING EQUIPMENT INSTALLATION		1.00	LS	0		0	0	0	16349	0	16349
							\$0	\$0	\$0	\$16,349	\$0	\$16,349
Subtotal							\$0	\$0	\$0	\$76,904	\$0	\$76,904
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$76,904
Escalation							\$0	\$0	\$0	\$10,274	\$0	\$10,274
Contingency							\$0	\$0	\$0	\$43,017	\$0	\$43,017
--Total 4.2.01.16.04 WRP - CRITICALITY & RAD MONITORING SYSTEMS INSTALLATION					0		\$0	\$0	\$0	\$130,195	\$0	\$130,195

**4.2.01.16.05 WRP - CCTV MONITORING SYSTEM**

**Memo: Costs are based on the GEM project calculated square footage.**

	CCTV MONITORING SYSTEM-INSTALLATION LABOR		62,500.00	SF	0		0	0	0	1.36	0	1.36
							\$0	\$0	\$0	\$85,000	\$0	\$85,000
Memo: Unit costs are based on the GEM project. Camera equipment costs are included in the procurement WBS.												
Subtotal							\$0	\$0	\$0	\$85,000	\$0	\$85,000
Sales Tax							\$0	\$0	\$0	\$0	\$0	\$0
INEEL/Subcontractor Overheads							\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Estimate												\$85,000
Escalation							\$0	\$0	\$0	\$11,356	\$0	\$11,356
Contingency							\$0	\$0	\$0	\$47,545	\$0	\$47,545
--Total 4.2.01.16.05 WRP - CCTV MONITORING SYSTEM					0		\$0	\$0	\$0	\$143,901	\$0	\$143,901

**4.2.03.01 INCINERATOR - GENERAL CONDITIONS**

	SUPERVISION	GEN	20,820.00	HRS	0.12	\$40.00	4.8	0	0	0	0	4.8
					2,490	CN-SUPR	\$99,936	\$0	\$0	\$0	\$0	\$99,936
Memo: @ 12% of labor hrs.												