# Appendix E

# Summary – Site Scoring Vote Spread

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This appendix presents the site scoring vote spread from the March 28, 2002, value engineering session. Table E-1 presents the site scoring vote spread across the six criteria for each site and Table E-2 across the sites for each of the six criteria.

The evaluator comments in Table E-1 are the opinion of the evaluators and some may not be technically or factually correct. However, those comments that were not in agreement with the WAG 3 approach to remediation of these sites were removed. Prior to implementation of remediation at the specific sites, additional evaluation will be performed to consider these comments and issues.

**Table E-1. Site scoring vote spread across the six criteria for each site.**

***This table shows the distribution of scores (1-10) across the six criteria for each of the sites. The number within a criteria/score cell indicates the number of participants that used that score for that criteria. Within a site, the criteria are sorted from the highest to the lowest score. Footnotes reference explanations provided by participants regarding why they scored a criteria/site combination.***

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.CPP-01/04/05** | | | | | | | | | | | | | | | |
| Environmental Risk Reduction (1.79) | | | | | | | | 8 | 3 | | 91 | 8.27 | 0.47 | 11 | 14.81 |
| INTEC Integration (0.16) | | | | | | 1 | 1 | 9[1] | | | 85 | 7.73 | 0.65 | 11 | 1.24 |
| INTEC Facility Infrastructure (0.82) | | | | | | 3 | 3[2] | 4 | 1[3] | | 80 | 7.27 | 1.01 | 11 | 5.96 |
| Waste Management (0.31) | | | 1[4] | | 7 | 3 | | | | | 56 | 5.09 | 0.83 | 11 | 1.58 |
| Complexity of Worker Controls (0.51) | | 2[5] | 3[6] | 6[7] | | | | | | | 37 | 3.36 | 0.81 | 11 | 1.72 |
| Future Use of Site (2.41) | | 11 | | | | | | | | | 22 | 2.00 | 0.00 | 11 | 4.82 |
| **2.CPP-03** | | | | | | | | | | | | | | | |
| Waste Management (0.31) | | | | | | | | 7 | 4 | | 92 | 8.36 | 0.50 | 11 | 2.59 |
| Complexity of Worker Controls (0.51) | | | | | | | 1 | 7 | 3 | | 90 | 8.18 | 0.60 | 11 | 4.17 |
| INTEC Facility Infrastructure (0.82) | | | | | | | 2[8] | 7[9] | 2 | | 88 | 8.00 | 0.63 | 11 | 6.56 |

[1] Not much use, ops can facilitate excavation of this area.
This site has no integration issues (not in a traffic area)
Not anticipated for traffic use area pertaining to fuel storage.

[2] There are several process pipes to be worked around.

[3] Due to site, it is possible to plan alternative access routes.

[4] Anticipate site will have piping that will require grouting prior to disposal to ensure void space is addressed. Site will also have "issues" with where system begins.

[5] Site 32 feet bgs which makes work complex getting contaminated soils removed at that depth.
I believe this site should be rated as a high level of worker complexity based on the depth of the required excavation (32 ft BGS)

[6] The entire site may require excavation to basalt due adding this site with 4 and 5. Additionally, the site may extend to the 603.
Depth of contamination (32 feet) increases the worker complexity.

[7] Due to depth of investigation – 2.

[8] Few obstructions over a large area.

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**Facilitated by: Linda Seward/Buck West**

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTEC Integration (0.16) | | | | | 1 | 1 | 2[10] | 6[11] | 1[12] | | 82 | 7.45 | 1.13 | 11 | 1.19 |
| Environmental Risk Reduction (1.79) | | | | 11 | | | | | | | 44 | 4.00 | 0.00 | 11 | 7.16 |
| Future Use of Site (2.41) | 8 | | 2 | 1 | | | | | | | 18 | 1.64 | 1.12 | 11 | 3.94 |
| **3.Not applicable (During the discussion CPP-04/05 was merged with CPP-01 for rating purposes.** | | | | | | | | | | | | | | | |
| Future Use of Site (2.41) | | | | | | | | | | | | | | 0 | |
| Environmental Risk Reduction (1.79) | | | | | | | | | | | | | | 0 | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | | | | | | 0 | |
| Complexity of Worker Controls (0.51) | | | | | | | | | | | | | | 0 | |
| Waste Management (0.31) | | | | | | | | | | | | | | 0 | |
| INTEC Integration (0.16) | | | | | | | | | | | | | | 0 | |

[9] Shallow, may not even touch the utilities.

[10] Due to limited excavation, don't anticipate problems w/ traffic.

This site is not in a traffic area for INTEC. However, there may be some minimal integration issues concerning the railroad tracks.

[11] Not a real high traffic area.

[12] Based on meeting, this is not anticipated to be a future use area.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4.CPP-08** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | 2[13] | 4[14] | 5[15] | | | 80 | 7.27 | 0.79 | 11 | 1.16 |
| INTEC Facility Infrastructure (0.82) | | | 1 | 1[16] | 3 | 2 | 1 | 3[17] | | | 65 | 5.91 | 1.70 | 11 | 4.85 |
| Waste Management (0.31) | | | | | 7 | 2[18] | 2[19] | | | | 61 | 5.55 | 0.82 | 11 | 1.72 |
| Environmental Risk Reduction (1.79) | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 | 8.95 |
| Complexity of Worker Controls (0.51) | | | | 4[20] | 4[21] | 3[22] | | | | | 54 | 4.91 | 0.83 | 11 | 2.50 |
| Future Use of Site (2.41) | 1[23] | 6 | 4 | | | | | | | | 25 | 2.27 | 0.65 | 11 | 5.48 |

[13] Not a high traffic area - but need to coordinate with Deactivation.

[14] Although beside the CPP-603 building this is not a high traffic area and the traffic can be routed as necessary.

[15] Not expected to be in a high traffic area.

[16] Due to proximity of building - access have some difficulties.

[17] Most of site under building and not rated for that part. The remaining part is easily accessible.
Will only address the portion of contamination that can be accessed outside the building foundation.

[18] Issue of where to stop piping removal; need to grout piping for void space.

[19] Minimal piping to be dealt with.
Minimal piping will require grouting to meet void space requirement.

[20] Due to proximity to building there are numerous problems with excavation.
Excavating 31 feet BGS adjacent to facility adds to complexity from a 6 to a 4.

[21] Excavation to 31 ft BGS adds significant worker controls and potential problems with building structure.

[22] Depth of contamination - (30+ feet).

[23] This facility is under the CPP-603 building. Minimal future use potential.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5.CPP-09** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | 1[24] | 2 | 1[25] | 7[26] | | | 80 | 7.27 | 1.10 | 11 | 1.16 |
| Waste Management (0.31) | | | | | 9 | 2[27] | | | | | 57 | 5.18 | 0.40 | 11 | 1.61 |
| Environmental Risk Reduction (1.79) | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 | 8.95 |
| Complexity of Worker Controls (0.51) | | | 10[28] | | 1 | | | | | | 35 | 3.18 | 0.60 | 11 | 1.62 |
| INTEC Facility Infrastructure (0.82) | 1 | 3 | 7[29] | | | | | | | | 28 | 2.55 | 0.69 | 11 | 2.09 |
| Future Use of Site (2.41) | 1 | 10 | | | | | | | | | 21 | 1.91 | 0.30 | 11 | 4.60 |
| **6.CPP-10** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | 1 | | 1[30] | 1 | 3 | 5[31] | | | 75 | 6.82 | 1.60 | 11 | 1.09 |
| Waste Management (0.31) | | | 1 | | 1 | | 9 | | | | 71 | 6.45 | 1.29 | 11 | 2.00 |
| Environmental Risk Reduction (1.79) | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 | 8.95 |
| INTEC Facility Infrastructure (0.82) | | 2[32] | 7 | | | 1 | 1 | | | | 38 | 3.45 | 1.57 | 11 | 2.83 |
| Complexity of Worker Controls (0.51) | | | 10[33] | | 1 | | | | | | 35 | 3.18 | 0.60 | 11 | 1.62 |
| Future Use of Site (2.41) | | 6 | 5 | | | | | | | | 27 | 2.45 | 0.52 | 11 | 5.92 |

[24] Minimal "heavy traffic"

[25] See site CPP-08 explanation.

[26] Not expected to be a high traffic area.

[27] Grouting of pipes is the only Waste Management issue.

[28] Depth of contamination (30+ feet).

[29] Many of the lines are not active.
Dealing with many pipes in the area

[30] Moderate traffic area.

[31] No significant traffic in this area. It can all be rerouted.
Not expected to be a high traffic area.

[32] Appears to be significant piping in a very small area.

[33] The piping density (# pipes per $ft^2$) is high, therefore, the rating was changed to a lower number.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7.CPP-11** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | 1[34] | 5[35] | 5 | | | 81 | 7.36 | 0.67 | 11 | 1.18 |
| Environmental Risk Reduction (1.79) | | | | 4 | 2[36] | 1[37] | 4[38] | | | | 60 | 5.45 | 1.37 | 11 | 9.76 |
| Complexity of Worker Controls (0.51) | | | 2[39] | | 7[40] | 2[41] | | | | | 53 | 4.82 | 0.98 | 11 | 2.46 |
| INTEC Facility Infrastructure (0.82) | | 1[42] | 2 | 3[43] | 2[44] | 1 | 1[45] | 1 | | | 51 | 4.64 | 1.80 | 11 | 3.80 |
| Waste Management (0.31) | | 3 | 2 | 3[46] | 2 | 1 | | | | | 40 | 3.64 | 1.36 | 11 | 1.13 |
| Future Use of Site (2.41) | 1 | 10 | | | | | | | | | 21 | 1.91 | 0.30 | 11 | 4.60 |
| **8.CPP-13** | | | | | | | | | | | | | | | |
| Waste Management (0.31) | | | | | | | | 8 | 3 | | 91 | 8.27 | 0.47 | 11 | 2.56 |
| INTEC Facility Infrastructure (0.82) | | | | | | | 3 | 7[47] | 1 | | 86 | 7.82 | 0.60 | 11 | 6.41 |

[34] Only moderate traffic.

[35] See site CPP-08 explanation.

[36] There is uncertainty concerning contaminants under the tank vault. I am staying with the groups number.

[37] Uncertainty is of question for contamination under the tank.

[38] Due to RCRA closed tank and components remaining. RCRA does not address radionuclides - only hazardous constituents.
Unknown as to what remaining contaminates will be present in the close structures
High uncertainty associated with the unknown level of contamination beneath the tank.

[39] I rate this higher based on the assumption that the SFE-106 storage tank and vault will have to be removed as part of this action.

[40] Due to depth of contamination and tank. Unknowns in terms of RCRA end state.
The tank vault at this site sits above the soils relating to increased complexity and worker risk. Because of all infrastructure problem.
Depth of contamination and impact the removal of the structures.

[41] Vault issues and tank issue.

[42] This is a small area with a tank vault and piping that will interfere with our ability to access the contaminated soil. Therefore, I am rating this low.

[43] More involved due to tank and vault impact. Tank needs to be removed prior to CERCLA remediation.

[44] This site is full of problems with removing the vault and accessible underneath the vault. Impact on utilities and structures

[45] Access should be relatively easy due to tank closure and abandonment of the piping.

[46] Uncertainties due to vault and tank. Have to deal with waste such as the vault. Tank and associated debris will require additional Waste Management.

[47] Surface contamination, not expected to extend beyond 2.5 feet.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTEC Integration (0.16) | | | | | 1[48] | 2[49] | 6 | 2 | | | 75 | 6.82 | 0.87 | 11 | 1.09 |
| Complexity of Worker Controls (0.51) | | | | | 1[50] | 8 | 2 | | | | 67 | 6.09 | 0.54 | 11 | 3.11 |
| Environmental Risk Reduction (1.79) | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 | 10.74 |
| Future Use of Site (2.41) | 9 | 2 | | | | | | | | | 13 | 1.18 | 0.40 | 11 | 2.85 |
| **9.CPP-14** | | | | | | | | | | | | | | | |
| Complexity of Worker Controls (0.51) | | | | 2 | 6 | 2 | 1 | | | | 57 | 5.18 | 0.87 | 11 | 2.64 |
| INTEC Integration (0.16) | | | | 3 | 6[51] | 2 | | | | | 54 | 4.91 | 0.70 | 11 | 0.79 |
| Waste Management (0.31) | | | | 5 | 6[52] | | | | | | 50 | 4.55 | 0.52 | 11 | 1.41 |
| Future Use of Site (2.41) | | 4 | 7 | | | | | | | | 29 | 2.64 | 0.50 | 11 | 6.35 |
| INTEC Facility Infrastructure (0.82) | | 10 | | 1 | | | | | | | 24 | 2.18 | 0.60 | 11 | 1.79 |
| Environmental Risk Reduction (1.79) | 9 | 1 | 1 | | | | | | | | 14 | 1.27 | 0.65 | 11 | 2.28 |

[48] Safety analysis issues need to be resolved.

[49] SAR issue.

[50] Somewhat unknown: Potential for increased radiation depending on amount of earth removed.

[51] Area can be restricted (access) and worked around.

Some integration for dealing with tank closure.

Disturbance will not impact INTEC, other than road blockage.

[52] Will include tanks and piping that may require special management.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10.CPP-19** | | | | | | | | | | | | | | | |
| Environmental Risk Reduction (1.79) | | | | | | | | | 11 | | 99 | 9.00 | 0.00 | 11 | 16.11 |
| INTEC Facility Infrastructure (0.82) | | | | | | 2 | 3 | 5 | 1 | | 82 | 7.45 | 0.93 | 11 | 6.11 |
| INTEC Integration (0.16) | | | | 1 | 1 | 1[53] | 3[54] | 5[55] | | | 76 | 6.91 | 1.38 | 11 | 1.11 |
| Waste Management (0.31) | | | | 3[56] | 7 | | 1[57] | | | | 54 | 4.91 | 0.83 | 11 | 1.52 |
| Complexity of Worker Controls (0.51) | | 7[58] | 3[59] | | | 1[60] | | | | | 29 | 2.64 | 1.21 | 11 | 1.34 |
| Future Use of Site (2.41) | 8 | 3 | | | | | | | | | 14 | 1.27 | 0.47 | 11 | 3.07 |

[53] No major routing problems anticipated due to this site.

[54] The site location is remote and should only moderately interfere with INTEC operations.

[55] Area is out of the traffic area.

Not much integration because 1617 isn't an issue and fuel shipments shouldn't affect.

Not in main area of INTEC, not expected to impact 1617 operations.

[56] Expect to have volume of piping of an unknown quantity. Question on where system begins and ends needs to be resolved. What can be left in place due to high levels of contamination?

[57] Minimal debris will be generated (some piping).

[58] Because of the number of lines in the small area.

[59] High complexity based on amount of unknown conditions. Depth of excavation poses several problems. Potential need to "chase" piping leaks.

[60] High radiation and depth of contamination.

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**Facilitated by: Linda Seward/Buck West**

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11.CPP-34A & 34B** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | | 7 | 4 | 103 | 9.36 | 0.50 | 11 | 1.50 |
| INTEC Facility Infrastructure (0.82) | | | | | | | 2 | 3 | 6 | | 92 | 8.36 | 0.81 | 11 | 6.86 |
| Complexity of Worker Controls (0.51) | | | | | | | 1 | 6[61] | 4[62] | | 91 | 8.27 | 0.65 | 11 | 4.22 |
| Waste Management (0.31) | | | | | | 1 | 5[63] | 5[64] | | | 81 | 7.36 | 0.67 | 11 | 2.28 |
| Environmental Risk Reduction (1.79) | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 | 8.95 |
| Future Use of Site (2.41) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 2.41 |
| **12.Not applicable (site CPP-34B was merged with site CPP-34A during the discussion)** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | | | | | | | |
| Complexity of Worker Controls (0.51) | | | | | | | | | | | | | | | |
| Waste Management (0.31) | | | | | | | | | | | | | | | |
| Environmental Risk Reduction (1.79) | | | | | | | | | | | | | | | |
| Future Use of Site (2.41) | | | | | | | | | | | | | | | |

[61] Expect minimal hand work, minimal utility issues.

Previous excavated site containing moderate rad levels of contaminated soils with no infrastructures. Easy access with mechanical equipment excavation anticipated.

No real issues to contend with

Known extent of contamination and no hand work required.

[62] Should not require much handwork and a lot of the utilities are not issues.

[63] Minimal potential for debris in the buried soils

Minimal debris is expected; no treatment required.

[64] May have potential for debris but none identified.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13.CPP-35** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | 9 | 2[65] | | | 79 | 7.18 | 0.40 | 11 | 1.15 |
| Environmental Risk Reduction (1.79) | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 | 10.74 |
| Waste Management (0.31) | | | | | 7 | 3[66] | 1 | | | | 60 | 5.45 | 0.69 | 11 | 1.69 |
| Complexity of Worker Controls (0.51) | | | 2[67] | 8 | | 1[68] | | | | | 44 | 4.00 | 0.77 | 11 | 2.04 |
| INTEC Facility Infrastructure (0.82) | | 3 | 1 | 3 | 2 | 1 | 1 | | | | 44 | 4.00 | 1.67 | 11 | 3.28 |
| Future Use of Site (2.41) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 2.41 |
| **14.CPP-36** | | | | | | | | | | | | | | | |
| Environmental Risk Reduction (1.79) | | | | | | | | | 1 | 10 | 109 | 9.91 | 0.30 | 11 | 17.74 |
| Waste Management (0.31) | | | | 1 | 2 | 8 | | | | | 62 | 5.64 | 0.67 | 11 | 1.75 |
| INTEC Facility Infrastructure (0.82) | 1[69] | 2[70] | 5[71] | 3 | | | | | | | 32 | 2.91 | 0.94 | 11 | 2.39 |
| INTEC Integration (0.16) | 1 | | 10 | | | | | | | | 31 | 2.82 | 0.60 | 11 | 0.45 |
| Future Use of Site (2.41) | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 | 2.63 |
| Complexity of Worker Controls (0.51) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 0.51 |
| **15.CPP-37a** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | | 1 | 10 | 109 | 9.91 | 0.30 | 11 | 1.59 |

[65] Only minimal traffic area.

[66] Will need to address the contaminated piping from the WCF until contaminated soil is no longer present.

[67] Potential to encounter unknowns and near transport line.

Excavating in this area will have a potential for rad exposure from the WCF transport line.

[68] Although there is radionuclide contamination present, the site should be easy to remediate.

[69] This is the most congested area for underground utilities within INTEC.

[70] This is probably one of the worst sites.

[71] Lowered rating due to number of obstructions.

Based on number of lines in area.

Area contains some active piping and numerous unused lines.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTEC Facility Infrastructure (0.82) | | | | | | | | | 3 | 8 | 107 | 9.73 | 0.47 | 11 | 7.98 |
| Complexity of Worker Controls (0.51) | | | | | | | | 1 | 9 | 1 | 99 | 9.00 | 0.45 | 11 | 4.59 |
| Waste Management (0.31) | | | | | | | | 7 | 4 | | 92 | 8.36 | 0.50 | 11 | 2.59 |
| Future Use of Site (2.41) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 2.41 |
| Environmental Risk Reduction (1.79) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 1.79 |
| **16.CPP-37b** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | 3 | 6 | 2 | 98 | 8.91 | 0.70 | 11 | 1.43 |
| INTEC Facility Infrastructure (0.82) | | | | | | | 2 | 3 | 6 | | 92 | 8.36 | 0.81 | 11 | 6.86 |
| Future Use of Site (2.41) | | | | | | 2[72] | 3[73] | 2 | 2[74] | 2[75] | 87 | 7.91 | 1.45 | 11 | 19.06 |
| Complexity of Worker Controls (0.51) | | | | | 8 | | | 2 | 1 | | 65 | 5.91 | 1.58 | 11 | 3.01 |
| Environmental Risk Reduction (1.79) | | 2 | 1 | | 5 | 3 | | | | | 50 | 4.55 | 1.51 | 11 | 8.14 |
| Waste Management (0.31) | | | 8 | 3 | | | | | | | 36 | 3.27 | 0.47 | 11 | 1.01 |
| **17.CPP-37c** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | 4 | 7 | | 95 | 8.64 | 0.50 | 11 | 1.38 |
| Complexity of Worker Controls (0.51) | | | | | | | 1 | 4 | 6 | | 93 | 8.45 | 0.69 | 11 | 4.31 |
| INTEC Facility Infrastructure (0.82) | | | | | | 3[76] | 5 | 3 | | | 77 | 7.00 | 0.77 | 11 | 5.74 |
| Future Use of Site (2.41) | | 1 | | | 3[77] | 1 | 1 | 3 | 1 | 1[78] | 73 | 6.64 | 2.29 | 11 | 15.99 |
| Waste Management (0.31) | | | 2[79] | 5 | 2 | 2 | | | | | 48 | 4.36 | 1.03 | 11 | 1.35 |

[72] This area does have some potential for future facilities.

[73] The HLW EIS identifies this location as a possible site for new process buildings. More than 10 years out.

[74] May have future uses due to proximity to tank farm and other INTEC facilities.

[75] In the Idaho HLW & FD EIS, this is part of the location selected for the construction of the new treatment and processing facilities.

[76] Security fence issues. Going through security.

[77] Anticipate that site will be part of a future use for tank farm closure. This area does have some potential for future facilities.

[78] See CPP-37B.

[79] Some debris is known to be present at this site.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Environmental Risk Reduction (1.79) | | 2 | 2 | 6 | 1 | | | | | | 39 | 3.55 | 0.93 | 11 | 6.35 |
| **18.CPP-41a** | | | | | | | | | | | | | | | |
| Waste Management (0.31) | | | | | | 3 | 2 | 4[80] | 2[81] | | 82 | 7.45 | 1.13 | 11 | 2.31 |
| Complexity of Worker Controls (0.51) | | | | | | 9[82] | 1 | 1 | | | 69 | 6.27 | 0.65 | 11 | 3.20 |
| INTEC Integration (0.16) | | | 2 | | | | 9[83] | | | | 69 | 6.27 | 1.62 | 11 | 1.00 |
| INTEC Facility Infrastructure (0.82) | | | | | 10[84] | | 1 | | | | 57 | 5.18 | 0.60 | 11 | 4.25 |
| Future Use of Site (2.41) | 2 | 9 | | | | | | | | | 20 | 1.82 | 0.40 | 11 | 4.38 |
| Environmental Risk Reduction (1.79) | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 | 1.95 |
| **19.CPP-44** | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | 7 | 3 | 93 | 9.30 | 0.48 | 10 | 7.63 |
| Waste Management (0.31) | | | | | | | | 7 | 3 | | 83 | 8.30 | 0.48 | 10 | 2.57 |
| Complexity of Worker Controls (0.51) | | | | | | | 8 | 1 | 1[85] | | 73 | 7.30 | 0.67 | 10 | 3.72 |
| INTEC Integration (0.16) | | | | | | | 9 | 1 | | | 71 | 7.10 | 0.32 | 10 | 1.14 |
| Future Use of Site (2.41) | 9 | 1 | | | | | | | | | 11 | 1.10 | 0.32 | 10 | 2.65 |
| Environmental Risk Reduction (1.79) | 10 | | | | | | | | | | 10 | 1.00 | 0.00 | 10 | 1.79 |
| **20.CPP-48** | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | 1 | 9 | | 89 | 8.90 | 0.32 | 10 | 7.30 |
| Complexity of Worker Controls (0.51) | | | | | | | | 10 | | | 80 | 8.00 | 0.00 | 10 | 4.08 |

[80] Minimal issues with debris, anticipated no problems w/ VOCs.
Soil contamination only.

[81] Soil release, no expected debris.

[82] Depth of contamination suspected to be at or below the utility levels which may result in hand excavation and increased worker exposure.

[83] Minimal problems anticipated.
Access from different directions.

[84] Due to potential impact on utilities. Lots of utilities in a small area. Expect to excavate deep enough to encounter utilities.

[85] Minimal controls necessary.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Waste Management (0.31) | | | | | | | 9 | 1 | | | 71 | 7.10 | 0.32 | 10 | 2.20 |
| INTEC Integration (0.16) | | | | | | 3 | 6 | 1 | | | 68 | 6.80 | 0.63 | 10 | 1.09 |
| Environmental Risk Reduction (1.79) | | | 1 | 9[86] | | | | | | | 39 | 3.90 | 0.32 | 10 | 6.98 |
| Future Use of Site (2.41) | 10 | | | | | | | | | | 10 | 1.00 | 0.00 | 10 | 2.41 |
| **21.CPP-55** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | 1 | 7[87] | 1 | 2 | 92 | 8.36 | 0.92 | 11 | 1.34 |
| INTEC Facility Infrastructure (0.82) | | | | | | | 4 | 7 | | | 84 | 7.64 | 0.50 | 11 | 6.26 |
| Waste Management (0.31) | | | | | | | 4 | 7[88] | | | 84 | 7.64 | 0.50 | 11 | 2.37 |
| Complexity of Worker Controls (0.51) | | | | | 1 | 1 | 8[89] | 1 | | | 75 | 6.82 | 0.75 | 11 | 3.48 |
| Future Use of Site (2.41) | 3 | 8 | | | | | | | | | 19 | 1.73 | 0.47 | 11 | 4.16 |
| Environmental Risk Reduction (1.79) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 1.79 |
| **22.CPP-67** | | | | | | | | | | | | | | | |
| INTEC Integration (0.16) | | | | | | | | | 4 | 7 | 106 | 9.64 | 0.50 | 11 | 1.54 |
| INTEC Facility Infrastructure (0.82) | | | | | | | | 10 | 1 | | 89 | 8.09 | 0.30 | 11 | 6.63 |
| Waste Management (0.31) | | | | | | | 5 | 4[90] | 2 | | 85 | 7.73 | 0.79 | 11 | 2.40 |
| Complexity of Worker Controls (0.51) | | | | | | 1 | 3 | 6[91] | 1 | | 84 | 7.64 | 0.81 | 11 | 3.89 |
| Environmental Risk Reduction (1.79) | | | | | 1 | 5 | 3 | 2 | | | 72 | 6.55 | 0.93 | 11 | 11.72 |
| Future Use of Site (2.41) | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 | 2.63 |

[86] Cs-137 contamination level.

[87] Some operations are still taking place.

[88] Just soil is anticipated.

[89] Less infrastructure than originally identified.

[90] Anticipated to be soil only - no debris.

[91] No access to pits or manholes by personnel with no anticipated pipe contamination. Work to be accomplished by large excavation equipment.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23.CPP-68** | | | | | | | | | | | | | | | |
| Waste Management (0.31) | | | | | | | | 8[92] | 3 | | 91 | 8.27 | 0.47 | 11 | 2.56 |
| Complexity of Worker Controls (0.51) | | | | | | | 1 | 10 | | | 87 | 7.91 | 0.30 | 11 | 4.03 |
| INTEC Facility Infrastructure (0.82) | | | | | | 4 | 4 | 3 | | | 76 | 6.91 | 0.83 | 11 | 5.67 |
| INTEC Integration (0.16) | | | 1 | | 1[93] | 4[94] | 5[95] | | | | 67 | 6.09 | 1.22 | 11 | 0.97 |
| Future Use of Site (2.41) | 2 | 9 | | | | | | | | | 20 | 1.82 | 0.40 | 11 | 4.38 |
| Environmental Risk Reduction (1.79) | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 | 1.95 |
| **24.CPP-91** | | | | | | | | | | | | | | | |
| Environmental Risk Reduction (1.79) | | | | | | | | | 11 | | 99 | 9.00 | 0.00 | 11 | 16.11 |
| Waste Management (0.31) | | | | | | | 7[96] | 4 | | | 81 | 7.36 | 0.50 | 11 | 2.28 |
| INTEC Integration (0.16) | | | 1 | 2[97] | 7[98] | 1 | | | | | 52 | 4.73 | 0.79 | 11 | 0.76 |
| Complexity of Worker Controls (0.51) | | 10[99] | | 1 | | | | | | | 24 | 2.18 | 0.60 | 11 | 1.11 |
| INTEC Facility Infrastructure (0.82) | 10 | | | | 1[100] | | | | | | 15 | 1.36 | 1.21 | 11 | 1.12 |
| Future Use of Site (2.41) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 2.41 |

[92] Will have tank to manage.

[93] Alternative accesses are available.

[94] Can access from different points.

[95] Access can be made around the site without impact to operations.

[96] Would have some debris, if accessed.

[97] Site is accessible and small.

[98] Accessible from other directions.

[99] Very inaccessible.
Inaccessibility increases complexity and worker risk from a 4 to a 2 with complex shoring and confines space anticipated.
Inaccessibility of site will make worker controls excessive. Site is inaccessible and would be very complex to access
Site is not accessible due to the WCF cap.

[100] Part of this site following remediation should be considered as a group 2 site.

Session: Group-3 Soils Prioritization 3/28/02
**Facilitated by: Linda Seward/Buck West**

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25.CPP-92** | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | 7 | 4 | 103 | 9.36 | 0.50 | 11 | 7.68 |
| Future Use of Site (2.41) | | | | | | 1 | 1 | 3[101] | 3[102] | 3[103] | 94 | 8.55 | 1.29 | 11 | 20.59 |
| INTEC Integration (0.16) | | | | | | | 2 | 4 | 5[104] | | 91 | 8.27 | 0.79 | 11 | 1.32 |
| Complexity of Worker Controls (0.51) | | | | | | | | 11 | | | 88 | 8.00 | 0.00 | 11 | 4.08 |
| Environmental Risk Reduction (1.79) | | | | 2[105] | 5 | | 3 | | 1 | | 63 | 5.73 | 1.56 | 11 | 10.25 |
| Waste Management (0.31) | | | 8 | 1[106] | 2 | | | | | | 38 | 3.45 | 0.82 | 11 | 1.07 |
| **26.CPP-93** | | | | | | | | | | | | | | | |
| Complexity of Worker Controls (0.51) | | | | | | | 2[107] | 9 | | | 86 | 7.82 | 0.40 | 11 | 3.99 |
| Waste Management (0.31) | | | | | | | 10[108] | 1[109] | | | 78 | 7.09 | 0.30 | 11 | 2.20 |
| INTEC Integration (0.16) | | | | | | | 10 | 1 | | | 78 | 7.09 | 0.30 | 11 | 1.13 |
| Environmental Risk Reduction (1.79) | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 | 10.74 |
| INTEC Facility Infrastructure (0.82) | | | | 1 | 3 | 6 | | 1 | | | 63 | 5.73 | 1.01 | 11 | 4.70 |
| Future Use of Site (2.41) | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 | 2.41 |

[101] Need to move this waste out of temporary storage into disposal. The SSA is not for long-term storage. Needs to be used for future storage for WAG 3 remediation.

[102] Need to remove the existing waste so it can be used for potential future waste storage.

[103] This site, comprised of boxed soils and debris, is located on an active staging and storage facility. The staging and storage facility (SSA) will continue to be utilized during the remediation of INTEC. The future and continued use of the SSA for the remediation activities at INTEC is of high priority and deems this area as a site with a known future use.

[104] This is only a transportation issue that shouldn't be any problem.

[105] Currently in compliant storage but the boxes can degrade.

[106] Sampling of the waste boxes will be required; some treatment will be necessary.

[107] Lots of Utilities.

[108] Not much debris in CPP-92. Mostly soil that will only require sampling.

[109] Anticipated to be soil only.

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **27.CPP-97** | | | | | | | | | | | | | | | |
| Future Use of Site (2.41) | | | | | | | | 1 | 2 | 8 | 106 | 9.64 | 0.67 | 11 | 23.22 |
| INTEC Integration (0.16) | | | | | | | | 1 | 5 | 5[110] | 103 | 9.36 | 0.67 | 11 | 1.50 |
| Complexity of Worker Controls (0.51) | | | | | | | | 1 | 10 | | 98 | 8.91 | 0.30 | 11 | 4.54 |
| INTEC Facility Infrastructure (0.82) | | | | | | | | 4 | 6 | 1 | 96 | 8.73 | 0.65 | 11 | 7.16 |
| Waste Management (0.31) | | | | 2[111] | 1 | | 8[112] | | | | 69 | 6.27 | 1.27 | 11 | 1.94 |
| Environmental Risk Reduction (1.79) | | | | 6 | 4[113] | | 1 | | | | 51 | 4.64 | 0.92 | 11 | 8.30 |
| **28.CPP-98** | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | 5 | 4 | 85 | 9.44 | 0.53 | 9 | 7.74 |
| Future Use of Site (2.41) | | | | | | | 1 | 3 | 4 | 1 | 77 | 8.56 | 0.88 | 9 | 20.62 |

[110] Seems to be questions on need for treatment.

[111] May not require treatment. Uncertainty.

[112] Soils are listed as mixed waste in the OU 3-13 ROD. Soils have been sampled and determined to not be characteristic. Soils may contain listed waste constituents (codes). Further characterization and hazardous waste determinations are needed, but the soil will not require treatment to meet the ICDF WAC

Treatment will not be required based on sampling data.

[113] Due to length of time in storage, tarp may be at end of life.

Session: Group-3 Soils Prioritization 3/28/02
**Facilitated by: Linda Seward/Buck West**

Table E-1. (continued).

| Criteria | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n | Weighted Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Complexity of Worker Controls (0.51) | | | | | | | | 7 | 2 | | 74 | 8.22 | 0.44 | 9 | 4.19 |
| INTEC Integration (0.16) | | | | | 2 | | 3 | 1 | 3 | | 66 | 7.33 | 1.58 | 9 | 1.17 |
| Environmental Risk Reduction (1.79) | | | | 3 | 4 | | 2 | | | | 46 | 5.11 | 1.17 | 9 | 9.15 |
| Waste Management (0.31) | | 2 | 6 | | 2 | | | | | | 32 | 3.20 | 1.03 | 10 | 0.99 |
| **29.CPP-99** | | | | | | | | | | | | | | | |
| INTEC Facility Infrastructure (0.82) | | | | | | | | | 4 | 5 | 86 | 9.56 | 0.53 | 9 | 7.84 |
| Future Use of Site (2.41) | | | | | | | 1 | 2 | 5 | 1 | 78 | 8.67 | 0.87 | 9 | 20.89 |
| Complexity of Worker Controls (0.51) | | | | | | | | 7 | 2 | | 74 | 8.22 | 0.44 | 9 | 4.19 |
| INTEC Integration (0.16) | | | | | 1 | | 3 | 1 | 4 | | 70 | 7.78 | 1.39 | 9 | 1.24 |
| Environmental Risk Reduction (1.79) | | | | 3 | 4 | | 2 | | | | 46 | 5.11 | 1.17 | 9 | 9.15 |
| Waste Management (0.31) | | 1 | 7 | 1 | 1 | | | | | | 32 | 3.20 | 0.79 | 10 | 0.99 |

**Table E-2. Site scoring vote spread across the sites for each of the six criteria.**

***This table shows the distribution of scores (1-10) across the sites for each of the six criteria.***

| Remediation Sites | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.Future Use of Site** | | | | | | | | | | | | | | |
| CPP-97 | | | | | | | | 1 | 2 | 8 | 106 | 9.64 | 0.67 | 11 |
| CPP-99 | | | | | | | 1 | 2 | 5 | 1 | 78 | 8.67 | 0.87 | 9 |
| CPP-98 | | | | | | | 1 | 3 | 4 | 1 | 77 | 8.56 | 0.88 | 9 |
| CPP-92 | | | | | | 1 | 1 | 3 | 3 | 3 | 94 | 8.55 | 1.29 | 11 |
| CPP-37b | | | | | | 2 | 3 | 2 | 2 | 2 | 87 | 7.91 | 1.45 | 11 |
| CPP-37c | | 1 | | | 3 | 1 | 1 | 3 | 1 | 1 | 73 | 6.64 | 2.29 | 11 |
| CPP-14 | | 4 | 7 | | | | | | | | 29 | 2.64 | 0.50 | 11 |
| CPP-10 | | 6 | 5 | | | | | | | | 27 | 2.45 | 0.52 | 11 |
| CPP-08 | 1 | 6 | 4 | | | | | | | | 25 | 2.27 | 0.65 | 11 |
| CPP-01/04/05 | | 11 | | | | | | | | | 22 | 2.00 | 0.00 | 11 |
| CPP-09 | 1 | 10 | | | | | | | | | 21 | 1.91 | 0.30 | 11 |
| CPP-11 | 1 | 10 | | | | | | | | | 21 | 1.91 | 0.30 | 11 |
| CPP-41a | 2 | 9 | | | | | | | | | 20 | 1.82 | 0.40 | 11 |
| CPP-68 | 2 | 9 | | | | | | | | | 20 | 1.82 | 0.40 | 11 |
| CPP-55 | 3 | 8 | | | | | | | | | 19 | 1.73 | 0.47 | 11 |
| CPP-03 | 8 | | 2 | 1 | | | | | | | 18 | 1.64 | 1.12 | 11 |
| CPP-19 | 8 | 3 | | | | | | | | | 14 | 1.27 | 0.47 | 11 |
| CPP-13 | 9 | 2 | | | | | | | | | 13 | 1.18 | 0.40 | 11 |
| CPP-44 | 9 | 1 | | | | | | | | | 11 | 1.10 | 0.32 | 10 |
| CPP-36 | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 |
| CPP-67 | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 |
| CPP-34A & 34B | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| CPP-35 | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| CPP-37a | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| CPP-48 | 10 | | | | | | | | | | 10 | 1.00 | 0.00 | 10 |
| CPP-91 | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| CPP-93 | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| **2.Environmental Risk Reduction** | | | | | | | | | | | | | | |
| CPP-36 | | | | | | | | | 1 | 10 | 109 | 9.91 | 0.30 | 11 |
| CPP-19 | | | | | | | | | 11 | | 99 | 9.00 | 0.00 | 11 |
| CPP-91 | | | | | | | | | 11 | | 99 | 9.00 | 0.00 | 11 |
| CPP-01/04/05 | | | | | | | | 8 | 3 | | 91 | 8.27 | 0.47 | 11 |
| CPP-67 | | | | | 1 | 5 | 3 | 2 | | | 72 | 6.55 | 0.93 | 11 |
| CPP-13 | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 |
| CPP-35 | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 |

Table E-2. (continued).

| Remediation Sites | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPP-93 | | | | | | 11 | | | | | 66 | 6.00 | 0.00 | 11 |
| CPP-92 | | | | 2 | 5 | | 3 | | 1 | | 63 | 5.73 | 1.56 | 11 |
| CPP-11 | | | | 4 | 2 | 1 | 4 | | | | 60 | 5.45 | 1.37 | 11 |
| CPP-98 | | | | 3 | 4 | | 2 | | | | 46 | 5.11 | 1.17 | 9 |
| CPP-99 | | | | 3 | 4 | | 2 | | | | 46 | 5.11 | 1.17 | 9 |
| CPP-08 | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 |
| CPP-09 | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 |
| CPP-10 | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 |
| CPP-34A & 34B | | | | | 11 | | | | | | 55 | 5.00 | 0.00 | 11 |
| CPP-97 | | | | 6 | 4 | | 1 | | | | 51 | 4.64 | 0.92 | 11 |
| CPP-37b | | 2 | 1 | | 5 | 3 | | | | | 50 | 4.55 | 1.51 | 11 |
| CPP-03 | | | | 11 | | | | | | | 44 | 4.00 | 0.00 | 11 |
| CPP-48 | | | 1 | 9 | | | | | | | 39 | 3.90 | 0.32 | 10 |
| CPP-37c | | 2 | 2 | 6 | 1 | | | | | | 39 | 3.55 | 0.93 | 11 |
| CPP-14 | 9 | 1 | 1 | | | | | | | | 14 | 1.27 | 0.65 | 11 |
| CPP-41a | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 |
| CPP-68 | 10 | 1 | | | | | | | | | 12 | 1.09 | 0.30 | 11 |
| CPP-37a | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| CPP-44 | 10 | | | | | | | | | | 10 | 1.00 | 0.00 | 10 |
| CPP-55 | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| **3.INTEC Facility Infrastructure** | | | | | | | | | | | | | | |
| CPP-37a | | | | | | | | | 3 | 8 | 107 | 9.73 | 0.47 | 11 |
| CPP-99 | | | | | | | | | 4 | 5 | 86 | 9.56 | 0.53 | 9 |
| CPP-98 | | | | | | | | | 5 | 4 | 85 | 9.44 | 0.53 | 9 |
| CPP-92 | | | | | | | | | 7 | 4 | 103 | 9.36 | 0.50 | 11 |
| CPP-44 | | | | | | | | | 7 | 3 | 93 | 9.30 | 0.48 | 10 |
| CPP-48 | | | | | | | | 1 | 9 | | 89 | 8.90 | 0.32 | 10 |
| CPP-97 | | | | | | | | 4 | 6 | 1 | 96 | 8.73 | 0.65 | 11 |
| CPP-34A & 34B | | | | | | | 2 | 3 | 6 | | 92 | 8.36 | 0.81 | 11 |
| CPP-37b | | | | | | | 2 | 3 | 6 | | 92 | 8.36 | 0.81 | 11 |
| CPP-67 | | | | | | | | 10 | 1 | | 89 | 8.09 | 0.30 | 11 |
| CPP-03 | | | | | | | 2 | 7 | 2 | | 88 | 8.00 | 0.63 | 11 |
| CPP-13 | | | | | | | 3 | 7 | 1 | | 86 | 7.82 | 0.60 | 11 |
| CPP-55 | | | | | | | 4 | 7 | | | 84 | 7.64 | 0.50 | 11 |
| CPP-19 | | | | | | 2 | 3 | 5 | 1 | | 82 | 7.45 | 0.93 | 11 |
| CPP-01/04/05 | | | | | | 3 | 3 | 4 | 1 | | 80 | 7.27 | 1.01 | 11 |
| CPP-37c | | | | | | 3 | 5 | 3 | | | 77 | 7.00 | 0.77 | 11 |
| CPP-68 | | | | | | 4 | 4 | 3 | | | 76 | 6.91 | 0.83 | 11 |
| CPP-08 | | | 1 | 1 | 3 | 2 | 1 | 3 | | | 65 | 5.91 | 1.70 | 11 |

Table E-2. (continued).

| Remediation Sites | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPP-93 | | | | 1 | 3 | 6 | | 1 | | | 63 | 5.73 | 1.01 | 11 |
| CPP-41a | | | | | 10 | | 1 | | | | 57 | 5.18 | 0.60 | 11 |
| CPP-11 | | 1 | 2 | 3 | 2 | 1 | 1 | 1 | | | 51 | 4.64 | 1.80 | 11 |
| CPP-35 | | 3 | 1 | 3 | 2 | 1 | 1 | | | | 44 | 4.00 | 1.67 | 11 |
| CPP-10 | | 2 | 7 | | | 1 | 1 | | | | 38 | 3.45 | 1.57 | 11 |
| CPP-36 | 1 | 2 | 5 | 3 | | | | | | | 32 | 2.91 | 0.94 | 11 |
| CPP-09 | 1 | 3 | 7 | | | | | | | | 28 | 2.55 | 0.69 | 11 |
| CPP-14 | | 10 | | 1 | | | | | | | 24 | 2.18 | 0.60 | 11 |
| CPP-91 | 10 | | | | 1 | | | | | | 15 | 1.36 | 1.21 | 11 |
| **4.Complexity of Worker Controls** | | | | | | | | | | | | | | |
| CPP-37a | | | | | | | | 1 | 9 | 1 | 99 | 9.00 | 0.45 | 11 |
| CPP-97 | | | | | | | | 1 | 10 | | 98 | 8.91 | 0.30 | 11 |
| CPP-37c | | | | | | | 1 | 4 | 6 | | 93 | 8.45 | 0.69 | 11 |
| CPP-34A & 34B | | | | | | | 1 | 6 | 4 | | 91 | 8.27 | 0.65 | 11 |
| CPP-98 | | | | | | | | 7 | 2 | | 74 | 8.22 | 0.44 | 9 |
| CPP-99 | | | | | | | | 7 | 2 | | 74 | 8.22 | 0.44 | 9 |
| CPP-03 | | | | | | | 1 | 7 | 3 | | 90 | 8.18 | 0.60 | 11 |
| CPP-48 | | | | | | | | 10 | | | 80 | 8.00 | 0.00 | 10 |
| CPP-92 | | | | | | | | 11 | | | 88 | 8.00 | 0.00 | 11 |
| CPP-68 | | | | | | | 1 | 10 | | | 87 | 7.91 | 0.30 | 11 |
| CPP-93 | | | | | | | 2 | 9 | | | 86 | 7.82 | 0.40 | 11 |
| CPP-67 | | | | | | 1 | 3 | 6 | 1 | | 84 | 7.64 | 0.81 | 11 |
| CPP-44 | | | | | | | 8 | 1 | 1 | | 73 | 7.30 | 0.67 | 10 |
| CPP-55 | | | | | 1 | 1 | 8 | 1 | | | 75 | 6.82 | 0.75 | 11 |
| CPP-41a | | | | | | 9 | 1 | 1 | | | 69 | 6.27 | 0.65 | 11 |
| CPP-13 | | | | | 1 | 8 | 2 | | | | 67 | 6.09 | 0.54 | 11 |
| CPP-37b | | | | | 8 | | | 2 | 1 | | 65 | 5.91 | 1.58 | 11 |
| CPP-14 | | | | 2 | 6 | 2 | 1 | | | | 57 | 5.18 | 0.87 | 11 |
| CPP-08 | | | | 4 | 4 | 3 | | | | | 54 | 4.91 | 0.83 | 11 |
| CPP-11 | | | 2 | | 7 | 2 | | | | | 53 | 4.82 | 0.98 | 11 |
| CPP-35 | | | 2 | 8 | | 1 | | | | | 44 | 4.00 | 0.77 | 11 |
| CPP-01/04/05 | | 2 | 3 | 6 | | | | | | | 37 | 3.36 | 0.81 | 11 |
| CPP-09 | | | 10 | | 1 | | | | | | 35 | 3.18 | 0.60 | 11 |
| CPP-10 | | | 10 | | 1 | | | | | | 35 | 3.18 | 0.60 | 11 |
| CPP-19 | | 7 | 3 | | | 1 | | | | | 29 | 2.64 | 1.21 | 11 |
| CPP-91 | | 10 | | 1 | | | | | | | 24 | 2.18 | 0.60 | 11 |
| CPP-36 | 11 | | | | | | | | | | 11 | 1.00 | 0.00 | 11 |
| **5.Waste Management** | | | | | | | | | | | | | | |
| CPP-03 | | | | | | | | 7 | 4 | | 92 | 8.36 | 0.50 | 11 |

Table E-2. (continued).

| Remediation Sites | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPP-37a | | | | | | | | 7 | 4 | | 92 | 8.36 | 0.50 | 11 |
| CPP-44 | | | | | | | | 7 | 3 | | 83 | 8.30 | 0.48 | 10 |
| CPP-13 | | | | | | | | 8 | 3 | | 91 | 8.27 | 0.47 | 11 |
| CPP-68 | | | | | | | | 8 | 3 | | 91 | 8.27 | 0.47 | 11 |
| CPP-67 | | | | | | | 5 | 4 | 2 | | 85 | 7.73 | 0.79 | 11 |
| CPP-55 | | | | | | | 4 | 7 | | | 84 | 7.64 | 0.50 | 11 |
| CPP-41a | | | | | | 3 | 2 | 4 | 2 | | 82 | 7.45 | 1.13 | 11 |
| CPP-91 | | | | | | | 7 | 4 | | | 81 | 7.36 | 0.50 | 11 |
| CPP-34A & 34B | | | | | | 1 | 5 | 5 | | | 81 | 7.36 | 0.67 | 11 |
| CPP-48 | | | | | | | 9 | 1 | | | 71 | 7.10 | 0.32 | 10 |
| CPP-93 | | | | | | | 10 | 1 | | | 78 | 7.09 | 0.30 | 11 |
| CPP-10 | | | 1 | | 1 | | 9 | | | | 71 | 6.45 | 1.29 | 11 |
| CPP-97 | | | | 2 | 1 | | 8 | | | | 69 | 6.27 | 1.27 | 11 |
| CPP-36 | | | | 1 | 2 | 8 | | | | | 62 | 5.64 | 0.67 | 11 |
| CPP-08 | | | | | 7 | 2 | 2 | | | | 61 | 5.55 | 0.82 | 11 |
| CPP-35 | | | | | 7 | 3 | 1 | | | | 60 | 5.45 | 0.69 | 11 |
| CPP-09 | | | | | 9 | 2 | | | | | 57 | 5.18 | 0.40 | 11 |
| CPP-01/04/05 | | | 1 | | 7 | 3 | | | | | 56 | 5.09 | 0.83 | 11 |
| CPP-19 | | | | 3 | 7 | | 1 | | | | 54 | 4.91 | 0.83 | 11 |
| CPP-14 | | | | 5 | 6 | | | | | | 50 | 4.55 | 0.52 | 11 |
| CPP-37c | | | 2 | 5 | 2 | 2 | | | | | 48 | 4.36 | 1.03 | 11 |
| CPP-11 | | 3 | 2 | 3 | 2 | 1 | | | | | 40 | 3.64 | 1.36 | 11 |
| CPP-92 | | | 8 | 1 | 2 | | | | | | 38 | 3.45 | 0.82 | 11 |
| CPP-37b | | | 8 | 3 | | | | | | | 36 | 3.27 | 0.47 | 11 |
| CPP-99 | | 1 | 7 | 1 | 1 | | | | | | 32 | 3.20 | 0.79 | 10 |
| CPP-98 | | 2 | 6 | | 2 | | | | | | 32 | 3.20 | 1.03 | 10 |
| **6.INTEC Integration** | | | | | | | | | | | | | | |
| CPP-37a | | | | | | | | | 1 | 10 | 109 | 9.91 | 0.30 | 11 |
| CPP-67 | | | | | | | | | 4 | 7 | 106 | 9.64 | 0.50 | 11 |
| CPP-34A & 34B | | | | | | | | | 7 | 4 | 103 | 9.36 | 0.50 | 11 |
| CPP-97 | | | | | | | | 1 | 5 | 5 | 103 | 9.36 | 0.67 | 11 |
| CPP-37b | | | | | | | | 3 | 6 | 2 | 98 | 8.91 | 0.70 | 11 |
| CPP-37c | | | | | | | | 4 | 7 | | 95 | 8.64 | 0.50 | 11 |
| CPP-55 | | | | | | | 1 | 7 | 1 | 2 | 92 | 8.36 | 0.92 | 11 |
| CPP-92 | | | | | | | 2 | 4 | 5 | | 91 | 8.27 | 0.79 | 11 |
| CPP-99 | | | | | 1 | | 3 | 1 | 4 | | 70 | 7.78 | 1.39 | 9 |
| CPP-01/04/05 | | | | | | 1 | 1 | 9 | | | 85 | 7.73 | 0.65 | 11 |
| CPP-03 | | | | | 1 | 1 | 2 | 6 | 1 | | 82 | 7.45 | 1.13 | 11 |
| CPP-11 | | | | | | 1 | 5 | 5 | | | 81 | 7.36 | 0.67 | 11 |

Table E-2. (continued).

| Remediation Sites | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPP-98 | | | | | 2 | | 3 | 1 | 3 | | 66 | 7.33 | 1.58 | 9 |
| CPP-08 | | | | | | 2 | 4 | 5 | | | 80 | 7.27 | 0.79 | 11 |
| CPP-09 | | | | | 1 | 2 | 1 | 7 | | | 80 | 7.27 | 1.10 | 11 |
| CPP-35 | | | | | | | 9 | 2 | | | 79 | 7.18 | 0.40 | 11 |
| CPP-44 | | | | | | | 9 | 1 | | | 71 | 7.10 | 0.32 | 10 |
| CPP-93 | | | | | | | 10 | 1 | | | 78 | 7.09 | 0.30 | 11 |
| CPP-19 | | | | 1 | 1 | 1 | 3 | 5 | | | 76 | 6.91 | 1.38 | 11 |
| CPP-13 | | | | | 1 | 2 | 6 | 2 | | | 75 | 6.82 | 0.87 | 11 |
| CPP-10 | | | 1 | | 1 | 1 | 3 | 5 | | | 75 | 6.82 | 1.60 | 11 |
| CPP-48 | | | | | | 3 | 6 | 1 | | | 68 | 6.80 | 0.63 | 10 |
| CPP-41a | | | 2 | | | | 9 | | | | 69 | 6.27 | 1.62 | 11 |
| CPP-68 | | | 1 | | 1 | 4 | 5 | | | | 67 | 6.09 | 1.22 | 11 |
| CPP-14 | | | | 3 | 6 | 2 | | | | | 54 | 4.91 | 0.70 | 11 |
| CPP-91 | | | 1 | 2 | 7 | 1 | | | | | 52 | 4.73 | 0.79 | 11 |
| CPP-36 | 1 | | 10 | | | | | | | | 31 | 2.82 | 0.60 | 11 |

# Appendix F

# Evaluation and Comparison of Capping vs Remediation Costs

Idaho National Engineering and Environmental Laboratory

# INTEROFFICE MEMORANDUM

**Date:** May 14, 2002

**To:** C. J. Hurst MS 3953 6-3115

**From:** J. D. Folker MS 3655 6-0322

**Subject:** COST ESTIMATE -WAG 3/OPERATING UNIT 3-13/GROUP 3/OTHER SURFACE SOILS SITE PRIORITIZATION AND GROUPING REPORT/CAPPING EVALUATION/CAPPING COSTS vs. REMEDIATION COSTS

Estimating Services has prepared a revised Project Support Cost Estimate for the above referenced project. Bechtel BWXT Idaho, LLC G&A allowances are included in the labor rates. This rough order of magnitude estimate is for comparison purposes only and is not intended to be used for funding. Because the costs are to be compared, escalation and contingency have not been included in the estimate.

Total Estimated Cost (TEC) for capping evaluation (Cap for 200 Sq. ft Bottom).....$ 2,250,000
Total Estimated Cost (TEC) for capping evaluation (Excavate for 200 Sq. ft Bottom).....$ 940,000

Please refer to the attached detail, recapitulation, and summary sheets for cost breakdowns, descriptions, and cost estimating basis.

If you have any questions or comments, please contact me at 526-0322 or e-mail folkjd.

JDF

Attachments

cc: M. S. Kaptein, MS 3930
R. A. Matthews, MS 3953
S. W. Sherick, MS 3953
Estimate File 2973-C
J. D. Folker Letter File (JDF-13-02)

Uniform File Code: 8309
Disposition Authority: A16-1.4
Retention Schedule: Cut off at the end of each fiscal year. Destroy when 10 years old.

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.

Bechtel BWXT Idaho, LLC

## COST ESTIMATE SUPPORT DATA RECAPITULATION

| | |
|---|---|
| Project Title: | WAG 3/OU 3-13/GROUP 3/OTHER SURFACE SOILS SITE PRIORITIZATION AND GROUPING REPORT/CAPPING EVALUATION/CAPPING COSTS vs. REMEDIATION COSTS |
| Estimator: | J. D. Folker |
| Date: | May 14, 2002 |
| Estimate Type: | Project Support |
| File: | 2973-C |
| Approved By: | |

I. **SCOPE OF WORK:** *Brief description of the proposed project.*

The work scope of this estimate is to compare capping costs with remediation costs for a 200-ft by 200-ft area near site CPP-37. Capping costs include installation of monitoring wells and institutional controls until 2095. Remediation costs include excavation, and hauling and disposal to the ICDF and backfilling the excavation.

II. **BASIS OF THE ESTIMATE:** *Drawings, Design Report, Engineers Notes and/or other documentation upon which the estimate is originated.*

A. Request for comparison estimate from C. J. Hurst and M. S. Kaptein.
B. Meetings with M. S. Kaptein, C. J. Hurst, and "Q." Evans
C. Documented costs of the ICDF cap per square foot and the footprint of each site as identified in the OU 3-13 Record of Decision.
D. ICDF Final Cover Sections and Details, CH2MHILL, Drawing CPP-C-305, Rev 0.
E. Section 3, Landfill Cover Design Analysis.
F. Estimate file number 2605, CPP pit, by J. C. Grenz.
G. Estimate file number 8512-C, ICDF Cell Cap, by J. C. Grenz.

III. **ASSUMPTIONS:** *Conditions statements accepted or supposed true without proof of demonstration. An assumption has a direct impact on total estimated cost*

A. For the cap, monitoring will be performed the first 5 years, eight wells at twice per year.
B. For the cap, monitoring will be performed the last 95 years, eight wells at once every 5 years.
C. Cap construction will consist of the following: earth fill/structural fill from the ICDF stockpile, clay cover from Rye Grass Flats, filter types 1 and 2 from Lincoln Pit, type 3 armor from Lincoln Pit, Geotextile covering, engineered structural fill from Lincoln Pit, and type 1 armor from Idaho Falls.
D. There will be four perched water-monitoring wells and four aquifer wells with pumps upstream and downstream of the cap.
E. For the remediation site, the material will be excavated and hauled to the ICDF.
F. There will be no dump fees at the ICDF.

G. The remediation site excavation will be backfilled with material from the ICDF stockpile.

IV. **CONTINGENCY GUIDELINE IMPLEMENTATION:** *The percentage used for contingency as determined by the contingency allowance guidelines can be altered to reflect the type of construction and conditions that may impact the total estimated cost.*

Because this estimate compares capping costs and remediation costs, contingency has not been included.

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

A. Costs from the Detailed Cost Estimate sheets are direct costs for material, labor, equipment, and special subcontracts. Costs for corresponding divisions on the Cost Estimate Summary sheet include all applicable indirect costs (overhead, profit, commission on subcontracts, sales tax, and bond).
B. Operating contractor labor force costs are based on *FY 2002 Company Burdened Rates*.
C. Costs for General and Administrative (G&A) allowance and Procurement Fee have been included in this estimate.

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Project Number: *2973-C*

## TPC Summary Report 2

| ESTIMATE ELEMENT | Estimate Subtotal | Escalation | Contingency | TOTAL |
|---|---|---|---|---|
| | | *0.00%* | *0.00%* | |
| **Total Estimated Cost (TEC)** | **$2,250,086** | **$0** | **$0** | **$2,250,086** |
| | | *0.00%* | *0.00%* | |
| **Total Project Cost (TPC)** | **$2,250,086** | **$0** | **$0** | **$2,250,086** |
| **Rounded TPC** (Rounded to the nearest $ 10000) | | | | **$2,250,000** |

| | | Remarks |
|---|---|---|
| Type of Estimate: | Project Support | Capping Costs for 200 x 200 (Bottom) |
| Estimator: | JCG/JDF | Monitoring Wells |
| Checked By: | | Project Long Term Monitoring |
| Approved By: | | |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

## Project Summary Report

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | | Estimate Subtotal | Escalation | Contingency | Contingency % | TOTAL |
|---|---|---|---|---|---|---|
| 9002 | CAP for 200 Sq Ft BOTTOM | $2,250,086 | $0 | $0 | 0.00% | $2,250,086 |
| 9002.01 | --PROJECT MONITORING | $439,834 | $0 | $0 | 0.00% | $439,834 |
| 9002.01.01 | ----FIRST FIVE YEARS | $168,085 | $0 | $0 | 0.00% | $168,085 |
| 9002.01.02 | ----LAST NINETY FIVE YEARS | $271,749 | $0 | $0 | 0.00% | $271,749 |
| 9002.03 | --CH2MHILL CAP (200 sf bottom) | $978,636 | $0 | $0 | 0.00% | $978,636 |
| 9002.03.01 | ----Earth Fill/Structural Fill | $10,023 | $0 | $0 | 0.00% | $10,023 |
| 9002.03.02 | ----Compacted Clay Cover | $272,033 | $0 | $0 | 0.00% | $272,033 |
| 9002.03.03 | ----Filter Type 1, 2 Layers | $260,737 | $0 | $0 | 0.00% | $260,737 |
| 9002.03.04 | ----Type 3 Armor | $194,058 | $0 | $0 | 0.00% | $194,058 |
| 9002.03.05 | ----Geotex | $51,536 | $0 | $0 | 0.00% | $51,536 |
| 9002.03.06 | ----Engineered Structural Fill | $72,345 | $0 | $0 | 0.00% | $72,345 |
| 9001.03.07 | ----Type 1 Armor | $57,000 | $0 | $0 | 0.00% | $57,000 |
| 9002.03.08 | ----Seeding | $8,300 | $0 | $0 | 0.00% | $8,300 |
| 9002.03.09 | ----Cap Maint. | $52,603 | $0 | $0 | 0.00% | $52,603 |
| 9002.05 | --MONITORING WELLS | $831,616 | $0 | $0 | 0.00% | $831,616 |
| 9002.05.01 | ----4 Aquifer Wells | $433,800 | $0 | $0 | 0.00% | $433,800 |
| 9002.05.02 | ----4 Perched Water Wells | $397,816 | $0 | $0 | 0.00% | $397,816 |
| Total | WAG 3/OU 3-13/Group 3/Capping Evaluation/Cap | $2,250,086 | $0 | $0 | 0.00% | $2,250,086 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | | Hrs | Crew/Rate | | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -- 9002.01.01 FIRST FIVE YEARS | | | | | | | | | | | | |
| | | U.C. per ea | | 1 | T07 | | 45.054 | 0 | 0 | 700 | 0 | 745.054 |
| Collect Samples (8 wells @ 2x per yr) | | | 88.00 | 88 | | $45.05 | $3,965 | $0 | $0 | $61,600 | $0 | $65,565 |
| | | U.C. per ea | | | | | 0 | 0 | 0 | 1165 | 0 | 1165 |
| Full Sample | | | 88.00 | 0 | | | $0 | $0 | $0 | $102,520 | $0 | $102,520 |
| Subtotal | | | | | | | $3,965 | $0 | $0 | $164,120 | $0 | $168,085 |
| Sales Tax | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **Subtotal Estimate** | | | | | | | | | | | | **$168,085** |
| Escalation | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **--Total 9002.01.01 FIRST FIVE YEARS** | | | | **88** | | | **$3,965** | **$0** | **$0** | **$164,120** | **$0** | **$168,085** |
| -- 9002.01.02 LAST NINETY FIVE YEARS | | | | | | | | | | | | |
| | | U.C. per ea | | 1 | T07 | | 45.054 | 0 | 0 | 700 | 0 | 745.054 |
| Collect Samples (8 wells every 5 yrs) | | | 168.00 | 168 | | $45.05 | $7,569 | $0 | $0 | $117,600 | $0 | $125,169 |
| | | U.C. per ea | | | | | 0 | 0 | 0 | 1165 | 0 | 1165 |
| Full Sample | | | 84.00 | 0 | | | $0 | $0 | $0 | $97,860 | $0 | $97,860 |
| | | U.C. per ea | | | | | 0 | 0 | 0 | 580 | 0 | 580 |
| Half Sample | | | 84.00 | 0 | | | $0 | $0 | $0 | $48,720 | $0 | $48,720 |
| Subtotal | | | | | | | $7,569 | $0 | $0 | $264,180 | $0 | $271,749 |
| Sales Tax | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **Subtotal Estimate** | | | | | | | | | | | | **$271,749** |
| Escalation | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **--Total 9002.01.02 LAST NINETY FIVE YEARS** | | | | **168** | | | **$7,569** | **$0** | **$0** | **$264,180** | **$0** | **$271,749** |
| -- 9002.03.01 Earth Fill/Structural Fill | | | | | | | | | | | | |
| | GEN | U.C. per cy | | | | | 0.44 | 0.87 | 0 | 0 | 0 | 1.31 |
| Place Leveling Course w/scrapers | | | 5,930.00 | 0 | | | $2,609 | $5,159 | $0 | $0 | $0 | $7,768 |
| Subtotal | | | | | | | $2,609 | $5,159 | $0 | $0 | $0 | $7,768 |
| Sales Tax | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | | $757 | $1,498 | $0 | $0 | $0 | $2,255 |
| **Subtotal Estimate** | | | | | | | | | | | | **$10,023** |
| Escalation | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **--Total 9002.03.01 Earth Fill/Structural Fill** | | | | **0** | | | **$3,367** | **$6,657** | **$0** | **$0** | **$0** | **$10,023** |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| --- 9002.03.02 Compacted Clay Cover | | | | | | | | | | |
| | GEN | U.C. per cy | | | 1.83 | 3.52 | 4.18 | 0 | 0 | 9.53 |
| Process Material | | 13,700.00 | 0 | | $25,071 | $48,224 | $57,266 | $0 | $0 | $130,561 |
| | GEN | U.C. per cy | | | 1.51 | 2.24 | 0 | 0 | 0 | 3.75 |
| Haul from Ryegrass | | 13,700.00 | 0 | | $20,687 | $30,688 | $0 | $0 | $0 | $51,375 |
| | GEN | U.C. per cy | | | 0.84 | 1.06 | 0 | 0 | 0 | 1.9 |
| Spread and Compact | | 13,700.00 | 0 | | $11,508 | $14,522 | $0 | $0 | $0 | $26,030 |
| Subtotal | | | | | $57,266 | $93,434 | $57,266 | $0 | $0 | $207,966 |
| Sales Tax | | | | | $0 | $0 | $2,863 | $0 | $0 | $2,863 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $16,624 | $27,124 | $17,456 | $0 | $0 | $61,204 |
| **Subtotal Estimate** | | | | | | | | | | **$272,033** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.02 Compacted Clay Cover** | | | 0 | | **$73,890** | **$120,558** | **$77,585** | **$0** | **$0** | **$272,033** |
| --- 9002.03.03 Filter Type 1, 2 Layers | | | | | | | | | | |
| *Memo:* | *Hanford cap had 1 ft sand layer. Calculated volume 6850 Cu Yards. CH2MHILL cap has 4 ft sand layers ( filter type 1 & 2). 4/1 = 4. Total volume = 27400 cu yds.* | | | | | | | | | |
| | GEN | U.C. per cy | | | 1.73 | 3.52 | 0 | 0 | 0 | 5.25 |
| Process Material | | 27,400.00 | 0 | | $47,402 | $96,448 | $0 | $0 | $0 | $143,850 |
| | GEN | U.C. per cy/mi | | | 0.12 | 0.17 | 0 | 0.01 | 0 | 0.3 |
| Haul from TRA Pit | | 20,550.00 | 0 | | $2,466 | $3,494 | $0 | $206 | $0 | $6,165 |
| | GEN | U.C. per cy | | | 0.84 | 1.06 | 0 | 0 | 0 | 1.9 |
| Spread and Compact | | 27,400.00 | 0 | | $23,016 | $29,044 | $0 | $0 | $0 | $52,060 |
| Subtotal | | | | | $72,884 | $128,986 | $0 | $206 | $0 | $202,075 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $21,158 | $37,444 | $0 | $60 | $0 | $58,662 |
| **Subtotal Estimate** | | | | | | | | | | **$260,737** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.03 Filter Type 1, 2 Layers** | | | 0 | | **$94,042** | **$166,430** | **$0** | **$265** | **$0** | **$260,737** |
| --- 9002.03.04 Type 3 Armor | | | | | | | | | | |
| *Memo:* | *Hanford cap had 3 ft rock layer. Calculated volume 25600 Cu Yards. CH2MHILL cap has 2.5 ft rock ( type 3 armor). 3/2.5 = 0.8333333. Total volume = 21333 cu yds.* | | | | | | | | | |
| | GEN | U.C. per cy | | | 1.73 | 3.52 | 0 | 0 | 0 | 5.25 |
| Process Material | | 21,333.00 | 0 | | $36,906 | $75,092 | $0 | $0 | $0 | $111,998 |
| | GEN | U.C. per cy/mi | | | 0.12 | 0.17 | 0 | 0.01 | 0 | 0.3 |
| Haul from TRA Pit | | 64,000.00 | 0 | | $7,680 | $10,880 | $0 | $640 | $0 | $19,200 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| --- 9002.03.04 Type 3 Armor | | | | | | | | | | |
| *Memo:* | *Hanford cap had 3 ft rock layer. Calculated volume 25600 Cu Yards. CH2MHILL cap has 2.5 ft rock ( type 3 armor). 3/2.5 = 0.8333333. Total volume = 21333 cu yds.* | | | | | | | | | |
| | GEN | U.C. per cy | | | 0.51 | 0.39 | 0 | 0 | 0 | 0.9 |
| Spread Gravel | | 21,333.00 | 0 | | $10,880 | $8,320 | $0 | $0 | $0 | $19,200 |
| Subtotal | | | | | $55,466 | $94,292 | $0 | $640 | $0 | $150,398 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $16,102 | $27,373 | $0 | $186 | $0 | $43,661 |
| **Subtotal Estimate** | | | | | | | | | | **$194,058** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.04 Type 3 Armor** | | | **0** | | **$71,568** | **$121,665** | **$0** | **$826** | **$0** | **$194,058** |
| --- 9002.03.05 Geotex | | | | | | | | | | |
| | SPEC | U.C. per sf | 0.002 | CN-LABR | 0.047 | 0 | 0.16 | 0 | 0 | 0.207 |
| Purchase & Install Geotextile | | 160,000.00 | 240 | $31.58 | $7,579 | $0 | $25,600 | $0 | $0 | $33,179 |
| Memo: Material Quote 5/5/00 from GSE | | | | | | | | | | |
| Subtotal | | | | | $7,579 | $0 | $25,600 | $0 | $0 | $33,179 |
| Sales Tax | | | | | $0 | $0 | $1,280 | $0 | $0 | $1,280 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $3,756 | $0 | $13,321 | $0 | $0 | $17,077 |
| **Subtotal Estimate** | | | | | | | | | | **$51,536** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.05 Geotex** | | | **240** | | **$11,335** | **$0** | **$40,201** | **$0** | **$0** | **$51,536** |
| --- 9002.03.06 Engineered Structural Fill | | | | | | | | | | |
| *Memo:* | *Hanford cap had 2.5 ft topsoil. Calculated volume 10700 Cu Yards. CH2MHILL cap has 9 ft topsoil (engineered structural fill). 9/2.5 = 4. Total volume = 42800 cu yds.* | | | | | | | | | |
| | GEN | U.C. per cy | | | 0.44 | 0.87 | 0 | 0 | 0 | 1.31 |
| Place Topsoil w/scrapers | | 42,800.00 | 0 | | $18,832 | $37,236 | $0 | $0 | $0 | $56,068 |
| Subtotal | | | | | $18,832 | $37,236 | $0 | $0 | $0 | $56,068 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $5,467 | $10,810 | $0 | $0 | $0 | $16,277 |
| **Subtotal Estimate** | | | | | | | | | | **$72,345** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.06 Engineered Structural Fill** | | | **0** | | **$24,299** | **$48,046** | **$0** | **$0** | **$0** | **$72,345** |
| --- 9001.03.07 Type 1 Armor | | | | | | | | | | |
| *Memo:* | *Local vendor quote for cobble material of this spec is $26/cu. yard delivered. total installed cost = $30/Cu Yard* | | | | | | | | | |
| | | U.C. per CY | | | 0 | 0 | 0 | 30 | 0 | 30 |
| Deliver and install Type 1 armor on slopes. | | 1,900.00 | 0 | | $0 | $0 | $0 | $57,000 | $0 | $57,000 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| --- 9001.03.07 Type 1 Armor | | | | | | | | | | |
| *Memo:* | *Local vendor quote for cobble material of this spec is $26/cu. yard delivered. total installed cost = $30/Cu Yard* | | | | | | | | | |
| Subtotal | | | | | $0 | $0 | $0 | $57,000 | $0 | $57,000 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **Subtotal Estimate** | | | | | | | | | | **$57,000** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9001.03.07 Type 1 Armor** | | | 0 | | **$0** | **$0** | **$0** | **$57,000** | **$0** | **$57,000** |
| --- 9002.03.08 Seeding | | | | | | | | | | |
| | SPEC | U.C. per ac | | | 0 | 0 | 0 | 1500 | 0 | 1500 |
| Seed Top | | 3.70 | 0 | | $0 | $0 | $0 | $5,550 | $0 | $5,550 |
| Subtotal | | | | | $0 | $0 | $0 | $5,550 | $0 | $5,550 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $0 | $0 | $0 | $2,750 | $0 | $2,750 |
| **Subtotal Estimate** | | | | | | | | | | **$8,300** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.03.08 Seeding** | | | 0 | | **$0** | **$0** | **$0** | **$8,300** | **$0** | **$8,300** |
| --- 9002.03.09 Cap Maint. | | | | | | | | | | |
| | GEN | U.C. per cy | | | 1.73 | 3.52 | 0 | 0 | 0 | 5.25 |
| Process Material (10%) | | 2,500.00 | 0 | | $4,325 | $8,800 | $0 | $0 | $0 | $13,125 |
| | GEN | U.C. per cy/mi | | | 0.12 | 0.17 | 0 | 0.01 | 0 | 0.3 |
| Haul from TRA Pit | | 7,500.00 | 0 | | $900 | $1,275 | $0 | $75 | $0 | $2,250 |
| | GEN | U.C. per cy | | | 0.51 | 0.39 | 0 | 0 | 0 | 0.9 |
| Spread Gravel | | 2,500.00 | 0 | | $1,275 | $975 | $0 | $0 | $0 | $2,250 |
| | SPEC | U.C. per sf | 0.002 | CN-LABR | 0.047 | 0 | 0.16 | 0 | 0 | 0.207 |
| Purchase & Install Geotextile | | 16,000.00 | 24 | $31.58 | $758 | $0 | $2,560 | $0 | $0 | $3,318 |
| Memo: Material Quote 5/5/00 from GSE | | | | | | | | | | |
| | GEN | U.C. per cy | | | 0.44 | 0.87 | 0 | 0 | 0 | 1.31 |
| Place Topsoil (Engineered Structural Fill) | | 4,000.00 | 0 | | $1,760 | $3,480 | $0 | $0 | $0 | $5,240 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| --- 9002.03.09 Cap Maint. | | | | | | | | | | | |
| | SPEC | U.C. per ac | | | | 0 | 0 | 0 | 1500 | 0 | 1500 |
| Seed Top (2x) | | | 8.00 | 0 | | $0 | $0 | $0 | $12,000 | $0 | $12,000 |
| Subtotal | | | | | | $9,018 | $14,530 | $2,560 | $12,075 | $0 | $38,183 |
| Sales Tax | | | | | | $0 | $0 | $128 | $0 | $0 | $128 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | $2,773 | $4,218 | $1,332 | $5,968 | $0 | $14,292 |
| **Subtotal Estimate** | | | | | | | | | | | **$52,603** |
| Escalation | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **--Total 9002.03.09 Cap Maint.** | | | | **24** | | **$11,791** | **$18,748** | **$4,020** | **$18,043** | **$0** | **$52,603** |
| --- 9002.05.01 4 Aquifer Wells | | | | | | | | | | | |
| 00E2060 | SPEC | U.C. per hr | | 1 | 00E2060 | 0 | 7.88 | 0 | 0 | 0 | 7.88 |
| 3/4 In 4x4 Pickup | | | 370.00 | 370 | | $0 | $2,916 | $0 | $0 | $0 | $2,916 |
| 00E0830 | SPEC | U.C. per hr | | 1 | 00E0830 | 0 | 132.73 | 0 | 0 | 0 | 132.73 |
| Robins RRT35 Drill | | | 370.00 | 370 | | $0 | $49,110 | $0 | $0 | $0 | $49,110 |
| Memo: 5 set-ups at 5 hr = 25 hr. Drill 2400 lf at 10 lf per hr =240 hr. Lost time on each well for setting casings, gravel, grout, etc will be 4 days. Use 465 hr. | | | | | | | | | | | |
| 00E2050 | SPEC | U.C. per hr | | 1 | 00E2050 | 0 | 31.38 | 0 | 0 | 0 | 31.38 |
| 4000 gal Water Truck | | | 370.00 | 370 | | $0 | $11,611 | $0 | $0 | $0 | $11,611 |
| CN-SUPR | SPEC | U.C. per hr | | 1 | CN-SUPR | 40 | 0 | 0 | 0 | 0 | 40 |
| Supervisor | | | 370.00 | 370 | $40.00 | $14,800 | $0 | $0 | $0 | $0 | $14,800 |
| CN-LABR | SPEC | U.C. per hr | | 2 | CN-LABR | 63.16 | 0 | 0 | 0 | 0 | 63.16 |
| Laborer | | | 370.00 | 740 | $31.58 | $23,369 | $0 | $0 | $0 | $0 | $23,369 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 25.9 | 0 | 0 | 25.9 |
| 10 inch casing | | | 180.00 | 0 | | $0 | $0 | $4,662 | $0 | $0 | $4,662 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 27 | 0 | 0 | 27 |
| 6 inch SS casing | | | 1,840.00 | 0 | | $0 | $0 | $49,680 | $0 | $0 | $49,680 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 40 | 0 | 0 | 40 |
| 6 inch SS screen | | | 80.00 | 0 | | $0 | $0 | $3,200 | $0 | $0 | $3,200 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 3 | 0 | 0 | 3 |
| 1 inch SS casing | | | 1,840.00 | 0 | | $0 | $0 | $5,520 | $0 | $0 | $5,520 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 5 | 0 | 0 | 5 |
| 1 inch SS screen | | | 80.00 | 0 | | $0 | $0 | $400 | $0 | $0 | $400 |
| | SPEC | U.C. per cf | | | | 0 | 0 | 1.5 | 0 | 0 | 1.5 |
| Gravel pack | | | 70.00 | 0 | | $0 | $0 | $105 | $0 | $0 | $105 |
| | SPEC | U.C. per cf | | | | 0 | 0 | 6 | 0 | 0 | 6 |
| Grout | | | 1,075.00 | 0 | | $0 | $0 | $6,450 | $0 | $0 | $6,450 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| --- 9002.05.01 4 Aquifer Wells | | | | | | | | | | | |
| | SPEC | U.C. per bag | | | | 0 | 0 | 5 | 0 | 0 | 5 |
| Bentonite | | | 12.00 | 0 | | $0 | $0 | $60 | $0 | $0 | $60 |
| | SPEC | U.C. per ea | | | | 0 | 0 | 5000 | 0 | 0 | 5000 |
| 10 HP Pump | | | 4.00 | 0 | | $0 | $0 | $20,000 | $0 | $0 | $20,000 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 4.35 | 0 | 0 | 4.35 |
| 1 1/2 SS Pipe | | | 1,840.00 | 0 | | $0 | $0 | $8,004 | $0 | $0 | $8,004 |
| | SPEC | U.C. per ea | | | | 0 | 0 | 100 | 0 | 0 | 100 |
| Well-head Cap | | | 4.00 | 0 | | $0 | $0 | $400 | $0 | $0 | $400 |
| | SPEC | U.C. per hr | | 1 | | 93.16 | 171.99 | 0 | 0 | 0 | 265.15 |
| Directed Stand-by | | | 320.00 | 320 | $93.16 | $29,811 | $55,037 | $0 | $0 | $0 | $84,848 |
| Subtotal | | | | | | $67,980 | $118,673 | $98,481 | $0 | $0 | $285,135 |
| Sales Tax | | | | | | $0 | $0 | $4,924 | $0 | $0 | $4,924 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | $33,688 | $58,810 | $51,243 | $0 | $0 | $143,741 |
| **Subtotal Estimate** | | | | | | | | | | | **$433,800** |
| Escalation | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.05.01 4 Aquifer Wells** | | | | **1,430** | | **$101,669** | **$177,483** | **$154,648** | **$0** | **$0** | **$433,800** |
| --- 9002.05.02 4 Perched Water Wells | | | | | | | | | | | |
| 00E2060 | SPEC | U.C. per hr | | 1 | 00E2060 | 0 | 7.88 | 0 | 0 | 0 | 7.88 |
| 3/4 tn 4x4 Pickup | | | 500.00 | 500 | | $0 | $3,940 | $0 | $0 | $0 | $3,940 |
| 00E0830 | SPEC | U.C. per hr | | 1 | 00E0830 | 0 | 132.73 | 0 | 0 | 0 | 132.73 |
| Robins RRT35 Drill | | | 500.00 | 500 | | $0 | $66,365 | $0 | $0 | $0 | $66,365 |
| Memo: 8 set-ups at 5 hr = 40 hr. Drill 3200 lf at 10 lf per hr =320 hr. Lost time on each well for setting casings, gravel, grout, etc will be 8 days. Use1000 hr. | | | | | | | | | | | |
| 00E2050 | SPEC | U.C. per hr | | 1 | 00E2050 | 0 | 31.38 | 0 | 0 | 0 | 31.38 |
| 4000 gal Water Truck | | | 500.00 | 500 | | $0 | $15,690 | $0 | $0 | $0 | $15,690 |
| CN-SUPR | SPEC | U.C. per hr | | 1 | CN-SUPR | 40 | 0 | 0 | 0 | 0 | 40 |
| Supervisor | | | 500.00 | 500 | $40.00 | $20,000 | $0 | $0 | $0 | $0 | $20,000 |
| CN-LABR | SPEC | U.C. per hr | | 2 | CN-LABR | 63.16 | 0 | 0 | 0 | 0 | 63.16 |
| Laborer | | | 500.00 | 1,000 | $31.58 | $31,580 | $0 | $0 | $0 | $0 | $31,580 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 25.9 | 0 | 0 | 25.9 |
| 10 inch casing | | | 180.00 | 0 | | $0 | $0 | $4,662 | $0 | $0 | $4,662 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 5.6 | 0 | 0 | 5.6 |
| 2 inch SS casing | | | 2,740.00 | 0 | | $0 | $0 | $15,344 | $0 | $0 | $15,344 |
| | SPEC | U.C. per lf | | | | 0 | 0 | 9 | 0 | 0 | 9 |
| 2 inch SS screen | | | 240.00 | 0 | | $0 | $0 | $2,160 | $0 | $0 | $2,160 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Capping Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| --- 9002.05.02 4 Perched Water Wells | | | | | | | | | | | |
| | SPEC | U.C. per cf | | | | 0 | 0 | 1.5 | 0 | 0 | 1.5 |
| Gravel pack | | | 170.00 | 0 | | $0 | $0 | $255 | $0 | $0 | $255 |
| | SPEC | U.C. per bag | | | | 0 | 0 | 5 | 0 | 0 | 5 |
| Bentonite | | | 70.00 | 0 | | $0 | $0 | $350 | $0 | $0 | $350 |
| | SPEC | U.C. per cf | | | | 0 | 0 | 6 | 0 | 0 | 6 |
| Grout | | | 740.00 | 0 | | $0 | $0 | $4,440 | $0 | $0 | $4,440 |
| | SPEC | U.C. per ea | | | | 0 | 0 | 100 | 0 | 0 | 100 |
| Well-head Cap | | | 4.00 | 0 | | $0 | $0 | $400 | $0 | $0 | $400 |
| | SPEC | U.C. per hr | | 1 | | 93.16 | 171.99 | 0 | 0 | 0 | 265.15 |
| Directed Stand-by | | | 375.00 | 375 | $93.16 | $34,935 | $64,496 | $0 | $0 | $0 | $99,431 |
| Subtotal | | | | | | $86,515 | $150,491 | $27,611 | $0 | $0 | $264,617 |
| Sales Tax | | | | | | $0 | $0 | $1,381 | $0 | $0 | $1,381 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | | $42,873 | $74,577 | $14,367 | $0 | $0 | $131,818 |
| **Subtotal Estimate** | | | | | | | | | | | **$397,816** |
| Escalation | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9002.05.02 4 Perched Water Wells** | | | | **1,875** | | **$129,388** | **$225,069** | **$43,359** | **$0** | **$0** | **$397,816** |
| **Subtotal WAG 3/OU 3-13/Group 3/Capping Evaluation/Cap** | | | | | | **$389,684** | **$642,801** | **$211,518** | **$503,771** | **$0** | **$1,747,773** |
| **Sales Tax** | | | | | | **$0** | **$0** | **$10,576** | **$0** | **$0** | **$10,576** |
| **INEEL ORG Labor/Subcontractor Overheads** | | | | | | **$143,200** | **$241,854** | **$97,719** | **$8,964** | **$0** | **$491,737** |
| **Subtotal Estimate** | | | | | | | | | | | **$2,250,086** |
| **Escalation** | | | | | | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| **Contingency** | | | | | | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| **Total WAG 3/OU 3-13/Group 3/Capping Evaluation/Cap** | | | | **3,825** | | **$532,883** | **$884,655** | **$319,813** | **$512,735** | **$0** | **$2,250,086** |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation Costs*
Project Location: *INTEC*
Project Number: *2973-C*

## TPC Summary Report 2

| ESTIMATE ELEMENT | Estimate Subtotal | Escalation | Contingency | TOTAL |
|---|---|---|---|---|
| | | *0.00%* | *0.00%* | |
| **Total Estimated Cost (TEC)** | $940,349 | $0 | $0 | $940,349 |
| | | *0.00%* | *0.00%* | |
| **Total Project Cost (TPC)** | $940,349 | $0 | $0 | $940,349 |
| **Rounded TPC** (Rounded to the nearest $ 10000) | | | | $940,000 |

| | | Remarks |
|---|---|---|
| Type of Estimate: | Project Support | Excavation Costs for 200 x 200 (Bottom) |
| Estimator: | JCG/JDF | |
| Checked By: | | |
| Approved By: | | |

*INEEL*

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

## Project Summary Report

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | | Estimate Subtotal | Escalation | Contingency | Contingency % | TOTAL |
|---|---|---|---|---|---|---|
| 9004 | EXCAVATE, LOAD, HAUL MATERIAL for 200 SQ Ft BOTTOM | $940,349 | $0 | $0 | 0.00% | $940,349 |
| 9004.01 | --Excavate, Load | $206,551 | $0 | $0 | 0.00% | $206,551 |
| 9004.02 | --Haul To ICDF (200 sf bottom) | $344,252 | $0 | $0 | 0.00% | $344,252 |
| 9004.03 | --Re Fill Hole | $389,545 | $0 | $0 | 0.00% | $389,545 |
| Total | WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation | $940,349 | $0 | $0 | 0.00% | $940,349 |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

# CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| --- 9004.01 Excavate, Load | | | | | | | | | | |
| | GEN | U.C. per cy | | | 0.45 | 1.95 | 0 | 0 | 0 | 2.4 |
| Excavate, Load Material | | 66,700.00 | 0 | | $30,015 | $130,065 | $0 | $0 | $0 | $160,080 |
| Memo: From RS Means, facilities Construction Cost Data, section 022 238, Excavation Bulk Bank Measure, incl load onto truck. 20% adder to Means labor rates for INEEL labor. Production rate = 160 CY/Hr. (For 3 CY Bucket with 50 min hour, this is cycle time (Excavate, swing, dump, return) of 1 min.) | | | | | | | | | | |
| Subtotal | | | | | $30,015 | $130,065 | $0 | $0 | $0 | $160,080 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $8,713 | $37,758 | $0 | $0 | $0 | $46,471 |
| **Subtotal Estimate** | | | | | | | | | | **$206,551** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9004.01 Excavate, Load** | | | **0** | | **$38,728** | **$167,823** | **$0** | **$0** | **$0** | **$206,551** |
| --- 9004.02 Haul To ICDF (200 sf bottom) | | | | | | | | | | |
| | GEN | U.C. per cy | | | 1.15 | 2.85 | 0 | 0 | 0 | 4 |
| Haul Material | | 66,700.00 | 0 | | $76,705 | $190,095 | $0 | $0 | $0 | $266,800 |
| Subtotal | | | | | $76,705 | $190,095 | $0 | $0 | $0 | $266,800 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $22,267 | $55,185 | $0 | $0 | $0 | $77,452 |
| **Subtotal Estimate** | | | | | | | | | | **$344,252** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9004.02 Haul To ICDF (200 sf bottom)** | | | **0** | | **$98,972** | **$245,280** | **$0** | **$0** | **$0** | **$344,252** |
| --- 9004.03 Re Fill Hole | | | | | | | | | | |
| | DIRT | U.C. per cy | | | 0.66 | 0.94 | 0 | 0 | 0 | 1.6 |
| Load and Haul Material | | 66,700.00 | 0 | | $44,022 | $62,698 | $0 | $0 | $0 | $106,720 |
| | DIRT | U.C. per cy | | | 1.01 | 1.2 | 0 | 0 | 0 | 2.21 |
| Spread and Compact | | 66,700.00 | 0 | | $67,367 | $80,040 | $0 | $0 | $0 | $147,407 |
| Subtotal | | | | | $111,389 | $142,738 | $0 | $0 | $0 | $254,127 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $59,357 | $76,062 | $0 | $0 | $0 | $135,418 |
| **Subtotal Estimate** | | | | | | | | | | **$389,545** |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| **---Total 9004.03 Re Fill Hole** | | | **0** | | **$170,746** | **$218,800** | **$0** | **$0** | **$0** | **$389,545** |

Project Name:
*WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation Costs*
Project Location: *INTEC*
Estimate Number: *2973-C*

## CONSTRUCTION DETAIL ITEM REPORT

Client: *J. Hurst*
Prepared By: *JCG/JDF*
Estimate Type: *Project Support*

| LEVEL | Org/Subcontractor | QTY | Hrs | Crew/Rate | Labor | Const Eqp | Matl | S/C | Other | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal | WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation | | | | $218,109 | $462,898 | $0 | $0 | $0 | $681,007 |
| Sales Tax | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| INEEL ORG Labor/Subcontractor Overheads | | | | | $90,337 | $169,004 | $0 | $0 | $0 | $259,342 |
| Subtotal Estimate | | | | | | | | | | $940,349 |
| Escalation | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Contingency | | | | | $0 | $0 | $0 | $0 | $0 | $0 |
| Total WAG 3/OU 3-13/Group 3/Capping Evaluation/Remediation | | | | | $308,446 | $631,902 | $0 | $0 | $0 | $940,349 |