



November 21, 2002

To: Tom Fredrichs

From: Jen Mayer and Don Hammer, ICF Consulting

Subject: Comparison of Waste Volumes used in Cost Estimate for Fansteel Incorporated, Muskogee, Oklahoma

ICF's independent cost estimate for decommissioning Fansteel Incorporated's (Fansteel) facility in Muskogee, Oklahoma differs significantly from Fansteel's 2002 cost estimate. Specifically, ICF estimates that the cost to decommission will be approximately \$170 million, whereas Fansteel estimates that the cost to decommission will be approximately \$57 million. A central driver in the discrepancy in cost is the amount of soil that will require off-site disposal. A secondary cause for this discrepancy in cost is the amount of soil and pond residue that is considered mixed waste.

Table 1 compares ICF's and Fansteel's estimates of the amount of soil and pond residues that will require excavation and off-site disposal. As can be seen in this table, ICF estimated that significantly more soil would need to be excavated and disposed than Fansteel estimated. In addition, ICF estimate that a portion of this waste was mixed waste. It is unclear whether Fansteel assumed any waste was mixed. Fansteel assumed that the 13,038 tons of Pond 2 and Pond 3 residues would be disposed of at Envirocare at a higher unit price than the rest of the soils and residues, which Fansteel assumed would be disposed of at WCS. However, Fansteel does not explicitly indicate that these Pond 2 and Pond 3 residues are mixed waste. The basis for ICF's soil volume estimates are described in the cost model documentation submitted on November 15, 2002.

Table 1. Comparison of Fansteel's and ICF's Contaminated Soil and Pond Volumes

	Fansteel Estimate (tons)	ICF Estimate (ft3)	ICF Estimate ^{2,3} (tons)	ICF Estimate Mixed Waste (tons)
Pond Residues - Dried	67,201	860,217	67,201 ⁴	13,038
Hot Spots under Ponds	25,500 ¹	100,000	5,500	0
Pond Liners		503,001	29,235	0
Other Soils		4,351,400	239,315	10,570
Total	92,701	5,814,618	341,251	23,608

1 - Fansteel did not break out their waste estimate into these three categories

2 - Unless noted, mass estimates were based on assumed densities typical of clay and clayey soil.

3 - These totals include mixed waste

4 - Absent data on the density of dried pond residue, ICF accepted Fansteel's quantity estimate.