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State of New Mexico
ENVIRONMENT DEPARTMENT

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PETER MAGGIORE
SECRETARY

MEMORANDUM

TO: Triassic Park Administrative Record

FROM: Dave Cobrain, Hazardous Waste Bureau

SUBJECT: TRIASSIC PARK FINANCIAL ASSURANCE COST COMPARISON

DATE: April 8, 2002

Pursuant to the Secretary's final Order filed March 18, 2002, a review was conducted of unit costs for excavation, transport and placement of both contaminated and clean soil was conducted using supplemental information provided by the Applicant, information on file and construction handbook cost data. The review included a comparison of equipment costs from a partial EquipmentWatch Cost Reference Guide for Construction Equipment (2001) cost list provided by the Applicant and a comparison of equipment costs and unit cubic yardage costs for soil excavation, transport and backfilling derived from the 2001 Environmental Cost Handling Options and Solutions (ECHOS) Remediation Cost Data Handbook.

The unit costs for earth moving and transport provided in the handbooks are not directly comparable to the conditions that would exist at Triassic Park if the State hired a third party to conduct the facility closure or to the unit costs derived from NMED's New Mexico construction cost survey conducted in August 2000. The handbook costs for both earth moving and transport of contaminated and clean soil are similar if not lower than the unit costs used in the Permit cost estimate calculations. The landfill waste disposal costs quoted in the ECHOS handbook estimate are for disposal of contaminated soil and debris at an off-site landfill that would be charging a per unit fee for disposal of the waste. It was established in the administrative record that closure costs are based on the assumption that all contaminated soil and construction debris will be placed in the Triassic Park landfill at the time of closure, therefore there would be no disposal fee.

The equipment costs were variable in the EquipmentWatch and ECHOS handbooks; however, the hourly cost estimates in both handbooks were similar to the NMED UST Bureau Contractor Fee Schedule (November 2, 1995) unit costs for excavation equipment.

The method for revegetation after closure and demolition of the on-site facilities and construction of the landfill cap, assumed for the cost estimate and included in the administrative record, did not include the use of irrigation. A line item will be added to the closure cost for water rights and application in order to adjust for the cost of irrigation during revegetation of the landfill cap and the other facility units. The line item will be for a total of \$114,000.00 using a cost of \$2000.00 per acre for 57 acres.

ECHOS (Environmental Cost Handling Options and Solutions), 2001 Environmental Remediation Cost Data - Unit Price
7th Annual Edition

Costs are bare national average costs
 ECHOS unit price x Localization Factor = Localized Cost
 Localization Factor for New Mexico, Zip Code 882XX = 0.92

ECHOS Estimates:

Description	ECHOS #	Page	Unit	Labor	Equip.	Matl.	Total	Localized	Notes
								total	
Landfill nonhazardous solid waste	33 19 7269	9-204	ton	0.00	0.00	79.48	79.48	73.12	
Landfill nonhazardous solid waste	33 19 7270	9-204	cy	0.00	0.00	91.16	91.16	83.87	
Landfill hazardous solid bulk waste	33 19 7263	9-204	ton	0.00	0.00	144.20	144.20	132.66	
Landfill hazardous solid bulk waste	33 19 7265	9-204	cy	0.00	0.00	312.95	312.95	287.91	
Haul & Dispose Debris, 16.5 cy truck, 10 miles to landfill	33 19 7301	9-205	cy	0.70	3.29	77.25	81.24	74.74	
Transport Bulk Solid Hazardous Waste, Max 18 ton	33 19 0206	9-174	mi	0.00	0.00	1.70	1.70	1.56	
Transport Bulk Solid Hazardous Waste, Max 20 cy	33 19 0205	9-174	mi	0.00	0.00	1.70	1.70	1.56	
Bulk solid hazardous waste loading into truck									
(Excavate and load, 75 cy/hr)	33 19 0102	9-171	cy	0.58	1.40	0.00	1.98	1.82	
Soil, 5 miles, dump truck, load/haul spoil	17 33 0282	4-16	cy	1.32	2.32	0.00	3.63	3.34	
Haul soil, 12 CY, truck, 1 mile	02234 0340	4-10	cy	0.49	0.86	0.00	2.70	2.48	*factor of 2 added in
8 cy dump truck	17 33 0284	4-16	hr	23.95	42.11	0.00	66.06	60.78	
12 cy dump truck	17 33 0285	4-16	hr	23.95	42.46	0.00	66.41	61.10	
16.5 cy dump truck	17 33 0286	4-16	hr	23.95	89.79	0.00	113.74	104.64	
D3 dozer, A blade	17 03 0701	4-27	hr	28.75	35.51	0.00	64.26	59.12	
D6 dozer, A blade	17 03 0704	4-28	hr	30.35	66.58	0.00	96.93	89.18	
D7 dozer, U blade	17 03 0705	4-28	hr	30.35	98.64	0.00	128.99	118.67	
D10 dozer U blade	17 03 0708	4-28	hr	0.00	0.00	253.38	253.38	233.11	
Spread & compact large area, 6" lift, D8 and sheepheads	17 03 0517	4-27	cy	0.20	0.43	0.00	0.63	0.58	
Spread & compact large area, 8" lift, D8 and sheepheads	17 03 0518	4-27	cy	0.11	0.24	0.00	0.35	0.32	
Spread dumped borrow and compact with roller (8"lift)	17 03 0513	4-27	cy	0.14	0.25	0.00	0.39	0.36	
935, 1.3CY track loader	17 03 0214	4-11	hr	28.75	38.40	0.00	67.15	61.78	
973, 3.75 CY track loader	17 03 0219	4-11	hr	30.35	123.85	0.00	154.20	141.86	
Excavate soil to side/pile	17 03 0201	4-10	cy	0.39	0.42	0.00	0.81	0.75	
Demolish unreinforced concrete, 6", air equipment	17 02 0205	4-6	cy	35.75	11.89	0.00	47.64	43.83	
Demolish mesh reinforced concrete, 6", air equipment	17 02 0206	4-6	cy	51.68	17.20	0.00	68.88	63.37	
Demolish rod reinforced concrete, 6", air equipment	17 02 0207	4-6	cy	56.08	18.66	0.00	74.73	68.75	
Demolish unreinforced concrete, 7"-24", power equip	17 02 0210	4-6	cy	68.77	36.26	0.00	105.04	96.64	
910, 1.25 CY, Wheel Loader	17 03 0220	4-11	hr	28.75	28.45	0.00	57.20	52.62	
992, 13.5 CY, Wheel Loader	17 03 0227	4-11	hr	30.35	262.28	0.00	292.63	269.22	
.075 CY Backhoe with front end loader	17 03 0437	4-25	hr	43.52	29.74	0.00	73.26	67.40	
Fine grading , 12G, 2 passes	17 03 0106	4-9	sy	0.10	0.18	0.00	0.29	0.27	
Fine grading , 130G, 2 passes	17 03 0108	4-10	sy	0.07	0.13	0.00	0.20	0.18	
Scraper- Standard 15 CY, 621 D8 Dozer	17 03 0730	4-28	hr	38.74	233.97	0.00	272.71	250.89	
Scraper- Standard 34 CY, 651 D9L Dozers	17 03 0732	4-29	hr	46.66	381.10	0.00	427.42	393.23	

Units
 ton per ton
 cy cubic yard
 mi per mile
 hr hourly
 sy square yard