Schedule 2.11(f)

UNIT PRICE SUBCONTRACT

WORK ASSIGNMENT D002478-45

South Hill Dump Site

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
1. ERD Environmental	Test Pit Excavation	$ 26,565.00

Item	MAXIMUM REIMBURSEMENT RATE	UNIT	EST NO UNITS	TOTAL ESTIMATED COST	WEEK DELIVERY IS ANTICIPATED
Mobilize/Demobilize	$1,200	ls	1	$1,200	
Construct Decontamination Pad	$750	ls	1	$750	
Construct Drum Staging Area	$650	ls	1	$650	
Test Area Clearing and Access (Level D)	$90	hr	15	$1,350	
Test Pit Excavation and Drum Overpacking (level B)	$140	hr	90	$12,600	
Test Pit Excavation and Drum Overpacking (level C*)	$125	hr	0	$0	
Drum Staging (level D)	$110	hr	10	$1,100	
Drum Sampling (level B)	$140	hr	15	$2,100	
Equipment Decontamination (level D)	$105	hr	20	$2,100	
Drum Overpacks	$120	each	20	$2,400	
Drum Spill Kit, including Absorbants	$140	drum	5	$700	
55-gallon Drums for Decon Water or Spent Absorbents	$35	drum	10	$350	
Sales Tax	$0	%	1	$0	
			TOTAL COST =	**$**	**25,300.00**
			SUBCONTRACT MANAGEMENT FEE =	**$**	**1,265.00**
			TOTAL COST =	**$**	**26,565.00**

Schedule 2.11(f)

UNIT PRICE SUBCONTRACT

WORK ASSIGNMENT D002478-45

South Hill Dump Site

	NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
3.	NYTEST Environmental, Inc.	Analytical Laboratory Services	$104,723.85

Sample Location	Analyses	Analytical Method	Matrix	MAXIMUM REIMBURSEMENT RATE	ESTIMATED NUMBER OF UNITS	LAB QA	TOTAL ESTIMATED COST	WEEK DELIVERY ANTICIPATED
Task 2.4								
Test Pit and Drum Sampling	TCL Volatiles	91-1	Soil	$168	34	6	$6,720	
	TCL Semi -Volatiles	91-1		$399	34	6	$15,960	
	TCL Pesticides/PCBs	91-3		$168	34	6	$6,720	
	TAL Metals & Cyanide	CLP-M		$147	34	6	$5,880	
					SUBTOTAL =		$35,280	
	TCL Volatiles	91-1	Drum	$168	20	4	$4,032	
	TCL Semi -Volatiles	91-2		$399	20	3	$9,177	
	TCL Pesticides/PCBs	91-3		$168	20	3	$3,864	
	TAL Metals & Cyanide	CLP-M		$147	20	3	$3,381	
	TCLP	1311/ASP		$829	5	0	$4,145	
					SUBTOTAL =		$24,599	
						TASK TOTAL =	$	59,879.00
Task 2.5								
Surface Water and Sediment Sampling	TCL Volatiles	91-1	Sediment	$168	6	3	$1,512	
	TCL Semi -Volatiles	91-2		$399	6	3	$3,591	
	TCL Pesticides/PCBs	91-3		$168	6	3	$1,512	
	TAL Metals & Cyanide	CLP-M		$147	6	3	$1,323	
					SUBTOTAL =		$7,938	
	TCL Volatiles	91-1	Water	$168	6	0	$1,008	
	TCL Semi -Volatiles	91-2		$399	6	0	$2,394	
	TCL Pesticides/PCBs	91-3		$168	6	0	$1,008	
	TAL Metals & Cyanide	CLP-M		$147	6	0	$882	
					SUBTOTAL =		$5,292	
						TASK TOTAL =	$	13,230.00
Task 2.6								
Soil Borings and Monitoring Well Installations	TCL Volatiles	91-1	Soil	$168	16	3	$3,192	
	TCL Semi -Volatiles	91-2		$399	16	3	$7,581	
	TCL Pesticides/PCBs	91-3		$168	16	3	$3,192	
	TAL Metals & Cyanide	CLP-M		$147	16	3	$2,793	
						TASK TOTAL =		$16,758.00
Task 2.7								
Groundwater Sampling	TCL Volatiles	91-1	Water	$168	8	4	$2,016	
	TCL Semi -Volatiles	91-2		$399	8	3	$4,389	
	TCL Pesticides/PCBs	91-3		$168	8	3	$1,848	
	TAL Metals & Cyanide	CLP-M		$147	8	3	$1,617	
					SUBTOTAL =		$9,870	
						TASK TOTAL =		$9,870.00
					REMEDIAL INVESTIGATION ANALYTICAL SAMPLES			
						TOTAL ANALYTICAL COST =		$99,737.00
						SUBCONTRACT MANAGEMENT FEE =		$4,986.85
					REMEDIAL INVESTIGATION ANALYTICAL SAMPLES			
						TOTAL ANALYTICAL CO!		$104,723.85

Schedule 2.11(f)

UNIT PRICE SUBCONTRACT

WORK ASSIGNMENT D002478-45

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
1. S. F. THEW, P.E.,L.S.	Field Survey & Base Map Preparation	$ 3,905.00

Item		MAXIMUM REIMBURSEMENT RATE	UNIT	EST NO UNITS	TOTAL ESTIMATED COST	WEEK DELIVERY IS ANTICIPATED
Mobilization/Demobilization	$	125.00	ls	1.00	$125	
Onsite Topographic and Sample Location Survey	$	720.00	day	3.00	$2,160	
Prepare Base map	$	1,620.00	ls	1.00	$1,620	
				SUBTOTAL =	**$3,905**	

Survey Well Locations

TOTAL COST = $3,905

SUBCONTRACT MANAGEMENT FEE = $ -

Survey Well Locations

TOTAL COST = $ 3,905.00

Schedule 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name South Hill Dump Site RI/Lehigh Redesign
Task No./Name Task 1 South Hill Scoping and Work Plans
Complete _____ %

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

	Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+C)	E Estimated Costs To Completion	F Estimated Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/Over (G-F)
1.	Direct Salary Costs							$ 8,417.08	
2.	Indirect Costs 117.3%							$ 9,873.23	
3.	Subtotal Direct Salary Costs and Indirect Costs							$ 18,290.31	
4.	Travel							$ 37.50	
5.	Other Non-Salary Costs							$ 649.00	
6.	Subtotal Direct Non-Salary Costs							$ 686.50	
7.	Subcontractors							$ -	
8.	Total Contract Cost							$ 18,976.81	
9.	Fixed Fee 15%							$ 2,743.55	
10.	Total Contract Price							$ 21,720.36	

Project Manager (Engineer) Peter M. Pitoniak Date 11/15/96

Schedule 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer: Engineering-Science, Inc.
Contract No.: D002478-45
Project Name: South Hill Dump Site RI/Lehigh Redesign
Task No./Name: Task 2 Remedial Investigation
Complete: _____ %

Date Prepared: 17-Jan-97
Billing Period: NA
Invoice No.: NA

	A	B	C	D	E	F	G	H
Expenditure Category	Costs Claimed This Period	Paid to Date	Total Disallowed To Date	Total Costs Incurred To Date (A+B+C)	Estimated Costs To Completion	Estimated Total Work Assignment Price (A+B+E)	Approved Budget	Estimated Under/Over (G-F)
1. Direct Salary Costs							$ 26,928.11	
2. Indirect Costs 117.3%							$ 31,586.67	
3. Subtotal Direct Salary Costs and Indirect Costs							$58,514.78	
4. Travel							$ 4,130.00	
5. Other Non-Salary Costs							$ 17,259.75	
6. Subtotal Direct Non-Salary Costs							$21,389.75	
7. Subcontractors							$ 151,769.35	
8. Total Contract Cost							$231,673.88	
9. Fixed Fee 15%							$ 8,777.22	
10. Total Contract Price							$240,451.10	

Project Manager (Engineer): Patty M Pitrone Date: 1/17/97

Schedule 2.11(g)

MONTHLY COST CONTROL REPORT

SUMMARY OF FISCAL INFORMATION

Engineer: Engineering-Science, Inc.
Contract No.: D002478-45
Project Name: South Hill Dump Site RI/Lehigh Redesign
Task No./Name: South Hill Summary
Complete: _____%

Date Prepared: 17-Jan-97
Billing Period: NA
Invoice No.: NA

	Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+C)	E Estimated Costs To Completion	F Estimated Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/Over (G-F)
1.	Direct Salary Costs							$ 35,345.19	
2.	Indirect Costs 117.3%							$ 41,459.91	
3.	Subtotal Direct Salary Costs and Indirect Costs							$76,805.10	
4.	Travel							$ 4,167.50	
5.	Other Non-Salary Costs							$ 17,908.75	
6.	Subtotal Direct Non-Salary Costs							$22,076.25	
7.	Subcontractors							$ 151,769.35	
8.	Total Contract Cost							$250,650.70	
9.	Fixed Fee 15%							$ 11,520.76	
10.	Total Contract Price							**$262,171.46**	

Project Manager (Engineer): Peter W. Pilcher

Date: 1/17/97

Schedule 2.11(g) - Supplemental
MONTHLY COST CONTROL REPORT
SUBCONTRACTS

Engineer: ~~Engineering~~-Science, Inc.
Contract No.: D002478-45
Project Name: South Hill Dump Site RI/Lehigh Redesign
Complete: _____ %

Date Prepared 17-Jan-97
Billing Period NA
Invoice No.

Subcontract Name	A Subcontract Costs Claimed This Application Incl. Resubmittals	B Subcontract Costs Approved for Payment on Previous Appl.	C Total Subcontract Costs to Date (A+B)	D Subcontract Approved Budget	E Management Fee Budget*	F Management Fee Paid	G Total Costs to Date (C+F)
SJB Services			$ -	$ 8,147.00	$ -		$ -
ERD Environmental			$ -	$ 25,300.00	$ 1,265.00		$ -
NYTEST Environmental, Inc.			$ -	$ 99,737.00	$ 4,986.85		$ -
Atlas Fence			$ -	$ 8,428.50	$ -		$ -
S. F. THEW, P.E.,L.S.			$ -	$ 3,905.00	$ -		$ -
Totals	$ -	$ -	$ -	$ 145,517.50	$ 6,251.85	$ -	$ -

Project Manager (Engineer) Peter W Filmer Date 1/17/97

* Total Subcontract Value on Work Assignment Exceeds $10,000

Schedule 2.11(h)

MONTHLY COST CONTROL REPORT

SUMMARY OF LABOR HOURS

NUMBER OF DIRECT LABOR HOURS EXPENDED TO DATE/ESTIMATED NUMBER OF DIRECT LABOR HOURS TO COMPLETION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name South Hill Dump Site
Complete _____%

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

No.	Maximum Reimbursement Rates / Task	Officer IX $51.00		Principal Engr. 1 VIII $46.50		Principal Engr. 2 VII $35.64		Supervising Scien./Engr. 1 VI $32.79		Supervising Scien./Engr. 2 V $26.69		Staff Scien. Engr. 1 IV $24.77		Staff Scien. Engr. 2 III $21.87		Staff Scient. 1 II $19.57		Specialist 1.00 I $12.98		Word Processor WP $12.84		Total No. of Direct Labor Hours	
		EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST
Task 1	Scoping and Work Plans		0.0		93.0		0.0		0.0		28.0		2.0		0.0		100.0		24.0		80.0	0.0	327.0
Task 2	Remedial Investigation		0.0		63.0		0.0		0.0		0.0		170.0		589.0		152.0		202.0		102.0	0.0	1278.0
	Total Hours/Units		0.0		156.0		0.0		0.0		28.0		172.0		589.0		252.0		226.0		182.0	0.0	1605.0

Schedule 2.11(a)
SUMMARY OF TOTAL CONTRACT PRICE
WORK ASSIGNMENT D002478-45
Lehigh Redesign

1	Direct Salary Costs (Schedules 2.10(a) and 2.11(b))	$8,857.13
2	Indirect Costs (Schedule 2.10(g))	$10,389.41
3	Direct Non-Salary Costs (Schedules 2.10(d,e,f) and 2.11(c,d))	$3,059.00

Subcontract Costs

Cost-Plus-Fixed-Fee Subcontracts (Schedule 2.10(e) and 2.11(e))

Name of Subcontractor	Services to be Performed	Subcontract Price

4	Total Cost-Plus-Fixed-Fee Subcontracts	$ -

Unit Price Subcontracts (Schedule 2.10(f) and 2.11(f))

Name of Subcontractor	Services to be Performed	Subcontract Price

5	Total Unit Price Subcontracts	$ -
6	Subcontract Management Fee	
7	Total Subcontract Costs (4+5+6)	$ -
8	Fixed Fee (Schedule 2.10(h))	$2,886.98
9	Total Work Assignment Price (Lines 1+2+3+7+8)	$ 25,192.53

Schedule 2.11(b)
NUMBER OF DIRECT LABOR HOURS BUDGETED
WORK ASSIGNMENT D002478-45
Lehigh Redesign

No.	Task	Officer	Principal Engr. 1	Principal Engr. 2	Supervising Scien./Engr. 1	Supervising Scien./Engr. 2	Staff Scien. Engr. 1	Staff Scien. Engr. 2	Scient. 1	Specialist 1.00	Word Processor	Subtotal Labor Hrs.
		IX	VIII	VII	VI	V	IV	III	II	I	WP	
	Maximum Reimbursement Rates	$51.00	$46.50	$35.64	$32.79	$26.69	$24.77	$21.87	$19.57	$12.98	$12.84	
Task 3	**Task 3 Subtotal**	0.0	21.0	0.0	0.0	14.0	4.0	0.0	16.0	4.0	4.0	63.0
Task 4	**Drainage System Re-Design**	0.0	5.0	7.0	12.0	133.0	0.0	24.0	80.0	5.0	32.0	298.0
	Total Hours/Units	0.0	26.0	7.0	12.0	147.0	4.0	24.0	96.0	9.0	36.0	361.0
	Total Direct Labor Cost	$ -	$ 1,209.00	$ 249.48	$ 393.48	$ 3,923.43	$ 99.08	$ 524.88	$ 1,878.72	$ 116.82	$ 462.24	$ 8,857.13

Schedule 2.11(b-1)
NUMBER OF DIRECT ADMINISTRATIVE LABOR HOURS BUDGETED
WORK ASSIGNMENT D002478-45
Lehigh Redesign

No.	Task	Officer	Principal Engr. 1	Principal Engr. 2	Supervising Scien./Engr. 1	Supervising Scien./Engr. 2	Staff Scien. Engr. 1	Staff Scien. Engr. 2	Scient. 1	Specialist 1.00	Word Processor	Subtotal Labor Hrs.
		IX	VIII	VII	VI	V	IV	III	II	I	WP	
	Maximum Reimbursement Rates	$51.00	$46.50	$35.64	$32.79	$26.69	$24.77	$21.87	$19.57	$12.98	$12.84	
Task 3	**Task 3 Subtotal**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Task 4	**Drainage System Re-Design**	0.0	1.0	0.0	0.0	9.0	0.0	0.0	0.0	1.0	20.0	31.0
	Total Hours/Units	0.0	1.0	0.0	0.0	9.0	0.0	0.0	0.0	1.0	20.0	31.0
	Total Direct Labor Cost	$ -	$ 46.50	$ -	$ -	$ 240.21	$ -	$ -	$ -	$ 12.98	$ 256.80	$ 556.49

Schedule 2.11(c and d)

MAXIMUM REIMBURSEMENT RATES FOR DIRECT NON-SALARY COSTS

WORK ASSIGNMENT D002478-45

Lehigh Redesign

	Item	Maximum Reimbursement Rate	Unit	Estimated Number of Units		Total Estimated Cost
A	In-House Costs					
	1. Telephone	$1.00	Actual Cost	80.00	$	80.00
	2. Photocopies	$0.05	Page	1000.00	$	50.00
	3. Postage	$1.00	Actual Cost	175.00	$	175.00
	4a. Blueline Prints	$1.00	Page	566.00	$	566.00
	4b. Reproducable Prints	$3.00	Page	10.00	$	30.00
	5. Materials and Supplies	$1.00	Page	0.00	$	-
	6a. Telecopies (Domestic)	$1.00	Page	80.00	$	80.00
	6b. Telecopies (Overseas)	$5.00	Page	0.00	$	-
	7. Personal Computer	$1.50	Hour	74.00	$	111.00
	8. Auto Cad	$15.00	Hour	72.00	$	1,080.00
	9. Field Equipment	$1.00	Actual Cost	550.00	$	550.00
	10. Level D Equipment	$19.00	Day	4.00	$	76.00
	11. Level C Equipment	$40.00	Day	0.00	$	-
	12. Level B Equipment	$100.00	Day	0.00	$	-
				Subtotal	$	2,798.00
B.	Miscellaneous					
	Travel					
	a. Air Fare	$1.00	Actual Cost	0.00	$	-
	b1. Auto Rental	$75.00	Day	0.00	$	-
	b2. Truck/Van Rental	$130.00	Day	1.00	$	130.00
	c. Personal Mileage	$0.25	Miles	0.00	$	-
	d. Per Diem	$106.00	Day	1.00	$	106.00
	e. Miscellaneous Expense	$1.00	Actual Cost	25.00	$	25.00
				Subtotal	$	261.00
				Total	$	3,059.00

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name South Hill Dump Site RI/Lehigh Redesign
Task No./Name Task 3 Lehigh Work Plan Development
Complete _____ %

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

	Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+C)	E Estimated Costs To Completion	F Estimated Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/Over (G-F)
1.	Direct Salary Costs							$1,865.64	
2.	Indirect Costs 117.3%							$2,188.40	
3.	Subtotal Direct Salary Costs and Indirect Costs							$4,054.04	
4.	Travel							$0.00	
5.	Other Non-Salary Costs							$149.00	
6.	Subtotal Direct Non-Salary Costs							$149.00	
7.	Subcontractors							$0.00	
8.	Total Contract Cost							$4,203.04	
9.	Fixed Fee 15%							$608.11	
10.	Total Contract Price							**$4,811.14**	

Project Manager (Engineer) Peter M Peloso Date 11/15/96

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name South Hill Dump Site RI/Lehigh Redesign
Task No./Name Task 4 Lehigh Re-Design
Complete _____ %

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

	Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+C)	E Estimated Costs To Completion	F Estimated Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/Over (G-F)
1.	Direct Salary Costs							$ 6,991.49	
2.	Indirect Costs 117.3%							$ 8,201.02	
3.	Subtotal Direct Salary Costs and Indirect Costs							$15,192.51	
4.	Travel							$ 261.00	
5.	Other Non-Salary Costs							$ 2,649.00	
6.	Subtotal Direct Non-Salary Costs							$2,910.00	
7.	Subcontractors							$ -	
8.	Total Contract Cost							$18,102.51	
9.	Fixed Fee 15%							$ 2,278.88	
10.	Total Contract Price							**$20,381.38**	

Project Manager (Engineer) Peter M. Schoo Date 11/15/96

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name South Hill Dump Site RI/Lehigh Redesign
Task No./Name Lehigh Summary
Complete _____ %

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

	Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+C)	E Estimated Costs To Completion	F Estimated Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/Over (G-F)
1.	Direct Salary Costs							$8,857.13	
2.	Indirect Costs 117.3%							$10,389.41	
3.	Subtotal Direct Salary Costs and Indirect Costs							$19,246.54	
4.	Travel							$261.00	
5.	Other Non-Salary Costs							$2,798.00	
6.	Subtotal Direct Non-Salary Costs							$3,059.00	
7.	Subcontractors							$0.00	
8.	Total Contract Cost							$22,305.54	
9.	Fixed Fee 15%							$2,886.98	
10.	Total Contract Price							$25,192.53	

Project Manager (Engineer) Peter M. Petrow Date 11/15/96

Schedule 2.11(h)

MONTHLY COST CONTROL REPORT

SUMMARY OF LABOR HOURS

NUMBER OF DIRECT LABOR HOURS EXPENDED TO DATE/ESTIMATED NUMBER OF DIRECT LABOR HOURS TO COMPLETION

Engineer Engineering-Science, Inc.
Contract No. D002478-45
Project Name Lehigh Redesign
Complete _____ %

Date Prepared 14-Nov-96
Billing Period NA
Invoice No. NA

No.	Maximum Reimbursement Rates / Task	Officer IX $51.00		Principal Engr. 1 VIII $46.50		Principal Engr. 2 VII $35.64		Supervising Scien./Engr. 1 VI $32.79		Supervising Scien./Engr. 2 V $26.69		Staff Scien. Engr. 1 IV $24.77		Staff Scien. Engr. 2 III $21.87		Staff Scient. 1 II $19.57		Specialist 1.00 I $12.98		Word Processor WP $12.84		Total No. of Direct Labor Hours	
		EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST	EXP	EST
Task 3	**Task 3 Subtotal**		**0.0**		**21.0**		**0.0**		**0.0**		**14.0**		**4.0**		**0.0**		**16.0**		**4.0**		**4.0**	0.0	63.0
Task 4	**Drainage System Re-Design**		**0.0**		**5.0**		**7.0**		**12.0**		**133.0**		**0.0**		**24.0**		**80.0**		**5.0**		**32.0**	0.0	298.0
	Total Hours/Units		0.0		26.0		7.0		12.0		147.0		4.0		24.0		96.0		9.0		36.0	0.0	361.0

WORK ASSIGNMENT BUDGET ASSUMPTIONS
SOUTH HILL DUMP SITE RI/LEHIGH REDESIGN
WORK ASSIGNMENT NO. D002478-45

INTRODUCTION

This document provides a summary of key assumptions upon which the work assignment budget is based. The budget is presented in a set of tables which provide a detailed breakdown of estimated costs. Table 1 provides an overall summary of costs. Tables 2, 3, 4, and 5 provide, respectively, summaries of labor costs, material costs, travel costs, and equipment costs. NYSDEC cost schedules (2.11a, a-1, b, b-1, b-1 detail, c and d, f, g, g-supplemental, and h) follow. The 2.11g and h schedules will be revised and submitted to the Department with monthly cost control reports.

Two independent projects have been combined in this work assignment. Activities for the South Hill Dump RI will be conducted under Tasks 1 and 2. Activities for the Lehigh Redesign will be conducted under Task 3 and 4. Principal budget assumptions for these tasks are summarized below. The budget for the South Hill RI is based on the scope of work provided in the NYSDEC work plan, dated July 29, 1996 (attached). The revised project schedule is attached.

TASK 1 - SOUTH HILL DUMP RI SCOPING AND WORK PLAN

Task 1 consists of reviewing background information and the Work Plan prepared by the Department, conducting a site visit with the NYSDEC Project Manager, and developing the RI budget. As part of this effort:

- A conflict of interest check was performed which indicated a potential conflict of interest with DuPont Chemicals. Subsequent discussions with the Department and a letter of clarification indicating that DuPont is not considered a PRP allowed Parsons ES to accept the work assignment.
- Preliminary work scopes were prepared for the proposed subcontracts based on the work assignment requirements and faxed to the Departments PM for discussion during the site visit and scoping session.
- Aerial photographs received from the Department were evaluated for use in preparing a base map. Discussions with a surveying subcontractor indicated that insufficient information was available to use photographs for a base map.
- A site visit and scoping session was conducted with the representatives of the Department.
- AutoCadd files supplies by the Department were transferred to Parsons ES's local area network and were used to produce a preliminary map for scoping purposes.
- A final set of work scopes were prepared for the proposed subcontracts required for the revised Statement of Work in the Work Plan received from the Department.

- Five Cost Control reports and four monthly reports have been prepared and submitted and a fifth set will be prepared and submitted during the Work Plan development stage.

TASK 2 - SOUTH HILL DUMP REMEDIAL INVESTIGATION

SUBTASK 2.1 - RECORD SEARCH

This task will consist of obtaining prints of pertinent historical aerial photographs, and obtaining pertinent site records from the following agencies:

- Cortlandville Township (landfill operator records),
- Cortland County Dept. of Health (or equivalent local agency),
- NYSDEC Region 7; and
- U.S. Geological Survey (well records and information about regional hydrogeology).

The budget for this task is based on the following assumptions:

- Prints of up to 10 photographs will be obtained.
- The estimated time for review and acquisition of agency records by one Parsons ES employee is 2 days.
- The NYSDEC project manager will obtain pertinent site records from the NYSDEC-Albany office and the New York State Department of Health.
- Parsons ES has assumed that the tax map provided by the NYSDEC project manager is adequate for the purposes of the RI; consequently; the project budget does not include costs to obtain a tax map.

SUBTASK 2.2 - SITE SURVEY AND BASEMAP PREPARATION

This task will consist of subcontractor procurement and management, conduct of an onsite sample location and topographic survey, and preparation of the site basemap. The budget for this task is based on the following assumptions:

- The onsite survey will be conducted during a single trip to the site after all survey points (e.g., sampling locations) have been established. A preliminary site basemap will not be prepared, in order to minimize the cost of this task.
- The estimated survey area is 6 acres, as specified in the work plan.
- A Parsons ES employee will show survey points to the surveying subcontractor during a half-day site walkover.
- Three blueline copies of the site basemap with topography, and three blueline copies of the site basemap without topography will be submitted to the Department.
- The Parsons ES survey subcontract will specify that the site map be provided in AutoCAD LT Release 2 or AutoCAD Release 13.

SUBTASK 2.3 - SITE PREPARATION

This task will consist of subcontractor procurement and management, mobilization of a field trailer and portable restroom, fence installation, and clearing of brush from the trailer and fence locations. The budget for this task is based on the following assumptions:

- The field trailer will be used primarily for storage, phone calls, and record-keeping during daylight hours; consequently, the budget does not include costs for providing electrical power to the trailer. One Parsons ES employee will provide oversight and assist with clearing brush when the trailer is delivered to the site. A 10-hour work day was assumed.
- A telephone with answering machine will be purchased for use in the trailer (estimated cost $75), and a telephone line will be installed by NYTEL (minimum $143.26) and maintained ($20 per month). The cost of installing the phone line cannot be determined until the trailer is onsite. For budgeting purposes, Parsons ES has assumed that the cost to install the phone line will be approximately $500. Alternatives (e.g., a cellular phone) will be assessed if the installation cost exceeds $500.
- The security fence will be installed by a subcontractor during a 3-day period. A Parsons ES employee will provide oversight and assist with clearing brush during that time. Ten-hour work days were assumed. If possible, the field trailer mobilization and portable restroom mobilization will coincide with the fence installation.
- The field trailer, telephone, and portable restroom will remain onsite for 4 months, as specified in the work plan.

SUBTASK 2.4 - TEST PIT AND DRUM SAMPLING

This task will consist of subcontractor procurement and management; excavation of test pits; sampling of test pit soils; extraction, overpacking, and staging of drums encountered in the test pits; drum sampling; and preparation of test pit logs and sample records. The budget for this task is based on the following assumptions:

- The estimated duration of field work is 15 days, as specified by the NYSDEC project manager. Test pit excavation and drum staging activities will be completed during a 13-day period; drum sampling will be completed during a 2-day period. Ten-hour work days were assumed.
- The Parsons ES field team will consist of an OSHA-qualified Level B supervisor in Level C personal protective equipment (PPE) with Level B backup, and two individuals in Level B PPE assigned to document field observations and conduct air monitoring (PID and explosimeter) in the Level B exclusion zone. Subcontractor personnel will use Level B PPE. In addition, a 1-day audit of the test excavation work may be conducted by the Parsons ES Health and Safety Officer, due to use of Level B PPE.
- Samples will be analyzed by a Parsons ES subcontractor. Estimated field sampling costs and laboratory costs are based on the sample program specified in the

NYSDEC work plan; up to 34 test pit soil (10 surface and 24 subsurface) samples and associated QA/QC samples (two MS, two MSD, and two duplicate samples) will be collected and analyzed, and up to 20 drum samples and associated QA/QC samples (one trip blank, one MS, one MSD, and one duplicate sample) will be collected and analyzed. In addition, up to five samples will be analyzed for TCLP VOCs, SVOCs, pesticides and herbicides, and metals.

- One copy of the test pit logs, sample records, and laboratory data packages will be submitted to the Department.

SUBTASK 2.5 - SURFACE WATER AND SEDIMENT SAMPLING

This task will consist of collection and analysis of six surface water samples and six sediment samples, and preparation of sample records. The budget for this task is based on the following assumptions:

- NYSDEC personnel will collect, pack, and ship the surface water and sediment samples.
- Parsons ES will deliver sampling equipment, and packing and shipping materials to the onsite field trailer prior to sampling.
- Parsons ES will retrieve sampling equipment from the field trailer after the surface water and sediment samples are collected. Parsons ES estimates that equipment will be onsite for 2 days.
- Samples will be analyzed by a Parsons ES subcontractor. Estimated field sampling costs and laboratory costs are based on the sample program specified in the NYSDEC work plan; up to six sediment samples and associated QA/QC samples (one MS, one MSD, and one duplicate sample) will be collected and analyzed, and up to six surface water samples will collected and analyzed. One set of QA/QC samples (one trip blank, one MS, one MSD, and one duplicate sample) will be obtained for the surface water and groundwater samples. The matrix selected for these samples (surface water or groundwater) will be determined in the field. For budgeting purposes, costs for the analysis of these samples are included in the groundwater sampling task budget (Task 2.7).
- One copy of the laboratory data packages will be submitted to the Department.

SUBTASK 2.6 - SOIL BORINGS AND MONITORING WELL INSTALLATIONS

This task will consist of subcontractor procurement and management; installation of four monitoring well pairs; and preparation of boring logs and well construction logs. The budget for this task is based on the following assumptions:

- Four monitoring well pairs will be installed and developed as described in Subsection 3.6.2 of the work plan. The wells will be installed on the site property.
- The exploratory boring described in Subsection 3.6.1 will not be drilled and associated monitoring wells will not be installed, based on the assumption that the

data the boring and wells would provide can be obtained from the upgradient well pair that will be installed as described in Subsection 3.6.2.

- The estimated duration of field work is 5 days. One Parsons ES employee will conduct subsurface soil sampling and provide subcontractor oversight during that time. Ten-hour field days were assumed.
- Estimated drilling and well construction footages are based on the NYSDEC project manager's estimate of the total depth of the shallow (10 feet) and deep (25 feet) wells. Based on these depths, the assumed depth of the water table is 7 feet below grade, and the assumed depth of bedrock is 13 feet below grade. Five-foot screens will be installed in the shallow wells, as specified by the NYSDEC project manager.
- The monitoring wells will be developed by NYSDEC personnel using Parsons ES equipment.
- Drill cuttings and development and decontamination water will be spread or discharged on the ground surface near each well location; these materials will not be contained or transported to another location.
- Samples will be analyzed by a Parsons ES subcontractor. Estimated field sampling costs and laboratory costs are based on the sample program specified in the NYSDEC work plan; up to 16 soil boring samples and associated QA/QC samples (one MS, one MSD, and one duplicate sample) will be collected and analyzed.
- One copy of the boring and well construction logs, and laboratory data packages will be submitted to the Department.

SUBTASK 2.7 - GROUNDWATER SAMPLING

This task will consist of collection and analysis of eight groundwater samples, and preparation of sample records. The budget for this task is based on the following assumptions:

- NYSDEC personnel will collect, pack, and ship the groundwater samples.
- Parsons ES will deliver sampling equipment, and packaging and shipping materials to the onsite field trailer prior to sampling.
- Parsons ES will retrieve sampling equipment from the field trailer after the groundwater samples are collected. Parsons ES estimates that equipment will be onsite for 2 days.
- Samples will be analyzed by a Parsons ES subcontractor. Estimated field sampling costs and laboratory costs are based on the sample program specified in the NYSDEC work plan; eight groundwater samples and associated QA/QC samples will be collected and analyzed. As noted previously (Task 2.5), one set of QA/QC samples (one trip blank, one MS, one MSD, and one duplicate sample) will be obtained for the surface water and groundwater samples. The matrix selected for these samples (surface water or groundwater) will be determined in the field. For

budgeting purposes, costs for the analysis of these samples are included in the groundwater sampling task budget (Task 2.7).

- One copy of the laboratory data packages will be submitted to the Department.

SUBTASK 2.8 - FISH AND WILDLIFE IMPACT ANALYSIS

A baseline ecological risk assessment will be conducted in accordance with the NYSDEC October 1994 guidance for Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (FWIA). As specified in the NYSDEC work plan, the FWIA will consist of Step I and Step IIa of the guidance. As part of Step I, an initial screening analysis will be conducted by comparing mean and maximum contaminant concentrations against the regulatory criteria to identify whether any of the contaminants are present at concentrations that might represent adverse conditions for fish, wildlife, and/or vegetation resources. Step IIa (Pathway Analysis) will be conducted to evaluate the potential for exposure of resident fish and wildlife to site attributable contamination. The need for completion of additional FWIA tasks will be determined during the first phase steps outlined above. The budget does not include costs for conducting additional FWIA tasks.

SUBTASK 2.9 DATA VALIDATION

Laboratory analytical packages will be validated by Parsons ES. Data validation will consist of the tasks specified in Work Element V ("Data Validation Scope of Work - NYSDEC RI/FS Program") of Supplemental Agreement No. 1 of the Standby Contract under which this work assignment is being conducted. The NYSDEC project manager will be informed about any deficiencies identified during the validation process so that timely corrective action, if required, may be undertaken to minimize impacts to the project schedule and budget.

A validation report summarizing the results from data validation will be prepared and submitted to NYSDEC. As specified in the NYSDEC draft project quality assurance (QA) plan (dated August 29, 1996), the report will include an assessment of the completeness and compliance of laboratory data packages, descriptions of deviations from ASP protocols, an assessment of outliners and the overall usability of the data, and identification of applicable data qualifiers, including, if necessary, rejection of non-compliance data.

The budget for this task is based on the following assumptions:

- The number of samples collected during the RI will be as specified above under Tasks 2.4, 2.5, 2.6, and 2.7;
- One copy of the data validation report will be submitted to the NYSDEC project manager; and
- The Data Usability Summary Report (DUSR) specified on page 4 of the NYSDEC draft QA plan will be prepared by NYSDEC.

SUBTASK 2.10 - TASK MANAGEMENT

Article 11 of the Superfund Standby Contract between NYSDEC and Parsons ES imposes specific reporting requirements on Parsons ES, which are the responsibility of the Parsons ES Project Manager, and are independent of the Project Manager's technical effort on this Work Assignment. Specifically, the Project Manager will:

- Review the progress and cost of the RI effort on a continuing basis.
- Submit a Monthly Cost Control Report for this Work Assignment pursuant to the requirements of Schedule 2 of the contract.
- Submit, as part of the Monthly Cost Control Report, a description of Parsons ES's utilization of MBE/WBE firms by listing the firm's name, cost of work performed to date, and percent of work assignment costs paid to the MBE/WBE firms to date. This report will include invoices from the MBE/WBE firms. The Project Manager will also report on such other matters related to the affirmative action goals and requirements established by the Contract as the Department may require, including separate quarterly reports.
- Submit a Monthly Project Report for this Work Assignment that will describe, by task, compliance with the Progress Schedule, accomplishments, problems, and projected changes in the scope of the RI/FS.
- Submit a Progress Schedule Update which indicates the schedule for completion of work, including milestones required by this work assignment, along with the Monthly Cost Control Report and the Monthly Project Report. The Progress Schedule Update will be a bar chart representing graphically the starting date, duration, and finishing date for each task identified in the work assignment. A single starting date and a single finishing date will be shown for each task. The current status and projected time to completion will be shown on each bar.

The level of effort required for these activities are shown in Schedule 2.11 (b-1) and the detailed breakdown is attached to the transmittal letter. This level of effort is based on the following assumptions.

- **Prepare Monthly Cost Control Report & CAP**

The schedule proposed in the Scoping Plans indicates a total duration of 11 months for the South Hills Dump site and 2 months for the Lehigh Redesign, including Work Plan development. Allowing 8 hours per month for CAP preparation results in a total of 104 hours. These hours have been distributed to the tasks based on task duration and not on percentage of the task level of effort.

- **Oversee CAP Preparation**

This activity requires a minimum of 2 hours per month, primarily at the Project Manager level, to estimate the percent complete for each active task and labor hours required to complete these tasks, and to review the Cost Control Report, the back up, and the CAP form for accuracy. The total required is 26 hours.

- **Prepare Monthly Progress Report & Schedule Update**

The monthly progress report requires an average of 4 hours per month of combined project manager and support time to compile and type the monthly report, to review and edit, make corrections, to revise the schedule, and produce the report for distribution. As a result, a total of 52 hours is required to cover the projects.

TASK 3 - LEHIGH REDESIGN WORK PLAN DEVELOPMENT

Parsons ES will amend the existing text of the work plan and develop separate budget schedules (including staffing plan) for the Lehigh Industrial Park Site. The additional text will include a brief description of the tasks to be completed and a separate schedule.

TASK 4 - LEHIGH SITE DRAINAGE SYSTEM AND GRADING RE-DESIGN

Parsons ES will re-evaluate the amount of storm water expected, the size of the swales/berms, and the size/engineering considerations and construction details of the infiltration basin and regrading of the site.

SUBTASK 4.1 CONCEPTUAL LAYOUT

Parsons ES be involved in (3) conference calls with the Department to conceptually discuss ideas and proposals associated with the surface water drainage re-design. As a result of those discussions Parsons ES will prepare a brief description with sketches of the final conceptual design. No face to face meetings between the Department and Parsons ES are included in the budget.

SUBTASK 4.2 DRAINAGE COMPUTATIONS

Parsons ES will execute a field investigation program that will consist of three percolation tests to incorporate in the drainage re-design. We have assumed the work will be conducted with a small rented backhoe in Level D equipment. The test locations will be based on conceptual infiltration basin locations. Parsons ES will perform all engineering calculations associated with the design of the infiltration basin and redesign of the drainage and grading contours. The calculations will serve as the basis for the final design of the surface water drainage.

SUBTASK 4.3 SPECIFICATIONS

Parsons ES will prepare (draft and final) plans and specifications associated with the redesign. Those specifications shall be written in a form consistent with the existing contract documents.

SUBTASK 4.4 DRAFTING REVISIONS

Modifications to existing AutoCadd drawings/contract drawings and specifications are anticipated. It is estimated that one drawing (Drawing C-3) will need to be regenerated and another drawing (Drawing C-2) will need to be revised. Furthermore,

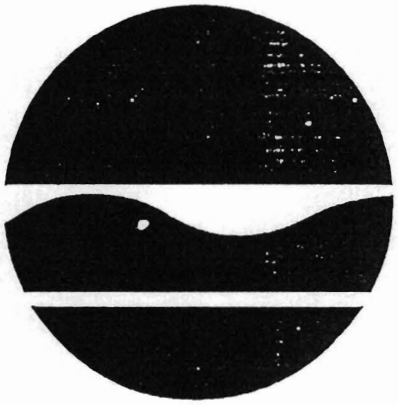
Parsons ES will produce 75 sets of revised drawings and one stamped copy of specifications and a copy of the revised drawings on disk. All drawings and specifications will be approved and stamped by a NYS licensed professional engineer.

SUBTASK 4.5 ENGINEER'S COST ESTIMATE

Once the necessary contract drawings and specifications have been revised and finalized, Parsons ES will provide estimated costs, including supporting documentation, associated with the redesign, and a proposed sewer for discharge of site storm water.

Department of Environmental Conservation
Division of Environmental Remediation

Remedial Investigaiton
Work Plan



South Hill Dump Site
Cortland County
Site No. 7-12-009

August 1996

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1.0 Introduction

1.1 Description of Project

The New York State Department of Environmental Conservation (NYSDEC), with the assistance of Engineering Science, Inc. (Work Assignment D-002478-45), is conducting a Remedial Investigation (RI) at the South Hill Dump Inactive Hazardous Waste Site, Cortland County, New York, Site No. 7-12-009. The purpose of the RI is to determine the nature and extent of contamination resulting from the disposal of hazardous waste at the site.

1.2 Scope

This Work Plan provides background information on the South Hill Dump Site, and defines the specific activities for the Phase I RI. The approach for this RI, as detailed below, is based on a Presumptive Remedy for the site. A remedy would be implemented only if it is determined hazardous wastes are present or have been disposed of at the site, and this disposal represents a significant threat to human health or the environment. The presumed remedies could include consolidation of wastes and capping with an impermeable cover. Groundwater contamination would also be addressed as appropriate. Also included is a Quality Assurance Plan (Appendix A), and a Health and Safety Plan (Appendix B). Field activities will include the following:

* Development of a topographic map
* Installation and sampling of monitoring wells
* Excavation of test pits and subsurface soil sampling
* Surface water, seep and sediment sampling
* Sample analysis and data validation
* Habitat Based Assessment

2.0 Site Description/Condition

The South Hill Dump site is approximately 2½ acres in size, and is located on South Hill Road, 2 miles south of the Village of McGraw in the Town of Clarendon, New York (Fig. 1). The site is generally a three tiered area of mixed fill located on a steep hillside. Fill material consists of road construction debris, brush and stumps, tires, various drums, white metal and cars, and other industrial waste material. Steep, unstable embankments exist at each tier, with wastes visible in the sides of the embankments. The older section of the landfill consisting of primarily cars and white metal goods extends deep into the wooded area down the existing hillside. Mobility with field vehicles and excavation equipment will be difficult due to the steep nature of the site and the fact that the entire area is heavily overgrown or wooded. Access to the site is currently unrestricted, with occasional dumping of household and yard wastes occurring.

2.2 Site History

The site was operated as a municipal disposal facility by the Town of Cortlandville for municipal waste from the Village of McGraw and the Towns of Cortlandville and Solon from the early 1960's until 1972, and also accepted industrial wastes from local industries. Before the Town

operated the landfill, residents used the site as far back as 1949 for trash disposal. The NYSDEC conducted a removal of six drums containing TCE and other compounds in 1990 and 1991, however, numerous drum carcasses are still visible in the face of the two landfill lifts. Witnesses also reported the presence of a waste oil pit when the landfill was operating. The site was added to the New York State Registry of Inactive Hazardous Waste Sites in February 1991 as a Class 2 site. Results of sampling of soil, surface water, and sediments show the presence of chlorinated solvents, pesticides, PCBs, and elevated levels of lead in soil, surface water and sediments.

2.3 Geology/Hydrogeology

Since no subsurface investigations have been performed at this site, little is known regarding the geology or hydrogeology. Based on field observations during a site visit and review of geologic maps, it appears that a relatively thin cover of glacial till overlies Devonian shale bedrock. Surface drainage flows east along the north and south sides of the landfill, then south to Hoxie Gorge, and eventually west to the Tioughnioga River. Details of the geology and groundwater flow conditions will be defined during the Remedial Investigation (RI).

3.0 Remedial Investigation

The purpose of this RI is to define the geologic and hydrogeologic conditions, the physical characteristics of the fill material, the nature and extent of any hazardous waste contamination, and to provide sufficient data to perform a focussed Feasibility Study to determine the appropriate remedial response.

3.1 Literature Search

Prior to the start of actual field activities, a literature search will be conducted to gain as much historical information about the site and surrounding area as possible. Sources of information will include, but not be limited to, landfill operators records, Town and County records including tax maps and files, published geologic or hydrogeologic papers, local well drillers logs, and available historical aerial photographs. A compilation of all available information will be prepared and submitted to the NYSDEC along with any observations or conclusions regarding the history of the site.

3.2 Base Map

Site mapping will include the preparation of a site map and on-site survey of sampling locations. The site will be surveyed, and a map will be prepared in AutoCAD format compatible with AutoCAD® LT ver. 2.0, at a scale of 1"=50' with a contour interval of 2 feet. A preliminary map will be produced for use on site during field work. Sample locations will be surveyed and added to the final map.

Our preliminary estimate of the map area is 6 acres, which includes adjacent areas to assist with hydrogeologic interpretation. The boundaries of the final site map will be specified while the investigation is in progress, so that the map limits can reflect new information on the extent of contamination.

3.3 Site Preparation

Site preparation activities that will be completed prior to the mobilization of the drilling and excavation contractors include:

- Site Clearing - Heavy vegetation will be cleared from the upper level in the area of the trailer, and other areas if needed. All cut trees and shrubs will be piled in the brush disposal area.

- Fencing - The area consisting of the upper most tier off South Hill Road will be fenced with 8 foot chain link fence. The main entrance and the access road leading down to the next level will have 16 foot swinging gates to allow access with heavy equipment and still provide security. The area to be fenced will be of sufficient size to contain the field office trailer, the decontamination pad for equipment, and a lined drum storage area for waste material generated during field activities and overpacked drums removed from the landfill.

- Trailer Mobilization - An office trailer will be mobilized to the site for four months. This will provide an area to compile and interpret data for use in the ongoing planning of site activities.

3.4 Test Pits

Numerous drum carcasses are still visible in the face of the two landfill lifts. Witnesses also reported the presence of a waste oil pit when the landfill was operating. To characterize both the existence and condition of buried drums and to explore the existence and possible location of a waste oil pit, test pits shall be excavated on all three levels of the landfill.

Excavations will be performed with a track-mounted backhoe capable of excavating to a depth of 20 to 25 feet. The test pits will be excavated down either to the water table, the undisturbed soil horizon, bedrock, or the full reach of the backhoe, whichever is reached first. Excavated material will be placed adjacent to the pit on the ground during test pit operations. Material will be replaced in the excavation when the test pit operations are complete. Any excavated drums which contain product shall be overpacked and staged in the drum storage area. Protocols and equipment for handling spills from drums shall be in place prior to starting the test pits.

Excavation will proceed as necessary to delineate the extent of any contamination identified visually or with field instrumentation. Test pit logs will be prepared describing the subsurface conditions encountered (including: thickness and type of fill material, depth to groundwater, depth to native soil, type of native soil, length-width-depth of pit, and any other pertinent information) for each test pit. Test pits will be visually inspected for the presence of contamination, and the soil removed from the test pits shall be screened for total volatiles with a PID. Soil samples shall be collected, including samples from any obviously stained soils, soils adjoining buried drums, and soils containing volatiles as measured on a PID. At a minimum, 2 soil samples shall be collected from each test pit. Samples shall also be collected from the contents of any intact drums. Samples will be taken from material removed by the backhoe: no personnel will enter an open test pit (see Quality Assurance Plan for sampling procedure).

3.5 Sediment and Surface Water Samples

Sediment and surface water samples will be collected and analyzed from visible seeps at the toe of the landfill and from the drainage swale at the toe of the landfill, as determined in the field by the DEC representative and the consultant. Water samples will be collected from the same locations as the sediment samples. Up to six sediment/water samples will be collected. To ensure water samples are representative, they will be collected prior to collection of sediment samples.

3.6 Subsurface Investigation

3.6.1 Exploratory Boring

An exploratory boring and monitoring well will be installed upgradient of the landfill mass to determine the site stratigraphy and serve as a background groundwater sampling point. The boring will be installed with 6¼" hollow stem augers (HSAs) to the top of bedrock. Split spoon samples will be collected continuously in two foot intervals in accordance with standard ASTM specifications, and logged in accordance with modified Burmeister Classification. If a significant water bearing zone is encountered in the overburden unit, a shallow monitoring well will be constructed at this upgradient location in a separate bore hole (see below for shallow monitoring well construction) A permanent 4" diameter mild steel casing will be grouted into the top two feet of competent bedrock. The borehole will then be advanced using an HX core barrel to at least 20 feet into bedrock. Drilling will be accomplished by water rotary methods. After each 10' core run the core will be retrieved, scanned for total volatile organics with a photoionization meter (PID), logged by the on-site geologist, labeled and stored in a wooden core box for future archiving. If groundwater has not yet been encountered, the boring will continue to be advanced in 10 foot increments until groundwater is found. The bore hole will be pumped dry to the extent possible after each core run to determine if a water bearing unit has been found based on recharge, therefore careful monitoring of drilling fluid loss is necessary. The boring will be left as an open hole monitoring well with the 4 inch casing fitted with a locking cap as the well riser.

3.6.2 Well Installation

There are no wells currently on site, and no information on the depth to groundwater or to any confining unit. Wells will be installed at 4 locations, 1 upgradient and 3 down gradient, to assess the stratigraphy and determine whether groundwater is contaminated. Continuous split spoon and core samples will be collected, screened with a PID, and logged. The rock cores will be archived. Up to four soil samples will be collected for laboratory analysis from each well or well pair location. Sample locations and depths will be determined in the field by the DEC representative in consultation with the consultant, based upon PID readings and visual observations. Because of the limited information available, provisions will be made for installing well pairs at these 4 locations, and for installing wells into bedrock and overburden. The decisions on well locations and construction will be made in the field by the DEC representative in consultation with the consultant.

3.6.2.1 Overburden Well Installation Method

Overburden monitoring wells will be drilled and installed using standard hollow stem auger (HSA) methods or other NYSDEC approved methods. Since it is anticipated that the wells will be installed as deep and shallow pairs, a borehole will be advanced as described above to bedrock and cased. A second borehole will be advanced for the shallow overburden well approximately 6 to 8 feet away to the appropriate depth for the well based on the boring log from the first borehole. No split spoon sampling will be necessary except for possibly the bottom of the boring to confirm similar stratigraphy. This will be determined by the on-site geologist. All wells will be screened across the water table in order to obtain information about the upper portion of the aquifer. Typically, screen length will be 10 feet or less.

Monitoring wells will be constructed of two inch ID threaded schedule 40 PVC flush-joint casing and properly sized section of machine slotted 0.010-inch well screen. The annulus around the well screen will be backfilled with No. 1 Morie sand. The sand pack will extend at least two feet above the well screen. A bentonite seal will be placed above the sand pack to form a two foot seal. A cement/bentonite grout will be placed to within three feet of the surface. Each well will have a vented cap and a four inch diameter steel protective casing with a hinged locking cover. A cement pad will be installed to channel surface water away from the well. A weep hole will be drilled in the protective casing to allow any water between the inner and outer casing to drain.

3.6.2.2 Bedrock Well Installation Method

Bedrock wells will be constructed as an open bedrock well, in accordance with standard bedrock coring methods or other NYSDEC approved methods. The well will be advanced using an HX or HQ core barrel through a permanent steel surface casing, which will be grouted into the upper one to two feet of bedrock, as described above.

3.6.3 Well Development and Sampling

Monitoring wells will be developed using bailers and/or by pumping or surging until temperature, conductivity, and pH have stabilized and turbidity of less than 50 NTUs has been achieved. Well evacuation will be accomplished using a disposable polyethylene bailer or a pump and polyethylene tubing. All development water will be discharged onto the landfill surface. Water levels in the shallow wells should be observed during development of the deeper wells as an indication of vertical hydraulic connection.

3.7 Analytical Program

The number of samples and the analytical parameters are summarized in Table 1, Sampling Summary. The sample locations are described in Sections 3.4 through 3.6, above. Sample collection methods are described in Section 4 of the Quality Assurance Plan.

3.8 Waste Disposal

Four different types of waste materials are anticipated on this project:

- Water (including drilling water, purge water, and decontamination water)
- Soil and rock cuttings
- Disposable equipment and protective clothing
- Drums and contents.

All water will be discharged onto the landfill surface.

Soil and rock cuttings will be placed on the landfill surface. Cuttings from the background well will be transported to the landfill.

Disposable equipment and protective clothing will be collected and placed in 55 gallon DOT-approved steel drums. Drums and contents removed during test pitting will be overpacked, as described above. The overpacked drums and the disposable equipment and protective clothing will be disposed of appropriately after testing. Parsons Engineering Science will sign the manifest as agents of the NYSDEC. This task will be added to the Work Assignment by amendment.

3.9 Fish and Wildlife Impact Analysis

Parsons Engineering Science will conduct a baseline ecological risk assessment in accordance with New York State guidance (*Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites*, NYSDEC, October 1994). The scope under this task will be the completion of Step 1 and Step 2A of this guidance, which includes:

- A description of the major terrestrial, wetland, and aquatic habitats within a 0.5 mile radius of the site, and creation of a covertype map.
- A description of fauna expected within each covertype.
- Observations of stress, including visibly contaminated areas and atypical biotic conditions.
- An assessment of the value of habitat to associated fauna and to humans.
- Identification of applicable fish and wildlife regulatory criteria.
- A pathways analysis, which identifies fish and wildlife resources, contaminants of concern, sources of contaminants, and potential pathways of contaminant migration and exposure.
- If minimal impact is identified, no additional analysis is required. If an impact is identified, a criteria-specific analysis will be performed, comparing site specific contaminant concentrations to numerical criteria to provide an assessment of potential impact.

3.10 Report Preparation

Upon receipt of analytical data for the samples obtained during field activities, the NYSDEC will prepare a Phase I RI Report to summarize project activities and present findings.

4.0 Project Schedule

South Hill Dump Site Project Schedule		
	Activity	**Date**
	Notice to Proceed	8/16/96
	Public Information Meeting	8/20/96
	Mobilize	8/26/96
	Test Pit Excavation, Sample Collection	8/26-9/6/96
	Monitoring Well Installation & Sampling	8/26-9/6/96
	Completion of Fieldwork	9/11/96
	Submit Analytical Data Results and Data Useability Report	10/18/96

5.0 Project Organization [to be completed by Parsons Engineering Science]

5.1 Project Team

5.2 Resumes

Table 1: Sampling Summary

Soil and Sediment Samples Analytical Methods and Estimated Number of Samples				
Parameter	Volatile Organics	Semivolatile Organics	Pesticides/PCBs	TAL Metals
Method	ASP 91-1	ASP 91-2	ASP 91-3	ASP CLP-M
Surface Soil	10	10	10	10
Subsurface Soil	40	40	40	40
Sediment	6	6	6	6
MS/MSD	6	6	6	3
Duplicates	3	3	3	3
Total	63	63	63	60

Water/Liquid Samples Analytical Methods and Estimated Number of Samples				
Parameter	Volatile Organics	Semivolatile Organics	Pesticides/PCBs	TAL Metals
Method	ASP 91-1	ASP 91-2	ASP 91-3	ASP CLP-M
Groundwater	8	8	8	8
Surface Water	6	6	6	6
MS/MSD	2	2	2	1
Duplicates	1	1	1	1
Trip Blank	1			
Total	18	17	17	16

Table 1 (cont.): Sampling Summary

Waste Samples Analytical Methods and Estimated Number of Samples				
Parameter	Volatile Organics	Semivolatile Organics	Pesticides/PCBs	TAL Metals
Method	ASP 91-1	ASP 91-2	ASP 91-3	ASP CLP-M
Drum Wastes	20	20	20	20
MS/MSD	2	2	2	2
Duplicates	1	1	1	1
Trip Blank	1*			
Total	23 (24)*	23	23	23

* If waste is liquid

PROJECT SCHEDULE
SOUTH HILL DUMP SITE RI/LEHIGH REDESIGN
WORK ASSIGNMENT D002478-45

Weeks from Notice to Proceed:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SOUTH HILL DUMP SITE RI															
Task 2.1 – Record Search															
Task 2.2 – Site Survey and Basemap Preparation															
Task 2.3 – Site Preparation															
Task 2.4 – Test Pit and Drum Sampling															
Task 2.5 – Surface Water and Sediment Sampling															
Task 2.6 – Soil Borings and Monitoring Wells															
Task 2.7 – Groundwater Sampling															
Task 2.8 – Fish and Wildlife Impact Analysis															
Task 2.9 – Data Validation															
LEHIGH REDESIGN															
Task 4.1 – Conceptual Layout															
Task 4.2 – Drainage Computations															
Task 4.3 – Specifications															
Task 4.4 – Drafting Revisions															
Task 4.5 – Engineers Cost Estimate															
Task 4.6 – Contract Drawing Production															

BID COMPARISON TABLE
FENCE INSTALLATION SUBCONTRACTORS
SOUTH HILL DUMP SITE RI

ITEM DESCRIPTION	UNITS	ATLAS FENCE			BUTLER FENCE			ROGERS FENCE		
		EST. QUAN.	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	EST. QUAN.	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	EST. QUAN.	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)
FENCE INSTALLATION										
Mobilization/Demobilization	ls	1	$390.00	$390.00	1	$500.00	$500.00	1	$500.00	$500.00
Fence-line, installed*	lf	409	$16.50	$6,748.50	409	$26.33	$10,768.97	409	$17.10	$6,993.90
Access Gate, 16-ft wide	ea	2	$475.00	$950.00	2	$595.00	$1,190.00	2	$800.00	$1,600.00
Remove and dispose of existing fencing	lf	42	$2.00	$84.00	42	$2.00	$84.00	42	$1.80	$75.60
Remove and dispose of existing gate	ls	1	$120.00	$120.00	1	$50.00	$50.00	1	$20.00	$20.00
Borings to set gate posts	ea	4	$20.00	$80.00	4	$40.00	$160.00	4	$20.00	$80.00
Padlocks	ea	2	$28.00	$56.00	2	$40.00	$80.00	2	$18.00	$36.00
	TOTAL NOT-TO-EXCEED COST			$8,428.50			$12,832.97			$9,305.50

*: Unit prices for 2.5-inch O.D. line posts and 3-inch O.D. terminal posts.

Post-it® Fax Note 7671	Date 8/13	# of pages 1	
To David Chaffin	From Scott Hamm		
Co./Dept. Sarasota Air R.	Co. Roger's Fence		
Phone # 315-451-9260	Phone # 826-3756		
Fax # 315-451-9570	Fax # 826-7224		

ATTACHMENT B

ON COST SCHEDULE

NYSDEC WORK ASSIGNMENT #D002478-45

SOUTH HILL DUMP SITE

ITEM DESCRIPTION	UNITS	EST. QUAN.	UNIT COST* ($)	TOTAL ITEM ESTIMATE ($)
FENCE INSTALLATION				
Mobillzation/Demobilization	lump sum	1	500.00	500.00
Fence-line, installed	linear Foot	409	16.25	6625.80
Access Gate, 16-ft wide	each	2	800.00	1600.00
Remove and dispose of existing fencing	linear Foot	42	1.80	75.60
Remove and dispose of existing gate	each	1	20.00	20.00
Borings to set gate posts	each	4	20.00	80.00
Padlocks	each	2	18.00	36.00
Other (specify):	each			
Other (specify):	each			
Other (specify):	each			
Other (specify):	each			
Other (specify):	day			
	TOTAL NOT-TO-EXCEED COST			8937.40

* Level D personal protective equipment assumed.

Mark-up for installation using Level C personal protective equipment: % 50%

Quote is based on Attached Specification & in Compliance with RFP Specification Supplied. The 2" O.D. Post Specified is not in compliance with industry standards. Add $.90/LF if 2½" O.D. Posts & 3" OD Terminal Posts are to be used. Current Fence Quoted is based on top & Bottom tension wire. A top rail would be Recomended for this Fence Configuration Add $1.19/LF if Top Rail is to be used.

Roger's Fence 8/13/96

48816\dec\southill\logistic\fence.wk3 08-Aug-96

ROGER'S FENCE CO., INC.
P.O. BOX 367
POLAND, NEW YORK 13431
(315) 826-3758

BUTLER
FENCE CO., INC.
536 State Fair Blvd.
SYRACUSE, NEW YORK 13204-1142
(315) 422-8410
1-800-992-8919 FAX: 315-476-0126

JOB ESTIMATE

PHONE	DATE
451-9560	8/13/96

JOB NAME/LOCATION

TO Parsons Engineering Science, Inc.
Att: David Chaffin
290 Elwood Davis Rd., Liverpool, NY 13088

Security Fence Installation
South Hill Dump Site RI
(NYSDEC Site No. 712009)
Work Assignment D002478-45
State Superfund Standby Contract

JOB DESCRIPTION:

Modifying our quotation dated August 7, 1996 to include 2-1/2" O.D. Line Posts and 3" O.D. Terminal Posts including appropriate fittings, parts, etc. as follows;

Fence Line Installed - $26.33 per L.F.

Also, to provide an alternate to add 1-5/8" O.D. Top Rail in lieu of Top Tension Wire to the proposed fence;

ADD: $2.46 per L.F.

If there are further questions please do not hesitate to call.

THIS ESTIMATE IS FOR COMPLETING THE JOB AS DESCRIBED ABOVE. IT IS BASED ON OUR EVALUATION AND DOES NOT INCLUDE MATERIAL PRICE INCREASES OR ADDITIONAL LABOR AND MATERIALS WHICH MAY BE REQUIRED SHOULD UNFORESEEN PROBLEMS OR ADVERSE WEATHER CONDITIONS ARISE AFTER THE WORK HAS STARTED.

ESTIMATED JOB COST: As Above

ESTIMATED BY: Neil R. Austin /bs
Neil R. Austin

Customer Signature _____ Date: _____

Job Estimate accepted by:

Purchase Order No# _____

QUOTATION

ATLAS FENCE, INC.
6852 Manlius Center Road
East Syracuse, New York 13057
(315) 463-9207
(315) 433-8561 Fax

To :PARSONS ENGINEERING SCIENCE Phone:

ATTN: DAVID CHAFFIN Date: 8-14-96

Job/RFQ #:SOUTH HILL DUMP SITE

****** REVISED TO ADD INCREASE FOR LARGER POSTS******

SCOPE OF WORK:

Furnish and install approximately 409 feet of 8' high chain link fencing, topped with three strands of barbed wire as per the plans and specifications.

Furnish and install 2 - 16' double drive swing gates.

Remove the fencing as shown.

MOBILIZATION/DEMOBILIZATION		$	390.00
409 FEET. FENCE LINE INSTALLED	@ $ 15.61	$	6384.49 *
2 - 16' ACCESS GATES.	@ $ 475.00 EA.	$	950.00
42' - REMOVE AND DISPOSE OF EXISTING FENCE	@ $ 2.00/FT.	$	84.00
1 - REMOVE AND EXPOSE OF EXISTING GATE	@ $ 120.00	$	120.00
4 - BORINGS TO SET POSTS	@ $ 20.00	$	80.00
2 - PADLOCKS	@ $ 28.00	$	56.00

TOTAL $ 8064.00

* ADD $ .89/FT TO CHANGE LINE POSTS TO 2-1/2" O.D. AND TERMINAL POSTS TO 3" O.D.

TAX EXEMPT.

THANK YOU.

SOUTHILL

This quotation, unless otherwise expressly stated, is for acceptance within 30 days. Any changes to this contract may result in price change.

Accepted By: _____ ATLAS FENCE, INC.

Date : _____ John J. Czebiniak

The balance of said price is due and payable immediately upon completion of the work unless otherwise set forth. The owner executing this contract form represents and warrants that he is owner of the aforesaid premises and that he has read this agreement, as set forth on both sides. It is further agreed this contract is not subject to cancellation except by written consent of both parties.

A service charge of 1 1/2% per month will be charged if not paid within 10 days

BID COMPARISON TABLE
TEST PIT SUBCONTRACTORS
SOUTH HILL DUMP SITE RI

ITEM DESCRIPTION	UNITS	ESTIMATED QUANTITY	ERD Environmental		MARCOR Environmental		Sevenson Environmental		SJB Services		Sterling Environmental	
			UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)
Mobilize/Demobilize	lump sum	1	$1,200.00	$1,200.00	$2,498.00	$2,498.00	$20,000.00	$20,000.00	$1,500.00	$1,500.00	$2,500.00	$2,500.00
Construct Decontamination Pad	lump sum	1	$750.00	$750.00	$905.00	$905.00	$3,500.00	$3,500.00	$300.00	$300.00	$750.00	$750.00
Construct Drum Staging Area	lump sum	1	$650.00	$650.00	$905.00	$905.00	$5,000.00	$5,000.00	$300.00	$300.00	$750.00	$750.00
Test Area Clearing and Access (Level D)	hour	15	$90.00	$1,350.00	$145.00	$2,175.00	$350.00	$5,250.00	$155.00	$2,325.00	$280.00	$4,200.00
Test Pit Excavtion and Drum Overpacking (Level B)	hour	90	$140.00	$12,600.00	$240.00	$21,600.00	$475.00	$42,750.00	$255.00	$22,950.00	$335.00	$30,150.00
Test Pit Excavtion and Drum Overpacking (Level C)*	hour	0	$125.00	$0.00	$195.00	$0.00	$440.00	$0.00	$155.00	$0.00	NS	$0.00
Drum Staging (Level D)	hour	10	$110.00	$1,100.00	$135.00	$1,350.00	$425.00	$4,250.00	$155.00	$1,550.00	$310.00	$3,100.00
Drum Sampling (Level B)	hour	15	$140.00	$2,100.00	$82.00	$1,230.00	$450.00	$6,750.00	$255.00	$3,825.00	$70.00	$1,050.00
Equipment Decontamination (Level D)	hour	20	$105.00	$2,100.00	$91.00	$1,820.00	$400.00	$8,000.00	$125.00	$2,500.00	$245.00	$4,900.00
Drum Overpacks	each	20	$120.00	$2,400.00	$75.00	$1,500.00	$80.00	$1,600.00	$140.00	$2,800.00	$105.00	$2,100.00
Drum Spill Kit Including Absorbants	drum	5	$140.00	$700.00	$122.00	$610.00	$100.00	$500.00	$140.00	$700.00	$275.00	$1,375.00
55-Gallon Drums for Decon. Water or Spent Absorbants	drum	10	$35.00	$350.00	$30.00	$300.00	$60.00	$600.00	$45.00	$450.00	$25.00	$250.00
Sales Tax	8%	1	NS	$0.00	NS	$0.00	NS	$0.00	NS	$0.00	$4,090.00	$4,090.00
	TOTAL NOT-TO-EXCEED COST			$25,300.00		$34,893.00		$98,200.00		$39,200.00		$55,215.00

NOTE: NS = Cost not specified in bid

ATTACHMENT B

TEST PIT SUBCONTRACTOR COST SCHEDULE

SOUTH HILL DUMP SITE

ITEM DESCRIPTION	UNITS	ESTIMATED QUANTITY	UNIT COST ($)	TOTAL ITEM ESTIMATE ($)
TEST PIT AND DRUM SAMPLING ACTIVITIES				
Mobilize/Demobilize	lump sum	1	2,500.00	2500.00
Construct Decontamination Pad	lump sum	1	750.00	750.00
Construct Drum Staging Area	lump sum	1	750.00	750.00
Test Area Clearing and Access (Level D)	hour	15	280.00	4200.00
Test Pit Excavtion, Sampling, and Drum Overpacking (Level B)	hour	90	335.00	30150.00
Test Pit Excavtion, Sampling, and Drum Overpacking (Level C)*	hour	0		
Drum Staging (Level D)	hour	10	210.00	2100.00
Drum Sampling (Level B)	hour	15	70.00	1050.00
Equipment Decontamination (Level D)	hour	20	245.00	4900.00
Drum Overpacks	each	20	105.00	2100.00
Drum Spill Kit Including Absorbents	drum	5	275.00	1375.00
55-Gallon Drums for PPE or Spent Absorbents	drum	10	25.00	250.00
OTHER				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify):				
Other (specify): Sub Total				58,925.00
Other (specify): 8% Sales Tax				4714.00
	TOTAL NOT-TO-EXCEED COST			63639.00

*: Level C will only be used if authorized by the project Health and Safety Officer.