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February 9, 1999

Mr. David J. Chiusano, Project Manager
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

RE: North Franklin Street Site Remedial Action
Work Assignment D003825-09
Evaluation and Conceptual Design for Additional Remedial Action

Dear Mr. Chiusano:

URS Greiner Woodward Clyde (URSGWC) is pleased to submit two copies of the *Evaluation and Conceptual Design for Additional Remedial Action* at the North Franklin Street site. URSGWC revised this report based on the New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH) comments as transmitted in your letter dated January 4, 1999. Attachment 1 to this letter addresses each of your comments, outlining our response and revisions made to the final report.

As requested in your Comment No. 5, URSGWC evaluated an additional alternative to consist of demolishing the former dry cleaners building prior to site remediation. This additional alternative is evaluated in Attachment 2 of this letter, but as requested it has not been included in the report. The alternative evaluated in Attachment 2 is somewhat more costly than the alternative recommended in the report. It has benefits over the recommended alternative, but also has additional unknowns as described in Attachment 2. At this point, we recommend that NYSDEC consider initiating discussions with the owner and other interested parties to evaluate the feasibility of this approach.

Once you have had a chance to review this report and our recommendations, please call us to discuss the next phase of action at the site. As always, please call us if you have any questions.

Sincerely,

URS Greiner Woodward Clyde

Craig W. Pawlewski

Craig W. Pawlewski, P.E.
Project Manager

Enclosure

cc: D. Napier - NYSDOH
J. Gorton - URSGWC
D. Rothman - URSGWC (letter only)
D. McCall - URSGWC
File: 35388.00 (C-1)

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Attachment 1

Response to NYSDEC and NYSDOH Comments

Each of your specific comments as transmitted in your letter dated January 4, 1999 has been paraphrased below, along with our response:

1. **Install a vapor venting system under the concrete floor of the building instead of monitoring:** The revised report includes installation of a passive vapor venting system under the building, instead of monitoring as was proposed in the draft report. However, neither monitoring nor installation of a venting system was included with the new alternative of demolishing the building (see Comment No. 5).

2. **Is it possible to use the H-piles and a retaining wall to control shallow groundwater migration back into the excavated area?** It is not expected that the temporary retaining wall as proposed would prevent the migration of groundwater. The wall would be very difficult to seal and the groundwater would simply migrate around the sheets at each pile. While we could install a barrier wall that would prevent groundwater movement, it could not easily be installed at the desired close proximity to the building, and may not provide the support that is required for building stability during excavation.

   Even if an impermeable barrier wall were to be installed, it is probable that contaminated groundwater would simply migrate laterally around the barrier wall. Discussion of the drawbacks to using a retaining wall as a barrier to migration has been included in the report.

3. **Show the location of the Iron Treatment wall. Discuss barrier wall effect on groundwater flow:** Figure 12 has been added to the report to show the approximate location of this wall. Comment No. 2 addressed using a barrier wall at the site. Due to the unknown effect on the groundwater flow pattern in using a barrier wall, it would not be recommended to include both a barrier and a treatment wall in the design.

4. **Include costs for monitoring with the treatment wall:** Provisions will be made in the cost estimate to include installation of additional piezometers. Monitoring costs are already included with the costs for groundwater monitoring (Table 9).

5. **Evaluate the alternative of building demolition:** URSGWC evaluated demolition of the building, followed by excavation, as an additional alternative. Attachment 2 outlines the demolition plan and the basis for the estimated cost of this alternative. Please note that our evaluation and cost estimate did not consider legal and other issues that may significantly affect the cost and implementation of the selected alternative.

Attachment 2

Building Demolition and Soil Excavation

The remedial alternatives for the North Franklin Street site, described in the *Evaluation and Conceptual Design for Additional Remedial Action* report, are all based on the assumption that the existing site buildings will be maintained in their existing condition. Many of the costs and problems associated with the site remediation alternatives are for maintaining and protecting the former dry cleaner building. Since the area of highest soil contamination is located directly adjacent to the foundation and also extends underneath a portion of the building, many additional work components had to be included with the recommended alternative. These components include:

- Construction of a temporary retaining wall
- Excavation and backfill of soil in small segments
- Installation of an in-situ treatment wall
- Installation of a passive venting system under the building

As an alternative to maintaining the building, URSGWC evaluated the cost for demolishing the existing building and then remediating the site. Demolishing the building provides several advantages from a remediation standpoint. Not only are the design components listed above unnecessary, but the scope of the remediation can be increased by increasing the depth of excavation and extending it into the clay layer (although there is no demonstrated risk from contamination in the clay layer). The reasonable depth of excavation while maintaining the building is in the range of 6 to 7 feet. However, without the building, the reasonable depth of excavation would be at least several feet greater. Removing shallow contamination from underneath the building may eliminate the need for property restrictions that would limit future construction at the site.

Description of Alternative

The general approach to remediation would still focus on the source of the contamination (soil) since it represents the greatest potential risk and impact. Even after demolition of the building, URSGWC considers excavation and disposal to be the most expedient and cost effective method to address the contaminated soil. Major components of this alternative are outlined below:

- Building Demolition - The first step in the process will be the purchase and demolition of the former dry cleaner building. For the purpose of this evaluation, URSG assumed $87,000 as the purchase price for the building. A Village clerk indicated that the assessed value of the property and building was $69,000 in 1998. URSG added 25% to the assessed value to account for the fact that the actual value may be higher, or that the owner may not sell at the assessed value, especially when considering that the cost to replace the building with a comparable structure will be higher.

  Demolition is assumed to consist of the entire 2-story brick building with two storefronts -- the former dry cleaners and an antique shop. The approximate dimensions of the building are 41 feet by 100 feet. Demolition will be conducted in a manner that protects the VFW building, located immediately adjacent. Prior to demolition, the building will be assessed for the presence of asbestos and other conditions that may require special handling / removal (for the purpose of the cost estimate it was assumed that there is no asbestos and/or other special conditions).

URS Greiner, Inc.

SHEET No 8 OF 8

COST ESTIMATE

JOB No 05.35388.17

NORTH FRANKLIN ST.
EXCAVATION

BY DNO DATE 12.3.98
CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY.	UNIT COST	TOTAL COST
8	DESIGN PROCUREMENT OVERSIGHT				
8 A	SYSTEM DESIGN PROCUREMENT	MH	120	$60	$ 7,200
8.B	CONSTR. MANAGEMENT, OVERSIGHT	MH	80	$ 60	$ 4,800
8.C	BUILDING EVAL. CRACK SURVEY	LS	1		$ 1,000
8 D	TRAVEL, PER DIEM, ETC.	LS	1		$ 1,500
	(ASSUME DESIGN OF RETAINING				
	WALL ETC. IS SIMILAR TO COST				
	FOR BUILDING DEMOLITION, ETC.)				
8	TOTAL				$14,500

URS Greiner, Inc.

SHEET No 6 OF 8

JOB No

COST ESTIMATE

North Franklin

Excavation & Disposal

BY RJ DATE 2/12

CHKD BY DATE

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
6	Repave 1640 f^2 = 182 sy				
A	4" Stone Base 022 303 0100	sy	182	6.95	1265-
	1½ Binder 025 104 0080	sy	182	2.82	513
	1" Top 0300	sy	182	2.20	400
	add - all Hand Work				
	small area	%	2178	50	1089
	NOTE: Cost to Repave				
	Only existing parking areas				
					$3270

URS Greiner, Inc.

SHEET No 5 OF 8

JOB No

COST ESTIMATE

NORTH FRANKLIN

EXCAVATION & DISPOSAL

BY KL DATE 2/12/13

CHKD BY DATE

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
5.	BACKFILL (610 cy rest in place 854 cy Fluff)				
A	Haul	cy	854	22.18	18,942
B	Install 022 208 J300	cy	854	1.98	1,691
C	Truck Haul	cy	854	7	5,978
D	Compact 022 222 0600	cy	854	1.62	1,383
	small job - add	%	28,000	15	4200
					32,194
					$32,194

URS Greiner, Inc.

SHEET No 4 OF 8

JOB No

COST ESTIMATE

NORTH FRANKLIN
EXCAVATION & DISPOSAL

BY RH DATE 2/93
CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
4	continued				
	UTILITIES				
	SEWER DIG & PLUG 12"	EA END	2	250	500 ~~250~~
	RELAY 50' 12" RCP SEWER	LF	50	21	1050
	WATER DIG & PLUG	EA EACH	2	250	500
	new 1" Water Line say	LF	50	6	300
	replace gas line				750
	contingency	%	3100	25	775
					3875
	Total Item 4				$18,628

URS Greiner, Inc.

SHEET No 3 OF 8

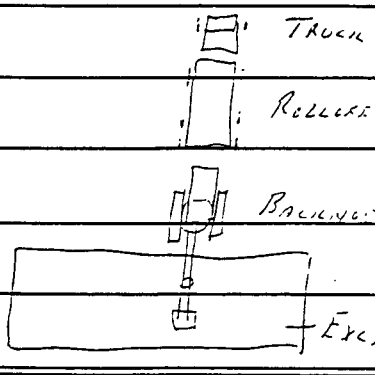
JOB No

COST ESTIMATE

NORTH FRANKLIN
EXCAVATION & DISPOSAL

BY RVH DATE 2/13
CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
4	EXCAVATE				
A.	EXCAVATION 610 cy TOTAL SOIL IN PLACE				
	MEANS 022 254 0110 (610 cy/day)	cy	610 ×1.4	3.72	$ 3177
	(40% FLUFFY FACTOR)				
B	LOST TIME, UTILITIES, PILE say 100%				$ 3177
C	TRUCK FOR HANDLING ROLLOFF say	d	2	1200	2400
D	RENTAL - $\frac{854}{20cy}$ = 43 ROLLOFFS say	ea	43	50	2150
E	DELIVERY ROLLOFFS say	ea	43	75	3225
F	DECON BACKHOE CAT B-11M say	d	1/2	648	324
G	H+S say	LS			300
					$ 14,753



URS Greiner, Inc.

SHEET No 2 OF 8

COST ESTIMATE

JOB No

NORTH FRANKLIN
EXCAVATION & DISPOSAL

BY RH DATE 2/13
CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
2	STOCKPILE				
A	non-use Rolloffs				
	Excavation to be placed directly into 20cy Rolloffs				
	Using a site truck - move Rolloffs To/From excavation				
	to staging area				
	see Item 4				
B	DECON PAD Build	LS			2500
	remove	LS			2000
C	Decon Water - Haul only	LS			300
	To Sewer or Through treatment Plant				
D	Water supply	LS			200
	contingency	%	3700	20	740

$ 5,740

URS Greiner, Inc.

SHEET No 1 OF 8

JOB No

COST ESTIMATE

EXCAVATION & DISPOSAL

BY RH DATE 2/13

CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
1	MOBILIZATION				
A	Backhoe 022 27+ 1000	EA	1	380	380
B	Rolloff Truck see Item 4				
	Rolloff " " "				
	crane " " 3				
	Insurance req	%	or 75,000	2	1500
	Facilities + site labor req	LS			1000
	H+S req	LS			500
					3380

Table A-2

North Franklin Street Site - Watkins Glen, NY

Cost Estimate for Excavation & Disposal (After Demolition)

Item	Description	Unit	Quan.	Unit Cost	Total	Source
Direct Costs						
1	Mobilization				$3,380	
2	Stockpile				$5,740	
3	Sheet Piling (Not Used)					
4	Excavate				$18,628	
5	Backfill				$32,194	
6	Repave				$3,270	
7	Disposal				$111,340	
8	Design, Procurement, Oversight				$14,500	
	Subtotal Direct Costs				***$189,052***	
Indirect Costs (as a percentage of Direct Costs)						
1	Contingency			30%	$56,716	
	Subtotal Indirect Costs				***$56,716***	
	Total Cost				***$245,800***	

Note: The Contingency included with the cost estimate also accounts for changes in the estimated inflation factor until the time of construction, city cost index, etc.
Costs for construction do not include any savings for work in conjunction with other site activities.

Cost Estimate Backup Information

The building will be demolished to ground level (there are no known basements or substructures) but the foundation and the concrete floors will remain in place. Portions of the foundation and the concrete floor that are located in the contaminated soil area will be removed and disposed in conjunction with the contaminated soil.

All uncontaminated building debris will be disposed at a C&D landfill as appropriate.

- Soil excavation would be conducted as outlined in the report, except that no retaining wall or other structures will be required. The total 4,298 cubic feet (160 cubic yards) of contaminated soil in the 0-6 foot depth will be excavated. This includes 2,862 cubic feet (106 cubic yards) of soil outside the building, and 1,436 cubic feet (54 cubic yards) underneath the building. The total in-place volume of excavated material, including overexcavation, is estimated to be 610 cubic yards.

  After excavation, the area will be backfilled with either stone or fill material.

- As the soil is excavated, it will be screened with a PID for organic vapors. The excavated soil will be separated into stockpiles of high and low contamination, sampled, and then disposed of as appropriate. For the cost estimate, it was conservatively assumed that all 160 cubic yards of contaminated soil above the cleanup criteria will be disposed of as hazardous waste, and that the overexcavation soil is non-hazardous and will be disposed at a landfill.

- Water that collects in the excavation will be pumped to the equalization tank of the existing GWET system for treatment and discharge.

- Existing monitoring wells will be sampled semiannually. Monitoring requirements are assumed to be the same as for the alternative recommend in the report, at least initially. Estimated costs for monitoring are shown on Table 9 of the report.

- The existing groundwater treatment system will be demobilized and stored offsite so that it can be used in the future if monitoring results indicate the need for it.

- Remaining SVET wells, GWET wells, pressure monitors, etc. will be decommissioned (it is assumed that all GWET, and SVET piping would remain buried) .

- Site fencing will be removed.

- Miscellaneous site restoration (e.g., repaving) will be implemented. Table 11 of the report summarizes all of the estimated miscellaneous site work costs.

Costs for Building Demolition

Table A-1 presents the estimated cost for demolishing the building (former dry cleaners and antique shop). Table A-2 presents the estimated cost for excavation of all contaminated soil in the 0-6 foot depth, both inside and outside the building, but without the added costs of the retaining wall. Costs for other components of this alternative (groundwater monitoring and miscellaneous site work) would remain the same as for the alternative selected in the report.

Table A-3 summarizes the total cost for the remedial alternative selected in the report (protection of the existing building) as compared to the cost for demolishing the building and then remediating the site.

As shown on Table A-3, considering the contingencies and other unknown factors (such as the purchase price for the building), the costs for the two alternatives are relatively close. Evaluating the two alternatives from the standpoint of benefit provided, the alternative to demolish the building provides the most benefit, since it should be a permanent solution for the site. Please note however, that URSG did not evaluate non-cost issues that may affect the implementation of either of these two alternatives. These potential issues include:

- Legal issues, such as NYSDEC purchase of the building
- Willingness of the building owner to have the building demolished (i.e., loss of business during the demolition/rebuilding period)
- Objection by the townspeople to demolition of a building on a primary village street.

Table A-2

North Franklin Street Site - Watkins Glen, NY

Cost Estimate for Excavation & Disposal (After Demolition)

Item	Description	Unit	Quan.	Unit Cost	Total	Source
Direct Costs						
1	Mobilization				$3,380	
2	Stockpile				$5,740	
3	Sheet Piling (Not Used)					
4	Excavate				$18,628	
5	Backfill				$32,194	
6	Repave				$3,270	
7	Disposal				$111,340	
8	Design, Procurement, Oversight				$14,500	
	Subtotal Direct Costs				***$189,052***	
Indirect Costs (as a percentage of Direct Costs)						
1	Contingency			30%	$56,716	
	Subtotal Indirect Costs				***$56,716***	
	Total Cost				***$245,800***	

Note: The Contingency included with the cost estimate also accounts for changes in the estimated inflation factor until the time of construction, city cost index, etc.
Costs for construction do not include any savings for work in conjunction with other site activities.

Table A-1

North Franklin Street Site - Watkins Glen, NY

Cost Estimate for Building Demolition

Item	Description	Unit	Quan.	Unit Cost	Total	Source
Direct Costs						
1	Masonry Demolition	CF	98,400	$0.25	$24,600	
	(Bldg 41' x 100' x 24' H) - Means 020.604.0080					
2	Contractor's Fee	LS			$5,000	
3	Protection of Common Wall w/ VFW	LS			$15,000	
4	Asbestos Survey	LS			$2,000	
5	Utilities	LS			$2,000	
	Subtotal Direct Costs				***$48,600***	
Indirect Costs (as a percentage of Direct Costs)						
1	Contingency			30%	$14,580	
	Subtotal Indirect Costs				***$14,580***	
	Total Cost				***$63,200***	

Note: The Contingency included with the cost estimate also accounts for changes in the estimated inflation factor until the time of construction, city cost index, unknown building factors, etc.
Assumes no basements, building demolished only to ground level, concrete floor and foundation left in place.
No building replacement costs are included.

Table A-3

North Franklin Street Site - Watkins Glen, NY

Cost Comparison for Building Protection vs. Building Demolition

Item	*Building Protection*	*Building Demolition*
Building Purchase		*$87,000*
Building Demolition		*$63,200*
Excavation & Disposal	*$196,100*	*$245,800*
Shallow Treatment Wall	*$114,900*	
Annual Monitoring	*$6,600*	*$6,600*
Passive Venting System	*$22,100*	
Misc. Site Work	*$21,400*	*$21,400*
Totals	*$361,100*	*$424,000*

URS Greiner, Inc.

SHEET No 7 OF 8

COST ESTIMATE

JOB No 05.35388.17

NORTH FRANKLIN ST.
EXCAVATION

BY [illegible] DATE 12.3.98
CHKD BY ____ DATE ____

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
7	SOIL DISPOSAL				
7.A	LOW CONTAMINATION SOIL	TON	608	$74.67	$45,400
	NONHAZARDONS				
	$450\ cy \times \frac{27 f^3}{cy} \times \frac{100\ lb}{f^3} \times \frac{ton}{2000 lb} = 608$				
	ECHOS 33.19.7269				
7.B	TRANSPORTATION (ASSUME 200 mi)	mi	200 x 32	$1.44	$ 9,216
	20 cy / TRIP · $(450_{cy} \times 1.4)/20 = 32$				
	ECHOS 33.19.0205				
7.C	LANDFILL HAZ WASTE REQUIRING				
	TREATMENT				
	$160\ cy \times \frac{27 f^3}{cy} \times \frac{100\ lb}{f^3} \times \frac{ton}{2,000 lb} = 216$	TON	216	$241	$ 52,056
	ECHOS 33.19.7265				
7.D	DISPOSAL (ASSUME 200 mi)				
	$(160\ cy \times 1.4)/20 = 11$ trips	mi	200 x 11	$1.44	$ 3,168
7.E	TESTING & ANALYSIS (ENG. EST	LS	1		$ 1500
7	TOTAL				$ 111,340