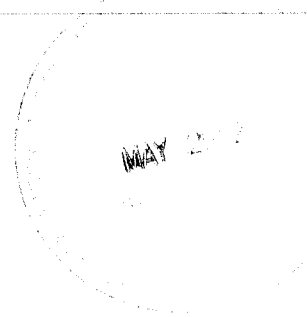


May 21, 2012

John E. Kielng, Bureau Chief  
New Mexico Environmental Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, New Mexico 87505-6303



**CERTIFIED MAIL #7010 3090 0001 3450 2852**

RE: 2012 Financial Assurance Cost Estimate Revision, Order No. HWB 07-34 (CO) and Interim Status Unit #, Western Refining Southwest, Inc. – Bloomfield Refinery  
EPA ID# NMD089416416

Dear Mr. Kielng:

Western Refining Southwest, Inc. Bloomfield Refinery submits the above referenced cost estimate revision. The estimate was prepared for Western by RPS, a third-party environmental company. The original estimate, dated January 18, 2012, was revised to include financial assurance costs for the Interim Status Unit #1 Final Closure. The costs for the Order No. HWB 07-34 (CO) remained the same. The 2012 financial assurance costs for Bloomfield Refinery are as follows:

Order No. HWB 07-34 (CO)	928,635
Interim Status Unit #1 Final Closure	<u>328,048</u>
Total Costs	\$1,256,683

Annual adjustments to the Order No. HWB 07-34 (CO) Estimate were made pursuant to Section III.P.2. of the July 2007 HWB Order and in compliance with the requirements of 40 CFR 264.142(b) and 264.144(b). Annual adjustments to the Interim Status Unit #1 Final Closure Estimate were made in compliance with the requirements of 40 CFR 265.143(b).

If you have any questions or would like to discuss this revision, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz  
HSER Director  
Western Refining Southwest, Inc.

- cc: D. Cobrain – NMED HWB
- C. Chavez – NMOCD
- L. Tsinnajinnie – NMED HWB
- R. Weaver – Western Refining - Bloomfield
- K. Robinson – Western Refining - Bloomfield
- A. Hains – Western Refining – El Paso



Cielo Center, 1250 South Capital of Texas Highway, Building Three, Suite 200, Austin, Texas 78746, USA  
T +1 512 347 7588 F +1 512 347 8243 W [www.rpsgroup.com](http://www.rpsgroup.com)

May 16, 2012

Mr. James R. Schmaltz  
Environmental Manager  
Western Refining Company  
P.O. Box 159  
Bloomfield, NM 87413

**Re:** Western Refining Southwest, Inc. Bloomfield Refinery;  
2012 Financial Assurance Cost Estimates

Dear Randy:

This financial assurance cost estimate for the Bloomfield Refinery includes separate costs to address:

1. those activities specified in Section III.P.1. of Order No. HWB 07-34 (CO) that was issued by the New Mexico Environment Department on September 27, 2007; and
2. implementation of the Final Closure Plan for Interim Status Unit No. 1 - North and South Aeration Lagoons.

The annual inflation factor used is that value available at the time the revised cost estimate was required for the Order (i.e., January 31, 2012). It is derived as follows:

Implicit price deflator for 2010/implicit price deflator for 2009 (updated 12/22/2011) =  $110.992/109.729 = 1.01\%$  [source - <http://www.bea.gov> (Table 1.1.9 Implicit Price Deflators for GDP)]

The cost estimate for the Order was prepared in accordance with 40 CFR 264.101 and substantially in compliance with the requirements of 40 CFR 264.142 and 264.144. Annual adjustments were made from the cost estimate provided in January 2011 pursuant to Section III.P.2 of the Order. The current total estimated cost is \$928,635. A detailed breakout of the estimate by activity is provided in enclosed Tables 1, 1A, 1B, and 1C.

The cost estimate for implementation of the Final Closure Plan for Interim Status Unit No. 1 – North and South Aeration Lagoons was prepared in accordance with 40 CFR 265.142. An annual adjustment was made from the cost estimate provided in the Final Closure Plan dated May 2010 (revised January 2011) and approved May 20, 2011. The current total estimated cost is \$328,048. A detailed breakout of the estimate by activity is provided in enclosed Tables 2 and 2A.

Mr. James R. Schmaltz  
May 16, 2012  
Page 2

The total 2012 financial assurance costs for the Bloomfield Refinery is \$1,256,683. If there are any questions, please contact me at (512) 347-7588.

Sincerely,

**RPS**



Scott T. Crouch, P.G.  
Senior Consultant

STC/sab  
Enclosures

cc: Allen Hains – Western Refining El Paso

**TABLE 1**  
**Western Refining Southwest, Inc.**  
**Bloomfield, New Mexico Refinery**  
**NMED Order No. HWB 07-34 (CO) -- Financial Assurance Cost Estimate**  
**5/16/2012**

Waste Management Area	NMED Order Provision	Capital Costs <sup>1</sup>	Operation & Maintenance Costs <sup>2</sup>	NMED Review Fees	Total Costs	Explanation
<b>Solid Waste Management Units (SWMU's) Investigation, Remediation, &amp; associated reports</b>						
<b>Group 1</b>						
Interim Status Unit No. 1: North & South Aeration Lagoons - Closure Plan Implementation	IV.B.5	\$0	\$0		\$0	Project completed
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0
<b>Group 2</b>						
SWMU No. 2: Drum Storage Area - North Bone Yard	IV.B.6	\$0	\$0		\$0	
SWMU No. 8: Inactive Landfill	IV.B.6	\$0	\$0		\$0	
SWMU No. 9: Landfill Pond	IV.B.6	\$0	\$0		\$0	
SWMU No. 11: Spray Irrigation Area	IV.B.6	\$0	\$0		\$0	
SWMU No. 18: Warehouse Yard	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0
<b>Group 3</b>						
SWMU No. 4: Transportation Terminal Sump	IV.B.6	\$0	\$0		\$0	
SWMU No. 5: Heat Exchanger Bundle Cleaning Area & AOC No. 25: Auxiliary Warehouse and 90-day Storage Area	IV.B.6	\$0	\$0		\$0	
AOC No. 22: Product Loading Rack & Crude Receiving Loading Racks	IV.B.6	\$0	\$0		\$0	
AOC No. 23: Southeast Holding Ponds	IV.B.6	\$0	\$0		\$0	
AOC No. 24: Tank Areas 41 and 43	IV.B.6	\$0	\$0		\$0	
AOC No. 26: Tank Area 44 and 45	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0

**TABLE 1**  
**Western Refining Southwest, Inc.**  
**Bloomfield, New Mexico Refinery**  
**NMED Order No. HWB 07-34 (CO) -- Financial Assurance Cost Estimate**  
**5/16/2012**

Waste Management Area	NMED Order Provision	Capital Costs <sup>1</sup>	Operation & Maintenance Costs <sup>2</sup>	NMED Review Fees	Total Costs	Explanation
<b>Group 4</b>						
SWMU No. 7 Raw Water Ponds	IV.B.6	\$0	\$0		\$0	
SWMU No. 10: Fire Training Area	IV.B.6	\$0	\$0		\$0	
SWMU No. 16: Active Landfill	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0
<b>Group 5</b>						
SWMU No. 15: Tank Farm Area	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0
<b>Group 6</b>						
AOC No. 19: Seep North of MW-45	IV.B.6	\$0	\$0		\$0	
AOC No. 20: Seep North of MW-46	IV.B.6	\$0	\$0		\$0	
AOC No. 21: Seep North of MW-47	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0
<b>Group 7</b>						
SWMU No. 17: River Terrace Area	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
					subtotal	\$0

**TABLE 1**  
**Western Refining Southwest, Inc.**  
**Bloomfield, New Mexico Refinery**  
**NMED Order No. HWB 07-34 (CO) -- Financial Assurance Cost Estimate**  
**5/16/2012**

Waste Management Area	NMED Order Provision	Capital Costs <sup>1</sup>	Operation & Maintenance Costs <sup>2</sup>	NMED Review Fees	Total Costs	Explanation
<b>Group 8</b>						
SWMU No. 3: Underground Piping Currently in Use	IV.B.6	\$0	\$0		\$0	
SWMU No. 6: Abandoned Underground Piping	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2			\$0	\$0	
Progress Report	VI.D.5			\$0	\$0	
Remedy Completion Report	VI.D.6			\$0	\$0	
				subtotal	\$0	
<b>Group 9</b>						
SWMU No. 13: Process Area	IV.B.6	\$0	\$0		\$0	
SWMU No. 14: Tanks 3, 4, and 5	IV.B.6	\$0	\$0		\$0	
SWMU No. 12: API Separator	IV.B.6	\$0	\$0		\$0	
Corrective Measures Implementation Plan	VI.D.2				\$0	
Progress Report	VI.D.5				\$0	
Remedy Completion Report	VI.D.6				\$0	
				subtotal	\$0	
<b>Other Areas</b>						
To be determined?	III.Q.1	\$0	\$0		\$0	Section III.G.2 of the NMED Order specifies that either NMED or Western may identify additional areas for corrective action. At this time, no additional areas have been identified.
Corrective Measures Implementation Plan	VI.D.2				\$0	
Progress Report	VI.D.5				\$0	
Remedy Completion Report	VI.D.6				\$0	
				subtotal	\$0	

**TABLE 1**  
**Western Refining Southwest, Inc.**  
**Bloomfield, New Mexico Refinery**  
**NMED Order No. HWB 07-34 (CO) -- Financial Assurance Cost Estimate**  
**5/16/2012**

Waste Management Area	NMED Order Provision	Capital Costs <sup>1</sup>	Operation & Maintenance Costs <sup>2</sup>	NMED Review Fees	Total Costs	Explanation
<b>Interim Measures &amp; Facility Wide Ground Water Monitoring</b>						
River Terrace Area Analytical	V.B.1		\$23,210		\$23,210	1 yr. Monitoring @\$23,210/yr - see detail Table A
River Terrace Annual Report	V.B.1		\$3,500	\$2,000	\$5,500	1 yr. reporting @\$3,500/annual report & NMED fees of \$2,000/annual rpt
River Terrace Operation & Maintenance	III.P.1 & V.B.		\$8,000		\$8,000	GAC filters & maintenance \$8,000/yr x 1 yr
North Barrier Wall collection operations	III.P.1		\$85,360		\$85,360	Bi-weekly fluid level measurements (labor 4hrs/biweekly event @ \$65/hr = \$6,760/yr & equipment \$1,000/yr x 11 years)
Facility Wide Ground Water Monitoring (including North Barrier Wall & Tank Farm) analytical costs	IV.A.		\$633,072		\$633,072	Table B provides detailed cost on a annual basis (\$57,552) which is multiplied by 11 years pursuant to the Order.
Facility-Wide Annual Monitoring Report (including North Barrier Wall)	IV.A.2.		\$77,000	\$22,000	\$99,000	11 yrs. Monitoring @ \$7,000/annual report & NMED fees of \$2,000/annual rpt
1# East Outfall	V.C.		\$0		\$0	Sampling is no longer conducted at this location as the discharge goes directly to the API Separator.
San Juan River samples			\$65,208		\$65,208	See Table C for detailed estimate; assume 11 years @\$5,928/yr
				subtotal	\$919,350	
<b>TOTAL ESTIMATED COSTS TO IMPLEMENT NMED ORDER (without inflation costs)</b>					<b>\$919,350</b>	
<b>Inflation Factor<sup>3</sup></b>					<b>1.01%</b>	
<b>CURRENT TOTAL ESTIMATED COSTS TO IMPLEMENT NMED ORDER.</b>					<b>\$928,635</b>	

1- capital costs associated with construction, installation, pilot testing, evaluation, permitting, and reporting of the effectiveness of the alternative  
2- continuing costs associated with operating, maintaining, monitoring, testing, and reporting on the use and effectiveness of the technology  
3- Implicit price deflator for 2010/implicit price deflator for 2009 (updated 12/22/2011) = 110.992/109.729 = 1.01% <http://www.bea.gov> (Table 1.1.9 Implicit Price Deflators for GDP)

**TABLE 1A  
RIVER TERRACE SAMPLING COST ESTIMATE**

<b>Analysis</b>	<b>Frequency</b>	<b># of Sample Locations</b>	<b>Total # of Samples <sup>(1)</sup></b>	<b>Cost/Sample</b>	<b>Cost per Year</b>
<b>RIVER TERRACE - AQUEOUS</b>					
8021B	Quarterly	9	40	\$45	\$1,800
8021B	Semi-annual	5	10	\$45	\$450
8015B (GRO, DRO)	Quarterly	9	40	\$75	\$3,000
8015B (GRO, DRO)	Semi-annual	5	10	\$75	\$750
Total Cr & Ba (6010B)	Annual	14	15	\$50	\$750
Total Pb (6010B)	Semi-annual	5	10	\$30	\$300
Total Pb (6010B)	Quarterly	9	40	\$30	\$1,200
Total Hg (7470)	Quarterly	1	4	\$30	\$120
<b>RIVER TERRACE - Vapor</b>					
8021B	Quarterly	9	44	\$45	\$1,980
8021B	Semi-annual	5	10	\$45	\$450
8015B (GRO)	Quarterly	9	44	\$35	\$1,540
8015B (GRO)	Semi-annual	5	10	\$35	\$350
Tedlar Bags	Quarterly	16	32	\$10	\$320
Level 4 Data Packet	Quarterly	1	4	\$400	\$1,600
River Terrace Labor	Quarterly	3 days of 7 hour days	\$65/hour	\$65/hour	\$5,460
<b>GAC Breakthrough Sampling</b>					
8021B	Monthly	1	12	\$45	\$540
8015B (GRO, DRO)	Monthly	1	12	\$75	\$900
8021B	Quarterly	2	8	\$45	\$360
8015B (GRO, DRO)	Quarterly	2	8	\$70	\$560
Annual analytical costs					\$22,430
River Terrace labor during annual sampling event -- 12 hours X \$65/hr					\$780
<b>Total Annual River Terrace Sampling Costs</b>					<b>\$23,210</b>

River terrace sampling conducted pursuant to August 2010 Facility-Wide Groundwater Monitoring Plan (Section 5.4) and Bioventing Monitoring Plan (Revised) River Terrace Voluntary Corrective Measures dated October 28, 2005

1 - Includes additional QA/QC samples



**TABLE 1B**

**Facility-Wide Groundwater Monitoring Cost Estimate**

Analysis	Frequency	# of Sample Locations	# of Samples (2)	Cost/Sample	Cost per Year
<b>Annual Refinery Complex (Non-RCRA Wells)</b>					
8260B	Annual	32	35	\$115	\$4,025
8015B (GRO, DRO)	Annual	32	35	\$75	\$2,625
8270C	Annual (1)	3	2	\$280	\$560
CO2/Alkalinity (310.1)	Annual	32	35	\$15	\$525
Cation Anion Balance + Diss Metals	Annual	32	35	\$229	\$8,015
RCRA 8 Metals	Annual	32	35	\$100	\$3,500
Filters			32	\$12	\$384
Level 4 Data Packet	Annual		1	\$3,500	\$3,500
<b>Annual Refinery Complex (RCRA Investigation Wells)</b>					
8260B	Annual	17	19	\$115	\$2,185
8015B (GRO, DRO)	Annual	17	19	\$75	\$1,425
8270C	Annual	17	19	\$280	\$5,320
CO2/Alkalinity (310.1)	Annual	17	19	\$15	\$285
Cation Anion Balance + Diss Metals	Annual	17	19	\$229	\$4,351
RCRA 8 Metals	Annual	17	19	\$100	\$1,900
Filters			17	\$12	\$204
Level 4 Data Packet	Annual		1	\$3,500	\$3,500
<b>Semi-Annual - Refinery Complex (Non-RCRA Wells)</b>					
8260B	Semi-Annual (3)	11	12	\$45	\$540
8015B (GRO, DRO)	Semi-Annual (3)	5	5	\$75	\$375
Level 4 Data Packet	Semi-Annual (3)		1	\$200	\$200
<b>Semi-Annual - North Barrier Wall OW/CW</b>					
8260B	Semi-Annual	16	35	\$45	\$1,575
8015B (GRO, DRO)	Semi-Annual	16	35	\$75	\$2,625
Level 4 Data Packet	Semi-Annual		1	\$200	\$200
<b>Semi-Annual River Bluff (Outfall 2 &amp; 3, &amp; Seeps 1, 6, 7, 8, &amp; 9)</b>					
8260B	Semi-Annual	7	15	\$45	\$675
CO2/Alkalinity (310.1)	Semi-Annual	7	15	\$15	\$225
Cation Anion Balance + Diss Metals	Semi-Annual	7	15	\$229	\$3,435
RCRA 8 Metals	Semi-Annual	2	5	\$100	\$500
Filters			4	\$12	\$48
Level 4 Data Packet	Semi-Annual		2	\$150	\$300
Sampling Labor	Semi-Annual & Annual events		10 Days of 7 hour days	\$65/hour	\$4,550
<b>Total Annual - Facility-Wide Groundwater Sampling &amp; Analysis</b>					<b>\$57,552</b>

Sampling conducted pursuant to August 2010 Facility-Wide Groundwater Monitoring Plan

1 - The SVOC analyses are performed every two years and the "# of samples" is adjusted accordingly

2 - # of Samples includes additional QA/QC samples

3 - This reference to semi-annual only includes a single event, as these locations are also included in the annual category

**TABLE 1C****San Juan River Sampling Cost Estimate**

<b>Analysis</b>	<b>Frequency</b>	<b># of Sample Locations</b>	<b># of Samples</b>	<b>Cost/Sample</b>	<b>Cost per year</b>
8260B	Semi-Annual	4	8	\$45	\$360
8015B (GRO, DRO)	Semi-Annual	4	8	\$75	\$600
CO2/Alkalinity (310.1)	Semi-Annual	4	8	\$15	\$120
Cation Anion Balance + Diss Metals	Semi-Annual	4	8	\$229	\$1,832
RCRA 8 Metals	Semi-Annual	4	8	\$100	\$800
Filters			8	\$12	\$96
Level 4 Data Packet	Semi-Annual		2	\$800	\$1,600
Annual analytical costs					\$5,408
Sampling Labor	Semi-Annual		4 hours each event	\$65/hour	\$520
Total Annual San Juan River Sampling Costs					\$5,928

Sampling pursuant to August 2010 Facility-Wide Groundwater Monitoring Plan

**TABLE 2**  
**Final Closure Cost Estimate**  
**Western Refining - Bloomfield Refinery**  
**North and South Aeration Lagoons**  
**May 14, 2012**

Item	Description	Quantity	Units	Unit Cost	Cost
<b>Professional Services</b>					
1	Analyses for waste characterization & investigation/soil confirmation sampling (Table 2)	1	LS	\$140,000	\$140,000
2	Final closure report	1	LS	\$20,000	\$20,000
3	Project administration (engineering, bidding, construction administration, etc.)	1	LS	\$18,700	\$18,700
<b>Construction</b>					
5	Mobilization	1	LS	\$6,200	\$6,200
6	Administrative costs (office facilities & staff, H&S plan, SWPPP, insurance, eqpmt decon, QA/QC, etc.)	1	LS	\$12,500	\$12,500
7	Dewater lagoons (1 ft water over 25,092 sq. ft.) Dispose water at authorized on-site discharge	188,000	Gal	\$0.011	\$2,100
8	Excavate and load sludge from aeration lagoons for disposal at local NMED permitted landfill. <sup>(1)</sup>	310	CY	\$4	\$1,200
9	Transfer sludge from aeration lagoons to local NMED permitted landfill. <sup>(2)</sup>	403	CY	\$12.5	\$5,000
10	Dispose of sludge at local landfill as Special Waste	403	CY	\$16.5	\$6,600
11	Remove and dispose of RCRA liners at local landfill <sup>(3)</sup>	1	LS	\$5,340	\$5,300
12	Remove and dispose of non-RCRA composite geotextile/geonet layer and 100 mil liner at local landfill; stockpile cemented amended sand <sup>(4) (5)</sup>	1	LS	\$7,780	\$7,800
13	Transport and dispose of cemented amended sand at local NMED permitted landfill as special waste <sup>(5)</sup>	605	CY	\$29	\$17,500
14	Excavate upper two feet of soils across all lagoons <sup>(6)</sup>	1,859	CY	\$5	\$9,300
15	Transport and dispose of excavated soils at local landfill as Special Waste	2,416	CY	\$29	\$70,100
16	Demobilization	1	LS	\$2,500	\$2,500
<b>TOTAL</b>					<b>\$324,800</b>
	<b>Inflation Factor <sup>(7)</sup></b>	0.01%			\$3,248
<b>CURRENT TOTAL ESTIMATED COST TO IMPLEMENT CLOSURE PLAN</b>					<b>\$328,048</b>

Notes

- 1 Assumed dried sludge in-place volume = 25,092 sq. ft. x 0.333ft = 310 cy (special waste). Estimated truck yards = 310 cy x 1.3 (fluff) = 403 cy. Estimated excavation cost = \$4/cy
- 2 Estimated transportation cost to NMED permitted landfill in Aztec, NM = \$12.50/cy (\$125/hr @ 2hrs per trip & 20 yd. truck)
- 3 Assume three 20-yd trucks @ \$16.50/cy; \$750 transportation & 72 hours labor @ \$50/hr = \$5,340
- 4 Assume four 20-yd trucks @ \$16.50/cy, \$1,000 transportation, 72 hours labor @ \$50/hr, & stockpile cemented amended sand (\$4/cy x 465 cy) = \$7,780
- 5 Estimated in-place volume of cemented amended sand = 25,092 sq. ft. x .5 ft. x 1.3 = 465 cy. Estimated truck yards = 465 cy x 1.3 (fluff) = 605 cy
- 6 Estimated in-place volume of excavated soils beneath lagoons = 25,092 sq. ft. x 2 ft. = 1,859 cy. Estimated truck yards = 2,203 cy x 1.3 (fluff) = 2,416 cy
- 7 Implicit price deflator for 2010/implicit price deflator for 2009 (updated 12/22/2011) = 110.992/109.729 = 1.01%  
<http://www.bea.gov> (Table 1.1.9 Implicit Price Deflators for GDP)  
 LS - Lump Sum  
 CY - cubic yard  
 Gal - gallon

**TABLE 2A**  
**Investigation & Confirmation Sampling Cost Estimate**  
**Western Refining - Bloomfield Refinery**  
**North and South Aeration Lagoons**

Analysis	# of Samples	Cost/Sample	Costs
<b>Waste Characterization Samples <sup>1</sup></b>			
VOCs 8260B	155	\$90	\$13,950
TCLP SVOCs 8270C	155	\$220	\$34,100
Haz. Characteristics	155	\$140	\$21,700
TCLP Skinner List Metals	155	\$185	\$525
Sampling Labor	40 hours	\$75/hour	\$3,000
<b>Subtotal</b>			<b>\$73,275</b>
<b>Investigation/Confirmation Samples <sup>2</sup></b>			
VOCs 8260B	87	\$90	\$7,830
SVOCs 8270C	87	\$220	\$19,140
TPH 8015B (GRO, DRO, MRO)	87	\$90	\$7,830
Skinner List Metals	87	\$185	\$16,095
Sampling Labor	40 hours	\$75/hour	\$3,000
Subcontract drilling			\$12,000
<b>Subtotal</b>			<b>\$65,895</b>
<b>Total</b>			<b>\$139,170</b>

1 - sludge samples (25,092 sq. ft. x .33 ft. = 310 yds / 20 yds/sample) = 16 samples; cement amended sand samples (25,092 sq. ft. x .5 ft. = 465 yds / 20 yds/sample) = 24 samples; excavated soil samples (25,092 sq. ft. x 2 ft. x 1.2 (fluff factor) / 27 (cu. ft/yd.) = 2,230 yds / 20 yds/sample) = 112 samples; potential leachate samples (RCRA liner, non-RCRA liner & French drain) = 3 samples; estimated total of 155 characterization samples

2 - assumes two samples (0-6" & 18-24") at each of 15 soil borings & 15 sidewall samples, one additional sample (lower interval) at each of the 15 soil borings, seven duplicate samples, and five equipment blanks

TPH - total petroleum hydrocarbons  
 GRO - Gasoline Range Organics  
 DRO - Diesel Range Organics  
 MRO - Motor Oil Range Organics  
 VOCs - volatile organic compounds  
 SVOCs - semi-volatile organic compounds