

	A	B	C	D
1				
2			Benzene - API	
3			Benzene Study Summary	
4			Exhibit B	
5				
6			Overall Approved Budget	
7		Example only. To be verified by API		
8	Exhibit B as referred to in Benzene Consortium Write-Up			
9				Approved
10	Item		Original Cost Estimate (Jan. 2001)	Revised Cost Estimate (Dec. 2001)
11	AHSciences Case-Control Study		\$1,595,000	\$2,283,095
12	DP & ME Studies (UCHSC)		\$13,665,017	\$15,258,017
13	Irons(T & E)		\$1,253,428	\$1,253,428
14	Fudan University		\$165,700	\$190,555
15	Total Research Costs		\$16,679,145	\$18,985,095
16	Scientific Review Panel			\$648,000
17	Ethics Review Panel			\$216,000
18	External Pathology & Cytogenetics Workgroups(Cost in UC cost)			\$130,000
19	Total Panel Costs		\$450,000	\$994,000
20	API Seed Monies		\$500,000	\$0
21	Outside Counsel			\$500,000
22	Public Affairs		\$1,000,000	\$1,000,000
23	QA/QC Activities			\$225,000
24	Misc. ?		\$190,855	\$0
25	Miscellaneous Costs		\$1,690,855	\$1,725,000
26	Subtotal		\$18,820,000	\$21,704,095
27	API Overhead (5%)		\$941,000	\$1,085,205
28	GRAND TOTAL		\$19,761,000	\$22,789,300
29	Notes by API			
30	Notes/Assumptions:			
31		- The total research costs have changed as a result of the protocol review process and changes in the protocols as		
32		- Panel costs assume that there will be only one face-to-face meeting for each panel each year.		
33		- Miscellaneous costs for outside counsel and media relations are based solely on assumptions.		
34		- QA/QC costs are based on an assumption of \$45,000 per year for 5 years.		

	E	F	G
1			
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9			
10	Unapproved Changes API not approved (June 2003)	Variance	The attached tabs provide detail for AHS Costs
11	\$2,283,695	0	
12	\$15,258,000	(17)	
13	\$1,597,273	343,845	
14	\$661,000	470,445	
15	\$19,799,368		
16	\$551,736	(96,264)	
17	\$192,000	(24,000)	
18	\$0	(130,000)	
19	\$743,736		
20	\$0	0	
21	\$100,576	(399,424)	
22	\$960,600	(39,400)	
23	\$100,000	(125,000)	
24	\$0	0	
25	\$1,161,176		
26	\$21,704,280		
27	\$1,085,019	(186)	
28	\$22,789,299	(1)	
29			
30			
31			
32			
33			
34			

	A	B	C	D	E	F	G	H	I	J	K
1	Applied Health Sciences: Shanghai Health Study Budget										
2							Exhibit B				
3			Original Budget Jan. 2001 (w/o inflation adj.)	Inflation Adjustment 5% annually	Original Budget W/ Inflation		Additional Budget for Exposure Assessment (includes 5% inflation adj.)		Approved Cost Total	AHS Payments to Date	AHS Balance as of June 2003
4	Year		(Table 1)	(Table 2)			(Table 3)				
5											
6	2001		84,025	0	84,025		\$0		\$84,025	128,852	
7											
8	2002		326,175	16,308	342,483		\$93,030		\$435,513	435,406	
9											
10	2003		288,900	29,612	318,512		\$113,999		\$432,511	120,508	
11											
12	2004		266,400	41,991	308,391		\$84,970		\$393,361		
13											
14	2005		290,125	62,524	352,649		\$89,218		\$441,867		
15											
16	2006		305,175	84,314	389,489		\$60,496		\$449,985		
17											
18	2007		34,200	11,631	45,831		\$0		\$45,831		
19											
20											
21	Total		1,595,000	\$ 246,380	\$ 1,795,549		\$441,713		\$2,283,093	684,766	\$1,598,327
22											
23									Ties to total on previous page under Benzene Study Summary		
24											
25											
26											

	A	B	C	D	E	F	G	H
1		Applied Health Sciences: TASK TIMELINE (Milestones) Exhibit B						
2					Project year			
3	Task	Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
4								
5	<u>Specific tasks</u>							
6								
7	S1	Finalization of research protocol	X					
8	S2	Development, translation and pre-test of questionnaire	X					
9	S3	Development of database, data linkage and data security	X					
10	S4	Enrollment of study subjects (AML & NHL patients and controls)	X	X	X	X	X	
11	S5	Interviews of study subjects	X	X	X	X	X	
12	S6	Acquisition of employment records of study subjects	X	X	X	X	X	
13	S7	Data entry and data management	X	X	X	X	X	
14	S8	Data audit	X	X	X	X	X	
15	S9	Acquisition of exposure data from Shanghai CDC and factories		X	X	X	X	
16	S10	Exposure assessment of individual study subjects		X	X	X	X	
17	S11	Data analysis					X	
18	S12	Presentation of results to Scientific Committee and sponsors in USA					X	
19	S13	Presentation of results to SMU, Shanghai CDC & others in China					X	
20	S14	Preparation of draft report					X	
21	S15	Finalization of report and response to comments					X	
22	S16	Preparation of manuscripts for journal publication						X
23	S17	Presentations of study at two international conferences						X
24								
25	<u>General tasks</u>							
26								
27	G1	Working with Chinese investigators in Shanghai	X	X	X	X	X	
28	G2	Meetings with the Scientific & Ethics Committees in USA	X	X	X	X	X	
29	G3	Communication with the Scientific Committee	X	X	X	X	X	
30	G4	Communication with the Ethics Committee	X	X	X	X	X	
31	G5	Project management	X	X	X	X	X	
32								
33	<u>Number of meetings and working trips</u>							
34								
35		Number of periodic meetings and working trips in Shanghai	4	3	3	3	3	
36		Number of periodic meetings in USA	3	3	2	2	2	
37		Meeting in USA to present study results					1	
38		Meeting in China to present study results					1	
39		Presentations at two international conferences						2
40								
41								
42	(1-30-2002)							

Milestones

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Applied Health Sciences: 2001 Original Budget W/out Inflation Adjustment : Explanation of Costs - Exhibit B													
2	Labor for regular activities (time)								Project year					
3		Hourly rate	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
4	Category	in 2001 \$	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount
5	Chief Epidemiologist (PI)	\$280	380	\$106,400	350	\$98,000	300	\$84,000	300	\$84,000	400	\$112,000	100	\$28,000
6	Biostatistician	\$140	140	\$19,600	120	\$16,800	120	\$16,800	120	\$16,800	200	\$28,000	20	\$2,800
7	Statistical programmer	\$120	120	\$14,400	120	\$14,400	120	\$14,400	120	\$14,400	200	\$24,000		
8	Research assistant	\$90	100	\$9,000	100	\$9,000	100	\$9,000	100	\$9,000	150	\$13,500	20	\$1,800
9	Administrative assistant	\$90	80	\$7,200	80	\$7,200	80	\$7,200	80	\$7,200	120	\$10,800		
10	Consulting industrial hygienist	\$200	120	\$24,000	120	\$24,000	100	\$20,000	100	\$20,000	100	\$20,000		
11	Consulting hematologist	\$250	20	\$5,000	20	\$5,000	20	\$5,000	20	\$5,000	20	\$5,000		
12	Consulting pathologist	\$250	20	\$5,000	20	\$5,000	20	\$5,000	20	\$5,000	20	\$5,000		
13	Total labor for regular activities			\$190,600		\$179,400		\$161,400		\$161,400		\$218,300		\$32,600
14														
15														
16	Meetings/working trips (time & expenses)													
17		Unit cost	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
18		in 2001 \$	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
19	Meetings in China (8 days @)	\$26,000	4	\$104,000	3	\$78,000	3	\$78,000	3	\$78,000	4	\$104,000		
20	Meetings in USA (3 days @)	\$12,000	3	\$36,000	3	\$36,000	2	\$24,000	2	\$24,000	3	\$36,000	1	\$12,000
21	Meeting in Europe (4 days @)	\$20,000											1	\$20,000
22	Total for meetings/meeting trips			\$140,000		\$114,000		\$102,000		\$102,000		\$140,000		\$32,000
23														
24														
25	Other direct expenses													
26			Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
27			Amount		Amount		Amount		Amount		Amount		Amount	
28	Fee for IRB members			\$2,500										
29	Domestic long-distance calls (in 2001 \$)			\$1,200		\$1,200		\$1,200		\$1,200		\$1,200		\$1,500
30	International calls (in 2001 \$)			\$1,000		\$1,000		\$1,000		\$1,000		\$1,000		\$1,200
31	Copying (in 2001 \$)			\$500		\$500		\$500		\$500		\$500		\$800
32	Postage and express mail (in 2001 \$)			\$300		\$300		\$300		\$300		\$300		\$300
33	Total for other expenses (in 2001 \$)			\$5,500		\$3,000		\$3,000		\$3,000		\$3,000		\$3,800
34														
35														
36	GRAND TOTAL (in 2001 \$)			\$336,100		\$296,400		\$266,400		\$266,400		\$361,300		\$68,400
37														
38														
39	TOTAL BUDGET FOR 6 YEARS (IN 2001 \$)													\$1,595,000

Table1

	A	B	C	D	E	F	G
1	2001 Original Budget: With Inflation Adjustment - Exhibit B						
2	Project year	Total for project year	Amount by quarter	Calendar quarter	Adjusted by 5%	Total by calendar year	
3		(in 2001 \$)	(in 2001 \$)		annual increase		
4							
5	Year 1	\$336,100	\$84,025	4th Q, 2001	\$84,025	Total for 2001 =	\$84,025
6			\$84,025	1st Q, 2002	\$88,226		
7			\$84,025	2nd Q, 2002	\$88,226	\$348,704	
8			\$84,025	3rd Q, 2002	\$88,226	\$12,604	
9							
10	Year 2	\$296,400	\$74,100	4th Q, 2002	\$77,805	Total for 2002 =	\$342,484
11			\$74,100	1st Q, 2003	\$81,695		
12			\$74,100	2nd Q, 2003	\$81,695	\$322,891	
13			\$74,100	3rd Q, 2003	\$81,695	\$26,491	
14							
15	Year 3	\$266,400	\$66,600	4th Q, 2003	\$73,427	Total for 2003 =	\$318,512
16			\$66,600	1st Q, 2004	\$77,098		
17			\$66,600	2nd Q, 2004	\$77,098	\$304,720	
18			\$66,600	3rd Q, 2004	\$77,098	\$38,320	
19							
20	Year 4	\$266,400	\$66,600	4th Q, 2004	\$77,098	Total for 2004 =	\$308,391
21			\$66,600	1st Q, 2005	\$80,953		
22			\$66,600	2nd Q, 2005	\$80,953	\$319,956	
23			\$66,600	3rd Q, 2005	\$80,953	\$53,556	
24							
25	Year 5	\$361,300	\$90,325	4th Q, 2005	\$109,791	Total for 2005 =	\$352,649
26			\$90,325	1st Q, 2006	\$115,280		
27			\$90,325	2nd Q, 2006	\$115,280	\$455,631	
28			\$90,325	3rd Q, 2006	\$115,280	\$94,331	
29							
30	Year 6	\$68,400	\$34,200	4th Q, 2006	\$43,649	Total for 2006 =	\$389,489
31			\$34,200	1st Q, 2007	\$45,831	Total for 2007 =	\$45,831
32						\$89,480	
33						\$21,080	
34	Total	\$1,595,000	\$246,382		\$1,841,382	\$246,382	

Table 2

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Scientific Review Panel Budget Increase by Category: With Inflation Adjustment Exhibit B												
2	<u>Labor by category</u>												
3		Hourly rate	Year 1		Year 2		Year 3		Year 4		Year 5		
4	Category	in 2001 \$	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours
5	Chief Epidemiologist (PI)	\$280	80	\$22,400	40	\$11,200	40	\$11,200	40	\$11,200	40	\$11,200	240
6	Statistical programmer	\$120	20	\$2,400	20	\$2,400	20	\$2,400	20	\$2,400	20	\$2,400	100
7	Research assistant	\$90	20	\$1,800	20	\$1,800	20	\$1,800	20	\$1,800	20	\$1,800	100
8	Consulting industrial hygienist	\$200	120	\$24,000	120	\$24,000	100	\$20,000	100	\$20,000	100	\$20,000	540
9	Total labor for regular activities (2001 \$)			\$50,600		\$39,400		\$35,400		\$35,400		\$35,400	\$980
10													
11													
12	<u>Meetings/working trips (time & expenses)</u>												
13		Unit cost	Year 1		Year 2		Year 3		Year 4		Year 5		
14		in 2001 \$	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.
15	Meetings in China (8 days @)	\$26,000	1	\$26,000	2	\$52,000	1	\$26,000	1	\$26,000			5
16	Meetings in USA (3 days @)	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000	1	\$12,000	5
17	Total for meetings/working trips (2001 \$)			\$38,000		\$64,000		\$38,000		\$38,000		\$12,000	10
18													
19	Total in 2001 \$ (labor and trips)			\$88,600		\$103,400		\$73,400		\$73,400		\$47,400	
20													
21													
22													
23	<u>Yearly budget estimates with a 5% annual adjustment</u>												
24				4,430		10,599		11,570		15,818		13,096	
25	Budget by calendar year			Year 2002		Year 2003		Year 2004		Year 2005		Year 2006	
26	Total (with 5% annual adjustment)			\$93,030		\$113,999		\$84,970		\$89,218		\$60,496	

Table 3

	N
1	
2	
3	Total
4	Amount
5	\$67,200
6	\$12,000
7	\$9,000
8	\$108,000
9	\$196,200
10	
11	
12	
13	Total
14	Amount
15	\$130,000
16	\$60,000
17	\$190,000
18	
19	\$386,200
20	
21	
22	
23	
24	55,512
25	Total
26	\$441,712

Table 3

	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5						March 31, 2003	April 1, 2003	April 2, 2003
6		Income					4,526,337	
7		BP				2,956,951		
8		Chevron Texaco				1,971,300		
9		Conoco Phillips				985,651		
10		Exxon Mobil				2,956,951		
11		Shell				1,971,300		
12		Marathon				15,000		
13		Additional Income				112,008		
14		Total Income				\$10,969,161		
15		Expenses						
16		UCHSC(includes Ext. Path and Cyn)				7,515,750		
17		Irons Field Expenses				539,486		
18		Applied Health Sciences				684,766		
19		Fudan University				21,711		
20		Scientific Review Panel				30,970		
21		Ethics Review Panel				2,500		
22		Communications - APCO				254,907		
23		Outside Legal Counsel				14,804		
24		QA/QC Support				0		
25		API Administrative And Overhead				345,119		
26		Total Expenses				\$9,410,013		
27		Balance at API				\$1,559,148		
28		Project overage as of March 2003 is \$1,559,148						
29								
30		Based on current projected income and expenses to date per API						
31			Balance 3/03	Income	Expenses	Balance YTD		
32		Dec-03	1,559,148	5,642,847	(3,547,718)	3,654,277		
33		Dec-04			(4,126,155)	(4,126,155)		
34		Dec-05			(4,126,582)	(4,126,582)		
35		Dec-06			(1,578,831)	(1,578,831)		
36		Total (Shortfall)/Overage			(13,379,286)	(\$6,177,291)		
37		Note: Above information should be verified by API. If expenses continue and no further contributions are made after 2003, as projected by API, a shortfall of (\$471,878) will result by the end of 2						
38		Project Items			Actual	Projected Expenses		
39		UCHSC(includes Ext. Path and Cyn)			7,515,750	7,742,250		
40		Irons Field Expenses			539,486	1,057,787		
41		Applied Health Sciences			684,766	1,598,329		
42		Fudan University			21,711	639,289		
43		Scientific Review Panel			30,970	520,766		
44		Ethics Review Panel			2,500	189,500		
45		Communications - APCO			254,907	705,693		
46		Outside Legal Counsel			14,804	85,772		
47		QA/QC Support			0	100,000		
48		API Administrative And Overhead			345,119	739,900		
49		Total			9,410,013	13,379,286		
50								
51								

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	I	J	K	L
1				
2				
3	it A)			
4	2004	2005	2006	2007
5				
6				
7				
8				
9				
10				
11				
12				
13	\$0	\$0	\$0	\$0
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26	\$0	\$0	\$0	\$0
27	\$0	\$0	\$0	\$0
28				
29				
30				
31	Shortfall By Yr			
32				
33	(471,878)			
34	(4,598,460)			
35	(1,106,953)			
36	(6,177,291)			
37	004, (\$4,598,460) by			
38	Balance			
39	15,258,000			
40	1,597,273			
41	2,283,095			
42	661,000			
43	551,736			
44	192,000			
45	960,600			
46	100,576			
47	100,000			
48	1,085,019			
49	22,789,299			
50				
51				

&[FILE]

Benzene Health Research Consortium
Overview of Financial Process Controls Administration

July 9, 2003

American Petroleum Institute
Attn: Lorraine Twerdok
Manager Health Sciences (BHRC Administrator)
1220 L Street, Northwest
Washington, D.C. 20005-4070

Dear Ms. Twerdok:

SUBJECT: FINANCIAL PROCESS COMPLIANCE AUDIT

A one day audit was performed on behalf of the Benzene Health Research Consortium (BHRC) at API offices located in Washington, D.C. on Wednesday, July 2, 2003. The objective of the audit was to verify financial process compliance as well as review and gain additional confidence surrounding financial tracking of various studies included in the Benzene Consortium Study. I would like to express my thanks to you, Bruce Jarnot - Senior Toxicologist, Matt Todd – Communications and Paula Podhasky, Subscription Research Program Coordinator and the rest of the API staff for the courtesy and cooperation received during the review.

AUDIT SCOPE:

Customers: Benzene Health Research Consortium Companies

Budget Period Covered: December 2001 - January 2007

Site Visited: API Office, Washington, D.C.

For purposes of this report, the study is comprised of the following projects based on approved budget items provided by API on July 2, 2003:

University of Colorado Health Sciences Center (UCHSC)	15,258,000
Richard Irons - Field Study Expenses	1,597,273
Applied Health Sciences	2,283,095
Fudan University	661,000
Scientific Review Panel	551,736
Ethics Review Panel	192,000
Communications – APCO	960,600
Outside Legal Counsel	100,576
QA/QC Support	100,000
API Administrative Overhead	1,085,019
Total Approved Budget Amount	\$22,789,299