

BHRC OVERSIGHT COMMITTEE & COMMITTEE CHAIR CALL ACTION ITEM TABLE

Last updated 11/5/04

OPEN Action Items (date assigned)	Responsible Party	Status	Comments
Invoice companies one third remaining commitment on 2/1/05 (11/3/04)	API		
Tabulate & circulate results from budget plan action items and distribute to OC Monday, 12/13/04 (11/3/04)			
Budget action plan items due to API cob, Friday Dec. 10, 2004 (11/3/04)	All members with action items		
Discuss with Pls NCI offer to assist in exposure assessment (11/3/04)	Tech. Cmtte		
Summarize exposure progress and update OC at Dec. 16, 2004 meeting (11/3/04)	L. Twerdok		
Consider how to involve NCI in laboratory sustainability efforts (11/3/04)	OC Members		
Provide M. Johnston with company sustainability contacts (11/3/04)	OC Members		
Draft laboratory transition goals and potential outcome document for OC review (11/3/04)	M. Johnston		
Contact APCO China for advice if/how BHRC can influence laboratory disposition decision by Fudan (11/3/04)	L. Russo		OC discussion at 12/16/04 mtg
Discuss with R. Irons (on next call) if it would be useful for sponsor in-country representatives to meet with Fudan to emphasize importance of maintaining laboratory (11/3/04)	Technical Committee		
Inform all SHS participants of change in venue for 2005 annual meeting once ExxonMobil provides API with details (11/3/04)	API		
Inform Madeleine API will not be planning 2005 annual mtg (11/3/04)	L. Twerdok		

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OPEN Action Items (date assigned)	Responsible Party	Status	Comments
Get details (logistics, level of audience, etc.) to set up briefing for ILSI/HESI funding recruitment presentation (11/3/04)	M. Bird		
Recruit internal legal council (11/3/04)	OC Members		
Host next SHS Annual Meeting in Fairfax, VA (11/3/04)	XOM		
Calculate savings for reducing remaining annual meeting from 3 to 2 (11/3/04)	L. Twerdok		
Contact M. Bird concerning reprogramming of QA/QC funds (11/3/04)	B. Doll		
Contact SHS principals for detailed budget re-analysis cost explanations for review to identify cost efficiencies (11/3/04)	TBC		
Arrange for Yimei (last name?) of EMBSI to work full time on exposure assessment IH management in Shanghai (11/3/04)	B. Doll		
Obtain signatures for BHRC agreement amendment 2 (and #1, if unsigned) (9/13/04)	OC Members		Received from BP, COP and Shell (as of 10/18/04)
Include recruitment privilege table (see 8/16 minutes) and circulate revised recruitment documents to OC for review/comment/approval (9/13/04)	M. Todd		
Identify & brief internal SD experts for possible assistance in lab sustainability effort (9/13/04)	OC members		
Arrange for Shell & XOM SD experts to join Nov. meeting (9/13/04)	P. Clegg & L. Russo		Agenda item will be 8 – 10 AM on Thursday, Nov. 4. Information to join by phone will be on the agenda
Arrange for early disbursement of funds to UCHSC (9/13/04)	B. Jarrot	complete	

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Financial management: 1. Establish an estimate for additional resources required. (9/13/04) 2. Conduct an analysis of available resources in the BHRC administrative funds (QA/QC) (9/13/04) 3. Provide recommendation for timing of 2005 sponsor invoicing at November OC meeting (9/13/04)	Technical Budget Committee		For discussion at 11/3/04 OC meeting
Seek opportunity to provide SHS update to API General Committee on Special Programs (GCSP) (8/19/04)	L. Twerdok	pending	Request to Brenda Hargett 8/30/04
Further investigate cost recovery potentials for the JCML; this activity could be a good way to initiate transition of laboratory to Fudan University (8/19/04).	M. Johnston & J. Wagner		
Budget - Pursue possibility of SHS clinical laboratory income being used to defray study costs (4/21/04)	J. Wagner & M. Johnston		Remind John – need advice & guidance for Nov. OC mtg.; Mike Johnston to work with John on issue

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OPEN Action Items (date assigned)	Responsible Party	Status	Comments
OC lead on lab transition/turnover plan development; work with S. Tsai and J. Wagner on issue (8/19/04)	M. Johnston		
R. Irons to keep OC informed of progress/decisions by Fudan University on disposition of laboratory; item should be on at least next few Investigator monthly call agendas (8/19/04)	B Jarnot	pending	On agenda for next PI call: discussion item in recent meeting between P. Beatty & R. Irons
Funding sponsor privileges for new sponsors should be used in any updates presented at API, and other presentations as appropriate (chart attached) (8/19/04)	OC members	On-going	
Update/verify case accrual numbers for 2Q04, and add case referral numbers (total number of diagnosis performed at JCML) to 3Q04 financial report(8/19/04)	B. Jarnot	Next update 4Q04	Total number of referrals no available 3Q04 (biannual progress reports)
Add invoice dates to yearly plan as they are adopted (8/19/04)	L. Twerdok	ongoing	
Adjust UCHSC EMBSI subcontractor projected expenses to first half of calendar year. EMBSI is paid once per year, rather than the current biannual projections (8/19/04)	L. Twerdok & B. Jarnot	pending	Expense projections being verified with subcontractors (as of 10/25/04)
Research in-house experience on sustainability transitions (8/19/04)	OC members	complete	Discussion at 11/4/04 OC mtg

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Investigators will keep SRP, ERP, Technical Committee and OC updated on upcoming scientific meeting presentations and papers, and circulate draft manuscripts to SRP/ERP and Technical Committee prior to submission to journals (may want to make a standing agenda item for monthly investigator calls) (8/19/04)	B. Jarrot to coordinate	On-going	
Work with R. Irons to explore use to Shell's access to Shanghai Mayor's Office to request that IPHS devote more experienced IH resources to the study (8/19/04)	P. Clegg		Shell has a visit to mayor's office scheduled for 10/04
Evaluate existing QA/QC resources to see if they can be deployed to address IH and QA/QC issues. (8/19/04)	Technical Committee		
Work with the investigators in development of proposals on exposure & IH issues; coordinate appropriate review by OC and SRP/ERP (8/19/04)	Technical Committee		Target to have initial proposals w/in one month

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Update OC on investigators' proposals at the November OC meeting in Houston. (8/19/04)	Technical Committee		
Explore funding opportunities with American Leukemia Society, Health Effects Institute (HEI), and International Life Sciences Institute/Health Effects Sciences Institute (ILSI/HESI), and report back on progress at the November OC meeting. (8/19/04)	M. Bird	On-going	• ILSI/HESI require formal presentation for Board consideration • Int'l Childhood Leukemia Assoc. contacted – awaiting response (Dr. Patricia Buffler) • No contact with HEI • Helmut Greim contacted to approach BP – on hold pending company-to-company contact
Check if BP & XOM have corporate discounts with any of the potential hotels for the 2005 Annual Meeting in Shanghai (8/19/04)	L. Russo & C. Roythorne	On-going	• XOM complete • BP outstanding
Research hotel options for 2005 Annual Meeting in Shanghai and report to OC at November OC meeting (8/19/04)	M. Sellouk	On-going	
Outreach - find out relevant professional meeting dates locations and presentation/abstract deadlines via internet (4/21/04 & 6/21/04)	M. Todd/L. Russo	DELETE?	Put on November agenda to review
Review organizations & contacts with Matt (6/21/04);	Outreach Contacts	On-going	
Outreach - outreach coordination, make sure circulate summaries as contacts are made (4/21/04)	M. Todd	ongoing	Updates will be posted to spreadsheet on website
Outreach - 2004 Benzene International Symposium (venue for USEPA, EU and German MAK update) ○ review attendee list for potential follow-up ○ get extra copies of proceedings (Chem. Biol.	Technical Committee		

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Interaction special issue and individual SHS reprints) (4/21/04)			

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COMPLETED Action Items	Responsible Party	Status	Comments
Schedule OC call to discuss funding sponsor recruitment and assign OC lead (8/26/04)	L. Twerdok	complete	Tentative: Monday, September 13; 2-3:30P (EDT)
Work with B. Jarnot to contact Peter Preuss (EPA) at 9/23/04 Naphthalene Coalition meeting (8/26/04)	S. Cagen & P. Beatty		
Work with L. Twerdok & B. Jarnot to develop agenda for October SRP/ERP call/mtg with T. Armstrong at the International Benzene Symposium (8/26/04)	P. Beatty	complete	
Make all approved changes to the amendment #2 and obtain API signatures. Two copies of the API signed amendment will then be sent to OC members for signature. (8/19/04)	J. Wagner	complete	Those companies that did not sign amendment #1 (which changed the payment schedule for payment in 2003/early 2004 of all initially committed funds), amendment #1 will be sent along with amendment #2 for signature.
Circulate GCSP roster	L. Twerdok	complete	
Update update OC action item table, and coordinate posting to website (8/19/04)	L. Twerdok	complete	
Tabulate list of additional professional organizations for potential outreach - for OC discussion at the Nov. 3-4, 2004 meeting in Houston (8/19/04)	M. Todd	complete	
Update 2004 Plan for Communications, Technical and Budget committees (8/19/04)	M. Todd & B. Jarnot	complete	
Update yearly plan, and post updates to website (in consultation with respective committees) (8/19/04)	M. Todd, B. Jarnot & L. Twerdok	complete	
Communicate consortium privileges to Marathon	L. Twerdok	complete	Via email 8/30/04

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COMPLETED Action Items	Responsible Party	Status	Comments
Provide to L. Twerdok logistical information for November 3 – 4 OC meeting in Houston (8/19/04)	M. Johnston	complete	
Determine if an SHS update will be on the 10/19/04 HESGC agenda (8/19/04)	L. Twerdok	complete	SHS update will NOT be on the agenda
Give Craig Parker of Marathon Ashland full access to SHS website (with the exception of the SRP/ERP areas, which no sponsor has access to) (8/19/04)	M. Todd	Complete	
Provide L. Twerdok detailed map of Shanghai, noting locations of hotels and Fudan University (8/19/04)	O. Wong	complete	
Circulate link to NIH website on ethics training (8/26/04)	L. Twerdok	complete	
Budget - Document with UCHSC that API requested interest for 2001,2002 and 2003 unspent funds and was denied, indicating that consortium still feels that it is owed this interest income – send letter to UCHSC (4/21/04 & 6/21/04)	J. Wagner & B. Jarnot	complete	No back interest; will collect interest for 2004 forward
2004 Annual Meeting - Develop a robust closing session for the 2004 meeting (4/21/04)	P. Clegg	complete	

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COMPLETED Action Items	Responsible Party	Status	Comments
Circulate 2 nd draft of consortium agreement amendment to OC for review (7/29/04)	J. Wagner	complete 7/30/04	Due 8/6/04
Add review of consortium agreement amendment to 8/16/04OC meeting agenda (7/29/04)	L. Twerdok	complete 8/4/04	
Find out date & location for fall HESGC meeting (7/29/04)	L. Twerdok	Complete 7/29/04	October 19, 2004 Pasadena, CA Passed along request for BHRC update to Howard
Ensure active Outreach items covered on next PI call (6/21/04)	B. Jarrot	complete	
1Q04 financial report – case accrual sheet needs to be edited to clarify (6/21/04)	B. Jarrot	complete	
Update Outreach Spreadsheet for distribution (6/21/04)	P. Clegg	complete	
Send details of pre-Asilomar OC meeting in San Francisco to Lorraine (6/21/04)	P. Beatty	Complete 7/12/04	
Highlight meeting dates in email of minutes (6/21/04)	B. Jarrot	complete	
Email summary of Downstream meeting and presentation to all consortium members (5/20/04)	P. Clegg	complete	
Add 2005 invoicing and consortium agreement amendment to agenda for June 21 OC call (5/20/04)	L. Twerdok	complete	
Add P. Beatty to the CC roster on an interim basis until ChevronTexaco appoints a new, permanent member (5/20/04)	M. Todd	complete	
Send email ballot to OC for decision on which API staff will attend Annual Meeting (5/20/04)	L. Twerdok	complete	Bruce, Lorraine, Madeleine & Matt to attend
Annual Meeting - Send out pre-meeting package with final agenda and meeting logistics and information on the Monterey area by July 15, 2004 (5/20/04)	M Todd & M. Sellouk	complete	
2004 Annual Meeting - Set deadline (and communicate to presenters) for API receipt of presentations (5/20/04)	M. Todd & B. Jarrot	complete	Deadline is August 1, 2004
Develop a tracking spreadsheet to include a timeline for technical and regulatory outreach (5/20/04)	L. Twerdok	complete	Available on website

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1Q04 Financial Report - Clarify text summary and detail worksheet for case accruals with language provided on call (5/14/04)	L. Twerdok	complete	
1Q04 Financial Report - Reconcile bank balances with BHRC report and API financials (5/14/04)	L. Twerdok	complete	
1Q04 Financial Report - Circulate, via email, revised report for final OC approval once corrections made	L. Twerdok	complete	Circulated 6/3/04; approval pending
Put a 'no-cost time extension' amendment in place for APCO, to ensure that current contract does not expire while renewal issues are resolved (5/14/04)	M. Todd	complete	
2004 Annual Meeting - Circulate latest version of draft agenda	M. Todd	complete	on website
2004 Annual Meeting - Post list of attendees (and those not attending) to website (5/14/04)	M. Todd	complete	on website
2004 Annual Meeting - OC members to invite their appropriate company personnel, if not already invited (5/14/04)	OC	complete	
2004 Annual Meeting - Cancel additional meeting room reserved for Wed. afternoon (5/14/04)	M. Sellouk	complete	
2004 Annual Meeting - On next monthly PI call, inform that the Annual Meeting will be a good opportunity to discuss outreach issues (5/14/04)	B. Jarrot	complete	
2004 Annual Meeting - Invite M. Sellouk to join June 21 conference	M. Todd	complete	Madeleine will join call
Budget - Revise 4Q03 financial report as directed	L. Twerdok	complete	
Budget - Find out interest income rates for API and UCHSC	B. Jarrot & L. Twerdok	complete	API – 0.465% UCHSC – 0.837%
Outreach -Contact PIs to discuss outreach plans; Chinese Society Of Industrial Toxicology upcoming 9/04 meeting may be a good place to start, but who should give talk? PI or BHRC member? (next monthly call) (4/21/04)	P. Beatty, S. Cagen, B. Jarrot	complete	
Outreach - request investigators to provide list of talks/abstracts/poster presentations of all SHS staff (on next	P. Beatty, S. Cagen, B.	complete	

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COMPLETED Action Items	Responsible Party	Status	Comments
monthly PI call) (4/21/04)	Jarnot		
Budget - Decision for 2005 sponsor invoicing needs to be made by June 2004 (4/21/04)	OC members	Complete 6/21/04	Agenda item for 6/21/04 call
Budget - Execute UCHSC grant payment (4/21/04)	B. Jarnot	complete	
Outreach - build spreadsheet with actions, responsible party, and timelines for outreach plan (5/14/04)	L. Twerdok	Complete	
Outreach - obtain/circulate proceedings from previous Chinese Society Of Industrial Toxicology (5/14/04)	Shan Tsai & P. Clegg	complete	
2004 Annual Meeting - Get an update on 2004 Annual Meeting logistics from Madeleine, and inform her of her action items (4/21/04)	M. Todd	complete	
2004 Annual Meeting - Find out if Dr. Fu will be giving a talk (4/21/04)	P. Beatty & TC	complete	Dr. Fu will give short talk
2004 Annual Meeting - Entertainment (karaoke) for the Tuesday evening opening reception (5/14/04)	B. Doll & M. Sellouk	complete	
2004 Annual Meeting - Arrange for conference room for Wed. PM PI/OC/TC meeting (4/21/04)	M. Sellouk	complete	Decided to cancel concurrent meeting & room on 5/14/04
Consortium Agreement - Develop amendment, circulate to Ad Hoc legal group for review, and circulate to companies for signature (4/21/04)	J. Wagner	complete	
Other -Schedule/announce upcoming OC meetings (August 16-17 and November 3-4) and calls [May 14 @ 1 PM (eastern) (4/21/04)]	L. Twerdok	complete	
Other - Schedule/announce Thursday May 6 Technical Committee call @1PM (eastern) for 1Q04 financial report review. (4/21/04)	Bruce	complete	

**BHRC OC Meeting Minutes
November 3 & 4, 2004**

Attendees:

Patrick Beatty, ChevronTexaco	Lynn Russo, ExxonMobil
Don Burnett, BP	Howard Feldman, API
Stuart Cagen, Shell	Ed Murphy, API (11/3/04 only)
Patsy Clegg, Shell	Lorraine Twerdok, API
Brian Doll, ExxonMobil	<i>By phone:</i>
Judy Elledge, ConocoPhillips	John De Pasquale, ChevronTexaco
Mike Johnston, ConocoPhillips	Mark Fitzsimmons, Steptoe & Johnston
Glenna Kyle, ExxonMobil	John Wagner, API

Antitrust guidelines reviewed and quorum established by L. Twerdok.

Budget Discussion:

- **Decision:** 3Q04 financial report unanimously approved with one date correction to executive summary page.
- **Decision:** At API's request to facilitate distribution of funds, SRP/ERP contracts will be renewed annually by fund addition amendments.
- **Decision:** API will send out BHRC sponsor 2005 invoices on February 1, 2005. This invoice will be for 1/3 of remaining company commitments.
 - **ACTION – API** to invoice companies 2/1/05
- L. Twerdok presented M Bird's update on funding recruitment. ILSI/HESI contacted and require formal presentation to HESI Board in order to consider funding request. At least one OC and one Technical Committee member to attend. HEI has not been contacted. Attempting to make contact with International Childhood Leukemia Society
 - **ACTION – M. Bird** to get details (logistics, level of audience, etc.) to set up briefing

Study budget reanalysis:

- Approximately \$3.3 million of additional funds has been requested by the SHS investigators. The OC identified a 3-pronged approach to address this request:
 - reprogramming from existing committed sponsor funds,
 - supplementing funds from new and/or existing funding sponsors, and
 - the Technical Committee will work with PIs to explore potential cost efficiencies within this estimate of additional funds required to meet the goals of the study.
- E. Murphy, API Industry Operations & Downstream Group Director, reiterated that API is only the administrator for the BHRC, emphasizing that all consortium oversight, financial decisions and research activity oversight is the responsibility of the BHRC member companies. Additionally, API
 - does not have funds to contribute to the program, and
 - cannot expend funds beyond the funds available
- The preliminary plan developed to address the funding shortfall is summarized in table below.

Budget Plan Action Items:

- **OC members** to recruit internal legal counsel

11/8/03
draft

- **XOM** to host next SHS Annual Meeting in Fairfax, VA
- **L. Twerdok** to calculate savings for reducing remaining annual meeting from 3 to 2
- **B. Doll** to contact M. Bird concerning reprogramming of QA/QC funds
- **Technical Budget Committee** to contact SHS principals for detailed budget re-analysis cost explanations for review to identify cost efficiencies
- **B. Doll** to arrange for Yimei Zhou of EMBSI to work full time on exposure assessment IH management in Shanghai
- **L. Twerdok** inform Madeleine that API will not be organizing 2005 annual meeting
- **API** inform all SHS participants of change in venue for 2005 annual meeting once ExxonMobil provides API with details

Budget Action Plan			
Action	Estimated Amount (\$K)	Lead	Due Date (to API)
Contact BP	1700	XOM & CVT	12/10/04
APCO	250	L. Russo	"
Legal	50	P. Clegg & G. Kyle	"
Reduce annual meeting 3 → 2 over next 3 years & hold in US	65	OC Committee	"
QA/QC	100	Technical Cmtte.	"
Contingency	100	API revise budget	"
Statisticians & database manager	100	Technical Cmtte	"
Case accrual schedule acceleration	?	Technical Cmtte	"
Generate list of anticipated publications	?	Technical Cmtte	"
ME case accrual ends when 200 high exposure cases recruited (~1200 cases)	?	Technical Cmtte	"
EMBSI recruit full time exposure expert (Yimei Zhou)	(800?)	B. Doll	"
			"
Total	\$2450K		"

Joint Clinical & Molecular Laboratory (JCML) Sustainability Discussions:

- Sustainability expert Andrew Roberts (CoP) gave a brief overview of how to develop sustainability plans & projects, emphasizing that
 - the sponsors need a clear idea of the goals of the sustainability effort (function to be maintained, benefits of maintaining effort, funding requirements, etc),
 - a business plan needs to be developed by appropriate participants, and
 - communication strategies need to be developed for likely scenarios for the outcome of the sustainability plan.
- The OC identified several potential future uses/users of the JCML
 - Shanghai hospitals for clinical diagnostic work
 - Researchers for diagnostic and molecular capabilities (e.g. NCI), and further investigations with banked tissue samples

11/8/03
draft

- Pharmaceutical/Biotech company use
 - “Safe Blood”, which is an organization dedicated to ensure safe blood collection for transfusions. The organization will be expanding its program into China in the near future.
- Once Fudan makes decision for JCML to be managed by Fudan University or Fudan School of Public Health, BHRC (or 3rd party designee) should contact newly appointed JCML Director to facilitate development of laboratory business plan.
- **ACTIONS Items:**
 - **Technical Committee** to discuss with R. Irons if it would be useful for sponsor in-country representatives to meet with Fudan to emphasize importance of maintaining laboratory
 - **L. Russo** to contact APCO China for advice if/how BHRC can influence laboratory disposition decision by Fudan. Get advice by 12/04, for OC discussion in 1/05.
 - **M. Johnston** to draft strawman of transition plan goals for January OC meeting
 - **OC** to provide M. Johnston with in-house sustainable development contacts
 - **OC** to consider whether to involve NCI in JCML transition/sustainability, if NCI interested in following up as indicated at the 10/04 Int’l Benzene Symposium.
 - **OC** to meet in Houston (CoP) January 31 & February 1, 2005

Technical Committee Update:

- P. Beatty presented an update on the October International Benzene Symposium
 - Meeting was data rich with interesting new data
 - SHS presentations were wellreceived. O. Wong presented the design of the case control study and R. Irons presented an overview of all studies and development of the laboratory. R. Irons then went on to review data from a subset of highly exposed workers.
 - NCI has expressed an interest in collaborating with AHS on future case control study in Shanghai
- As indicated in August, exposure information in Shanghai is less robust than originally indicated in the feasibility study. The case-control study will have a semi-quantitative, rather than a full quantitative exposure assessment.
- Detailed exposure assessment update will be presented at next meeting.

Next OC Meetings:

Date: Thursday, December 16, 2004

Time: 8:30 A – 5:00 P

Location: API offices, Washington, DC

Agenda items to include:

- Budget revision
- Outreach
- Exposure update
- Financial monitoring/audits
- Site visit to JCML in Shanghai, since 2005 Annual Meeting will be in Fairfax, VA (Select OC & TC members, Jerry Rice, Paul Lombardo)
- BHRC committee roles & responsibilities

11/8/03
draft

- 2004 action item update
- 2004 plan
- preliminary 2005 plan

Date: Monday, January 31 and Tuesday, February 1, 2005

Time: 1 – 5 P on Monday; 8 A – noon on Tuesday

Location: Houston (hosted by CoP)

Agenda items to include:

- JCML transition
 - Objective of transition plan
 - Transition plan goals
 - Potential laboratory sustainability outcomes, once SHS is complete

From: Bruce Jarnot <jarnotb@api.org>
Sent: Friday, November 12, 2004 5:41 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Howard Feldman <Feldman@api.org>; Lorraine Twerdok <Twerdokl@api.org>
Subject: BHRC-TC... Support Documentation for CC/DP/ME Study Budget Reanalyses
Attach: UCHSC re-anal 10-04.xls; AHS re-anal 10-04.xls

Benzene Health Research Consortium (BHRC) Technical Budget Committee -

As described below, there is a significant difference between recent cost projections and the currently approved program budget. API has requested immediate guidance from the Oversight Committee to reconcile the difference between sponsor-committed funds and investigator cost projections. Subsequently, the Oversight Committee has asked the Technical Committee to address this issue by December 10 (providing an agenda for next week's BHRC-TC Conference Call, date/time TBD). Otto and Richard have provided the following information to elaborate and support budget reanalyses (see attached files) which they recently submitted:

UCHSC Grant for DP & ME Studies / Dr. Richard Irons
\$17,336K following budget reanalysis
\$14,508K consortium-approved budget
\$..2,828K incremental costs

According to Dr. Irons, UCHSC's budget reanalysis reflects 1) actual cash flow analysis during JCML operations to meet current work load and study requirements, versus pre-operational budget projections; 2) costs of competitive hires, primarily in China, to meet unexpected personnel requirements for completing Exposure Analysis activities; and 3) costs of increased EMBSI resource commitments required to complete the research as scoped, including an additional full-time industrial hygiene professional in the field. There are no duplicative costs relative to the CC study. Additional costs for 2007 data analysis were not elaborated further. Major activities associated with increased cost projections include:

Analytic Chemistry -- All analytic chemistry operations have been established and study support functions embedded within JCML operations; these costs were not projected or anticipated within Fudan's operating budget, and includes reagents, small equipment, training and technical personnel.

Exposure Analysis -- Significantly increased support for exposure analysis field work has been required; these costs were not anticipated within Fudan's projected operating budget, and beyond for hiring and supporting additional JCML staff or staff we hire directly to do the exposure analysis and supervise the field assessment work or to support EMBSI in doing the same

Diagnostic Load -- the budget reanalysis reflects a realized 30% increase in case contact above pre-study projections, included within the Fudan University operating budget. The increased diagnostic load will allow 5-year case projections to be met in 3 years of JCML operation.

AHS Contract for CC Study / Dr. Otto Wong
\$..2,732K following budget reanalysis
\$..2,283K consortium-approved budget
\$.....449K incremental costs

According to Dr. Wong, analysis of realized expenses compared to pre-study budget shows \$449K of unanticipated incremental costs for the CC study (or \$400K in constant 2004 dollars). This reanalysis does not duplicate activities associated with the DP or ME studies.

Increases for 2005 and 2006 result from additional project supervision and for QA/QC required in Shanghai; this additional support was not anticipated within the projected CC operating budget, however, is vital to the success completion of the project based on observed progress and data quality to date. The increase fundamentally provides 3 additional weeks (120 hours) of professional time, plus travel-related costs for one additional trip to Shanghai during each of these 2 years.

Completion of the CC study was initially planned for in 2006. Delays experienced early in all three studies shifted completion of data analysis, QA/QC review and report writing into the first half of 2007. The budget reanalysis includes funding for these 2007 activities.

With best regards - Bruce.

SHELL-MCCLURG-052578

Case-control Study of AML and NHL
Additioanl Budget Estimate for 2005, 2006 and 2007

10/18/2004

	A	B	C	D	E
1	2005 and 2006				
2	Because of the need for much greater involvemnet of project supervision and QA/QC in Shanghai, we need to increase our level of effort.				
3	Basically we have added 3 weeks of the PI's time and support from the others. We have also added one more trip to Shanghai in 2005 and 2006.				
4					
5	2007				
6	Assuming that patient enrollment will be completed by end of 2006, we will be conducting final QA/QC, analysis and report writing in 2007.				
7	At this moment, there is no budget for 2007 at all. An estimated budget is provided below.				
8					
9					
10	Labor by category				
11		Hourly rate	2005		
12	Category	in 2004 \$	Hours	Amount	Hours
13	Chief Epidemiologist (PI)	\$324	120	\$38,880	120
14	Biostatician	\$162	40	\$6,480	40
15	Statistical programmer	\$139	20	\$2,780	20
16	Research/Administration assistant	\$104	20	\$2,080	20
17	Consulting industrial hygienist	\$232	20	\$4,640	20
18	Total labor for regular activities (2004 \$)			\$54,860	
19					
20					
21	Meetings/working trips (time & expenses)				
22		Unit cost	2005		
23		in 2004 \$	No.	Amount	No.
24	Meetings in China (10 days @)	\$34,000	1	\$34,000	1
25	Meetings in USA (3 days @)	\$10,500	0	\$0	0
26	Total for meetings/working trips (2004 \$)			\$34,000	
27					
28	Total in 2004 \$ (labor and trips)			\$88,860	
29					
30					
31	Yearly budget estimates with a 5% annual adjustment				
32					
33	Budget by calendar year			Year 2005	
34	Total (with 5% annual adjustment)			\$93,303	

Case-control Study of AML and NHL
Additioanl Budget Estimate for 2005, 2006 and 2007

10/18/2004

	F	G	H	I	J
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11	2006		2007		Total
12	Amount	Hours	Amount	Hours	Amount
13	\$38,880	200	\$64,800	440	\$142,560
14	\$6,480	160	\$25,920	240	\$38,880
15	\$2,780	180	\$25,020	220	\$30,580
16	\$2,080	80	\$8,320	120	\$12,480
17	\$4,640	40	\$9,280	80	\$18,560
18	\$54,860		\$133,340		\$243,060
19					
20					
21					
22	2006		2007		Total
23	Amount	No.	Amount	No.	Amount
24	\$34,000	2	\$68,000	4	\$136,000
25	\$0	2	\$21,000	2	\$21,000
26	\$34,000		\$89,000		\$157,000
27					
28	\$88,860		\$222,340		\$400,060
29					
30					
31					
32					
33	Year 2006		Year 2007		Total
34	\$97,968		\$257,386		\$448,657

Projected Costs
(2004-2006)

	A	B	C	D	E	F	G	H
1	UCHSC Incremental Costs							
2								
3		Actual Expenditures as of June 2004	Through Dec 2004	Through June 2005	Through Dec 2005	Through June 2006	Through Dec 2006	Subtotals
4	UCHSC	\$ 4,522,989	\$519,801	\$584,691	\$590,489	\$566,801	\$483,327	\$ 7,268,099
5	Fudan	\$ 1,774,199	\$ 792,150	\$ 763,836	\$ 793,836	\$ 794,389	\$ 697,295	\$ 5,615,706
6	IPHS	\$ 167,577	\$ 6,000	\$ 6,000	\$ 6,000	\$ -	\$ -	\$ 185,577
7	CDC	\$ 153,004	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 158,004
8	EMBSI	\$ 1,325,692	\$ -	\$ 624,673	\$ -	\$ 369,389	\$ -	\$ 2,319,754
9	Children's	\$ 145,138	\$ 84,225	\$ 56,000	\$ 56,000	\$ 58,800	\$ 58,800	\$ 458,963
10								
11	Projected Total	\$ 8,088,599	\$1,407,176	\$2,035,200	\$1,446,325	\$1,789,380	\$1,239,422	\$ 16,006,103
12	Current Budget							\$ 14,508,000
13	Incremental UCHSC Budget							\$ 1,498,103
14								
15								
16	EMBSI Incremental Costs							
17								
18		Actual Expenditures as of June 2004	Through Dec 2004	Through June 2005	Through Dec 2005	Through June 2006	Through Dec 2006	Subtotals
19	Projected Total	\$ 1,325,692	\$ -	\$ 743,748	\$ 119,075	\$ 488,464	\$ 119,075	\$ 2,796,054
20	Current Budget							\$ 2,319,754
21	Incremental EMBSI Costs							\$ 476,300

Report of Expenditures

	A	B	C
1	University of Colorado Health Sciences Center		
2			
3	Office of		
4	Grants and Contracts		
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15		Title of Project:	
16			
17		Project Director:	
18			
19		Reporting Period:	
20			
21		UCHSC Account Number :	
22			
23		Grant Period :	
24			
25		Total Amount of Grant :	
26			
27			
28			
29		Expenditures :	
30			Personnel:
31			
32			
33			Total Personnel:
34			Operating Expenses
35			
36			
37			
38			
39			
40			
41			Total Operating Expenses :
42			Sub Contracts:
43			
44			

Report of Expenditures

	D	E	F	G	H
1					
2					
3			University Hospitals		
4			School of Medicine		
5			School of Nursing		
6			School of Dentistry		
7					
8					
9					
10	REPORT OF EXPENDITURES				
11					
12					
13					
14					
15			API Leuk/Lymph Project		
16					
17			Richard Irons		
18					
19			1/1/2004 to 06/30/04		
20					
21			2555312		
22					
23			04/01/01 to 12/31/04		
24					
25			\$9,263,820.00		
26					
27					
28		Grant Budget to Date	Expenditures as of 12/31/03	Current Period Expenditure as of 06/30/04	Accumulative Actuals to date 06/30/04
29					
30					
31	Personnel at UCHSC:	\$ 1,696,871	\$1,255,819	\$ 211,016	\$ 1,466,836
32	Other:		\$3,900	\$ -	\$ 3,900
33		\$ 1,696,871	\$1,259,719	\$ 211,016	\$ 1,470,736
34					
35	Expendable Supplies:		\$310,525	\$ 412,552	\$ 723,077
36	Non-capital Equipment:		\$145,923	\$ (40)	\$ 145,883
37	Services		\$115,707	\$ 23,475	\$ 139,182
38	Maintenance:		\$6,161	\$ (45)	\$ 6,116
39	ME feasibility Study:		\$1,560	\$ 3,600	\$ 5,160
40	Contingency:		\$43,330	\$ -	\$ 43,330
41		\$ 1,683,743	\$623,207	\$ 439,542	\$ 1,062,748
42					
43	Fudan University (1)	\$ -	\$1,284,814	\$ 489,385	\$ 1,774,199
44	IPHSC (2)	\$ -	\$159,894	\$ 7,683	\$ 167,577

Report of Expenditures

	I	J	K	L	M	N
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28	Budget Balance Available	3-Month Actuals for 7/1/04 to 9/30/04	Actuals for 7/01/04 to 12/31/04	Project to Date Expenditures on 12/31/04	Budgeted for Grant Period	
29						
30						
31	\$ 230,035.34		\$ -	0.00		
32	-\$3,900		\$ -	0.00		
33	\$ 226,135.34	\$ 115,936.00	\$ -	0.00		
34						
35			\$ -	0.00		
36			\$ -	0.00		
37			\$ -	0.00		
38			\$ -	0.00		
39			\$ -	0.00		
40			\$ -	0.00		
41	\$ 620,994.48	\$ 161,028.00	\$ -	0.00		
42						
43		\$ 345,275.00	\$ -	0.00		
44			\$ -	0.00		

Report of Expenditures

	A	B	C
45			
46			
47			
48			Total Sub Contracts:
49			
50			Travel :
51			Equipment :
52			
53			
54			Total Equipment :
55			Indirect Costs :
56			
57			
58			Total Indirect Costs :
59			
60			
61		Total Expenditures :	
62			
63	Administrative Officer :		
64			

Report of Expenditures

	D	E	F	G	H
45	SMCDP (3)	\$ -	\$150,504	\$ 2,500	\$ 153,004
46	EMBSI (5)	\$ -	\$726,725	\$ 598,967	\$ 1,325,692
47	Children's Hospital (Cincinnati) (6)	\$ -	\$115,166	\$ 29,972	\$ 145,138
48		\$ 3,627,756	\$2,437,103	\$ 1,128,507	\$ 3,565,610
49					
50		\$ 32,000	\$9,098	\$ -	\$ 9,098
51					
52	Capital Equipment:	\$ 1,291,150	\$1,191,150	\$ 117,340	\$ 1,308,491
53	Shipping/importation			\$ -	
54		\$ 1,291,150	\$1,191,150	\$ 117,340	\$ 1,308,491
55					
56	Overhead:	\$ 932,300	\$523,312	\$ 167,979	\$ 691,291
57	Other:			\$ -	
58		\$ 932,300	\$523,312	\$ 167,979	\$ 691,291
59					
60					
61		\$ 9,263,820	\$6,043,589	\$ 2,064,384	\$ 8,107,974
62					
63					
64	Mary O'Connell				

Report of Expenditures

	I	J	K	L	M	N
45			\$ -	0.00		
46			\$ -	0.00		
47		\$ 49,477.00	\$ -	0.00		
48	\$ 62,146.11	\$ 394,752.00	\$ -	0.00		
49						
50	\$ 22,901.53	\$ -		0.00		
51						
52			\$ -	0.00		
53						
54	\$ (17,340.44)	\$ 75,000.00	\$ -	0.00		
55						
56			\$ -	0.00		
57						
58	\$ 241,009.42	\$ 71,353.00	\$ -	0.00		
59						
60						
61	\$ 1,155,846.44	\$ 818,069.00	0.00	0.00		
62						
63						
64						

Post-Study Analysis
(Jan 2007 - June 2007)

	A	B	C
1			
2		Jan 2007- June 2007	
3			
4	UCHSC	\$ 406,114	
5	EMBSI	\$ 407,700	
6	Cincinnati Children's Hospital	\$ 39,295	
7			
8	Total	\$ 853,109	

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, November 11, 2004 7:53 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Howard Feldman <Feldman@api.org>
Subject: BHRC-TC... Reply Needed by COB Fri 11/12 - Date/Time for next Conf Call
Attach: 2004 11-3-04 OC min.doc; 2004 OC Action Item Table 11-05-04.doc

Benzene Health Research Consortium (BHRC) Technical Committee -

Attached are Lorraine's draft minutes from last week's (Nov 3-4) Oversight Committee meeting in Houston, along with an updated table of "action items"; as you'll see, a fair number of new action items fall to the Technical Committee (TC) and to the Technical Budget Committee (TBC).

**** Note that all action items need to be completed by Friday, December 10th (ref: action item #3), so that resolution of each be readied for discussion at the upcoming December 16th OC meeting *****

Given the quick turnaround request by the OC, Patrick suggested that we convene a conference call next week to 1) provide a short team de-brief of the recent Houston OC meeting, 2) to review progress to date on any open action items, and 3) to develop plans to complete the remaining action items.

PLEASE REPLY BY COB FRIDAY (tomorrow) as to which of these dates & start times work best with your schedule:

Nov 15 (Mon), 9:00am Eastern / 6:00am Pacific
Nov 15 (Mon), 5:00pm Eastern / 2:00pm Pacific

Nov 18 (Thurs), 2:00pm Eastern / 11:00am Pacific
Nov 18 (Thurs), 4:00pm Eastern / 1:00pm Pacific

Nov 19 (Fri), 9:00am Eastern / 6:00am Pacific
Nov 19 (Fri), 2:00pm Eastern / 1:00pm Pacific

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

-----Original Message-----

From: Lorraine Twerdok
Sent: Wednesday, November 10, 2004 9:57 AM
To: Benzene OC listserve (E-mail)
Subject: BHRC - 11/3 draft minutes for review

BHRC OC Members -

Attached please find draft minutes and updated action item table from the Nov. 3/4 meeting in Houston. Comments are due Monday, November 29.

SHELL-MCCLURG-052589

<<2004 11-3-04 OC min.doc>> <<2004 OC Action Item Table 11-05-04.doc>>

Regards,
Lorraine

Lorraine E. Twerdok, Ph.D., DABT
Manager, Health Sciences
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

tel: 202-682-8344
email: twerdoki@api.org
fax: 202-682-8031

From: Matt Todd <ToddM@api.org>
Sent: Monday, May 2, 2005 8:05 PM (GMT)
To: BHRC Oversight Committee (E-mail) <benzconsort-oc@listserve.api.org>; BHRC Technical Committee (E-mail) <benzconsort-tc@listserve.api.org>; BHRC Communications Committee (E-mail) <benzconsort-cc@listserve.api.org>
Subject: Shanghai Health Study Update: May 2, 2005

Shanghai Health Study Update

Announcements:

- **Attention: The conference call number has changed to 707.765.9147. The participant code is 2026828319, followed by the # sign.**
- **The Oversight Committee will be meeting tomorrow (May 3, 2005) at API in Washington, DC. The draft agenda for the meeting is posted on the SHS Update page.**
- **The final minutes from the April 11th and 12th Oversight Committee meetings in Houston have been posted on the Oversight page.**
- **The Oversight Committee Action Table has been updated and is posted on the SHS Update page.**
- **The Finance Committee met by conference call on April 5th to review the 4Q04 Finance Report and April 29th to review the 1Q05 Finance Report.**
- **The Technical Committee met by conference call on April 8th to approve the 4Q04 Finance Report and April 29th to approve the 1Q05 Finance Report.**
- **The Technical Committee met for a conference call on April 13th with Otto Wong.**
- **The Technical Committee is scheduling May conference calls with Drs. Krieger, Wong, and Irons.**
- **If you have any announcements that you would like to be posted, please send an email to Matt Todd.**

Matthew Todd
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street NW
Washington, DC 20005
p: (202)682-8319
f: (202)682-8031
www.api.org

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, May 2, 2005 7:57 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Matt Todd (E-mail) <matthewatodd@netzero.com>
Subject: BHRC-TC... Shanghai PIs - Generic Titles for 2006 Presentations

Benzene Health Research Consortium (BHRC) Technical Committee -

"Generic titles" for 2006 plenary presentation by Shanghai-based PIs, which may be suitable for invitation letters to facilitate obtaining Chinese travel visas...

Fu Hua... Advances in Exposure Assessment for the Shanghai Health Study

You-Xin Liang... Reconstruction of Occupational Exposure in the Shanghai Health Study

Best Regards - Bruce.

-----Original Message-----

From: Bruce Jarnot
Sent: Wednesday, April 27, 2005 5:19 PM
To: benzconsort-tc@listserve.api.org
Cc: Michael Bird (E-mail)
Subject: BHRC-TC... Pls Review by Fri 4/29: draft 2005 plenary session titles

Benzene Health Research Consortium (BHRC) Technical Committee -

The BHRC-OC recently tasked the TC to draft titles for plenary session presentations at the 2005 SHS annual meeting.

ACTION - please review attached 1-page word document, which provides you with a "first draft" speaker line-up / draft presentation titles / draft presentation themes for discussion & revision during the 11:00am EDT conference call on Friday 4/29

Thanks, and best regards - Bruce.

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Friday, April 29, 2005 2:17 PM (GMT)
To: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Subject: BHRC - 4/20 budget summary
Attach: BHRC rev budget 4-20-05.xls; UCHSC 2005 - 2007 budget summary - LT.xls

<<BHRC rev budget 4-20-05.xls>> <<UCHSC 2005 - 2007 budget summary - LT.xls>>

*Regards,
Lorraine*

Lorraine E. Twerdok, Ph.D., DABT
Manager, Health Sciences
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

tel: 202-682-8344
email: twerdokl@api.org
fax: 202-682-8031

	A
1	
2	
3	
4	
5	
6	
7	UCHSC Proposed Pmt Schedule
8	
9	EMBSI subcontract increases
10	
11	Fudan subcontract increases (new)
12	
13	Histology consultant*
14	
15	Cincinnati Children's Hospital**
16	
17	less UCHSC 12/31/04 bank balance
18	
19	
20	TOTALS
21	Current Payment Schedule
22	Proposed increase
23	
24	
25	
26	
27	
28	* Histology consultant included since this service is a subcontract for the DP/ME studies.
29	
30	
31	** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress report figures

	B	C	D	E
1	UCHSC Projected expenses 2005 - 2007 to include subcontractor increases			
2				
3				
4				2005
5				
6				
7				\$3,374,030
8				
9				\$238,150
10				
11				\$159,600
12				
13				
14				
15				\$0
16				
17				
18				
19				
20				\$3,771,780
21				\$1,748,060
22				
23				
24			Current UCHSC Program Budget	
25			Proposed budget increase	
26			Proposed UCHSC Program Budget	
27				
28				
29	Payment for 2006 & 2007 should be made directly to Dr. Bennett by UCHSC (2005 pmt already made by API)			
30				
31				

	F	G	H	I	J	K	L
1							
2	(draft)						
3							
4	2006	2007	TOTALS				
5							
6					API revised payment schedule		
7	\$2,682,280	\$406,114	\$6,462,424		Apr-05		\$874,030
8					Oct-05		\$2,750,000
9	\$562,550	\$407,700	\$1,208,400		Apr-05		\$2,500,000
10					Oct-06		\$1,500,000
11	\$159,600	\$159,600	\$478,800		Feb-07		\$570,889
12					Total		\$8,194,919
13	\$3,000	\$3,000	\$6,000				
14							
15	\$0	\$39,295	\$39,295				
16					UCHSC 1/05 proposed schedule 2		
17					Apr-05		\$874,030
18					Oct-05		\$2,500,000
19					Apr-05		\$1,750,000
20	\$3,407,430	\$1,015,709	\$8,194,919		Oct-06		\$932,280
21	\$1,748,060	\$874,030	\$4,370,150		Feb-07		\$406,114
22			\$3,824,769		Total		\$6,462,424
23							
24		\$14,508,000					
25		\$3,824,769					
26		\$18,332,769					
27							
28							
29							
30							
31							

	A
1	
2	
3	
4	
5	
6	
7	UCHSC Expenses
8	
9	EMBSI subcontract expenses
10	
11	Fudan subcontract expenses
12	
13	Histology consultant expenses*
14	
15	Cincinnati Children's Hospital expenses**
16	
17	IPHS expenses
18	
19	UCHSC 12/31/04 bank balance (subtract from expense projections for 2005 payment to UCHSC
20	
21	Projected Expense Totals 2005-2007
22	
23	Current Payment Schedule/budget
24	
25	Total budget increase
26	Total paid to UCHSC as of 12/31/04
27	Revised UCHSC program budget
28	
29	
30	* Histology consultant included since this service is a subcontract for the DP/ME studies.
31	
32	
33	** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress report figures

	B	C	D	E	F	G	H	I
1	UCHSC Projected expenses 2005 - 2007 and Revised Program Budget							
2						(draft)		
3								
4				2005	2006	2007	TOTALS	
5								
6								
7				\$1,217,148	\$1,108,178	\$406,114	\$2,731,440	
8								
9				\$ 862,823	\$ 931,939	\$ 407,700	\$2,202,462	
10								
11				\$1,676,855	\$1,651,285	\$159,600	\$3,487,740	
12								
13					\$3,000	\$3,000	\$6,000	
14								
15				\$112,000	\$117,600	\$39,295	\$268,895	
16								
17				\$12,000	\$0	\$0	\$12,000	
18								
19				(513,618)			(\$513,618)	
20								
21				\$3,367,208	\$3,812,002	\$1,015,709	\$8,194,919	
22								
23				\$1,748,060	\$1,748,060	\$874,030	\$4,370,150	
24								
25				\$1,619,148	\$2,063,942	\$141,679	\$3,824,769	
26							\$10,137,850	
27							\$18,332,769	
28								
29								
30								
31	Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)							
32								
33								

	J	K	L
1			
2			
3			
4			
5	API revised payment schedule		
6	Apr-05		\$874,030
7	Oct-05		\$2,750,000
8	Apr-06		\$2,500,000
9	Oct-06		\$1,500,000
10	Feb-07		\$570,889
11	Total		\$8,194,919
12			
13			
14			
15			
16			
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33			

	A	B
1		UCHSC 2005 - 2007 Increase by Category
2		
3		
4		
5		
6		
7	UCHSC increases	
8		
9	EMBSI subcontract increases	
10		
11	Fudan subcontract increases (new)	
12		
13	Histology consultant*	
14		
15	Cincinnati Children's Hospital**	
16		
17	TOTALS	
18		
19	* Histology consultant included since this service is a subcontract for the DP/ME studies.	
20		Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)
21		
22	** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress report figures	

	C	D	E	F	G	H
1						
2			(draft)			
3						
4			2005	2006	2007	TOTALS
5						
6						
7			\$843,080	\$843,080	\$406,114	\$2,092,274
8						
9			\$238,150	\$562,550	\$407,700	\$1,208,400
10						
11			\$159,600	\$159,600	\$159,600	\$478,800
12						
13			\$0	\$3,000	\$3,000	\$6,000
14						
15			\$0	\$0	\$39,295	\$39,295
16						
17			\$1,240,830	\$1,568,230	\$1,015,709	\$3,824,769
18						
19						
20						
21						
22						

	A	B	C	D	E	F	G
1	UCHSC Projected Expenses for 2005 - 2007						
2	does NOT INCLUDE subcontractor increases (EMBSI, Fudan, Cincinnati & Bennett)						
3	(from January 2005 Progress Report)						
4			(draft)				
5							
6		Funds at UCHSC as of 12/31/04	2005 Expenses	2006 Expenses	2007 Expenses		Totals
7	Personnel		\$463,610	\$482,144	\$203,265		\$1,149,019
8	Operating Expenses		\$501,380	\$396,360	\$0		\$897,740
9	Subcontracts*		\$2,286,533	\$1,958,069	\$150,000		\$4,394,602
10	Travel		\$1,000	\$1,000	\$0		\$2,000
11	Equipment		\$0	\$0	\$0		\$0
12	Indirect		\$251,158	\$228,674	\$52,849		\$532,681
13							
14	Totals	(\$513,618)	\$3,503,681	\$3,066,247	\$406,114		\$6,462,424
15							
16							
17	Amount for 2005-2007 UCHSC disbursement						\$6,462,424

	A	B	C	D	E	F	G	H	I
1	EMBSI Incremental Costs								
2	(draft)								
3									
4									
5		Actual Expenditures as of June 2004	Through Dec 2004	Through June 2005	Through Dec 2005	Through June 2006	Through Dec 2006	Through 2007	Subtotals
6	Projected Total	\$ 1,325,692	\$ -	\$ 743,748	\$ 119,075	\$ 488,464	\$ 119,075	\$ 407,700	\$ 3,203,754
7	2006 Yimei Zhou costs					\$ 324,400			\$ 324,400
8	Totals	\$ 1,325,692		\$ 743,748	\$ 119,075	\$ 812,864	\$ 119,075	\$ 407,700	\$ 3,528,154
9									\$ -
10	Current Budget	\$ 1,325,692	\$ -	\$ 624,673	\$ -	\$ 369,389	\$ -		\$ 2,319,754
11									\$ -
12	EMBSI Increases	\$ -		\$ 119,075	\$ 119,075	\$ 443,475	\$ 119,075	\$ 407,700	\$ 1,208,400
13									
14									
15	Increased costs by year				\$ 238,150		\$ 562,550	\$ 407,700	\$ 1,208,400
16									
17	Total cost per year				\$ 862,823		\$ 931,939	\$ 407,700	\$ 2,202,462

	A	B	C	D	E	F	G	H
1			FUDAN Subcontract to UCHSC: 2005 - 2007 Increases					
2			(as submitted to API by R. Schnatter on 4/7/05)					
3					(draft)			
4								
5	\$ 50,000		To extend Dr. Ni's contract to locate MD phase 1 and 2 factories					
6			(a) contract expired 3/31/05, and additional factories need to be recruited					
7								
8	\$ 25,000		For additional western-based expert review of job exposure matrix					
9			(a) retain funds in "contingency" for EA effort?					
10			(b) apply to EMBSI sub-contract?					
11								
12	\$ 135,200		For 4 additional Shanghai-based EA staff (US \$16,900/year) x 2 years					
13			(b) one additional staff to work with IPHS to extract data from IPHS database;					
14			(c) two additional skilled staff (with leadership skills) for field work;					
15			(d) one factory liaison (from district IPHS office) to work with municipal IPHS for factory recruitment					
16								
17	\$ 45,000		For additional Factory Access (based on experience to date, US \$1K - 2.5K per factory)					
18			(a) 15 factories for Phase 1 (\$1K)					
19			(b) 12 factories for Phase 2 (2.5K)					
20								
21	\$ 100,000		For 8 Chinese industry experts (e.g. printing, painting, rubber)					
22			(a) 100K = 8 x \$50/hr x 125 hr/year x 2 years					
23			(b) Note: this represents a 4x decrease from Dr. Fu's earlier proposed requirement					
24								
25	\$ 56,000		To further engage district IPHS offices					
26			(a) district offices are administratively separate from Municipal IPHS					
27			(b) funds provided to Municipal IPHS was not further distributed to district offices					
28								
29	\$ 67,600		For two EA liaisons, to facilitate ex-Shanghai IPHS \$ factory communications					
30			(a) 67.6K = 2 liaisons x 2 years x US\$16,900/year					
31								
32	\$ 478,800	Total						
33								
34			Payment Schedule - split equally over the three years at \$159,600 per year					

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**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H
1								
2				BHRC Overall Program Budget Approved April 12, 2005				
3					(draft)			
4								
5						Approved		Approved
6				Item		16 Dec 04 OC mtg	Requested Increase APRIL 05	12 APR 05 OC mtg
7				UCHSC DP & ME Studies		\$14,508,000	\$3,824,769	\$18,332,769
8				Irons (field expenses)		\$1,413,428	\$0	\$1,413,428
9				AHSciences Case-Control Study		\$2,283,095	\$647,746	\$2,930,841
10				Fudan University		\$230,000	\$76,062	\$306,062
11					Total Research Costs	\$18,434,523	\$4,548,577	\$22,983,100
12				Scientific Review Panel		\$300,000	\$0	\$300,000
13				Ethics Review Panel		\$64,000	\$0	\$64,000
14				External Pathology & Cytogenetics Workgroups(Cost in UC cost)		\$0	\$0	\$0
15					Total Panel Costs	\$364,000		\$364,000
16				API Seed Monies		\$0	\$0	\$0
17				Outside Counsel		\$100,000	\$40,000	\$140,000
18				Public Affairs		\$300,000	\$0	\$300,000
19				QA/QC Activities		\$50,000	\$0	\$50,000
20				UCHSC Interest		\$0	\$0	\$0
21				contingency		\$590,272	\$260,000	\$850,272
22					Miscellaneous Costs	\$1,040,272	\$300,000	\$1,340,272
23					Subtotal	\$19,838,795	\$4,848,577	\$24,687,372
24					API Admin.*	\$1,245,205	\$200,000	\$1,445,205
25				GRAND TOTAL		\$21,084,000	\$5,048,577	\$26,132,577
26								
27				* API administrative costs for one extra year (2007)				
28								

**Benzene Health Research Consortium Program Budget
as of April 20, 2005**

	A	B	C	D	E
1					
2					BHRC Project
3					
4			Cumulative		
5			Actuals		
6			Inception		Proposed
7	Cost Centers	Project #	Thru 4Q04		2005*
8					
9	Income		16,715,000		4,395,097
10	interest thru 12/31/04		50,692		
11	TOTAL INCOME		16,765,692		
12					
13	Cost Centers				
14	UCHSC	X8105	10,137,850		3,367,208
15	Irons-Field Expense	X8106	788,486		262,000
16	Applied Health Sciences	X8107	1,391,014		534,843
17	Fudan University	X8108	124,090		80,563
18	Scientific & Ethics Panels	X8109	166,772		79,250
19	Communications	X8103	294,161		1,946
20	Outside Legal Counsel	X8104	64,529		30,031
21	QA/QC Support	X8110	0		16,667
22	API Administrative	X8100	871,150		184,995
23	Contingency**		104,473		159,933
24					
25	Total Expenses		13,942,525		4,717,436
26					
27	Fund Balance***		2,823,167		2,500,828
28					
29	totals may be off due to rounding				
30					
31	*ConocoPhillips paid full amend #2 in 2005: BP pay full remaining commitment in 2005				
32	**not zero out because a mix of actual and estimated expenses match proposed budget difference due to a mix of actual vs projected expenses				
33	*** Fund balance as of 12/31/04 reflects program interest to date. Interest for years 2005-2007 is not reflected due to changing rates.				

**Benzene Health Research Consortium Program Budget
as of April 20, 2005**

	F	G	H	I
1				
2	ted Expenses and Income Requirements			
3	(draft)			
4				
5			Prior	12 APR 05
6	Proposed	Proposed	Program	Program
7	2006	2007	Budget	Budget
8				
9	3,500,000	1,522,480	21,084,000	26,132,577
10				
11				
12				
13				
14	3,812,002	1,015,709	14,508,000	18,332,769
15	262,000	104,714	1,413,428	1,413,428
16	548,231	456,475	2,283,095	2,930,841
17	55,490	45,918	230,000	\$306,061
18	74,250	47,396	364,000	364,000
19	1,946	1,946	300,000	300,000
20	30,031	30,032	100,000	140,000
21	16,667	16,667	50,000	50,000
22	184,995	200,000	1,245,205	1,445,205
23	222,933	362,933	590,272	\$850,272
24				
25	5,208,545	2,281,790	21,084,000	26,132,576
26				
27	792,283	32,973	**	
28				
29				
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**Benzene Health Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F
1						
2	Consortium Agreement Amendment #3 Schedule A					
3				(draft)		
4						
5	Member	Original Budget	Amendment No. 2	Amendment No. 3	Program Total	
6		\$16,500,000	Revised Budget \$21,084,000	Additional Member Contributions¹	Revised Budget \$26,135,577	
7					Maximum Financial Contribution per Member	Amount Paid as of 12/31/04⁴
8						
9	BP	\$4,500,000	\$4,500,000	\$2,568,430	\$7,068,430	\$4,500,000
10	ChevronTexaco	3,000,000	4,096,000	616,287	4,712,287	3,000,000
11	ConocoPhillips	1,500,000	2,048,000	308,143	2,356,143	1,500,000
12	ExxonMobil	4,500,000	6,144,000	924,430	7,068,430	4,500,000
13	Shell	3,000,000	4,096,000	616,287	4,712,287	3,000,000
14	Marathon ³	15,000	200,000	0	215,000	215,000
15						
16	GRAND TOTAL⁴	\$16,515,000	\$21,084,000	\$5,033,577	\$26,132,577	\$16,715,000
17						
18						
19						
20	¹ BP's increased contribution reflects \$1,644,000 for amendment no. 2 plus \$924,430					
21	for amendment no. 3.					
22	² The share distribution has reverted back to the allocation specified in original agreement					
23	³ Marathon was invoiced for its contribution, and is not a signatory of this agreement.					
24	Marathon's earlier payment of \$15,000 was not reflected in previous calculations.					
25	⁴ Totals reflect rounding					

**Benzene Health Consortium Budget
as of April 20, 2005**

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7	Remaining Amount to be Paid	Original # of Shares
8		
9	\$2,568,430	3
10	1,712,287	2
11	856,143	1
12	2,568,430	3
13	1,712,287	2
14	0	--
15		
16	9,417,577	11
17		
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**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H
1	Sponsor Shares and Payment Schedule							
2					(draft)			
3								
4			Approved Increase by Share & Co.					
5			Approved Increase	\$5,048,577				
6			less BP amend #2 amt & MAP \$15K*	(\$1,659,000)				
7			amend 3 share calculation total	\$3,389,577				
8						Amend 2 commitment		Total Commitments
9			1 share	\$308,143		\$4,500,000		\$7,068,430
10			2 shares	\$616,287		\$4,096,000		\$4,712,287
11			3 shares	\$924,430		\$2,048,000		\$2,356,143
12						\$6,144,000		\$7,068,430
13			BP (amend. 2 + new)	\$2,568,430		\$4,096,000		\$4,712,287
14			ChevronTexaco	\$616,287				
15			ConocoPhillips	\$308,143		Total		\$25,917,577
16			ExxonMobil	\$924,430		Marathon		\$215,000
17			Shell	\$616,287		Grand Total		\$26,132,577
18								
19			Total	\$5,033,577				
20								
21			*MAP \$15K seed money included in share calculation resulting in a reduction of \$1366 per share					
22								
23								
24	Sponsor Potential Payment Schedule						Calcu	
25		2005	2006	2007	Total			Amend 2
26	BP	\$2,568,430	\$0	\$0	\$2,568,430		BP	\$0
27	CVX	\$365,333	\$911,959	\$434,994	\$1,712,286		CVX	\$1,096,000
28	COP*	\$548,000	\$308,143	\$0	\$856,143		COP	\$548,000
29	XOM*	\$548,000	\$1,367,939	\$652,492	\$2,568,431		XOM	\$1,644,000
30	Shell	\$365,333	\$911,959	\$434,994	\$1,712,286		Shell	\$1,096,000
31		\$4,395,096	\$3,500,000	\$1,522,480	\$9,417,576			\$4,384,000
32								
33	2005 prmt schedule unchanged from current schedule except for BP							Paid through 2004
34	* 2005 commitment paid as of 3/31/05							MAP contribution
35								
36								

**Benzene Health Research Consortium Budget
as of April 20, 2005**

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24	Reconciliation checks	
25	Amend 3	Total
26	\$2,568,430	\$2,568,430
27	\$616,287	\$1,712,287
28	\$308,143	\$856,143
29	\$924,430	\$2,568,430
30	\$616,287	\$1,712,287
31	\$5,033,577	\$9,417,577
32		
33		\$16,500,000
34		\$215,000
35		
36	Program Total	\$26,132,577

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

	A
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6	
7	UCHSC Expenses
8	
9	EMBSI subcontract expenses
10	
11	Fudan subcontract expenses
12	
13	Histology consultant expenses*
14	
15	Cincinnati Children's Hospital expenses**
16	
17	IPHS expenses
18	
19	UCHSC 12/31/04 bank balance (subtract from expense projections for 2005 payment to UCHSC
20	
21	Projected Expense Totals 2005-2007
22	
23	Current Payment Schedule/budget
24	
25	Total budget increase
26	Total paid to UCHSC as of 12/31/04
27	Revised UCHSC program budget
28	
29	
30	* Histology consultant included since this service is a subcontract for the DP/ME studies.
31	
32	
33	** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress report figures

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

	B	C	D	E	F	G	H	I
1	UCHSC Projected expenses 2005 - 2007 and Revised Program Budget							
2					(draft)			
3								
4				2005	2006	2007	TOTALS	
5								
6								
7				\$1,217,148	\$1,108,178	\$406,114	\$2,731,440	
8								
9				\$ 862,823	\$ 931,939	\$ 407,700	\$2,202,462	
10								
11				\$1,676,855	\$1,651,285	\$159,600	\$3,487,740	
12								
13					\$3,000	\$3,000	\$6,000	
14								
15				\$112,000	\$117,600	\$39,295	\$268,895	
16								
17				\$12,000	\$0	\$0	\$12,000	
18								
19				(513,618)			(\$513,618)	
20								
21				\$3,367,208	\$3,812,002	\$1,015,709	\$8,194,919	
22								
23				\$1,748,060	\$1,748,060	\$874,030	\$4,370,150	
24								
25				\$1,619,148	\$2,063,942	\$141,679	\$3,824,769	
26							\$10,137,850	
27							\$18,332,769	
28								
29								
30								
31	Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)							
32								
33								

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

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4			
5	API revised payment schedule		
6	Apr-05		\$874,030
7	Oct-05		\$2,750,000
8	Apr-06		\$2,500,000
9	Oct-06		\$1,500,000
10	Feb-07		\$570,889
11	Total		\$8,194,919
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**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C
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4			
5			
6			
7			UCHSC increases
8			
9			EMBSI subcontract increases
10			
11			Fudan subcontract increases (new)
12			
13			Histology consultant*
14			
15			Cincinnati Children's Hospital**
16			
17			TOTALS
18			
19			* Histology consultant included since this service is a subcontract for the DP/ME studies.
20			
21			
22			** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	D	E	F	G	H	I	J
1	UCHSC 2005 - 2007 Increase by Category						
2				(draft)			
3							
4				2005	2006	2007	TOTALS
5							
6							
7				\$843,080	\$843,080	\$406,114	\$2,092,274
8							
9				\$238,150	\$562,550	\$407,700	\$1,208,400
10							
11				\$159,600	\$159,600	\$159,600	\$478,800
12							
13				\$0	\$3,000	\$3,000	\$6,000
14							
15				\$0	\$0	\$39,295	\$39,295
16							
17				\$1,240,830	\$1,568,230	\$1,015,709	\$3,824,769
18							
19							
20	Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)						
21							
22	Report figures						

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C
1	AHS Case Control Expense Projections		
2			
3	2005 and 2006		
4	Because of the need for much greater involvement of project supervision and QA/QC in Shanghai, we need to increase our level of effort.		
5	Basically we have added 3 weeks of the PI's time and support from the others. We have also added one more trip to Shanghai in 2005 and 2006.		
6			
7	2007		
8	Assuming that patient enrollment will be completed by end of 2006, final diagnoses and patient interviews completed by March 2007 and exposure assessment		
9	completed by May-June 2007, we will be doing the following tasks in June-September 2007: final QA/QC, statistical analysis, presentations, discussion with		
10	Scientific Review Panel and Technical Committee, and report writing.		
11	At this moment, there is no budget for 2007 at all. An estimated budget for 2007 is provided below.		
12			
13			
14	Labor by category		
15		Hourly rate	2
16	Category	in 2004 \$	Hours
17	Chief Epidemiologist (PI)	\$324	120
18	Biostatistician	\$162	40
19	Statistical programmer	\$139	20
20	Research/Administration assistant	\$104	20
21	Consulting industrial hygienist	\$232	20
22	Total labor for regular activities (2004 \$)		
23			
24			
25	Meetings/working trips (time & expenses)		
26		Unit cost	2
27		in 2004 \$	No.
28	Meetings in China (10 days @)	\$34,000	1
29	Meetings in USA (3 days @)	\$10,500	0
30	Total for meetings/working trips (2004 \$)		
31			
32	Total in 2004 \$ (labor and trips)		
33			
34			
35	Yearly budget estimates with a 5% annual adjustment		
36			
37	Additional budget by calendar year		2004
38	Total additional budget (with 5% annual adjustment)		
39	+ original		439,242
40	TOTAL REVISED AHS BUDGET		439,242
41			

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	D	E	F	G	H	I	J
1							
2	(draft)						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	005		2006		2007		Total
16	Amount	Hours	Amount	Hours	Amount	Hours	Amount
17	\$38,880	120	\$38,880	400	\$129,600	640	\$207,360
18	\$6,480	40	\$6,480	320	\$51,840	400	\$64,800
19	\$2,780	20	\$2,780	360	\$50,040	400	\$55,600
20	\$2,080	20	\$2,080	160	\$16,640	200	\$20,800
21	\$4,640	20	\$4,640	100	\$23,200	140	\$32,480
22	\$54,860		\$54,860		\$271,320		\$381,040
23							
24							
25							
26	005		2006		2007		Total
27	Amount	No.	Amount	No.	Amount	No.	Amount
28	\$34,000	1	\$34,000	3	\$102,000	5	\$170,000
29	\$0	0	\$0	2	\$21,000	2	\$21,000
30	\$34,000		\$34,000		\$123,000		\$191,000
31							
32	\$88,860		\$88,860		\$394,320		\$572,040
33							
34							
35							
36							
37	Year 2005		Year 2006		Year 2007		Total
38	\$93,303		\$97,968		\$456,475		\$647,746
39	441,540		450,263		0		\$1,331,045
40	534,843		548,231		456,475		\$1,978,791
41							1,978,791

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H	I	J	K	L
1	Fudan University Case Control Revised Expense Projections											
2					(contracted directly with API)							
3					(draft)							
4												
5	Blue: Fudan budget reanalysis, through 2Q 2007											
6												
7	Labor (time)											
8		Annual Salary*		2004		2005 (Year 5)		2006 (Year 6)		2007 (half-year)		
9	Category	US\$			Time	Amount	Time	Amount	Time	Amount		Total
10	Physician epidemiologist	16,900			0.15	2,535	0.25	4,225	0.15	1,268		8,028
11	Data Handler	5,850			1.20	7,020	1.16	6,786	1.20	3,510		17,316
12	Total labor (US\$)					9,555		11,011		4,778		25,344
13												
14	Expenses											
15		Unit cost			No.	Amount	No.	Amount	No.	Amount		Total
16	Fee for Shanghai CDC staff					6,000		3,000		1,500		10,500
17	Fee for AML patients	30			150	4,500	130	3,900	65	1,950		10,350
18	Fee for NHL patients	30			150	4,500	130	3,900	65	1,950		10,350
19	Hospital coordinators	30			150	4,500	130	3,900	65	1,950		10,350
20	Fee for controls	30			600	18,000	460	13,800	230	6,900		38,700
21	Fee for NHL hospital coordination					5,000		5,000		2,500		12,500
22	Fee for office supplies					1,800		1,700		900		4,400
23	Transportation for local and long distance					1,200		1,200		600		3,000
24	Total expenses (US\$)					45,500		36,400		18,250		100,150
25												
26	New Expenses											
27	Add transport for annual mtgs					15,000		0		15,000		30,000
28												
29	sub total					70,055		47,411		38,028		155,494
30	5% Annual increase					0		2,371		1,901		4,272
31	Overhead Fee (15%)					10,508		5,709		5,989		22,207
32												
33	Grand Total					80,563		55,490		45,918		181,972
34	Current			52,170		58,356		49,015		0		159,541
35	Increase					22,207		6,475		45,918		22,431
36												
37												
38	[*Annual Salary includes salary, bonus and benefits.]											
39					Yrs 2005-2007 (est)		\$181,972					
40					Yrs 2001-2004 (act.)		\$124,090					
41					Revised est. budget		\$306,062					
42					11/03 budget		\$230,000					
43					budget increase		\$76,062					

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Friday, April 29, 2005 5:19 PM (GMT)
To: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Subject: BHRC rev budget 4-20-05.xls
Attach: BHRC rev budget 4-20-05.xls

<<BHRC rev budget 4-20-05.xls>>

Revised budget worksheet with AHS worksheet detailing the \$648K increases added.

-Lorraine

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H
1								
2				BHRC Overall Program Budget Approved April 12, 2005				
3					(draft)			
4								
5						Approved		Approved
6				Item		16 Dec 04 OC mtg	Requested Increase APRIL 05	12 APR 05 OC mtg
7				UCHSC DP & ME Studies		\$14,508,000	\$3,824,769	\$18,332,769
8				Irons (field expenses)		\$1,413,428	\$0	\$1,413,428
9				AHSciences Case-Control Study		\$2,283,095	\$647,746	\$2,930,841
10				Fudan University		\$230,000	\$76,062	\$306,062
11					Total Research Costs	\$18,434,523	\$4,548,577	\$22,983,100
12				Scientific Review Panel		\$300,000	\$0	\$300,000
13				Ethics Review Panel		\$64,000	\$0	\$64,000
14				External Pathology & Cytogenetics Workgroups(Cost in UC cost)		\$0	\$0	\$0
15					Total Panel Costs	\$364,000		\$364,000
16				API Seed Monies		\$0	\$0	\$0
17				Outside Counsel		\$100,000	\$40,000	\$140,000
18				Public Affairs		\$300,000	\$0	\$300,000
19				QA/QC Activities		\$50,000	\$0	\$50,000
20				UCHSC Interest		\$0	\$0	\$0
21				contingency		\$590,272	\$260,000	\$850,272
22					Miscellaneous Costs	\$1,040,272	\$300,000	\$1,340,272
23					Subtotal	\$19,838,795	\$4,848,577	\$24,687,372
24					API Admin.*	\$1,245,205	\$200,000	\$1,445,205
25				GRAND TOTAL		\$21,084,000	\$5,048,577	\$26,132,577
26								
27				* API administrative costs for one extra year (2007)				
28								

**Benzene Health Research Consortium Program Budget
as of April 20, 2005**

	A	B	C	D	E
1					
2					BHRC Project
3					
4			Cumulative		
5			Actuals		
6			Inception		Proposed
7	Cost Centers	Project #	Thru 4Q04		2005*
8					
9	Income		16,715,000		4,395,097
10	interest thru 12/31/04		50,692		
11	TOTAL INCOME		16,765,692		
12					
13	Cost Centers				
14	UCHSC	X8105	10,137,850		3,367,208
15	Irons-Field Expense	X8106	788,486		262,000
16	Applied Health Sciences	X8107	1,391,014		534,843
17	Fudan University	X8108	124,090		80,563
18	Scientific & Ethics Panels	X8109	166,772		79,250
19	Communications	X8103	294,161		1,946
20	Outside Legal Counsel	X8104	64,529		30,031
21	QA/QC Support	X8110	0		16,667
22	API Administrative	X8100	871,150		184,995
23	Contingency**		104,473		159,933
24					
25	Total Expenses		13,942,525		4,717,436
26					
27	Fund Balance***		2,823,167		2,500,828
28					
29	totals may be off due to rounding				
30					
31	*ConocoPhillips paid full amend #2 in 2005: BP pay full remaining commitment in 2005				
32	**not zero out because a mix of actual and estimated expenses match proposed budget difference due to a mix of actual vs projected expenses				
33	*** Fund balance as of 12/31/04 reflects program interest to date. Interest for years 2005-2007 is not reflected due to changing rates.				

**Benzene Health Research Consortium Program Budget
as of April 20, 2005**

	F	G	H	I
1				
2	ted Expenses and Income Requirements			
3	(draft)			
4				
5			Prior	12 APR 05
6	Proposed	Proposed	Program	Program
7	2006	2007	Budget	Budget
8				
9	3,500,000	1,522,480	21,084,000	26,132,577
10				
11				
12				
13				
14	3,812,002	1,015,709	14,508,000	18,332,769
15	262,000	104,714	1,413,428	1,413,428
16	548,231	456,475	2,283,095	2,930,841
17	55,490	45,918	230,000	\$306,061
18	74,250	47,396	364,000	364,000
19	1,946	1,946	300,000	300,000
20	30,031	30,032	100,000	140,000
21	16,667	16,667	50,000	50,000
22	184,995	200,000	1,245,205	1,445,205
23	222,933	362,933	590,272	\$850,272
24				
25	5,208,545	2,281,790	21,084,000	26,132,576
26				
27	792,283	32,973	**	
28				
29				
30				
31				
32				
33				

**Benzene Health Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F
1						
2	Consortium Agreement Amendment #3 Schedule A					
3				(draft)		
4						
5	Member	Original Budget	Amendment No. 2	Amendment No. 3	Program Total	
6		\$16,500,000	Revised Budget \$21,084,000	Additional Member Contributions¹	Revised Budget \$26,135,577	
7					Maximum Financial Contribution per Member	Amount Paid as of 12/31/04⁴
8						
9	BP	\$4,500,000	\$4,500,000	\$2,568,430	\$7,068,430	\$4,500,000
10	ChevronTexaco	3,000,000	4,096,000	616,287	4,712,287	3,000,000
11	ConocoPhillips	1,500,000	2,048,000	308,143	2,356,143	1,500,000
12	ExxonMobil	4,500,000	6,144,000	924,430	7,068,430	4,500,000
13	Shell	3,000,000	4,096,000	616,287	4,712,287	3,000,000
14	Marathon ³	15,000	200,000	0	215,000	215,000
15						
16	GRAND TOTAL⁴	\$16,515,000	\$21,084,000	\$5,033,577	\$26,132,577	\$16,715,000
17						
18						
19						
20	¹ BP's increased contribution reflects \$1,644,000 for amendment no. 2 plus \$924,430					
21	for amendment no. 3.					
22	² The share distribution has reverted back to the allocation specified in original agreement					
23	³ Marathon was invoiced for its contribution, and is not a signatory of this agreement.					
24	Marathon's earlier payment of \$15,000 was not reflected in previous calculations.					
25	⁴ Totals reflect rounding					

**Benzene Health Consortium Budget
as of April 20, 2005**

	G	H
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6		
7	Remaining Amount to be Paid	Original # of Shares
8		
9	\$2,568,430	3
10	1,712,287	2
11	856,143	1
12	2,568,430	3
13	1,712,287	2
14	0	--
15		
16	9,417,577	11
17		
18		
19		
20		
21		
22		
23		
24		
25		

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H
1	Sponsor Shares and Payment Schedule							
2					(draft)			
3								
4			Approved Increase by Share & Co.					
5			Approved Increase	\$5,048,577				
6			less BP amend #2 amt & MAP \$15K*	(\$1,659,000)				
7			amend 3 share calculation total	\$3,389,577				
8						Amend 2 commitment		Total Commitments
9			1 share	\$308,143		\$4,500,000		\$7,068,430
10			2 shares	\$616,287		\$4,096,000		\$4,712,287
11			3 shares	\$924,430		\$2,048,000		\$2,356,143
12						\$6,144,000		\$7,068,430
13			BP (amend. 2 + new)	\$2,568,430		\$4,096,000		\$4,712,287
14			ChevronTexaco	\$616,287				
15			ConocoPhillips	\$308,143		Total		\$25,917,577
16			ExxonMobil	\$924,430		Marathon		\$215,000
17			Shell	\$616,287		Grand Total		\$26,132,577
18								
19			Total	\$5,033,577				
20								
21			*MAP \$15K seed money included in share calculation resulting in a reduction of \$1366 per share					
22								
23								
24	Sponsor Potential Payment Schedule						Calcu	
25		2005	2006	2007	Total			Amend 2
26	BP	\$2,568,430	\$0	\$0	\$2,568,430		BP	\$0
27	CVX	\$365,333	\$911,959	\$434,994	\$1,712,286		CVX	\$1,096,000
28	COP*	\$548,000	\$308,143	\$0	\$856,143		COP	\$548,000
29	XOM*	\$548,000	\$1,367,939	\$652,492	\$2,568,431		XOM	\$1,644,000
30	Shell	\$365,333	\$911,959	\$434,994	\$1,712,286		Shell	\$1,096,000
31		\$4,395,096	\$3,500,000	\$1,522,480	\$9,417,576			\$4,384,000
32								
33	2005 prmt schedule unchanged from current schedule except for BP							Paid through 2004
34	* 2005 commitment paid as of 3/31/05							MAP contribution
35								
36								

**Benzene Health Research Consortium Budget
as of April 20, 2005**

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22		
23		
24	ation checks	
25	Amend 3	Total
26	\$2,568,430	\$2,568,430
27	\$616,287	\$1,712,287
28	\$308,143	\$856,143
29	\$924,430	\$2,568,430
30	\$616,287	\$1,712,287
31	\$5,033,577	\$9,417,577
32		
33		\$16,500,000
34		\$215,000
35		
36	Program Total	\$26,132,577

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

	A
1	
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7	UCHSC Expenses
8	
9	EMBSI subcontract expenses
10	
11	Fudan subcontract expenses
12	
13	Histology consultant expenses*
14	
15	Cincinnati Children's Hospital expenses**
16	
17	IPHS expenses
18	
19	UCHSC 12/31/04 bank balance (subtract from expense projections for 2005 payment to UCHSC
20	
21	Projected Expense Totals 2005-2007
22	
23	Current Payment Schedule/budget
24	
25	Total budget increase
26	Total paid to UCHSC as of 12/31/04
27	Revised UCHSC program budget
28	
29	
30	* Histology consultant included since this service is a subcontract for the DP/ME studies.
31	
32	
33	** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress report figures

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

	B	C	D	E	F	G	H	I
1	UCHSC Projected expenses 2005 - 2007 and Revised Program Budget							
2					(draft)			
3								
4				2005	2006	2007	TOTALS	
5								
6								
7				\$1,217,148	\$1,108,178	\$406,114	\$2,731,440	
8								
9				\$ 862,823	\$ 931,939	\$ 407,700	\$2,202,462	
10								
11				\$1,676,855	\$1,651,285	\$159,600	\$3,487,740	
12								
13					\$3,000	\$3,000	\$6,000	
14								
15				\$112,000	\$117,600	\$39,295	\$268,895	
16								
17				\$12,000	\$0	\$0	\$12,000	
18								
19				(513,618)			(\$513,618)	
20								
21				\$3,367,208	\$3,812,002	\$1,015,709	\$8,194,919	
22								
23				\$1,748,060	\$1,748,060	\$874,030	\$4,370,150	
24								
25				\$1,619,148	\$2,063,942	\$141,679	\$3,824,769	
26							\$10,137,850	
27							\$18,332,769	
28								
29								
30								
31	Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)							
32								
33								

**Benzene Health REsearch Consortium Budget
as of April 20, 2005**

	J	K	L
1			
2			
3			
4			
5	API revised payment schedule		
6	Apr-05		\$874,030
7	Oct-05		\$2,750,000
8	Apr-06		\$2,500,000
9	Oct-06		\$1,500,000
10	Feb-07		\$570,889
11	Total		\$8,194,919
12			
13			
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**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C
1			
2			
3			
4			
5			
6			
7			UCHSC increases
8			
9			EMBSI subcontract increases
10			
11			Fudan subcontract increases (new)
12			
13			Histology consultant*
14			
15			Cincinnati Children's Hospital**
16			
17			TOTALS
18			
19			* Histology consultant included since this service is a subcontract for the DP/ME studies.
20			
21			
22			** 2007 costs for Cincinnati Children's Hospital did not appear to be included in Jan 2005 progress

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	D	E	F	G	H	I	J
1	UCHSC 2005 - 2007 Increase by Category						
2				(draft)			
3							
4				2005	2006	2007	TOTALS
5							
6							
7				\$843,080	\$843,080	\$406,114	\$2,092,274
8							
9				\$238,150	\$562,550	\$407,700	\$1,208,400
10							
11				\$159,600	\$159,600	\$159,600	\$478,800
12							
13				\$0	\$3,000	\$3,000	\$6,000
14							
15				\$0	\$0	\$39,295	\$39,295
16							
17				\$1,240,830	\$1,568,230	\$1,015,709	\$3,824,769
18							
19							
20	Payment for 2006 & 2007 should be made by UCHSC (2005 pmt already made by API)						
21							
22	Report figures						

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C
1	AHS Case Control Expense Projections		
2			
3	2005 and 2006		
4	Because of the need for much greater involvement of project supervision and QA/QC in Shanghai, we need to increase our level of effort.		
5	Basically we have added 3 weeks of the PI's time and support from the others. We have also added one more trip to Shanghai in 2005 and 2006.		
6			
7	2007		
8	Assuming that patient enrollment will be completed by end of 2006, final diagnoses and patient interviews completed by March 2007 and exposure assessment		
9	completed by May-June 2007, we will be doing the following tasks in June-September 2007: final QA/QC, statistical analysis, presentations, discussion with		
10	Scientific Review Panel and Technical Committee, and report writing.		
11	At this moment, there is no budget for 2007 at all. An estimated budget for 2007 is provided below.		
12			
13			
14	Labor by category		
15		Hourly rate	2
16	Category	in 2004 \$	Hours
17	Chief Epidemiologist (PI)	\$324	120
18	Biostatistician	\$162	40
19	Statistical programmer	\$139	20
20	Research/Administration assistant	\$104	20
21	Consulting industrial hygienist	\$232	20
22	Total labor for regular activities (2004 \$)		
23			
24			
25	Meetings/working trips (time & expenses)		
26		Unit cost	2
27		in 2004 \$	No.
28	Meetings in China (10 days @)	\$34,000	1
29	Meetings in USA (3 days @)	\$10,500	0
30	Total for meetings/working trips (2004 \$)		
31			
32	Total in 2004 \$ (labor and trips)		
33			
34			
35	Yearly budget estimates with a 5% annual adjustment		
36			
37	Additional budget by calendar year		2004
38	Total additional budget (with 5% annual adjustment)		
39	+ original		439,242
40	TOTAL REVISED AHS BUDGET		439,242
41			

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	D	E	F	G	H	I	J
1							
2	(draft)						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	005		2006		2007		Total
16	Amount	Hours	Amount	Hours	Amount	Hours	Amount
17	\$38,880	120	\$38,880	400	\$129,600	640	\$207,360
18	\$6,480	40	\$6,480	320	\$51,840	400	\$64,800
19	\$2,780	20	\$2,780	360	\$50,040	400	\$55,600
20	\$2,080	20	\$2,080	160	\$16,640	200	\$20,800
21	\$4,640	20	\$4,640	100	\$23,200	140	\$32,480
22	\$54,860		\$54,860		\$271,320		\$381,040
23							
24							
25							
26	005		2006		2007		Total
27	Amount	No.	Amount	No.	Amount	No.	Amount
28	\$34,000	1	\$34,000	3	\$102,000	5	\$170,000
29	\$0	0	\$0	2	\$21,000	2	\$21,000
30	\$34,000		\$34,000		\$123,000		\$191,000
31							
32	\$88,860		\$88,860		\$394,320		\$572,040
33							
34							
35							
36							
37	Year 2005		Year 2006		Year 2007		Total
38	\$93,303		\$97,968		\$456,475		\$647,746
39	441,540		450,263		0		\$1,331,045
40	534,843		548,231		456,475		\$1,978,791
41							1,978,791

	A	B	C
1	2005 and 2006		
2	Because of the need for much greater involvement of project supervision and QA/QC in Shanghai, we need to increase our level of effort.		
3	Basically we have added 3 weeks of the PI's time and support from the others. We have also added one more trip to Shanghai in 2005 and 2006.		
4			
5	2007		
6	Assuming that patient enrollment will be completed by end of 2006, final diagnoses and patient interviews completed by March 2007 and exposure assessment		
7	completed by May-June 2007, we will be doing the following tasks in June-September 2007: final QA/QC, statistical analysis, presentations, discussion with		
8	Scientific Review Panel and Technical Committee, and report writing.		
9	At this moment, there is no budget for 2007 at all. An estimated budget for 2007 is provided below.		
10			
11			
12	Labor by category		
13		Hourly rate	
14	Category	in 2004 \$	Hours
15	Chief Epidemiologist (PI)	\$324	120
16	Biostatistician	\$162	40
17	Statistical programmer	\$139	20
18	Research/Administration assistant	\$104	20
19	Consulting industrial hygienist	\$232	20
20	Total labor for regular activities (2004 \$)		
21			
22			
23	Meetings/working trips (time & expenses)		
24		Unit cost	
25		in 2004 \$	No.
26	Meetings in China (10 days @)	\$34,000	1
27	Meetings in USA (3 days @)	\$10,500	0
28	Total for meetings/working trips (2004 \$)		
29			
30	Total in 2004 \$ (labor and trips)		
31			
32			
33	Yearly budget estimates with a 5% annual adjustment		
34			
35	Additional budget by calendar year		
36	Total additional budget (with 5% annual adjustment)		

	D	E	F	G	H	I	J
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13	2005	2006		2007		Total	
14	Amount	Hours	Amount	Hours	Amount	Hours	Amount
15	\$38,880	120	\$38,880	400	\$129,600	640	\$207,360
16	\$6,480	40	\$6,480	320	\$51,840	400	\$64,800
17	\$2,780	20	\$2,780	360	\$50,040	400	\$55,600
18	\$2,080	20	\$2,080	160	\$16,640	200	\$20,800
19	\$4,640	20	\$4,640	100	\$23,200	140	\$32,480
20	\$54,860		\$54,860		\$271,320		\$381,040
21							
22							
23							
24	2005	2006		2007		Total	
25	Amount	No.	Amount	No.	Amount	No.	Amount
26	\$34,000	1	\$34,000	3	\$102,000	5	\$170,000
27	\$0	0	\$0	2	\$21,000	2	\$21,000
28	\$34,000		\$34,000		\$123,000		\$191,000
29							
30	\$88,860		\$88,860		\$394,320		\$572,040
31							
32							
33							
34							
35	Year 2005		Year 2006		Year 2007		Total
36	\$93,303		\$97,968		\$456,475		\$647,746

**Benzene Health Research Consortium Budget
as of April 20, 2005**

	A	B	C	D	E	F	G	H	I	J	K	L
1	Fudan University Case Control Revised Expense Projections											
2					(contracted directly with API)							
3					(draft)							
4												
5	Blue: Fudan budget reanalysis, through 2Q 2007											
6												
7	Labor (time)											
8		Annual Salary*		2004		2005 (Year 5)		2006 (Year 6)		2007 (half-year)		
9	Category	US\$			Time	Amount	Time	Amount	Time	Amount		Total
10	Physician epidemiologist	16,900			0.15	2,535	0.25	4,225	0.15	1,268		8,028
11	Data Handler	5,850			1.20	7,020	1.16	6,786	1.20	3,510		17,316
12	Total labor (US\$)					9,555		11,011		4,778		25,344
13												
14	Expenses											
15		Unit cost			No.	Amount	No.	Amount	No.	Amount		Total
16	Fee for Shanghai CDC staff					6,000		3,000		1,500		10,500
17	Fee for AML patients	30			150	4,500	130	3,900	65	1,950		10,350
18	Fee for NHL patients	30			150	4,500	130	3,900	65	1,950		10,350
19	Hospital coordinators	30			150	4,500	130	3,900	65	1,950		10,350
20	Fee for controls	30			600	18,000	460	13,800	230	6,900		38,700
21	Fee for NHL hospital coordination					5,000		5,000		2,500		12,500
22	Fee for office supplies					1,800		1,700		900		4,400
23	Transportation for local and long distance					1,200		1,200		600		3,000
24	Total expenses (US\$)					45,500		36,400		18,250		100,150
25												
26	New Expenses											
27	Add transport for annual mtgs					15,000		0		15,000		30,000
28												
29	sub total					70,055		47,411		38,028		155,494
30	5% Annual increase					0		2,371		1,901		4,272
31	Overhead Fee (15%)					10,508		5,709		5,989		22,207
32												
33	Grand Total - reanalysis					80,563		55,490		45,918		181,972
34	Current (12/04 projections)			52,170	**	58,356		49,015		0		159,541
35	Increase					22,207		6,475		45,918		22,431
36												
37												
38	[*Annual Salary includes salary, bonus and benefits.]											
39	**accrued, not expensed yet				Yrs 2005-2007 (est)			\$181,972				
40					Yrs 2001-2004 (act.)			\$124,090				
41					Revised est. budget			\$306,062				
42					11/03 budget			\$230,000				
43					budget increase			\$76,062				

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Sunday, April 24, 2005 3:56 PM (GMT)
To: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Cc: Bruce Jarnot <jarnotb@api.org>; Lorraine Twerdok <Twerdokl@api.org>
Subject: BHRC 1Q05 fina rpt for review/approval
Attach: BHRC Program Expenses 1Q05 rpt DRAFT.xls

To BHRC Budget Committee:

Attached is the final draft of the 1Q05 financial report for your review & approval. Note that your comments are required on the Text Summary page.

I would like to put this on the May 3rd OC agenda for approval, so Bruce will be contacting you shortly to set up a call for the week of April 25.

Regards,

Lorraine

Lorraine E. Twerdok, Ph.D., DABT

Manager, Health Sciences

Regulatory Analysis and Scientific Affairs

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Benzene Health Research Consortium
1Q05 Financial Report Overview

	A	B	C	D	E	F	G
1							
2	RESEARCH PROGRESS:						
3	Case Diagnosis: JCML clinical lab continues to increase diagnostic throughput, operating well above 100% capacity, processing 30% more cases than anticipated with 99+% concordance between						
4	secondary / tertiary pathology review.						
5	Case Accrual: Cases are being accrued at optimal rate from all participating hospitals, with 500+ AML and 400+ NHL anticipated by end of study. As of 4Q04, 687 confirmed cases were entered into						
6	External Review Panels: Panels reviewing progress reports, manuscripts and presentations as these documents become available.						
7							
8	EXPENSE DISCUSSION:						
9							
10	Fund Balance at API 4Q04:			\$3,672,133			DR
11	Irons Field Expenses: New T&E contract executed in 4Q04; \$131K disbursed in 1Q05.						
12	UCHSC: Contract amendment executed with UCHSC; \$874,030 additional was disbursed 4Q04, for a total \$2.62MM disbursed in 2004. Increased spending rate & total expenditures reflect marked increase in						
13	Subcontracts: 4Q04 subcontractor expenses include Fudan Univ (\$880K) and Children's Hosp (\$68K); no additional '04 EMBSI charges, front-loaded for the year.						
14	AHS: Travel expenses have stayed under budget, but high labor costs due to time spent in Shanghai have now put AHS \$46K (3%) over budget. [Jan/Feb expenses annualize to \$19K (5%) under budget]						
15	Fudan University: Additional case load, and transfer of CDC & IPHS activities has increased rate of expenditure; sufficient funds were not budgeted for travel to annual meetings (~10K/yr).						
16	SRP/ERP: Total expenses remain under budget as of year end 2004. Consortium should consider unanticipated additional expenses in out-years, if expert panels are to be retained post-study for management						
17	Communications (APCO): program budget reduced to \$300K (\$250K to contingency)						
18							
19	Outside Legal Council: cumulative variance of 28% over budget						
20							
21	QA/QC: program budget reduced to \$50K (\$50K to contingency)						
22							
23	Contingency: increased by \$300K (\$250K from communications; \$50K from QA/QC).						
24							
25	API Administrative Costs: 0.5 % over budget						
26							
27	FORWARD GUIDANCE:						
28							
29	SRP/ERP projected expenses need to be re-analyzed to reflect new meeting venue and possibly reduced number of meetings (3 to 2).						
30							
31	UCHSC grant requires close monitoring due to large 2004 expenses and new case-based cost structure						
32							
33	Irons Field Expenses: new T&E contract in place.						
34							
35	Fudan University: new contract should be executed in 1Q04.						
36							
37	API administrative expenses requires close monitoring to contain costs. Projected expenses for 2005 will require a substantial decrease in API staff time. Budget projections were based on the assumption						
38							
39	Need to reconcile UCHSC statement - they have a \$105 error (from 4Q03 rpt).						
40							
41	Technical Budget Work Group Acceptance:						
42	Oversight Committee Acceptance:						
43	Posted to Website:						
44							
45							
46	LT 4/24/05						
47	BJ 4/05/05						

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3	primary diagnosis &	
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5	to the database, including	
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10	AFT	
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12	increase in JCML case	
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14	budget for 2005.]	
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16	manuscript review and other	
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37	option that API staffing	
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Benzene Health Research Consortium
Approved Program Budget
1Q05 Financial Report

	A	B	C	D	E	F	G	H
1			Original Cost	Approved	Unapproved	Approved	Approved	Approved
2	Item		Estimate (Jan. 2001)	Revised Cost Estimate (Dec. 2001)	Changes not approved (June 2003)	11 NOV 03 OC mtg	21 APR 04 OC mtg	16 Dec 04 OC mtg
3	AHSciences Case-Control Study		\$1,595,000	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095
4	DP & ME Studies (UCHSC)		\$13,665,017	\$15,258,017	\$15,258,000	\$14,508,000	\$14,508,000	\$14,508,000
5	Irons(T & E)		\$1,253,428	\$1,253,428	\$1,597,273	\$1,413,428	\$1,413,428	\$1,413,428
6	Fudan University		\$165,700	\$190,555	\$661,000	\$230,000	\$230,000	\$230,000
7	Total Research Costs		\$16,679,145	\$18,985,095	\$19,799,368	\$18,434,523	\$18,434,523	\$18,434,523
8	Scientific Review Panel			\$648,000	\$551,736	\$300,000	\$300,000	\$300,000
9	Ethics Review Panel			\$216,000	\$192,000	\$64,000	\$64,000	\$64,000
10	External Pathology & Cytogenetics Workgroups(Cost in UC cost)			\$130,000	\$0	\$0	\$0	\$0
11	Total Panel Costs		\$450,000	\$994,000	\$743,736	\$364,000	\$364,000	\$364,000
12	API Seed Monies		\$500,000	\$0	\$0	\$0	\$0	\$0
13	Outside Counsel			\$500,000	\$100,576	\$100,000	\$100,000	\$100,000
14	Public Affairs		\$1,000,000	\$1,000,000	\$960,600	\$550,000	\$550,000	\$300,000
15	QA/QC Activities			\$225,000	\$100,000	\$100,000	\$100,000	\$50,000
16	UCHSC Interest					(\$100,000)	\$0	\$0
17	contingency		\$190,855	\$0	\$0	\$390,272	\$290,272	\$590,272
18	Miscellaneous Costs		\$1,690,855	\$1,725,000	\$1,161,176	\$1,040,272	\$1,040,272	\$1,040,272
19	Subtotal		\$18,820,000	\$21,704,095	\$21,704,280	\$19,838,795	\$19,838,795	\$19,838,795
20	API Admin.		\$941,000	\$1,085,205	\$1,085,019	\$1,245,205	\$1,245,205	\$1,245,205
21	GRAND TOTAL		\$19,761,000	\$22,789,300	\$22,789,299	\$21,084,000	\$21,084,000	\$21,084,000
22								
23	Notes by API							
24	Notes/Assumptions for Dec. 2001 revised budget:					DRAFT		
25	- The total research costs have changed as a result of the							
26	- Panel costs assume that there will be only one face-to-face							
27	meeting for each panel each year.							
28								
29	LT 4/24/05							

Benzene Health Research Consortium
Executive Summary
1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2													
3			Actuals					Budget (actual + projected income)					
4	DRAFT		Inception					Cumulative					
5			Thru	Actuals				Actuals					
6			December	Jan - Mar		Program		Inception					
7		Cost Centers	2004	2005		to Date		Thru 1Q05		2005		2006	
8		Project #											
9		Income	\$ 16,765,693	\$ 1,096,000		\$ 17,861,693		\$ 17,861,693		\$ 1,826,667		\$ 1,278,667	
10									***				
11													
12		Cost Centers											
13		UCHSC*	X8105	10,137,850	-	10,137,850		10,137,850		1,748,060		1,748,060	
14		Irons-Field Expense*	X8106	788,486	131,000	919,486		919,486		131,000		262,000	
15		Applied Health Sciences	X8107	1,391,014	70,316	1,461,330		1,461,330		331,400		449,985	
16		Fudan University	X8108	124,090	-	124,090		124,090		21,861		29,148	
17		Scientific & Ethics Panels	X8109	166,772	-	166,772		166,772		74,500		71,000	
18		Communications	X8103	294,161	-	294,161		294,161		1,946		1,946	
19		Outside Legal Counsel	X8104	64,529	4,827	69,356		69,356		12,524		16,698	
20		QA/QC Support	X8110	-	-	-		-		12,500		16,667	
21		API Administrative	X8100	871,150	37,396	908,546		908,546		93,980		123,200	
22		Contingency**		104,473	3,496	107,969		107,969		162,933		162,933	
23													
24		Total Expenses		\$ 13,942,525	\$ 247,035	\$ 14,189,560		\$ 14,189,560		\$ 2,590,704		\$ 2,881,637	
25													
26		Fund Balance		\$ 2,823,169	\$ 848,965	\$ 3,672,133				\$ 2,908,096		\$1,305,126	
27													
28													
29		blue is projected fund balanced to project when current funds will run out											
30		* amount disbursed by API											
31													
32		** \$300K added to contingency; \$250K from Communicaitons & \$50K											
33		from QA/QC											
34		*** ConocoPhillips pay remaining commitment in 2005											
35		LT 4/24/05											
36													
37													
38													

Benzene Health Research Consortium
Executive Summary
1Q05 Financial Report

	N	O	P	Q
1				
2				
3	e & expenses)			
4				
5				
6			Projected	Program
7	2007		Expenses	Budget
8				
9	\$ 1,278,667		\$ 22,245,694	\$ 21,084,000
10				
11				
12				
13	874,030		14,508,000	14,508,000
14	104,714		1,417,200	1,413,428
15	45,833		2,288,549	2,283,095
16	29,148		204,247	230,000
17	44,000		356,272	364,000
18	1,946		300,000	300,000
19	16,698		115,276	100,000
20	16,667		45,833	50,000
21	123,200		1,248,926	1,245,205
22	159,933		593,768	590,272
23				
24	\$ 1,416,169		\$ 21,078,070	\$ 21,084,000
25				
26	\$1,167,624			
27				
28				
29				
30				
31	Income Detail			
32	sponsors		\$17,596,000	
33	2001 seed		\$15,000	
34	MAP contrib.		\$200,000	
35	API interest		\$50,692	
36	UCHSC interest		\$0	
37				
38	TOTAL		\$17,861,692	

Benzene Health Research Consortium
Case Accrual 1Q05

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Case Accrual (Case Predictions)	2003			2004			2005				2006				2007				
2	Reported Cumulatively	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	AML (120/yr; 450 total)																			
4	Cases Predicted	0	0	35		120		180		240		300		360		420				
5	Cases Accrued	0	0	42		150		437												
6	Variance	0	0	7		30		257												
7	NHL (120/yr; 450 total)																			
8	Cases Predicted	0	0	35		120		180		240		300		360		420				
9	Cases Accrued	0	0	66		139		155												
10	Variance	0	0	31		19		-25												
11	AA (50/yr; 188 total)*																			
12	Cases Predicted	0	0	12		50		75		100		125		150		175				
13	Cases Accrued	0	0	17		50		55												
14	Variance	0	0	5		0		-20												
15	MDS (60/yr; 225 total)*																			
16	Cases Predicted	0	0	15		60		90		120		150		180		210				
17	Cases Accrued	0	0	26		97		?												
18	Variance	0	0	11		37		?												
19	Benzene Poisoning (10/yr; 38 total)*																			
20	Cases Predicted	0	0	3		10		15		20		25		30		35				
21	Cases Accrued	0	0	0		12		?												
22	Variance	0	0	-3		2		?												
23	(+) variance: above predicted rate or accrual, (-) Variance: below predicted rate of accrual.																			
24																				
25																				
26	* Case predictions based on historical estimates; these are not target numbers of cases required for study completion.																			
27																				
28	LT 8/30/04																			
29	BJ 4/05/05																			

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&[DATE]

Benzene Health Research Consortium
Case Accrual 1Q05

	U	V
1	ESTIMATED	STUDY
2	TOTAL	PREDICTION
3		
4	420	450
5		
6		
7		
8	420	450
9		
10		
11		
12	175	188
13		
14		
15		
16	210	225
17		
18		
19		
20	35	38
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&[DATE]

Benzene Health Research Consortium
Cash Flow Statement 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1		2000	2001	2002		2003				2004				2005				2006	
2		1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	INCOME																		
4	Income for Reporting Period	\$60,246	\$2,113,132	\$8,367,446	\$448,024	\$3,186	\$4,265,241	\$1,485,875	\$6,746	\$6,506	\$9,292	\$1,096,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Income, Cumulative	\$60,246	\$2,173,378	\$10,540,824	\$10,988,848	\$10,992,034	\$15,257,275	\$16,743,149	\$16,749,895	\$16,756,401	\$16,765,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693
6	EXPENSE																		
7	Actual API Expenses	24,600	1,577,811	7,652,678	318,759	258,097	310,244	66,019	1,348,626	1,047,131	\$2,000,899	\$247,035	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	Expense, Cumulative	\$24,600	\$1,602,411	\$9,255,088	\$9,573,847	\$9,831,945	\$10,142,189	\$10,208,207	\$11,556,834	\$12,603,965	\$14,604,864	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899
9	INCOME LESS EXPENSE																		
10	Reporting Period	\$35,646	\$535,321	\$714,768	\$129,265	(\$254,911)	\$3,954,997	\$1,419,856	(\$1,341,880)	(\$1,040,825)	(\$1,991,607)	\$848,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Cumulative	\$35,646	\$570,967	\$1,285,736	\$1,415,001	\$1,160,089	\$5,115,086	\$6,534,942	\$5,193,061	\$4,152,436	\$2,160,829	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794
12																			
13		NOTE:	\$3,009,794	in bank at API															
14	blue designates projected income or expense																		
15																			
16	LT 10/19/04																		
17	RT 04/13/05																		

Benzene Health Research Consortium
Cash Flow Statement 1Q05 Financial Report

	T	U	V	W	X
1	2007				TOTALS
2	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3					
4	\$0	\$0	\$0	\$0	\$17,861,693
5	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	
6					
7	\$0	\$0	\$0	\$0	\$14,851,899
8	\$14,851,899	\$14,851,899	\$14,851,899	\$14,851,899	
9					
10	\$0	\$0	\$0	\$0	
11	\$3,009,794	\$3,009,794	\$3,009,794	\$3,009,794	
12					
13					
14					
15					
16					
17					

Benzene Health Research Consortium
Program Expense Summary 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M
		2000	2001	2002	2003				2004				20
	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.
3	UCHSC												
4	Disbursed		1,225,000	6,339,598	0	0	(48,839)	0		874,031	874,030	874,030	874,030
5	Budgeted	0	648,390	3,969,140	1,230,711	0	2,039,466	0		827,532	0	827,532	827,532
6	Actual expense	0	523,807	3,248,834	1,717,169	0	553,672	0		2,045,114	0	1,535,622	0
7	Current/Variance	0	124,583	720,306	(486,458)	0	1,485,794	0		(1,217,582)	0	(708,090)	827,532
8	Cumm Variance	0	124,583	844,889	332,137	332,137	1,813,804	1,813,804		586,386	586,386	(131,540)	686,156
9	Irons - Field Expenses												
10	Disbursed		145,763	393,723	0	0	0	0		189,320	0	59,680	131,000
11	Budgeted	0	3,200	259,060	138,359	69,179	55,508	55,508		55,508	55,508	55,508	55,508
12	Actual expense	0	3,157	195,549	89,577	54,382	169,606	43,945		95,409	49,390	60,427	0
13	Current/Variance	0	43	63,511	48,782	14,797	(114,098)	11,563		(39,901)	6,118	(4,919)	55,508
14	Cumm Variance	0	43	63,554	112,336	127,133	13,035	24,598		(15,303)	(9,185)	(14,104)	41,404
15	Applied Health Sciences												
16	Budgeted	0	84,025	435,513	216,256	108,128	108,128	98,340		98,340	98,340	98,340	110,467
17	Actual expense	0	136,329	435,406	140,665	149,389	90,103	0		168,623	105,508	164,991	70,316
18	Current/Variance	0	(52,304)	107	75,591	(41,261)	18,025	98,340		(70,283)	(7,168)	(66,651)	40,151
19	Cumm Variance	0	(52,304)	(52,197)	23,394	(17,868)	157	98,497		28,215	21,047	(45,604)	(5,454)
20	Fudan University - Case/Control Study												
21	Budgeted	0	31,303	42,751	21,376	10,688	7,288	7,288		7,288	7,288	7,287	7,287
22	Actual expense	0	0	15,470	6,492	8,851	1,168	0		27,755	0	64,354	0
23	Current/Variance	0	31,303	27,281	14,883	1,837	6,120	7,288		(20,467)	7,288	(57,067)	7,287
24	Cumm Variance	0	31,303	58,584	73,467	75,305	81,425	88,713		68,246	75,534	18,467	25,754
25	Scientific & Ethics Panels/cyto wkshop												
26	Budgeted	0	30,240	120,960	60,480	30,240	4,508	(163,074)		3,000	4,500	69,000	1,500
27	Actual expense	0	18,673	5,122	9,994	16,984	32,081	500		12,029	2,500	68,889	0
28	Current/Variance	0	11,567	115,838	50,486	13,256	(27,573)	(163,574)		(9,029)	2,000	111	1,500
29	Cumm Variance	0	11,567	127,405	177,891	191,147	163,574	0		(9,029)	(7,029)	(6,917)	(4,417)
30	Communications - APCO												
31	Budgeted	0	60,000	240,000	125,000	62,500	(196,636)	15,001		15,000	15,000	(41,704)	0
32	Actual expense	0	0	240,738	14,564	7,877	27,688	0		790	1,235	1,270	0
33	Current/Variance	0	60,000	110,436	54,623	(224,324)	15,001	0		14,210	13,765	(42,974)	0
34	Cumm Variance	0	60,000	59,262	169,699	224,322	(2)	14,999		29,209	42,974	0	0
35	Outside Legal Counsel												
36	Budgeted	0	30,000	120,000	62,500	31,250	(210,542)	4,175		4,175	4,175	4,175	4,175
37	Actual expense	0	0	13,565	1,728	0	17,915	365		2,995	1,870	26,092	4,827
38	Current/Variance	0	30,000	106,435	60,772	31,250	(228,457)	3,810		1,180	2,305	(21,918)	(653)
39	Cumm Variance	0	30,000	136,435	197,207	228,457	0	3,810		4,990	7,294	(14,623)	(15,276)
40	QA/QC Support												
41	Budgeted	0	13,500	54,000	28,126	14,063	(109,689)	6,250		6,250	6,250	(18,750)	4,167
42	Actual expense	0	0	0	0	0	0	0		0	0	0	0
43	Current/Variance	0	13,500	54,000	28,126	14,063	(109,689)	6,250		6,250	6,250	(18,750)	4,167
44	Cumm Variance	0	13,500	67,500	95,626	109,689	0	6,250		12,500	18,750	0	4,167
45	Contingency Funds												
46	Budgeted	0	0	0	0	0	290,272	0		0	0	300,000	0
47	Actual expense	0	0	0	0	0	101,473	0		0	0	3,000	3,496
48	Current/Variance	0	0	0	0	0	188,799	0		0	0	297,000	(3,496)
49	Cumm Variance	0	0	0	0	0	188,799	188,799		188,799	188,799	485,799	482,303
50	API Administrative and Overhead												
51	Budgeted	0	65,113	260,448	135,654	67,826	75,934	66,700		66,700	72,700	64,400	29,280
52	Actual expense	24,600	52,046	209,056	145,316	74,997	88,655	65,154		73,084	61,988	76,254	37,396
53	Current/Variance	(24,600)	13,067	51,392	(9,662)	(7,171)	(12,721)	1,546		(6,384)	10,712	(11,854)	(8,116)
54	Cumm Variance	(24,600)	(11,533)	39,859	30,197	23,026	10,305	11,851		5,467	16,179	4,325	22,889
55	TOTALS	2000	2001	2002	2003				2004				20
56	Budgeted	0	965,771	5,501,872	2,018,461	393,874	2,064,237	90,188		1,083,793	263,761	1,065,788	212,383
57	Actual expense	24,600	734,012	4,363,739	2,125,505	312,479	1,082,361	109,964		2,425,798	222,491	2,000,899	247,035
58	Current/Variance	(24,600)	231,759	1,138,133	(107,044)	81,394	981,876	(19,776)		(1,342,006)	41,270	(935,111)	(34,653)
59	Cumm Variance	(24,600)	207,159	1,345,292	1,238,248	1,319,642	2,301,518	2,281,742		939,736	981,006	45,895	11,242
60	CUMULATIVE TOTALS	2000	2001	2002	2003				2004				20
61	Budgeted	0	965,771	6,467,643	8,486,104	8,879,977	10,944,214	11,034,402		12,118,195	12,381,955	13,447,743	13,660,126
62	Expense	24,600	758,612	5,122,351	7,247,856	7,560,335	8,642,696	8,752,660		11,178,458	11,400,949	13,401,848	13,648,884
63	Variance	(24,600)	207,159	1,345,292	1,238,248	1,319,642	2,301,518	2,281,742		939,736	981,006	45,895	11,242
64	Blue: future cumulative variance has no meaning until Expense entered.												
65	LT 10/18/04			API disbursed		\$12,603,965		\$1,175,224		unspent at UCHSC as of 6/30/04 (no expense reporting for 3Q04)			
66	RT 04/13/05		Amt. At UCHSC & Irons Field exp. Bank acct	Amt Expensed		\$11,400,949		\$27,044		In Irons' field exp bank acct as of 6/30/04 (3Q04 exp report outstanding)			
67						\$1,203,016		\$1,202,268		Total as of 6/30/04			
68													
69													
70	API disbursed by period	24,600	1,577,811	7,652,678	318,759	258,097	310,244	66,019		1,348,626	1,047,131	1,338,560	378,035
71	(includes pre-payments												874,030
72	for UCHSC & Irons Field)												

&[DATE]

SHELL-MCCLURG-052649

**Benzene Health Research Consortium
Program Expense Summary 1Q05 Financial Report**

	N	O	P	Q	R	S	T	U	V	W	X
1	05			2006				2007			TOTALS
2		3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3											
4		0	874,030	0	874,030	0	874,030	0	874,030	0	14,508,000
5		0	827,532	0	827,539	0	827,542	0	827,542	0	14,508,000
6		0	0	0	0	0	0	0	0	0	9,624,218
7		0	827,532	0	827,539	0	827,542	0	827,542	0	827,542
8		686,156	1,503,852	1,503,852	2,321,548	2,321,548	3,139,244	3,139,244	3,956,940	3,956,940	4,883,782
9											
10		131,000	0	131,000	0	131,000	0	104,714	0	0	1,417,200
11		55,508	55,508	55,508	55,508	55,507	55,507	55,507	55,507	55,507	1,413,428
12		0	0	0	0	0	0	0	0	0	761,442
13		55,508	55,508	55,508	55,508	55,507	55,507	55,507	55,507	55,507	429,958
14		152,420	207,928	263,436	318,944	374,451	429,958	485,465	540,972	596,479	651,986
15											
16		110,467	110,467	112,496	112,496	112,496	112,496	45,833	0	0	2,283,095
17		0	0	0	0	0	0	0	0	0	1,461,330
18		110,467	110,467	112,496	112,496	112,496	112,496	45,833	0	0	0
19		215,480	325,947	438,443	550,939	663,435	775,932	821,765	821,765	821,765	821,765
20											
21		7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	230,000
22		0	0	0	0	0	0	0	0	0	124,090
23		7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287
24		40,328	47,615	54,902	62,189	69,476	76,763	84,050	91,337	98,624	105,911
25											
26		4,500	69,000	1,000	1,000	4,000	65,000	1,000	1,000	4,000	350,854
27		0	0	0	0	0	0	0	0	0	166,772
28		4,500	69,000	1,000	1,000	4,000	65,000	1,000	1,000	4,000	38,000
29		83	69,083	70,083	71,083	75,083	140,083	141,083	142,083	146,083	184,083
30											
31		0	1,946	0	0	0	1,946	0	0	0	300,000
32		0	0	0	0	0	0	0	0	0	294,161
33		0	1,946	0	0	0	1,946	0	0	0	3,893
34		0	1,946	1,946	1,946	1,946	3,893	3,893	3,893	5,839	5,839
35											
36		4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	100,000
37		0	0	0	0	0	0	0	0	0	69,356
38		4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	30,644
39		(6,927)	(2,752)	1,422	5,597	9,771	13,946	18,120	22,295	26,469	30,644
40											
41		4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	50,000
42		0	0	0	0	0	0	0	0	0	0
43		4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	50,000
44		12,500	16,667	20,833	25,000	29,167	33,333	37,500	41,667	45,833	50,000
45											
46		0	0	0	0	0	0	0	0	0	590,272
47		0	0	0	0	0	0	0	0	0	107,969
48		0	0	0	0	0	0	0	0	0	0
49		482,303	482,303	482,303	482,303	482,303	482,303	482,303	482,303	482,303	482,303
50											
51		40,650	26,650	29,250	26,650	40,650	26,650	29,250	26,650	40,650	1,245,135
52		0	0	0	0	0	0	0	0	0	883,946
53		40,650	26,650	29,250	26,650	40,650	26,650	29,250	26,650	40,650	361,189
54		63,539	90,189	119,439	146,089	186,739	213,389	242,639	269,289	309,939	361,189
55	05			2006				2007			
56		226,753	1,106,731	213,882	1,038,821	228,281	1,104,770	147,218	926,327	115,785	965,274
57		0	0	0	0	0	0	0	0	0	13,493,284
58		226,753	1,106,731	213,882	1,038,821	228,281	1,104,770	147,218	926,327	115,785	965,274
59		1,274,810	2,381,541	2,595,424	3,634,245	3,862,527	4,967,296	5,114,514	6,040,842	6,156,627	7,121,900
60	05			2006				2007			
61		14,923,694	16,030,425	16,244,307	17,283,129	17,511,410	18,616,180	18,763,398	19,689,725	19,805,511	20,770,784
62		13,648,884	13,648,884	13,648,884	13,648,884	13,648,884	13,648,884	13,648,884	13,648,884	13,648,884	13,648,884
63		1,274,810	2,381,541	2,595,424	3,634,245	3,862,527	4,967,296	5,114,514	6,040,842	6,156,627	7,121,900
64											
65											
66											
67											
68											
69											
70		131,000	874,030	131,000	874,030	131,000	874,030	104,714	874,030	0	19,032,824
71											
72											

**Benzene Health Research Consortium
UCHSC Grant 1Q05 Financial Report**

	A	B	C	D
1	UCHSC (x8105)	2001	2002	
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.
3	Grant Payments			
4	Disbursed	1,225,000	6,339,598	0
5	Personnel			
6	Budgeted	172,140	573,160	331,316
7	Actual expense	172,140	714,888	314,703
8	Current Variance	0	-141,528	16,613
9	Cumm Variance	0	-141,528	-124,915
10	Operating Expenses			
11	Budgeted	13,131	378,462	198,373
12	Actual expense	12,177	301,522	158,850
13	Current Variance	954	76,940	39,523
14	Cumm Variance	954	77,894	117,417
15	Subcontracts			
16	Budgeted	123,829	1,795,030	549,014
17	Actual expense	0	1,025,372	845,860
18	Current Variance	123,829	769,658	-296,846
19	Cumm Variance	123,829	893,287	596,441
20	Travel			
21	Budgeted	0	23,947	11,340
22	Actual expense	0	8,647	346
23	Current Variance	0	15,300	10,994
24	Cumm Variance	0	15,300	26,284
25	Equipment			
26	Budgeted	\$291,568	\$918,645	\$0
27	Actual expense	\$291,568	\$899,642	\$274,508
28	Current Variance	\$0	\$19,003	(\$274,508)
29	Cumm Variance	\$0	\$19,003	(\$255,505)
30	Indirect			
31	Budgeted	\$47,922	\$279,896	\$140,688
32	Actual expense	\$47,922	\$298,963	\$122,902
33	Current Variance	(\$0)	(\$19,067)	\$17,786
34	Cumm Variance	(\$0)	(\$19,067)	(\$1,301)
35	TOTALS	2001	2002	
36	Budgeted	\$648,380	\$3,969,140	\$1,230,711
37	Actual expense	\$523,807	\$3,248,834	\$1,717,169
38	Current Variance	\$124,583	\$720,306	(\$486,458)
39	Cumm Variance	\$124,583	\$844,889	\$332,137
40	CUMULATIVE TOTALS	2001	2002	
41	Budgeted	\$648,380	\$4,617,530	\$5,848,241
42	Expense	\$523,807	\$3,772,641	\$5,489,810
43	Variance	\$124,583	\$844,889	\$358,431
44				
45	Blue: future cumulative variance has no meaning until Expense entered.	Note: Actual expenses from Progress Report or UC Grants & Contracts Financials.		
46				
47	LT 3/11/05	Amt. paid UCHSC to date:		\$9,263,820
48	BJ 4/05/05	Amt. expensed to date:		\$9,088,596
49		Amt. In UCHSC bank acct:		\$1,175,224

**Benzene Health Research Consortium
UCHSC Grant 1Q05 Financial Report**

	E	F	G	H	I
1	2003			2004	
2	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
3					
4	0	-48,839	0	874,031	874,030
5					
6	0	293,007	0	195,778	0
7	0	58,188	0	211,016	0
8	0	234,819	0	-15,238	0
9	-124,915	109,904	109,904	94,666	94,666
10					
11	0	259,003	0	195,773	0
12	0	150,657	0	364,542	0
13	0	108,346	0	-168,769	0
14	117,417	225,763	225,763	56,994	56,994
15					
16	0	988,733	0	286,990	0
17	0	565,870	0	1,128,507	0
18	0	422,863	0	-841,517	0
19	596,441	1,019,304	1,019,304	177,787	177,787
20					
21	0	4,127	0	9,836	0
22	0	0	0	0	0
23	0	4,127	0	9,836	0
24	26,284	30,421	30,421	40,257	40,257
25					
26	\$0	\$350,000	\$0	\$48,050	\$0
27	\$0	(\$274,568)	\$0	\$192,340	\$0
28	\$0	\$624,568	\$0	(\$144,290)	\$0
29	(\$255,505)	\$369,063	\$369,063	\$224,773	\$224,773
30					
31	\$0	\$144,596	\$0	\$91,105	\$0
32	\$0	\$53,525	\$0	\$148,709	\$0
33	\$0	\$91,071	\$0	(\$57,804)	\$0
34	(\$1,301)	\$89,770	\$89,770	\$32,166	\$32,166
35	2003			2004	
36	\$0	\$2,038,466	\$0	\$827,532	\$0
37	\$0	\$553,672	\$0	\$2,045,114	\$0
38	\$0	\$1,485,784	\$0	(\$1,217,582)	\$0
39	\$332,137	\$1,813,804	\$1,813,804	\$586,386	\$586,386
40	2003			2004	
41	\$5,848,241	\$7,887,707	\$7,887,707	\$8,715,239	\$8,715,239
42	\$5,489,810	\$6,043,482	\$6,043,482	\$8,088,596	\$8,088,596
43	\$358,431	\$1,844,225	\$1,844,225	\$626,643	\$626,643
44					
45				UCHSC statement error for travel, off by +\$105 (4Q03)	
46					
47	(Adjusted 4Q03: \$48,839 attributed to UCHSC in 3Q03 Report has been reallocated to Contingency: \$25,000 <i>pre-consortium grant in 2001</i> ; \$3,600 for IRB Review in 2002; \$20,239 for EMBSI "feasibility study" in 2002)				
48	(Adjusted 4Q03: 2001 costs had been double expensed in 2002 column; (-\$523,807) adjustment made in 4Q03)				
49					

Benzene Health Research Consortium
UCHSC Grant 1Q05 Financial Report

	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1				2005				2006			2007			TOTALS
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3														
4	874,030	0	874,030	0	874,030	0	874,030	0	874,030	0	874,030	0		14,508,000
5														
6	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	2,935,847
7	229,260	0	0	0	0	0	0	0	0	0	0	0	0	1,699,995
8	-33,482	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	195,778
9	61,184	61,184	256,962	256,962	452,740	452,740	648,518	648,518	844,296	844,296	1,040,074	1,040,074	1,235,852	1,235,852
10														
11	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	2,415,153
12	237,258	0	0	0	0	0	0	0	0	0	0	0	0	1,225,006
13	-41,485	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	195,773
14	15,509	15,509	211,282	211,282	407,055	407,055	602,828	602,828	798,601	798,601	994,374	994,374	1,190,147	1,190,147
15														
16	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	5,752,326
17	948,696	0	0	0	0	0	0	0	0	0	0	0	0	4,514,305
18	-681,706	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	286,990
19	-483,919	-483,919	-196,929	-196,929	90,061	90,061	377,051	377,051	664,041	664,041	951,031	951,031	1,238,021	1,238,021
20														
21	9,836	0	9,836	0	9,836	0	9,843	0	9,846	0	9,846	0	9,846	118,139
22	0	0	0	0	0	0	0	0	0	0	0	0	0	8,993
23	9,836	0	9,836	0	9,836	0	9,843	0	9,846	0	9,846	0	9,846	9,846
24	50,093	50,093	59,929	59,929	69,765	69,765	79,608	79,608	89,454	89,454	99,300	99,300	109,146	109,146
25														
26	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$1,944,613
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,383,490
28	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$48,050
29	\$272,823	\$272,823	\$320,873	\$320,873	\$368,923	\$368,923	\$416,973	\$416,973	\$465,023	\$465,023	\$513,073	\$513,073	\$561,123	\$561,123
30														
31	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$1,341,922
32	\$120,408	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$792,429
33	(\$29,303)	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$91,105
34	\$2,863	\$2,863	\$93,968	\$93,968	\$185,073	\$185,073	\$276,178	\$276,178	\$367,283	\$367,283	\$458,388	\$458,388	\$549,493	\$549,493
35			2005				2006				2007			
36	\$827,532	\$0	\$827,532	\$0	\$827,532	\$0	\$827,539	\$0	\$827,542	\$0	\$827,542	\$0	\$827,542	\$14,508,000
37	\$1,535,622	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,624,218
38	(\$708,090)	\$0	\$827,532	\$0	\$827,532	\$0	\$827,539	\$0	\$827,542	\$0	\$827,542	\$0	\$827,542	\$827,542
39	(\$131,540)	(\$131,540)	\$686,156	\$686,156	\$1,503,852	\$1,503,852	\$2,321,548	\$2,321,548	\$3,139,244	\$3,139,244	\$3,956,940	\$3,956,940	\$4,774,636	\$4,883,782
40			2005				2006				2007			
41	\$9,542,771	\$9,542,771	\$10,370,303	\$10,370,303	\$11,197,835	\$11,197,835	\$12,025,374	\$12,025,374	\$12,852,916	\$12,852,916	\$13,680,456	\$13,680,456	\$14,508,000	\$14,508,000
42	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218	\$9,624,218
43	(\$81,447)	(\$81,447)	\$746,085	\$746,085	\$1,573,617	\$1,573,617	\$2,401,156	\$2,401,156	\$3,228,698	\$3,228,698	\$4,056,240	\$4,056,240	\$4,883,782	\$4,883,782
44														
45														
46														
47														
48														
49														

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Benzene Health Research Consortium
UCHSC Subcontract 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M
	UCHSC	2001	2002	2003				2004				2005	
	Subcontracts	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd & 4th Qtr.			1st & 2nd Qtr.	3rd & 4th Qtr.			1st & 2nd Qtr.	
2	Fudan University												
3	Actual expense		0	0	411,935	468,341		1,088,352		880,342			0
4	IPHSC												
5	Actual expense		0	0	8,339	27,496		7,683		0			0
6	SMCDGP												
7	Actual expense		0	0	45,563	24,766		2,500		0			0
8	EMBSI												
9	Actual expense		0	0	372,725	0		0		0			0
10	Children's Hospital Cincinnati												
11	Actual expense		0	0	7,298	45,267		29,972		68,354			0
12	TOTALS	2001	2002	2003				2004				2005	
13	Actual expense		\$0	\$1,025,372	\$845,860	\$565,870		\$1,128,507		\$948,696		\$0	
14								\$1,128,507					
15													
16													
17													
18	LT 8/6/04	*Total subcontractor expenses* from study report (preliminary figure); *actual expenses* from UC Office of Grants & Contracts spreadsheet (final figures).											
19	BJ 4/05/05												
20													

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	N	O	P	Q	R	S	T	U	V	W
1										
2			2006			2007				TOTALS
3	3rd & 4th Qtr.		1st & 2nd Qtr.		3rd & 4th Qtr.		1st & 2nd Qtr.		3rd & 4th Qtr.	
4										
5	0		0		0		0		0	2,848,970
6										
7	0		0		0		0		0	43,518
8										
9	0		0		0		0		0	72,829
10										
11	0		0		0		0		0	372,725
12										
13	0		0		0		0		0	150,891
14			2006			2007				
15	\$0		\$0		\$0		\$0		\$0	\$3,488,933
16										
17										
18										
19										
20										

Benzene Health Research Consortium
Irons Field Expenses 1Q05 Financial Report

	A	B	C	D	E
1	IRONS T&E (X8106)	2001	2002		
2	Cost Centers	4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.
3					
4	Payments				
5	Disbursed		\$145,763	\$393,723	\$0
6	Airfare & related expenses				
7	Budgeted		\$1,280	\$103,624	\$55,343
8	Actual expense		\$1,606	\$75,179	\$27,359
9	CurrentVariance		(\$326)	\$28,445	\$27,984
10	Cumm Variance		(\$326)	\$28,119	\$56,103
11	Apartment / hotel & related expenses				
12	Budgeted		\$1,280	\$103,624	\$55,343
13	Actual expense		\$1,024	\$89,717	\$45,291
14	CurrentVariance		\$256	\$13,907	\$10,052
15	Cumm Variance		\$256	\$14,163	\$24,216
16	Other expenses e.g. taxi, limo, misc.				
17	Budgeted		\$640	\$51,812	\$27,672
18	Actual expense		\$528	\$30,653	\$16,926
19	CurrentVariance		\$112	\$21,159	\$10,746
20	Cumm Variance		\$112	\$21,272	\$32,017
21	TOTALS	2001	2002		
22	Budgeted		\$3,200	\$259,080	\$138,359
23	Actual expense		\$3,157	\$195,549	\$89,577
24	CurrentVariance		\$43	\$63,511	\$48,782
25	Cumm Variance		\$43	\$63,554	\$112,336
26	CUMULATIVE TOTALS	2001	2002		
27	Budgeted		\$3,200	\$262,280	\$400,619
28	Expense		\$3,157	\$198,708	\$288,283
29	Variance		\$43	\$63,554	\$112,336
30	Blue: future cumulative variance has no meaning until Expense entered.	"Actual expense" is from quarterly expense reports, and does not reflect contract prepayments			
31					
32		Amt paid to Irons to date:		\$788,486	numbers as of 12/31/04
33		Amt Irons has spent:		\$761,442	
34	LT 2/14/05	Amt. In Irons bank acct:		\$27,044	
35	BJ 4/05/05				
36					
37					
38					
39					
40					
41					

Benzene Health Research Consortium
Irons Field Expenses 1Q05 Financial Report

	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1																	
2	2003	2004				2005				2006				2007			
3	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
4																	
5	\$0	\$0	\$189,320	\$0	\$59,680	\$131,000	\$0	\$131,000	\$0	\$131,000	\$0	\$131,000	\$0	\$104,714	\$0	\$0	\$0
6	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200
7	\$74,850	\$18,124	\$32,651	\$14,144	\$29,290	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	(\$52,650)	\$4,076	(\$10,451)	\$8,056	(\$7,090)	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200
9	\$6,046	\$10,122	(\$329)	\$7,728	\$637	\$22,837	\$45,037	\$67,237	\$89,437	\$111,637	\$133,837	\$156,037	\$178,237	\$200,437	\$222,637	\$244,837	\$267,037
10																	
11	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205
12	\$81,131	\$20,041	\$55,100	\$26,225	\$15,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	(\$58,926)	\$2,164	(\$32,895)	(\$4,020)	\$7,005	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205
14	(\$26,239)	(\$26,075)	(\$58,970)	(\$62,990)	(\$55,985)	(\$33,780)	(\$11,575)	\$10,630	\$32,835	\$55,040	\$77,245	\$99,450	\$121,655	\$143,860	\$166,065	\$188,270	\$210,475
15																	
16	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102
17	\$13,625	\$5,780	\$7,658	\$9,021	\$15,937	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	(\$2,522)	\$5,323	\$3,445	\$2,082	(\$4,834)	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102
19	\$76,735	\$82,058	\$85,503	\$87,585	\$82,751	\$83,854	\$104,957	\$116,060	\$127,163	\$138,266	\$149,369	\$160,471	\$171,573	\$182,675	\$193,777	\$204,879	\$215,981
20	2003	2004				2005				2006				2007			
21	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507
22	\$169,606	\$43,945	\$95,409	\$49,390	\$60,427	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	(\$114,098)	\$11,563	(\$39,901)	\$6,118	(\$4,919)	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507
24	\$13,035	\$24,598	(\$15,303)	(\$9,185)	(\$14,104)	\$41,404	\$96,912	\$152,420	\$207,928	\$263,436	\$318,944	\$374,451	\$429,958	\$485,465	\$540,972	\$596,479	\$651,986
25																	
26	2003	2004				2005				2006				2007			
27	\$525,306	\$580,814	\$636,322	\$691,830	\$747,338	\$802,846	\$858,354	\$913,862	\$969,370	\$1,024,878	\$1,080,386	\$1,135,893	\$1,191,400	\$1,246,907	\$1,302,414	\$1,357,921	\$1,413,428
28	\$512,270	\$556,215	\$601,624	\$701,014	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442	\$761,442
29	\$13,035	\$24,598	(\$15,303)	(\$9,185)	(\$14,104)	\$41,404	\$96,912	\$152,420	\$207,928	\$263,436	\$318,944	\$374,451	\$429,958	\$485,465	\$540,972	\$596,479	\$651,986
30	4Q03 ADJUSTMENT - 2001/2002 expense underrecorded; +\$114,289 adjustment																
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41	7																

DRAFT

Benzene Health Research Consortium
Irons Field Expenses 1Q05 Financial Report

	W
1	TOTALS
2	
3	
4	\$1,417,200
5	
6	\$565,319
7	\$298,282
8	\$178,237
9	\$267,037
10	
11	\$565,404
12	\$354,929
13	\$121,655
14	\$210,475
15	
16	\$282,705
17	\$108,231
18	\$171,573
19	\$174,474
20	
21	\$1,413,428
22	\$761,442
23	\$429,958
24	\$651,986
25	
26	\$1,413,428
27	\$761,442
28	\$651,986
29	
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Benzene Health Research Consortium
AHS 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K
1	AHS (X8107)	2001	2002			2003					
2	Cost Centers	4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.
3	Labor										
4	Budgeted	\$84,025	\$290,013	\$157,756	\$78,878	\$78,878	\$72,090	\$72,090	\$72,090	\$72,090	\$84,217
5	Actual expense	\$134,134	\$394,505	\$124,124	\$137,280	\$73,690	\$0	\$149,980	\$92,201	\$162,216	\$70,316
6	Current Variance	(\$50,109)	(\$104,482)	\$33,632	(\$58,402)	\$5,188	\$72,090	(\$77,890)	(\$20,111)	(\$90,126)	\$13,901
7	Cumm Variance	(\$50,109)	(\$154,601)	(\$120,970)	(\$179,372)	(\$174,184)	(\$102,094)	(\$179,984)	(\$200,094)	(\$290,220)	(\$276,319)
8	Travel & expenses										
9	Budgeted	\$0	\$140,000	\$57,000	\$28,500	\$28,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500
10	Actual expense	\$2,118	\$39,458	\$16,541	\$12,109	\$16,413	\$0	\$18,534	\$12,522	\$2,564	\$0
11	Current Variance	(\$2,118)	\$100,542	\$40,459	\$16,391	\$12,087	\$25,500	\$6,966	\$12,978	\$22,936	\$25,500
12	Cumm Variance	(\$2,118)	\$98,424	\$138,883	\$165,274	\$167,361	\$192,861	\$199,827	\$212,805	\$235,741	\$261,241
13	Other direct expenses										
14	Budgeted	\$0	\$5,500	\$1,500	\$750	\$750	\$750	\$750	\$750	\$750	\$750
15	Actual expense	\$77	\$1,443	\$0	\$0	\$0	\$0	\$109	\$785	\$211	\$0
16	Current Variance	(\$77)	\$4,057	\$1,500	\$750	\$750	\$750	\$641	(\$35)	\$539	\$750
17	Cumm Variance	(\$77)	\$3,980	\$5,480	\$6,230	\$6,980	\$7,730	\$8,371	\$8,336	\$8,875	\$9,625
18	TOTALS	2001	2002			2003			2004		
19	Budgeted	\$84,025	\$435,513	\$216,256	\$108,128	\$108,128	\$98,340	\$98,340	\$98,340	\$98,340	\$110,467
20	Actual expense	\$136,329	\$435,406	\$140,665	\$149,389	\$90,103	\$0	\$168,623	\$105,608	\$164,991	\$70,316
21	Current Variance	(\$52,304)	\$107	\$75,591	(\$41,261)	\$18,025	\$98,340	(\$70,283)	(\$7,168)	(\$66,651)	\$40,151
22	Cumm Variance	(\$52,304)	(\$52,197)	\$23,394	(\$17,868)	\$157	\$98,497	\$28,215	\$21,047	(\$45,604)	(\$5,454)
23	CUMULATIVE TOTALS	2001	2002			2003			2004		
24	Budgeted	\$84,025	\$519,538	\$735,794	\$843,921	\$952,049	\$1,050,389	\$1,148,730	\$1,247,070	\$1,345,410	\$1,455,877
25	Expense	\$136,329	\$571,735	\$712,400	\$861,789	\$951,892	\$951,892	\$1,120,515	\$1,226,023	\$1,391,014	\$1,461,330
26	Variance	(\$52,304)	(\$52,197)	\$23,394	(\$17,868)	\$157	\$98,497	\$28,215	\$21,047	(\$45,604)	(\$5,454)
27	Blue: future cumulative variance has no meaning until Expense entered.					4Q03 Adjustment: expense reduced by \$52,634; transferred to contingency since these were pre-consortia expenses					
28											
29											
30	LT 10/19/04										DRAFT
31	BJ 4/05/05										

Benzene Health Research Consortium
AHS 1Q05 Financial Report

	L	M	N	O	P	Q	R	S	T	U	V	W
1	2005			2006				2007				TOTALS
2	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3												
4	\$84,217	\$84,217	\$84,217	\$76,746	\$76,746	\$76,746	\$76,746	\$10,033	\$0	\$0	\$0	\$1,631,795
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,338,446
6	\$84,217	\$84,217	\$84,217	\$76,746	\$76,746	\$76,746	\$76,746	\$10,033	\$0	\$0	\$0	\$0
7	(\$192,103)	(\$107,886)	(\$23,669)	\$53,077	\$129,823	\$206,570	\$283,316	\$293,349	\$293,349	\$293,349	\$293,349	\$293,349
8												
9	\$25,500	\$25,500	\$25,500	\$35,000	\$35,000	\$35,000	\$35,000	\$32,000	\$0	\$0	\$0	\$630,000
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120,259
11	\$25,500	\$25,500	\$25,500	\$35,000	\$35,000	\$35,000	\$35,000	\$32,000	\$0	\$0	\$0	\$0
12	\$286,741	\$312,241	\$337,741	\$372,741	\$407,741	\$442,741	\$477,741	\$509,741	\$509,741	\$509,741	\$509,741	\$509,741
13												
14	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$3,800	\$0	\$0	\$0	\$21,300
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,625
16	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$3,800	\$0	\$0	\$0	\$0
17	\$10,375	\$11,125	\$11,875	\$12,625	\$13,375	\$14,125	\$14,875	\$18,675	\$18,675	\$18,675	\$18,675	\$18,675
18	2005			2006				2007				
19	\$110,467	\$110,467	\$110,467	\$112,496	\$112,496	\$112,496	\$112,496	\$45,833	\$0	\$0	\$0	\$2,283,095
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,461,330
21	\$110,467	\$110,467	\$110,467	\$112,496	\$112,496	\$112,496	\$112,496	\$45,833	\$0	\$0	\$0	\$0
22	\$105,013	\$215,480	\$325,947	\$438,443	\$550,939	\$663,435	\$775,932	\$821,765	\$821,765	\$821,765	\$821,765	\$821,765
23	2005			2006				2007				
24	\$1,586,344	\$1,676,810	\$1,787,277	\$1,898,773	\$2,012,270	\$2,124,766	\$2,237,262	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095
25	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330	\$1,461,330
26	\$105,013	\$215,480	\$325,947	\$438,443	\$550,939	\$663,435	\$775,932	\$821,765	\$821,765	\$821,765	\$821,765	\$821,765
27												
28												
29												
30												
31												

Benzene Health Research Consortium
Fudan 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S		
1	FUDAN (X8108)	2001	2002	2003		2004				2005				2006							
2	Cost Centers			1Q/2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05	1Q06	2Q06	3Q06	4Q06	1Q07		
3	Labor (salary + benefits)																				
4	Budgeted	\$9,620	\$8,775	\$4,388	\$2,194	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548		
5	Actual expense	\$0	\$8,774	\$6,492	\$0	\$0	\$0	\$14,385	\$0	\$46,409	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
6	Current Variance	\$9,620	\$1	(\$2,105)	\$2,194	\$1,548	\$1,548	(\$12,837)	\$1,548	(\$44,861)	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548		
7	Cumm Variance	\$9,620	\$9,621	\$7,516	\$9,709	\$11,257	\$12,805	(\$32)	\$1,516	(\$43,345)	(\$41,797)	(\$40,249)	(\$38,701)	(\$37,153)	(\$35,605)	(\$34,057)	(\$32,509)	(\$30,961)	(\$29,413)		
8	Expenses																				
9	Budgeted	\$17,600	\$28,400	\$14,200	\$7,100	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645		
10	Actual expense	\$0	\$4,870	\$0	\$8,851	\$1,168	\$0	\$9,750	\$0	\$10,983	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
11	Current Variance	\$17,600	\$23,530	\$14,200	(\$1,751)	\$3,477	\$4,645	(\$5,105)	\$4,645	(\$6,338)	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645		
12	Cumm Variance	\$17,600	\$41,130	\$55,330	\$53,579	\$57,056	\$61,701	\$56,596	\$61,241	\$54,903	\$59,548	\$64,193	\$68,838	\$73,483	\$78,128	\$82,773	\$87,418	\$92,063	\$96,708		
13	Overhead (15%)																				
14	Budgeted	\$4,083	\$5,576	\$2,788	\$1,394	\$1,095	\$1,095	\$1,095	\$1,095	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094		
15	Actual expense	\$0	\$1,825	\$0	\$0	\$0	\$0	\$3,620	\$0	\$6,961	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
16	Current Variance	\$4,083	\$3,751	\$2,788	\$1,394	\$1,095	\$1,095	(\$2,525)	\$1,095	(\$5,867)	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094		
17	Cumm Variance	\$4,083	\$7,834	\$10,622	\$12,016	\$13,111	\$14,208	\$11,681	\$12,776	\$6,908	\$8,003	\$9,097	\$10,191	\$11,285	\$12,379	\$13,473	\$14,567	\$15,661	\$16,755		
18	TOTALS	2001	2002	2003		2004				2005				2006							
19	Budgeted	\$31,303	\$42,751	\$21,376	\$10,688	\$7,288	\$7,288	\$7,288	\$7,288	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287		
20	Actual expense	\$0	\$15,470	\$6,492	\$8,851	\$1,168	\$0	\$27,755	\$0	\$64,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
21	Current Variance	\$31,303	\$27,281	\$14,883	\$1,837	\$6,120	\$7,288	(\$20,467)	\$7,288	(\$57,067)	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287		
22	Cumm Variance	\$31,303	\$58,584	\$73,467	\$75,305	\$81,425	\$88,713	\$68,246	\$75,534	\$18,467	\$25,754	\$33,041	\$40,328	\$47,615	\$54,902	\$62,189	\$69,476	\$76,763	\$84,050		
23	CUMULATIVE TOTALS	2001	2002	2003		2004				2005				2006							
24	Budgeted	\$31,303	\$74,054	\$95,430	\$106,117	\$113,405	\$120,693	\$127,981	\$135,269	\$142,556	\$149,843	\$157,130	\$164,417	\$171,704	\$178,991	\$186,278	\$193,565	\$200,852	\$208,139		
25	Expense	\$0	\$15,470	\$21,962	\$30,813	\$31,981	\$31,981	\$59,736	\$59,736	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090	\$124,090		
26	Variance	\$31,303	\$58,584	\$73,467	\$75,305	\$81,425	\$88,713	\$68,246	\$75,534	\$18,467	\$25,754	\$33,041	\$40,328	\$47,615	\$54,902	\$62,189	\$69,476	\$76,763	\$84,050		
27	Blue: future cumulative variance has no meaning until Expense entered.																				
28															Note: budget is in 2001 \$.						
29	LT 10/20/04																				
30	BJ 4/05/05																				

DRAFT

Benzene Health Research Consortium
Fudan 1Q05 Financial Report

	T	U	V	W
1	2007			TOTALS
2	2Q07	3Q07	4Q07	
3				
4	\$1,548	\$1,548	\$1,548	\$51,292
5	\$0	\$0	\$0	\$76,061
6	\$1,548	\$1,548	\$1,548	\$1,548
7	(\$27,865)	(\$26,317)	(\$24,769)	(\$24,769)
8				
9	\$4,645	\$4,645	\$4,645	\$146,265
10	\$0	\$0	\$0	\$35,622
11	\$4,645	\$4,645	\$4,645	\$4,645
12	\$101,353	\$105,998	\$110,643	\$110,643
13				
14	\$1,094	\$1,094	\$1,094	\$32,443
15	\$0	\$0	\$0	\$12,406
16	\$1,094	\$1,094	\$1,094	\$1,094
17	\$17,849	\$18,943	\$20,037	\$20,037
18	2007			
19	\$7,287	\$7,287	\$7,287	\$230,000
20	\$0	\$0	\$0	\$124,090
21	\$7,287	\$7,287	\$7,287	\$7,287
22	\$91,337	\$98,624	\$105,911	\$105,911
23	2007			
24	\$215,426	\$222,713	\$230,000	\$230,000
25	\$124,090	\$124,090	\$124,090	\$124,090
26	\$91,337	\$98,624	\$105,911	\$105,911
27				
28				
29				
30				

[illegible]

**Benzene Health Research Consortium
Communications 1Q05 Financial Report**

	A	B	C	D	E
	COMMUNICATIONS	2001	2002		2003
	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.
3	APCO				
4	Budgeted	\$57,600	\$230,400	\$120,000	\$60,000
5	Actual expense	\$0	\$232,229	\$14,483	\$7,351
6	CurrentVariance	\$57,600	(\$1,829)	\$105,517	\$52,649
7	Cumm Variance	\$57,600	\$55,771	\$161,288	\$213,937
8	Travel				
9	Budgeted	\$1,800	\$7,200	\$3,750	\$1,875
10	Actual expense	\$0	\$7,091	\$0	\$526
11	CurrentVariance	\$1,800	\$109	\$3,750	\$1,349
12	Cumm Variance	\$1,800	\$1,909	\$5,659	\$7,008
13	Other				
14	Budgeted	\$600	\$2,400	\$1,250	\$625
15	Actual expense	\$0	\$1,417	\$80	\$0
16	CurrentVariance	\$600	\$983	\$1,170	\$625
17	Cumm Variance	\$600	\$1,583	\$2,753	\$3,378
18					
19	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00
20	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00
21	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00
22	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00
23					
24	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00
25	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00
26	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00
27	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00
28					
29	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00
30	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00
31	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00
32	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00
33					
34	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00
35	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00
36	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00
37	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00
38	TOTALS	2001	2002		2003
39	Budgeted	\$60,000	\$240,000	\$125,000	\$62,500
40	Actual expense	\$0	\$240,738	\$14,564	\$7,877
41	CurrentVariance	\$60,000	(\$738)	\$110,436	\$54,623
42	Cumm Variance	\$60,000	\$59,262	\$169,699	\$224,322
43	CUMULATIVE TOTALS	2001	2002		2003
44	Budgeted	\$60,000	\$300,000	\$425,000	\$487,500
45	Expense	\$0	\$240,738	\$255,301	\$263,178
46	Variance	\$60,000	\$59,262	\$169,699	\$224,322
47	- Telecommunications, Consulting Services, Duplicating/Copies Internal, Postage, Couriers, Telephone, Meals, Lexis Nexis Searches				
48	Blue: future cumulative variance has no meaning until Expense entered.				
49	- Budget adjustment reflects budget reduction from \$1MM to \$550k				
50					
51	LT 1/28/05	*budget adjustment to lower program budget from \$550K to \$300K, as approved by OC on			
52	RT 1/21/05				

**Benzene Health Research Consortium
Communications 1Q05 Financial Report**

	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	2004				2005				2006				2007				TOTALS	
2	4th Qtr. <	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.*	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr. <	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3																		
4	(\$187,396)	\$14,401	\$14,400	\$14,400	(\$39,906)													\$283,899
5	\$26,541	\$0	\$790	\$1,235	\$1,270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$283,899
6	(\$213,937)	\$14,401	\$13,610	\$13,165	(\$41,176)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)
7	(\$0)	\$14,401	\$28,011	\$41,176	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
8																		
9	(\$5,876)	\$450	\$450	\$450	(\$1,350)													\$8,749
10	\$1,132	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,749
11	(\$7,008)	\$450	\$450	\$450	(\$1,350)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	\$0	\$450	\$900	\$1,350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13																		
14	(\$3,364)	\$150	\$150	\$150	(\$448)				\$1,946				\$1,946				\$1,946	\$7,352
15	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,513
16	(\$3,379)	\$150	\$150	\$150	(\$448)	\$0	\$0	\$0	\$1,946				\$1,946	\$0	\$0	\$0	\$1,946	\$5,839
17	(\$2)	\$148	\$298	\$448	\$0	\$0	\$0	\$0	\$1,947	\$1,947	\$1,947	\$1,947	\$3,893	\$3,893	\$3,893	\$3,893	\$5,839	\$5,839
18																		
19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
23																		
24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
28																		
29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
33																		
34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
38																		
39	(\$196,636)	\$15,001	\$15,000	\$15,000	(\$41,704)	\$0	\$0	\$0	\$1,946	\$0	\$0	\$0	\$1,946	\$0	\$0	\$0	\$1,946	\$300,000
40	\$27,688	\$0	\$790	\$1,235	\$1,270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$294,161
41	(\$224,324)	\$15,001	\$14,210	\$13,765	(\$42,974)	\$0	\$0	\$0	\$1,946	\$0	\$0	\$0	\$1,946	\$0	\$0	\$0	\$1,946	\$3,893
42	(\$2)	\$14,999	\$29,209	\$42,974	\$0	\$0	\$0	\$0	\$1,946	\$1,946	\$1,946	\$1,946	\$3,893	\$3,893	\$3,893	\$3,893	\$5,839	\$5,839
43																		
44	\$290,864	\$305,865	\$320,865	\$335,865	\$294,161	\$294,161	\$294,161	\$294,161	\$296,107	\$296,107	\$296,107	\$296,107	\$298,054	\$298,054	\$298,054	\$298,054	\$300,000	\$300,000
45	\$290,866	\$290,866	\$291,656	\$292,891	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161	\$294,161
46	(\$2)	\$14,999	\$29,209	\$42,974	\$0	\$0	\$0	\$0	\$1,946	\$1,946	\$1,946	\$1,946	\$3,893	\$3,893	\$3,893	\$3,893	\$5,839	\$5,839
47																		
48																		
49																		
50																		
51																		
52																		

DRAFT

Benzene Health Research Consortium
Legal 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	LEGAL	2001	2002	2003		2004				2005				2006				2007				
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.*	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	Step toe & Johnson																					
4	Budgeted	\$30,000	\$120,000	\$62,500	\$31,250	(\$210,542)	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175
5	Actual expense	\$0	\$13,565	\$1,728	\$0	\$17,915	\$365	\$2,995	\$1,870	\$26,092	\$4,827	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Current/Variance	\$30,000	\$106,435	\$60,772	\$31,250	(\$228,457)	\$3,810	\$1,180	\$2,305	(\$21,918)	(\$653)	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175
7	Cumm Variance	\$30,000	\$136,435	\$197,207	\$228,457	\$0	\$3,810	\$4,990	\$7,294	(\$14,623)	(\$15,276)	(\$11,101)	(\$6,927)	(\$2,752)	\$1,422	\$5,597	\$9,771	\$13,946	\$18,120	\$22,295	\$26,469	\$30,644
8	CUMULATIVE TOTALS	2001	2002	2003		2004				2005				2006				2007				
9	Budgeted	\$30,000	\$150,000	\$212,500	\$243,750	\$33,208	\$37,383	\$41,557	\$45,732	\$49,906	\$54,081	\$58,255	\$62,430	\$66,604	\$70,779	\$74,953	\$79,128	\$83,302	\$87,477	\$91,651	\$95,826	\$100,000
10	Expense	\$0	\$13,565	\$15,293	\$15,293	\$33,208	\$33,572	\$36,567	\$38,437	\$64,529	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356	\$69,356
11	Variance	\$30,000	\$136,435	\$197,207	\$228,457	\$0	\$3,810	\$4,990	\$7,294	(\$14,623)	(\$15,276)	(\$11,101)	(\$6,927)	(\$2,752)	\$1,422	\$5,597	\$9,771	\$13,946	\$18,120	\$22,295	\$26,469	\$30,644
12	Blue: future cumulative variance has no meaning until Expense entered.																					
13																						
14	* budget adjustment to lower program budget from \$500K to \$100K, as approved by OC on 11/11/03																					
15																						
16	LT 7/19/04																					
17	RT 04/13/05																					

DRAFT

Benzene Health Research Consortium
Legal 1Q05 Financial Report

	W
1	TOTALS
2	
3	
4	\$100,000
5	\$69,356
6	\$30,644
7	\$30,644
8	
9	\$100,000
10	\$69,356
11	\$30,644
12	
13	
14	
15	
16	
17	

**Benzene Health Research Consortium
QA-QC 1Q05 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	QA-QC	2001	2002	2003	2003	2004	2004	2004	2005	2005	2006	2006	2006	2007	2007	2007	2007	2007	2007	2007	2007	2007
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr**	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	Contractor																					
4	Budgeted	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	(\$18,750)	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167
5	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	CurrentVariance	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	(\$18,750)	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167
7	Cumm Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$0	\$4,167	\$8,333	\$12,500	\$16,667	\$20,833	\$25,000	\$29,167	\$33,333	\$37,500	\$41,667	\$45,833	\$50,000
8	Travel																					
9	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17																						
18	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22																						
23	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27																						
28	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32																						
33	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	TOTALS	2001	2002	2003	2003	2004	2004	2004	2005	2005	2006	2006	2006	2007	2007	2007	2007	2007	2007	2007	2007	2007
38	Budgeted	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	(\$18,750)	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167
39	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40	CurrentVariance	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	(\$18,750)	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167	\$4,167
41	Cumm Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$0	\$4,167	\$8,333	\$12,500	\$16,667	\$20,833	\$25,000	\$29,167	\$33,333	\$37,500	\$41,667	\$45,833	\$50,000
42	CUMULATIVE TOTALS	2001	2002	2003	2003	2004	2004	2004	2005	2005	2006	2006	2006	2007	2007	2007	2007	2007	2007	2007	2007	2007
43	Budgeted	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$0	\$4,167	\$8,333	\$12,500	\$16,667	\$20,833	\$25,000	\$29,167	\$33,333	\$37,500	\$41,667	\$45,833	\$50,000
44	Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$0	\$4,167	\$8,333	\$12,500	\$16,667	\$20,833	\$25,000	\$29,167	\$33,333	\$37,500	\$41,667	\$45,833	\$50,000
46	Blue: future cumulative variance has no meaning until Expense entered.																					
47																						
48	* budget adjustment to lower program budget from \$225K to \$100K, as approved by OC on 11/11/03	** budget adjustment to lower program budget from \$100K to \$50K, as approved by OC on 12/16/04																				
49																						
50	LT 1/28/05																					

Benzene Health Research Consortium
QA-QC 1Q05 Financial Report

	W
1	TOTALS
2	
3	
4	\$50,000
5	\$0
6	\$50,000
7	\$50,000
8	
9	\$0
10	\$0
11	\$0
12	\$0
13	\$0
14	\$0
15	\$0
16	\$0
17	
18	\$0
19	\$0
20	\$0
21	\$0
22	
23	\$0
24	\$0
25	\$0
26	\$0
27	
28	\$0
29	\$0
30	\$0
31	\$0
32	
33	\$0
34	\$0
35	\$0
36	\$0
37	
38	\$50,000
39	\$0
40	\$50,000
41	\$50,000
42	
43	\$50,000
44	\$0
45	\$50,000
46	
47	
48	
49	
50	

Benzene Health Research Consortium
API Administration 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	API	2000	2001	2002	2003			2004				2005				
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.
3	Salaries															
4	Budgeted	\$0	\$26,045	\$104,180	\$54,260	\$27,130	\$22,250	\$22,000	\$22,000	\$22,000	\$20,000	\$12,000	\$10,000	\$14,000	\$10,000	\$12,000
5	Actual expense	\$9,039	\$18,749	\$89,669	\$57,297	\$32,217	\$32,800	\$26,745	\$25,357	\$21,839	\$21,813	\$16,492	\$0	\$0	\$0	\$0
6	CurrentVariance	(\$9,039)	\$6,552	\$14,511	(\$3,037)	(\$5,087)	(\$10,550)	(\$4,745)	(\$3,357)	\$161	(\$1,813)	(\$4,492)	\$10,000	\$14,000	\$10,000	\$12,000
7	Cumm Variance	(\$9,039)	(\$2,487)	\$12,024	\$8,987	\$3,900	(\$6,650)	(\$11,395)	(\$14,752)	(\$14,591)	(\$16,404)	(\$20,896)	(\$10,896)	\$3,104	\$13,104	\$25,104
8	Employee Benefits															
9	Budgeted	\$0	\$3,256	\$13,022	\$ 6,783	\$ 3,391	\$2,750	\$ 3,000	\$ 3,000	\$ 3,000	\$2,900	\$1,100	\$1,000	\$1,400	\$1,000	\$1,100
10	Actual expense	\$774	\$2,329	\$11,209	\$7,163	\$4,027	\$4,100	\$3,343	\$3,169	\$2,730	\$2,727	\$2,061	\$0	\$0	\$0	\$0
11	CurrentVariance	(\$774)	\$927	\$1,813	(\$380)	\$ (636)	(\$1,350)	(\$1,350)	\$ (169)	\$270	\$173	(\$961)	\$1,000	\$1,400	\$1,000	\$1,100
12	Cumm Variance	(\$774)	\$153	\$1,966	\$1,586	\$950	(\$400)	(\$743)	(\$912)	(\$642)	(\$469)	(\$1,430)	(\$430)	\$970	\$1,970	\$3,070
13	Travel															
14	Budgeted	\$0	\$3,256	\$13,022	\$ 6,783	\$3,391	\$7,500	\$1,000	\$1,000	\$3,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$1,000
15	Actual expense	\$342	\$1,487	\$8,004	\$308	\$1,683	\$7,313	\$0	\$1,152	\$2,027	\$1,710	\$716	\$0	\$0	\$0	\$0
16	CurrentVariance	(\$342)	\$1,769	\$5,018	\$6,475	\$1,708	\$187	\$1,000	(\$152)	\$973	(\$710)	\$284	\$1,000	\$5,000	\$1,000	\$1,000
17	Cumm Variance	(\$342)	\$1,427	\$6,445	\$12,920	\$14,628	\$14,815	\$15,815	\$15,663	\$16,636	\$15,926	\$16,210	\$17,210	\$22,210	\$23,210	\$24,210
18	Other Operating Expenses (& mtgs)															
19	Budgeted	\$0	\$651	\$2,604	\$1,359	\$679	\$16,184	\$2,000	\$2,000	\$6,000	\$2,000	\$430	\$430	\$5,000	\$400	\$400
20	Actual expense	\$1,673	\$9,196	\$16,270	\$13,292	\$72	\$26,276	\$3,600	\$3,808	(\$3,223)	\$11,398	\$2,010	\$0	\$0	\$0	\$0
21	CurrentVariance	(\$1,673)	(\$8,545)	(\$13,666)	(\$11,933)	\$607	(\$10,092)	(\$1,600)	(\$1,808)	\$9,223	(\$9,398)	(\$1,580)	\$430	\$5,000	\$400	\$400
22	Cumm Variance	(\$1,673)	(\$10,218)	(\$23,884)	(\$35,817)	(\$35,210)	(\$45,302)	(\$46,902)	(\$48,710)	(\$39,487)	(\$48,885)	(\$50,465)	(\$50,035)	(\$45,035)	(\$44,635)	(\$44,235)
23	API Recovered Overhead															
24	Budgeted	\$0	\$8,465	\$33,858	\$ 17,635	\$ 8,817	\$6,250	\$ 6,200	\$ 6,200	\$ 6,200	\$ 6,000	\$3,500	\$3,000	\$4,000	\$3,000	\$3,500
25	Actual expense	\$5,752	\$4,687	\$25,110	\$16,043	\$9,021	\$9,185	\$7,489	\$7,099	\$6,115	\$6,107	\$4,618	\$0	\$0	\$0	\$0
26	CurrentVariance	(\$5,752)	\$3,778	\$8,748	\$1,592	(\$204)	(\$2,935)	(\$1,289)	(\$899)	\$85	(\$107)	(\$1,118)	\$3,000	\$4,000	\$3,000	\$3,500
27	Cumm Variance	(\$5,752)	(\$1,974)	\$6,774	\$8,366	\$8,162	\$5,227	\$3,938	\$3,039	\$3,124	\$3,017	\$1,899	\$4,899	\$8,899	\$11,899	\$15,399
28	API Allocated Costs															
29	Budgeted	\$0	\$16,929	\$67,717	\$35,269	\$17,635	\$15,250	\$28,000	\$28,000	\$28,000	\$28,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
30	Actual expense	\$0	\$13,886	\$58,794	\$34,213	\$19,478	\$17,231	\$28,000	\$27,999	\$28,000	\$27,999	\$6,999	\$0	\$0	\$0	\$0
31	CurrentVariance	\$0	\$3,043	\$8,923	\$1,056	(\$1,843)	(\$1,981)	\$0	\$1	\$0	\$1	\$3,001	\$10,000	\$10,000	\$10,000	\$10,000
32	Cumm Variance	\$0	\$3,043	\$11,966	\$13,022	\$11,179	\$9,198	\$9,198	\$9,199	\$9,199	\$9,200	\$12,201	\$22,201	\$32,201	\$42,201	\$52,201
33	Supported Expense															
34	Budgeted	\$0	\$6,511	\$26,045	\$ 13,565	\$ 6,783	\$5,750	\$ 4,500	\$ 4,500	\$4,500	\$4,500	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
35	Actual expense	\$7,020	\$1,712	\$0	\$17,000	\$8,499	(\$8,250)	(\$4,023)	\$4,500	\$4,500	\$4,500	\$4,500	\$0	\$0	\$0	\$0
36	CurrentVariance	(\$7,020)	\$4,799	\$26,045	(\$3,435)	(\$1,716)	\$14,000	\$8,523	\$0	\$0	\$0	(\$3,250)	\$1,250	\$1,250	\$1,250	\$1,250
37	Cumm Variance	(\$7,020)	(\$2,221)	\$23,824	\$20,389	\$18,673	\$32,673	\$41,196	\$41,196	\$41,196	\$41,196	\$37,946	\$39,196	\$40,446	\$41,696	\$42,946
38	TOTALS	2000	2001	2002	2003			2004				2005				
39	Budgeted	\$0	\$65,113	\$260,448	\$135,654	\$67,826	\$75,934	\$66,700	\$66,700	\$72,700	\$64,400	\$29,280	\$26,680	\$40,650	\$26,650	\$29,250
40	Actual expense	\$24,600	\$52,046	\$209,056	\$145,316	\$74,997	\$88,655	\$65,154	\$73,084	\$61,988	\$76,254	\$37,396	\$0	\$0	\$0	\$0
41	CurrentVariance	(\$24,600)	\$13,067	\$51,392	(\$9,662)	(\$7,171)	(\$12,721)	\$1,546	(\$6,384)	\$10,712	(\$11,854)	(\$8,116)	\$26,680	\$40,650	\$26,650	\$29,250
42	Cumm Variance	(\$24,600)	(\$11,533)	\$39,859	\$30,197	\$23,026	\$10,305	\$11,851	\$5,467	\$16,179	\$4,325	(\$3,791)	\$22,889	\$63,539	\$90,189	\$119,439
43	CUMULATIVE TOTALS	2000	2001	2002	2003			2004				2005				
44	Budgeted	\$0	\$65,113	\$325,561	\$461,215	\$529,041	\$604,975	\$671,675	\$738,375	\$811,075	\$875,475	\$904,755	\$931,435	\$972,085	\$998,735	\$1,027,985
45	Expense	\$24,600	\$76,646	\$285,702	\$431,018	\$506,015	\$594,670	\$659,824	\$732,908	\$794,896	\$871,150	\$908,546	\$908,546	\$908,546	\$908,546	\$908,546
46	Variance	(\$24,600)	(\$11,533)	\$39,859	\$30,197	\$23,026	\$10,305	\$11,851	\$5,467	\$16,179	\$4,325	(\$3,791)	\$22,889	\$63,539	\$90,189	\$119,439
47																
48	LT 4/24/05															
49	RT 04/13/05															
50																
51	Assumptions:															
52	Year 5, 6,7 Less than 1 FTE allocated, based allocated cost on 1/2 FTE															
53	T&E and Other \$15K for Annual Meeting (3rd Quarter)															
54	Supported Expense, drop off left some funds for consultant															

DRAFT

Benzene Health Research Consortium
API Administration 1Q05 Financial Report

	Q	R	S	T	U	V	W	X
1	2006			2007				TOTALS
2	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3								
4	\$10,000	\$14,000	\$10,000	\$12,000	\$10,000	\$14,000	\$10,000	\$411,865
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$342,978
6	\$10,000	\$14,000	\$10,000	\$12,000	\$10,000	\$14,000	\$10,000	\$68,143
7	\$35,104	\$49,104	\$59,104	\$71,104	\$81,104	\$95,104	\$105,104	\$68,887
8								
9	\$1,000	\$1,400	\$1,000	\$1,100	\$1,000	\$1,400	\$1,000	\$54,602
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,858
11	\$1,000	\$1,400	\$1,000	\$1,100	\$1,000	\$1,400	\$1,000	\$11,744
12	\$4,070	\$5,470	\$6,470	\$7,570	\$8,570	\$9,970	\$10,970	\$11,744
13								
14	\$1,000	\$5,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$63,952
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,400
16	\$1,000	\$5,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$59,552
17	\$25,210	\$30,210	\$31,210	\$32,210	\$33,210	\$38,210	\$39,210	\$39,552
18								
19	\$400	\$5,000	\$400	\$400	\$400	\$5,000	\$400	\$52,137
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82,699
21	\$400	\$5,000	\$400	\$400	\$400	\$5,000	\$400	(\$30,562)
22	(\$43,835)	(\$38,835)	(\$38,435)	(\$38,035)	(\$37,635)	(\$32,635)	(\$32,235)	(\$30,562)
23								
24	\$3,000	\$4,000	\$3,000	\$3,500	\$3,000	\$4,000	\$3,000	\$140,125
25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95,474
26	\$3,000	\$4,000	\$3,000	\$3,500	\$3,000	\$4,000	\$3,000	\$44,651
27	\$18,399	\$22,399	\$25,399	\$28,899	\$31,899	\$35,899	\$38,899	\$44,651
28								
29	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$384,800
30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$262,599
31	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$122,201
32	\$62,201	\$72,201	\$82,201	\$92,201	\$102,201	\$112,201	\$122,201	\$122,201
33								
34	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$91,654
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,938
36	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$58,716
37	\$44,196	\$45,446	\$46,696	\$47,946	\$49,196	\$50,446	\$51,696	\$58,716
38	2006			2007				
39	\$26,650	\$40,650	\$26,650	\$29,250	\$26,650	\$40,650	\$26,650	\$1,245,135
40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$893,946
41	\$26,650	\$40,650	\$26,650	\$29,250	\$26,650	\$40,650	\$26,650	\$361,189
42	\$146,089	\$186,739	\$213,389	\$242,639	\$269,289	\$309,939	\$336,589	\$361,189
43	2006			2007				
44	\$1,054,635	\$1,095,285	\$1,121,935	#####	\$1,177,835	\$1,218,485	\$1,245,135	\$1,245,135
45	\$908,546	\$908,546	\$908,546	\$908,546	\$908,546	\$908,546	\$908,546	\$908,546
46	\$146,089	\$186,739	\$213,389	\$242,639	\$269,289	\$309,939	\$336,589	\$336,589
47								
48								
49								
50								
51								
52								
53								
54								

Benzene Health Research Consortium
Contingency Fund 1Q05 Financial Report

	A	B	C	D	E	F	G
1							
2		2000	2001	2002			2003
3	Contingency Funds	1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.
4							
5	Budgeted	\$0	\$0	\$0	\$0	\$0	\$290,272
6	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
7	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$290,272
8	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$290,272
9	Reallocations from UCHSC						
10	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
11	Actual expense	\$0	\$0	\$0	\$0	\$0	\$48,839
12	CurrentVariance	\$0	\$0	\$0	\$0	\$0	(\$48,839)
13	Cumm Variance	\$0	\$0	\$0	\$0	\$0	(\$48,839)
14	Reallocations from AHS						
15	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
16	Actual expense	\$0	\$0	\$0	\$0	\$0	\$52,634
17	CurrentVariance	\$0	\$0	\$0	\$0	\$0	(\$52,634)
18	Cumm Variance	\$0	\$0	\$0	\$0	\$0	(\$52,634)
19	Histopath Review - J. Bennett						
20	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
21	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
22	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
23	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
24	Krieger						
25	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
26	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
27	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
28	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
29	Non-contract						
30	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
31	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
32	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
33	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
34							
35	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
36	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
37	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
38	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
39	TOTALS	2000	2001	2002			2003
40	Budgeted	\$0.00	\$0.00	0	0	0	290,272
41	Actual expense	\$0.00	\$0.00	0	0	0	101,473
42	CurrentVariance	\$0.00	\$0.00	0	0	0	188,799
43	Cumm Variance	\$0.00	\$0.00	0	0	0	188,799
44	CUMULATIVE TOTALS	2000	2001	2,002			2,003
45	Budgeted	\$0.00	\$0.00	0	0	0	290,272
46	Expense	\$0.00	\$0.00	0	0	0	101,473
47	Variance	\$0.00	\$0.00	0	0	0	188,799
48							
49							
50	LT 4/10/05						
51							4Q03 Adjustment - per Technical Committee, transfer \$48,839 from UCHSC expense detail to contingency because expenses not part of UCHSC gr
52							
53							
54							
55							AHS - expense transfer of \$52,634 from AHS expense detail to contingency because expenses not part of AHS full study budget

Benzene Health Research Consortium
Contingency Fund 1Q05 Financial Report

	H	I	J	K	L	M	N	O	P	Q
1										
2	2004				2005					2006
3	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.
4										
5	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0		\$0	\$0
6	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
7	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
8	\$290,272	\$290,272	\$290,272	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272
9										
10	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
11	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
12	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
13	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)
14										
15	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
16	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
17	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
18	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)
19										
20	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
21	\$0	\$0	\$0	\$3,000	\$3,000	\$0		\$0	\$0	\$0
22	\$0	\$0	\$0	(\$3,000)	(\$3,000)	\$0		\$0	\$0	\$0
23	\$0	\$0	\$0	(\$3,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)
24										
25	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
26	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
27	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
28	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
29										
30	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
31	\$0	\$0	\$0	\$0	\$496	\$0		\$0	\$0	\$0
32	\$0	\$0	\$0	\$0	(\$496)	\$0		\$0	\$0	\$0
33	\$0	\$0	\$0	\$0	(\$496)	(\$496)	(\$496)	(\$496)	(\$496)	(\$496)
34										
35	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
36	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
37	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
38	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0
39	2004				2005					2006
40	0	0	0	300,000	0	0	0	0	0	0
41	0	0	0	3,000	3,496	0	0	0	0	0
42	0	0	0	297,000	-3,496	0	0	0	0	0
43	188,799	188,799	188,799	485,799	482,303	482,303	482,303	482,303	482,303	482,303
44	2,004				2,005					2,006
45	0	0	0	300,000	0	0	0	0	0	0
46	101,473	101,473	101,473	104,473	107,969	0	0	0	0	0
47	188,799	188,799	188,799	485,799	-107,969	0	0	0	0	0
48										
49					DRAFT					
50										
51	Grant budget:									
52	1. June 2001 \$25K grant to UCHSC; seed money exhausted (API & sponsor), expense not included in final grant cost estimate									
53	2. \$3600 IRB fees to U of CO (this will be a yearly fee, since IRB must review at least once per year)									
54	3. 2002 invoice (\$20,239) from EMBSI for final feasibility study work (very late billing to API)									
55										

Benzene Health Research Consortium
Contingency Fund 1Q05 Financial Report

	R	S	T	U	V	W	X
1							
2	06				2007		TOTALS
3	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
4							
5	\$0	\$0	\$0	\$0	\$0	\$0	\$590,272
6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272	\$590,272
9							
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	\$0	\$0	\$0	\$0	\$0	\$0	\$48,839
12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)
14							
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	\$0	\$0	\$0	\$0	\$0	\$0	\$52,634
17	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)
19							
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000
22	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)	(\$6,000)
24							
25	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29							
30	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	\$0	\$0	\$0	\$0	\$0	\$0	\$496
32	\$0	\$0	\$0	\$0	\$0	\$0	\$0
33	(\$496)	(\$496)	(\$496)	(\$496)	(\$496)	(\$496)	(\$496)
34							
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	06				2007		
40	0	0	0	0	0	0	590,272
41	0	0	0	0	0	0	107,969
42	0	0	0	0	0	0	0
43	482,303	482,303	482,303	482,303	482,303	482,303	482,303
44	06				2,007		
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48							
49							
50							
51							
52							
53							
54							
55							

Benzene Health Research Consortium
Income 1Q05 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		2000	2001	2002		2003			2004				2005				2006	
2		1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
3	INCOME																	
4	Sponsor Payments	\$60,000	\$2,105,509	\$8,355,629	\$448,024	\$0	\$ 4,259,965	\$1,485,875	\$ -			\$1,096,000						
5	API Interest	\$246	\$7,623	\$11,817	\$0	\$3,186	\$5,276	\$0	\$6,746	\$6,506	\$9,292							
6	UCHSC Interest	\$0	\$0	\$0	\$0	\$0	\$0	\$0										
7	TOTALS																	
8	Reporting Period	\$60,246	\$2,113,132	\$8,367,446	\$448,024	\$3,186	\$4,265,241	\$1,485,875	\$6,746	\$6,506	\$9,292	\$1,096,000	\$0	\$0	\$0	\$0	\$0	\$0
9	Cumulative	\$60,246	\$2,173,378	\$10,540,824	\$10,988,848	\$10,992,034	\$15,257,275	\$16,743,149	\$16,749,895	\$16,756,401	\$16,765,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693
10																		
11																		
12	projected income																	
13																		
14	LT 7/19/04																	
15	RT 04/05/05																	

DRAFT

Benzene Health Research Consortium
Income 1Q05 Financial Report

	S	T	U	V	W	X	
1			2007				TOTALS
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.		
3							
4						\$17,811,001	
5						\$50,692	
6						\$0	
7							
8	\$0	\$0	\$0	\$0	\$0	\$17,861,693	
9	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693	\$17,861,693		
10							
11							
12							
13							
14							
15							

**Benzene Health Research Consortium
Sponsor Invoice Detail 1Q05 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
		(Seed Money)	Inv. #	Date Paid	2001			2002 (1st - 2nd Qtr.)			2002 (3rd - 4th Qtr.)			2003			
	Company Name				22-Aug-01	Inv. #	Date Paid	9-Jan-02	Inv. #	Date Paid	27-Aug-02	Inv. #	Date Paid	23-Sep-03	Inv. #	Date Paid	TOTAL
3	BP	\$15,000	522922	8-Nov-00	\$768,941	529301	4-Oct-01	\$806,441	532263	22-Feb-02	\$1,344,069	535033	11-Oct-02	\$1,431,041.00	544951	4-Dec-03	
4		\$22,500	528453	19-Jun-01							\$112,008		2-Oct-02				\$4,500,000
5	ChevronTexaco	\$15,000	522923	7-Nov-00	\$522,627	529302	9-Oct-01	\$537,627	532244	22-Feb-02	\$896,046	535034	5-Nov-02	\$1,028,700.00	544953	19-Nov-03	\$3,000,000
6	ConocoPhillips	\$15,000	522924	31-Oct-00	\$246,314	529309	17-Sep-01	\$268,814	532245	16-Jan-02	\$448,023	535035	26-Sep-02	\$514,349.00	544954	27-Oct-03	\$1,500,000
7		\$7,500	528574	31-Jul-01													
8	ExxonMobil	\$0	523540					\$1,612,882	532246		\$1,344,069	535036	13-Sep-02	\$1,543,049.00	544956		\$4,500,000
9								\$806,441		23-Jan-02				\$771,524.50		3-Oct-03	
10								\$806,441		11-Feb-02				\$771,524.50		22-Mar-04	
11	Shell	\$15,000	523054	24-Oct-00	\$507,627	529305	25-Sep-01	\$537,627	532247	7-Feb-02	\$896,046	535037		\$1,028,700.00	544958		
12		\$15,000	528333	15-May-01							\$448,023		25-Sep-02	\$514,350		28 Oct 03	\$3,000,000
13											\$448,023		10-Feb-03	\$514,350		14 Jan 04	
14	Marathon	\$15,000	528541	14-Aug-01								Marathon Ashland		\$150,000	548582	20-Jan-04	\$215,000
15												Marathon Oil		\$50,000	548581	3-Feb-04	
16	Total	\$120,000			\$2,045,509			\$5,376,273			\$5,936,307			\$8,317,588.00			\$16,715,000
17																	
18	LT 7/19/04															DRAFT	

Benzene Health Research Consortium
Sponsor Payment Detail 1Q05 Financial Report

	A	B	C	D	E	F
1	ID	CompanyName	PaymentDate	PaymentAmount	TOTALS	
2	19982	Shell Chemical	10/24/2000	\$ 15,000.00		
3	20086	ConocoPhillips	10/31/2000	\$ 15,000.00		
4	20972	ChevronTexaco	11/7/2000	\$ 15,000.00	yr 2000	
5	20239	BP International Limited	11/8/2000	\$ 15,000.00	\$ 60,000.00	
6	28285	Shell Chemical	5/15/2001	\$ 15,000.00		
7	28929	BP International Ltd	6/19/2001	\$ 22,500.00		
8	29861	ConocoPhillips	7/31/2001	\$ 7,500.00		
9	30179	Marathon Ashland Petroleum, LLC.	8/14/2001	\$ 15,000.00		
10	30853	ConocoPhillips	9/17/2001	\$ 246,314.00		
11	31000	Shell Chemical	9/25/2001	\$ 507,627.00		
12	31141	BP p.l.c.	10/4/2001	\$ 768,941.00	yr 2001	
13	31179	ChevronTexaco	10/9/2001	\$ 522,627.00	\$ 2,105,509.00	
14	33206	ConocoPhillips	1/16/2002	\$ 268,814.00		
15	34334	ExxonMobil Research and Engineering	1/23/2002	\$ 806,441.00		
16	34823	Shell Chemical	2/7/2002	\$ 537,627.00		
17	34889	ExxonMobil Research and Engineering	2/11/2002	\$ 806,441.00		
18	35200	ChevronTexaco	2/22/2002	\$ 537,627.00		
19	35207	BP p.l.c.	2/22/2002	\$ 806,441.00		
20	38625	ExxonMobil	9/13/2002	\$ 1,344,069.00		
21	38748	Shell Chemical	9/25/2002	\$ 448,023.00		
22	38779	ConocoPhillips	9/26/2002	\$ 448,023.00		
23	39101	BP p.l.c.	10/2/2002	\$ 112,008.00		
24	39214	BP p.l.c.	10/11/2002	\$ 1,344,069.00	yr 2002	
25	39493	ChevronTexaco	11/5/2002	\$ 896,046.00	\$ 8,355,629.00	
26	42934	American Petroleum Institute	1/17/2003	\$ 1.09	1+2Q03	
27	44094	Shell Chemical	2/10/2003	\$ 448,023.00	\$ 448,024.09	
28	51153	ExxonMobil	10/3/2003	\$ 771,524.50		3Q03
29	51869	ConocoPhillips	10/27/2003	\$ 514,349.00		\$ -
30	51891	Shell Chemical	10/28/2003	\$ 514,350.00		
31	52332	ChevronTexaco	11/19/2003	\$ 1,028,700.00	4Q03	
32	52633	BP p.l.c.	12/4/2003	\$ 1,431,041.00	\$ 4,259,964.50	
33	54618	Marathon Ashland Petroleum, LLC.	1/20/2004	\$ 150,000.00		
34	54472	Shell Chemical	1/13/2004	\$ 514,350.00		
35	55187	Marathon Oil Company	2/3/2004	\$ 50,000.00	1Q04	
36	57362	ExxonMobil	3/22/2004	\$ 771,524.50	\$ 1,485,874.50	
37	560056	ChevronTexaco Energy		\$ -		
38	560057	ConocoPhillips	3/18/2005	\$ 548,000.00		
39	560058	ExxonMobil	2/17/2005	\$ 548,000.00	1Q05	
40	560059	Shell Chemical		\$ -	\$ 1,096,000.00	
41				\$ 16,715,001.09	\$ 17,811,001.09	
42			(note - does not include interest income)			
43	LT 7/19/04					
44	RT 4/13/05				DRAFT	

	A	B	C	D	E
1	Company	Date Paid	Amount		
2	American Petroleum Institute	1/17/2003	\$ 1.09	(I am trying to get this \$1.09 removed from the books)	
3	BP International Limited	11/8/2000	\$ 15,000.00		
4	BP International Ltd	6/19/2001	\$ 22,500.00		
5	BP p.l.c.	10/4/2001	\$ 768,941.00		
6	BP p.l.c.	2/22/2002	\$ 806,441.00		
7	BP p.l.c.	10/2/2002	\$ 112,008.00		
8	BP p.l.c.	10/11/2002	\$ 1,344,069.00	BP Total	
9	BP p.l.c.	12/4/2003	\$ 1,431,041.00	\$ 4,500,000.00	
10	ChevronTexaco	11/7/2000	\$ 15,000.00		
11	ChevronTexaco	10/9/2001	\$ 522,627.00		
12	ChevronTexaco	2/22/2002	\$ 537,627.00		
13	ChevronTexaco	11/5/2002	\$ 896,046.00	ChevronTexaco Total	
14	ChevronTexaco	11/19/2003	\$ 1,028,700.00	\$ 3,000,000.00	
15	ConocoPhillips	10/31/2000	\$ 15,000.00		
16	ConocoPhillips	7/31/2001	\$ 7,500.00		
17	ConocoPhillips	9/17/2001	\$ 246,314.00		
18	ConocoPhillips	1/16/2002	\$ 268,814.00		
19	ConocoPhillips	9/26/2002	\$ 448,023.00		
20	ConocoPhillips	10/27/2003	\$ 514,349.00	ConocoPhillips Total	
21	ConocoPhillips	3/18/2005	\$ 548,000.00	\$ 2,048,000.00	
22	ExxonMobil Research and Engineering	1/23/2002	\$ 806,441.00		
23	ExxonMobil Research and Engineering	2/11/2002	\$ 806,441.00		
24	ExxonMobil	9/13/2002	\$ 1,344,069.00		
25	ExxonMobil	10/3/2003	\$ 771,524.50		
26	ExxonMobil	3/22/2004	\$ 771,524.50	ExxonMobil Total	
27	ExxonMobil	2/17/2005	\$ 548,000.00	\$ 5,048,000.00	
28	Marathon Ashland Petroleum, LLC.	8/14/2001	\$ 15,000.00		
29	Marathon Ashland Petroleum, LLC.	1/20/2004	\$ 150,000.00	Marathon Ashland Total	
30	Marathon Oil Company	2/3/2004	\$ 50,000.00	\$ 215,000.00	
31	Shell Chemical	10/24/2000	\$ 15,000.00		
32	Shell Chemical	5/15/2001	\$ 15,000.00		
33	Shell Chemical	9/25/2001	\$ 507,627.00		
34	Shell Chemical	2/7/2002	\$ 537,627.00		
35	Shell Chemical	9/25/2002	\$ 448,023.00		
36	Shell Chemical	2/10/2003	\$ 448,023.00		
37	Shell Chemical	10/28/2003	\$ 514,350.00	Shell Chemical Total	
38	Shell Chemical	1/13/2004	\$ 514,350.00	\$ 3,000,000.00	
39			\$ 17,811,001.09		
40	LT 7/19/04			DRAFT	
41	RT 4/13/05				

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Thursday, April 28, 2005 6:44 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>; Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>; Benzene consort comm (E-mail) <benzconsort-cc@listserve.api.org>
Cc: mona.y.kowalczyk@exxonmobil.com
Subject: FW: IF ASKED Shanghai Health Study
Attach: IF ASKED about the Shanghai Health Study.doc

To ALL BHRC Members:

Attached is an **IF ASKED** statement about the Shanghai Health Study developed by Communications in response to a query from AP in Houston. We used our "main Messages" Communications Cmtte paper to derive the text. It has had review from appropriate internal API staff and also by Patsy Clegg, Shell Chemical, chairman of the Benzene Health Research Oversight Committee, Lynn Russo, ExxonMobil, Chair of the BHRC communications committee, and Mark Fitzsimmons, outside counsel for the consortium.

As a reminder, if asked statements are used to talk from with reporters only.
Please let me know if you have questions.
Lorraine

<<IF ASKED about the Shanghai Health Study.doc>>

IF ASKED about the Shanghai Health Study on the health effects of benzene:

The Shanghai Health Study is being conducted to gain a better understanding of the relationship between benzene exposure and potential cancer risk to protect industry workers and customers. The study, begun in 2001, is currently scheduled for completion in 2007. The investigators conducting the study have full control over the study design, research, and all interpretations and conclusions that may be drawn from the data when the study is completed. Upon completion, the findings of the study will be peer-reviewed and published by the researchers in scientific journals.

The Shanghai Health Study is a project of Fudan University Medical Center in Shanghai, the University of Colorado Health Sciences Center and Applied Health Sciences, an independent research firm in San Francisco. This independent study is funded by a consortium of petroleum and chemical companies, and the consortium is administered by API. The study was designed by independent epidemiological and toxicological investigators. The research protocols and the research itself are being overseen by scientific and ethics review panels composed of 14 world-renowned, independent experts in the field. The research protocols also have been approved by independent review boards at Fudan University, the University of Colorado and Applied Health Sciences.

#

April 28, 2005 slh (F)

IF ASKED FURTHER about the actual research:

Contact: Dr. Richard Irons at the University of Colorado

Phone: 303-315-7196

E-mail: richard.iron@UCHSC.edu.

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Thursday, April 28, 2005 12:41 PM (GMT)
To: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>; Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>
Subject: Just received UCHSC 2005 - 2007 budget APPROVAL

FYI - we are getting there!

-----Original Message-----

From: Richard.Irons@UCHSC.edu [mailto:Richard.Irons@UCHSC.edu]
Sent: Wednesday, April 27, 2005 11:06 PM
To: Lorraine Twerdok
Cc: Bruce Jarrot; Ann.Louden@UCHSC.edu
Subject: RE: UCHSC 2005 - 2007 budget summary

Dear Lorraine,

We have reviewed and reconciled the details of the revised UCHSC budget and find that it is acceptable in its present form.

Thank you all for your hard work on this.

On another note, the BIMDS manuscript has been reformatted and is in submission. We will inform you when it is in press.

Thanks again,

Richard

From: Lorraine Twerdok [mailto:Twerdokl@api.org]
Sent: Thu 4/21/2005 9:07 AM
To: Irons Richard
Cc: Bruce Jarrot; Loudon Ann
Subject: UCHSC 2005 - 2007 budget summary

<<UCHSC 2005 - 2007 budget summary - LT.xls>>

Dr. Irons -

Attached, for your review and approval, is a revised UCHSC budget for 2005-2007. This document has been prepared to support the grant amendment to increase the UCHSC grant

UCHSC subcontractor increased costs were added into the revised cost estimate provided in the January 2005 progress report to develop the overall revised UCHSC budget.

There are several worksheets included in the file:

Tab 1 - Summary of cost estimates and revised payment schedule. This sheet that starts with Jan 2005 costs and adds in subcontractor increases

Tab 2 - Revised program budget with total costs per UCHSC and subcontractors. Please review carefully, as the January estimate did not break out subcontractor costs.

Tab 3 - Program budget increases only

Tab 4 - UCHSC expense detail provided with January 2005 progress report (no subcontractor increases)

Tab 5 - EMBSI expense detail - please note addition of EA support for Yimei Zhou in 2006

Tab 6 - Fudan University Exposure Assessment cost increases. These figures were provided to API by R. Schnatter.

Please contact me via return email with your comments and approval. If this budget presentation requires discussion, I am in the office and available for a phone conference over the next week. I will let you select a time/date, if required, since you are currently in Shanghai.

One final question - has the manuscript on BIMD been submitted for publication yet? I have been informed that you have/will submit it to Nature.

Regards,
Lorraine

Lorraine E. Twerdok, Ph.D., DABT
Manager, Health Sciences
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

tel: 202-682-8344
email: twerdokl@api.org
fax: 202-682-8031

From: Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>
Sent: Friday, April 8, 2005 1:02 PM (GMT)
To: Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>
Subject: FW: BHRC-TC... New Documents for Review
Attach: Irons_BIMDS_Mar2005.pdf; Thoughts on Bn EA.doc

Shan:

Do you have thoughts on the Irons paper

Stuart Cagen

Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 **Fax:** 3325 **Other Tel:** +1 832 646 3987

Email: stuart.cagen@shell.com

Internet: <http://www.shell.com/chemicals>

"Business Success through HSSE Excellence"

-----Original Message-----

From: Bruce Jarnot [mailto:jarnotb@api.org]

Sent: Thursday, March 31, 2005 8:26 AM

To: benzconsort-tc@listserve.api.org

Subject: BHRC-TC... New Documents for Review

Benzene Health Research Consortium (BHRC) Technical Committee (TC) -

1) Courtesy of Michael Bird, attached is a copy (19-page pdf) of a recent draft manuscript from Richard Irons: **Benzene-Induced Myelodysplasia: New Insights from an Old Nemesis** by R.D. Irons, L. Lv, X. Ye, L. Bao, X.Q. Wang, J. Ryder, T.W. Armstrong, Y. Zhou, L. Miao, S.A. Gross and H. Fu.

2) Draft **Thoughts on Benzene Exposure Assessment** (3-page doc) from Gary Krieger's visit to Fudan University, 27 March 2005.

Best Regards - Bruce.

From: Bruce Jarnot <jarnotb@api.org>
Sent: Friday, January 28, 2005 8:19 PM (GMT)
To: Richard Irons (E-mail) <richard.iron@uchsc.edu>
Cc: benzconsort-tc@listserve.api.org; benzconsort-oc@listserve.api.org
Subject: SHS Tech Committee... Follow-up to Dec 13th Denver Mtgs
Attach: Irons Letter 28Jan05.doc

Dear Richard -

The Shanghai Health Study (SHS) Technical Committee would like to share the attached letter in response to the very successful series of meetings recently hosted by you and Dr. Krieger in Denver...

For Jennifer Galvin, SHS Technical Committee Chair,

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

SHANGHAI HEALTH STUDY

Jennifer Galvin, Ph.D.
Chair, SHS Technical Committee
Phone: 918-661-3865
Email: jennifer.b.galvin@conocophillips.com

C/O American Petroleum Institute
1220 L Street, NW
Washington, DC 20005-4070
Email: twerdokl@api.org

Date: 28 January 2005
From: Jennifer Galvin, Ph.D., for the Shanghai Health Study (SHS) Technical Committee
To: Dr. Richard Irons
Subject: 2004 Year-End Progress Report and Revised Expense Projections

Dear Richard:

Thanks for recently spending time with the Shanghai Health Study (SHS) Technical Committee. You and Dr. Krieger explained the current situation with the Shanghai Benzene Research program in a clear manner, particularly with regard to exposure assessment, and provided a much clearer idea of the planned path forward.

It would be useful to incorporate your thoughts on implementing the revised exposure assessment plan in your 2004 year-end Progress Report. While we recognize there are still uncertainties in this plan, we would appreciate sufficient detail to allow the Technical Committee to track progress, and also allow this information to be shared through the Progress Report with the SHS expert panels. For instance, we would appreciate a written description there of the envisaged Sector group exposure analysis and its relationship to the current exposure analysis strategy.

Regarding the program as a whole, the budget discussion was very informative and we would also ask you to describe this in detail in the upcoming year-end progress report. We would like you to provide detailed information on item 2) expense increases, and item 3) total expense projections by year using the categories that you currently report in your biannual progress reports (e.g., personnel, operating expenses, subcontracts, travel, equipment & indirect expenses). The "post-study analyses" costs should be included in this more detailed expense projection. We need this information for two reasons; (1) to present detailed rationale for a request for increased funding, and (2) to develop a payment schedule for the remainder of the study, should additional funds be secured. Please see the attachment to this letter, to aid you in developing this required information for the year-end report.

Cc: SHS Technical Committee
SHS Oversight Committee

Administrative support provided by The American Petroleum Institute
1220 L Street, Northwest
Washington, DC 20005-4070

SHELL-MCCLURG-052687

Attachment 1

Item 1 – Exposure Assessment

A written description of the Sector group exposure analysis and its relationship to the current exposure analysis strategy.

Item 2 – Additional funding expense projections by year

Please provide expense projections for the categories consistent with program progress report finance reports. If these categories should be modified (e.g. cost per case, including an explanation of which categories below it includes), please inform us.

- Personnel
- Operating Expenses
- Subcontracts
- Travel
- Equipment
- Indirect (overhead)

A verbal description of the rationale for increased funding requirement for subcontractors should also be provided. Any, more detailed, expense projections for subcontractors would assist and strengthen the request for funding.

Item 3 – Total expense projections by year

This is essential for development of a payment schedule, should additional funds be secured.

Please provide expense projections for the categories consistent with program progress report finance reports. If these categories should be modified (cost per case, including an explanation of included categories), please inform us.

- Personnel
- Operating Expenses
- Subcontracts
- Travel
- Equipment
- Indirect (overhead)

From: Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>
Sent: Friday, January 28, 2005 3:35 PM (GMT)
To: 'Lorraine Twerdok' <Twerdokl@api.org>
Cc: Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>; Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Subject: RE: BHRC rosters

Lorraine:

Along with me, for Shell, Shan Tsai should be listed as a member of the technical committee (not as an alternate)

Please change

Thanks

Stuart

Stuart Cagen

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 Fax: 3325 Other Tel: +1 832 646 3987

Email: stuart.cagen@shell.com

Internet: <http://www.shell.com/chemicals>

-----Original Message-----

From: Lorraine Twerdok [mailto:Twerdokl@api.org]

Sent: Thursday, January 27, 2005 11:43 AM

To: Benzene consort comm (E-mail); Benzene consort tech (E-mail);

Benzene OC listserve (E-mail)

Subject: BHRC rosters

To BHRC committee members -

FYI - The attached file has all of the updated committee rosters

-----Original Message-----

From: Robin Tillery

Sent: Thursday, January 27, 2005 12:38 PM

To: Lorraine Twerdok

Subject: benzene

<<BenzeneCommittees.pdf>>

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, December 10, 2003 8:19 PM (GMT)
To: BenzConsort-OC@listserve.api.org; BenzConsort-TC@listserve.api.org; BenzConsort-CC@listserve.api.org
Subject: Shanghai inaugural ceremony a great success!

Patrick called earlier today to relate that the Shanghai Lab Inaugural event was a very great success, and that details will follow when he and Don return stateside...

Best Regards - Bruce.

From: Johnston, Michael D. <MIKE.D.Johnston@conocophillips.com>
Sent: Monday, November 24, 2003 4:08 PM (GMT)
To: Bruce Jarnot <jarnotb@api.org>; benzconsort-oc@listserve.api.org
Cc: benzconsort-tc@listserve.api.org; myron.c.harrison@exxonmobil.com;
lynn.b.russo@exxonmobil.com; mfitzsimmons@steptoe.com; Matt Todd
<ToddM@api.org>
Subject: RE: BHRC-OC... Path Forward Re: ERP Vacancy

Sounds like the right approach to me. Thanks, Bruce.

Mike Johnston

Phone: 281-293-4468

Mobile: 281-435-7182

Fax: 208-441-5451

Email: Mike.d.Johnston@ConocoPhillips.com

-----Original Message-----

From: Bruce Jarnot [mailto:jarnotb@api.org]

Sent: Monday, November 24, 2003 9:50 AM

To: benzconsort-oc@listserve.api.org

Cc: benzconsort-tc@listserve.api.org; myron.c.harrison@exxonmobil.com; lynn.b.russo@exxonmobil.com;
mfitzsimmons@steptoe.com; Matt Todd

Subject: BHRC-OC... Path Forward Re: ERP Vacancy

Importance: High

Benzene Health Research Consortium (BHRC) Oversight Committee -

There appears to be general consensus within the Oversight Committee on a path forward regarding the ERP, following Baruch Brody's resignation:

- 1) The ERP shall remain an independent and autonomous entity within the Shanghai Health Study;
- 2) A US-based ethicist should be identified and recruited to fill Baruch's vacancy.

Please advise if you have an alternate proposal or take exception to this plan; otherwise, this will be understood to be "adopted" by the Oversight Committee without need for a conference call.

Action Item - API will quickly assemble a list of candidate US-based ethicists for consideration by the Oversight Committee. I will begin by asking Dr. Brody and others for potential candidate names; for each, I will attempt to provide a brief biographical sketch from internet resources.

As a start, please forward any names of candidate ethicists that might come to mind... thank you!

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

From: myron.c.harrison@exxonmobil.com
Sent: Friday, November 21, 2003 9:09 PM (GMT)
To: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Cc: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; brian.e.doll@exxonmobil.com; Burnett, Don <burnetdm@bp.com at burnetdm@bp.com>; Bruce Jarnot <jarnotb@api.org>; lynn.b.russo@exxonmobil.com; mfitzsimmons@steptoe.com; michael.johnston@conocophillips.com; Beatty, Patrick (PatrickBeatty) <PatrickBeatty@chevrontexaco.com>; toddm@api.org
Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

Patty is right in my opinion.. One of the great strengths of our endeavor is the independent ethics review -- initial and ongoing.

Myron C. Harrison, M.D., M.P.H.

Senior Health Advisor, SH&E

Exxon Mobil Corporation

5959 Las Colinas Boulevard

Irving, TX, 75039-2298

phone: 972.444.1673 fax: 1633

myron.c.harrison@exxonmobil.com

"Clegg, Patsy M

SCC-CHSE-PC" To: "Beatty, Patrick (PatrickBeatty)"

<patsy.clegg@shell.co <PatrickBeatty@chevrontexaco.com>,

<mfitzsimmons@steptoe.com>,

m> <lynn.b.russo@exxonmobil.com>, "Bruce Jarnot" <jarnotb@api.org>,

<benzconsort-oc@listserve.api.org>, <benzconsort-tc@listserve.api.org>,

<toddm@api.org>, <brian.e.doll@exxonmobil.com>,

11/20/03 03:21 PM <myron.c.harrison@exxonmobil.com>, "Burnett, Don"

<IMCEACCMail-

burnetdm+40bp+2Ecom+20+20at+20burnetdm+40bp+2Ecom+20@SHELL.co

m>, <michael.johnston@conocophillips.com>

cc:

Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

I definitely support keeping the SRP and ERP as separate organizations. I

believe that we would definitely create a conflict of interest by merging

them. There serve 2 very distinct functions.

As far as resolution, I would vote for a quick resolution - either ballot

or conference call. There is a sense of urgency about finding a chair -

seems to me that one of the existing members would be appropriate - and

then finding an additional new US member. We have 3 protocol changes

proposed. The ethics review is as critical as SRP and IRB.

You may consider this email my vote for a separate SRP and ERP.

Regards,

Patsy

Patsy Clegg

Product Steward

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 Fax: 3325
Email: patsy.clegg@shell.com
Internet: <http://www.shell.com/chemicals>

-----Original Message-----

From: Beatty, Patrick (PatrickBeatty)
[mailto:PatrickBeatty@chevrontexaco.com]
Sent: Thursday, November 20, 2003 12:27 PM
To: mfitzsimmons@steptoe.com; lynn.b.russo@exxonmobil.com; Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org;
benzconsort-tc@listserve.api.org; toddm@api.org;
brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com
Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

My turn to weigh in. I agree that we should stick with our original structure. I also think that rather than debate the issue via e-mails that the Oversight Committee is the appropriate forum for discussion and a final decision. To that end I would like to request that the Oversight Committee be polled as to whether they wish to address this issue quickly or wait until the next scheduled conference call in December. (Don, Patsy, Lorraine take note.) The conference call should be advertised so that others can make their opinions known. Mark should be a mandatory participant in the discussion. Also, the members of the ERP should be apprised of the situation and their input solicited. There is a pragmatic question of a chairman for the Panel that will need to be addressed if we continue with the present structure.

Patrick

-----Original Message-----

From: mfitzsimmons@steptoe.com
[mailto:mfitzsimmons@steptoe.com]
Sent: Thursday, November 20, 2003 8:13 AM
To: 'lynn.b.russo@exxonmobil.com'; Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org;
benzconsort-tc@listserve.api.org; toddm@api.org;
brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com
Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

I tend to agree with Lynn. Like it or not there are going to be people out there who will want to misinterpret and criticize the study regardless, and I think it is important that "the integrity" of the effort be maintained. Perhaps Dr. Brody and or others would have thoughts on a replacement.

-----Original Message-----

From: lynn.b.russo@exxonmobil.com [mailto:lynn.b.russo@exxonmobil.com]
Sent: Thursday, November 20, 2003 11:05 AM
To: Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org;

benzconsort-tc@listserve.api.org; toddm@api.org;
brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com
Subject: Re: BHRC-TC... Recommendation to Combine SRP & ERP
External Panels

Bruce, While I'm not on the Technical Committee I receive their emails as the Communications Committee Chair. And from that perspective I strongly disagree with the proposal to combine the panels. I don't take exception to them meeting/working together, but feel quite strongly that we need to demonstrate a separate, independent ethics review capability. I would also prefer identifying a replacement for Baruch so we have 3 ethicists to consult.

The ERP was established to ensure independent ethics advice on the protocols and now on any suggested revisions/changes. For that purpose, we do need a separately constituted group. We do not want it to appear that the ethics advice is weighed with input from the science advisors to come to a recommendation.

The structure we have now which gives equal weight/voice to the ERP and SRP makes a very strong and good impression on external folks. I would also like to see Baruch replaced since the original concept was to include Europe, China and the US to reflect any different approaches reflected in their different cultural norms.

That said, the way the SRP and ERP worked at Asilomar is fine. For a routine annual review that has not raised any ethics issue that worked well. But we do need to preserve the option for an ERP review, as spelled out in the original agreement on the consortium structure.

Lynn

Lynn B. Russo

ExxonMobil

Downstream Public Affairs

Phone: 703-846-2500

Fax: 703-846-4169

Email: lynn.b.russo@exxonmobil.com

"Bruce Jarnot"

<jarnotb@api.org> To:

<benzconsort-tc@listserve.api.org>

cc:

<benzconsort-oc@listserve.api.org>

Subject:

BHRC-TC... Recommendation to Combine SRP & ERP External Panels

11/20/03 09:43 AM

Benzene Health Research Consortium (BHRC) Technical Committee -

Baruch Brody today resigned from the Shanghai Health Study,

stating "i have been very ill and have developed esrd

[end-stage renal disease] and that precludes extensive out of

town work. good luck on the remainder of the project - bab".

Now that the work load on both ethics and scientific review

panels has moderated, I would like to recommend that these external panels be integrated under the leadership of Jerry Rice. Both groups worked extremely well together in this fashion at the August Asilomar meeting, and "topic lead" can still be deferred to members having that specific expertise - as currently done with issues regarding biostatistics, molecular markers, industrial hygiene and other specialties within the science review panel.

If so desired by the Consortium as a reasonable solution to Baruch's resignation, Jerry Rice has agreed serve in this combined capacity (suspecting there might have been a chronic debilitating health issue with Baruch, I tested this possibility with Jerry in late October).

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

From: Johnston, Michael D. <MIKE.D.Johnston@conocophillips.com>
Sent: Thursday, November 20, 2003 10:47 PM (GMT)
To: Bruce Jarnot <jarnotb@api.org>; benzconsort-tc@listserve.api.org; benzconsort-oc@listserve.api.org
Subject: RE: BHRC-OC & -TC... copy of "regrets" note sent to Baruch

I support remaining with the original structure.

I fully support the ERP and SRP meeting and working together to share learnings, developing a shared understanding, and to leverage knowledge and information as appropriate. I think we need the separate, independent ethics review capability provided by the original structure. It was conceived to allow for equal weight/voice for the ERP and SRP with the background that this approach would be most favorably viewed by external communities of interest.

This will require identification of a replacement for Baruch so we have 3 ethicists on the panel.

I also think that the Oversight Committee is the appropriate forum for discussion and a final decision, but don't think it has to wait until mid-Dec. for a vote. I vote keeping them separate.

Mike Johnston

Phone: 281-293-4468

Mobile: 281-435-7182

Fax: 208-441-5451

Email: Mike.d.Johnston@ConocoPhillips.com

-----Original Message-----

From: Bruce Jarnot [mailto:jarnotb@api.org]
Sent: Thursday, November 20, 2003 9:21 AM
To: benzconsort-tc@listserve.api.org; benzconsort-oc@listserve.api.org
Subject: FYI: BHRC-OC & -TC... copy of "regrets" note sent to Baruch
Importance: Low

Benzene Health Research Consortium (BHRC) Technical and Oversight Committees -

FYI, attached is a copy of my note to Baruch Brody in response to his resignation, sent earlier this morning...

Regards - Bruce.

-----Original Message-----

From: Bruce Jarnot
Sent: Thursday, November 20, 2003 9:15 AM
To: 'Baruch Brody'
Cc: Lorraine Twerdok; Paula Podhasky; Matt Todd; Jerry Rice (E-mail)
Subject: RE: Resignation from the Shanghai Ethics Review Panel

Dear Baruch -

It is indeed regretful that you must resign from the Ethics Review Panel, as your leadership and contributions to the Shanghai Health Study will be truly missed...

I am, however, grateful that you lead and actively participated in the most active phase of ethics review at the front-end of this study. Now that the work load on both ethics and scientific review panels has moderated, I would like to recommend that these external panels be integrated under the leadership of Jerry Rice. Both groups worked extremely well together in this fashion at the August Asilomar meeting, and "topic lead" can be deferred to

members having that specific expertise - as currently done with issues regarding biostatistics, molecular markers, industrial hygiene and other specialties within the science review panel.

With best wishes for your well being, and with best regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

-----Original Message-----

From: Baruch Brody [<mailto:bbrody@bcm.tmc.edu>]
Sent: Wednesday, November 19, 2003 10:14 PM
To: Bruce Jarnot
Subject: Re: Shanghai Health Study - Annual Meeting... 17-20 August 2004

i regret to have to inform you that i must resign from this project. i have been very ill and have developed esrd and that precludes extensive out of town work. good luck on the remainder of the project
bab

At 04:00 PM 11/18/2003 -0500, you wrote:

Shanghai Health Study (SHS) Investigators & Scientific/Ethics Review Panels (SRP & ERP) -

Please mark your calendars -- 17-20 August, 2004 -- SHS Annual Conference

Responding to an overwhelmingly favorable response from attendees this past August, the Benzene Health Research Consortium (BHRC) has again reserved the Asilomar Conference Center in Monterey, California for our 2004 annual conference.

This email "early alert" confirms only meeting dates and location... an itinerary and meeting agenda are not yet available, and formal invitation letters will be sent in due course.

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Baruch Brody, Ph.D.
Leon Jaworski Professor of Biomedical Ethics
Distinguished Service Professor
Baylor College of Medicine
Andrew Mellon Professor of Humanities
Department of Philosophy
Rice University

713-798-3503 (phone)
713-798-5678 (fax)
bbrody@bcm.tmc.edu

From: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Sent: Thursday, November 20, 2003 9:21 PM (GMT)
To: Beatty, Patrick (PatrickBeatty) <PatrickBeatty@chevrontexaco.com>; mfitzsimmons@steptoe.com; lynn.b.russo@exxonmobil.com; Bruce Jarnot <jarnotb@api.org>; benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; toddm@api.org; brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com; Burnett, Don <burnetdm@bp.com at burnetdm@bp.com>; michael.johnston@conocophillips.com
Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

I definitely support keeping the SRP and ERP as separate organizations. I believe that we would definitely create a conflict of interest by merging them. There serve 2 very distinct functions.

As far as resolution, I would vote for a quick resolution - either ballot or conference call. There is a sense of urgency about finding a chair - seems to me that one of the existing members would be appropriate - and then finding an additional new US member. We have 3 protocol changes proposed. The ethics review is as critical as SRP and IRB.

You may consider this email my vote for a separate SRP and ERP.

Regards,
Patsy

Patsy Clegg
Product Steward
Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 **Fax:** 3325
Email: patsy.clegg@shell.com
Internet: <http://www.shell.com/chemicals>

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To: mfitzsimmons@steptoe.com; lynn.b.russo@exxonmobil.com; Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; toddm@api.org; brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com
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Sent: Thursday, November 20, 2003 8:13 AM
To: 'lynn.b.russo@exxonmobil.com'; Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; toddm@api.org;
brian.e.doll@exxonmobil.com; myron.c.harrison@exxonmobil.com
Subject: RE: BHRC-TC... Recommendation to Combine SRP & ERP External Panel s

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Sent: Thursday, November 20, 2003 11:05 AM
To: Bruce Jarnot
Cc: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; toddm@api.org;
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Lynn

Lynn B. Russo
ExxonMobil
Downstream Public Affairs
Phone: 703-846-2500
Fax: 703-846-4169
Email: lynn.b.russo@exxonmobil.com

"Bruce Jarnot"

<jarnotb@api.org>

To: <benzconsort-tc@listserve.api.org>

cc: <benzconsort-oc@listserve.api.org>

Subject: BHRC-TC... Recommendation to Combine SRP & ERP External Panels

11/20/03 09:43 AM

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Now that the work load on both ethics and scientific review panels has moderated, I would like to recommend that these external panels be integrated under the leadership of Jerry Rice. Both groups worked extremely well together in this fashion at the August Asilomar meeting, and "topic lead" can still be deferred to members having that specific expertise - as currently done with issues regarding biostatistics, molecular markers, industrial hygiene and other specialties within the science review panel.

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Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
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Regulatory and Scientific Affairs
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Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

From: Bruce Jarnot <jarnotb@api.org>
Sent: Friday, October 31, 2003 7:14 PM (GMT)
To: BenzConsort-TC@listserve.api.org
Cc: Matt Todd <ToddM@api.org>
Subject: Shanghai Technical Committee: Conf Call... Fri Nov 07, 2:00pm EST
Attach: Minutes BHRC-TC API 10 29 2003.doc

Who: Benzene Health Research Consortium - Technical Committee (BHRC-TC)

What: **BHRC-TC Conference Call**

When: **Friday Nov 07, 2:00-3:00pm EST**

Where: 1-866-448-6756 (domestic - toll free)
+763-315-6900 (international)
participant code: 6828319#

Why: Stuart and Patrick requested that the TC meet by conference call to review:

- 1) 3Q03 financial package (Lorraine will email separately)
- 2) proposal to OC... \$800K from ME Study to provide:
 - \$500K for contingency fund
 - \$300K for urinary SPMA (ME) and HIV (CC) testing

Attch: draft minutes from the Oct 29 BHRC-TC meeting

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

October 31, 2003

API, Washington DC

Participants

- | | |
|-----------------------------------|---------------------------|
| 1. Patrick Beatty (ChevronTexaco) | 5. Stuart Cagen (Shell) |
| 2. Michael Bird (ExxonMobil) | 6. Patsy Clegg (Shell) |
| 3. Steve Bose (ExxonMobil) | 7. Bruce Jarnot (API) |
| 4. Bill Broddle (ConocoPhillips) | 8. Lorraine Twerdok (API) |

General Items

- Antitrust review and introductions were completed
- Shanghai-based “administrative manager” or “deputy director” for Richard Irons was discussed, as a means of reducing Consortium risk
- Otto Wong’s request to reallocate travel funds, within AHS approved budget, was approved
 - **Action** – Bruce: communicate approval to Otto (completed 10/30/03)
- **Action** – Patrick/Stuart/Bruce: resume monthly “progress checks” with Pis

Contingency Fund

- Stuart proposed adding a \$500K “contingency fund” line item to the budget
- Discussion supported both inclusion of a contingency fund, and the proposed size of the fund

Endorsement of SRP Recommendations

- Two research enhancements proposed by the SRP were scientifically endorsed:
 - Addition of urinary SPMA analyses in ME study (link to earlier studies)
 - Addition of HIV testing of controls in CC study (a risk factor for NHL)
- Funding proposed by reducing # of ME workers from 2000 to 1000
 - Michael reported possible funding interest by a EU biomarkers group; will consider at April 2004 meeting

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

Overall Budget Reconciliation

- Investigator feedback suggested ME study could best withstand a “cut” in research budget; CC & DP studies should not be reduced
- Stuart recommended that an \$800K reduction in ME budget be proposed
 - \$500K toward contingency fund
 - \$300K to fund added HIV testing (CC) & SPMA analyses (ME)
 - **Action** – Patrick to review proposal w/ Dr. Irons before next OC meeting
 - Proposal then goes to OC & SRP for review, endorsement

Outreach to GOs & NGOs

- Stuart & Patrick suggested that the Consortium begin working “outreach” to both governmental (GOs) and non-governmental organizations (NGOs), such as the EPA and Leukemia Society
- Short term goal: active GO & NGO participation on the Technical Committee
 - EPA’s Bob Sonowanee (sp?) had indicated desire to participate
- Longer term goal: possible GO & NGO financial support for the study
- A meeting at API was suggested to introduce GOs/NGOs to the study, scheduled about ~6 months before the 2004 annual meeting (February?)

Financial Operations

- API’s CFO, Brenda Hargett, provided an overview of API financial operations, accounting practices and systems
- Recent development of system output, tailored to feed into the Consortium quarterly financial package, was highlighted
- Brenda indicated that API could contract an independent accounting review (or audit) of the University of Colorado grant, if desired
 - Cost estimated between \$5-\$25K, depending on scope and output

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

3Q03 Financial Package

- Lorraine reviewed the format and content of the newly-developed quarterly financial report package, including rationale for budget projections
- **Action** – Lorraine to recap Brenda's "API Financial Ops" presentation, and "Qtrly Financial Report" format & content review at Nov 10/11 BHRC-OC mtg
- **Action Items** were identified and requested to upgrade the report:
 - **Add** new sheet detailing "UCHSC Subcontracts" for 4Q03
 - **Add** "comment flags" to identify source of data (e.g., budget values)
 - **Change** cash flow statement to "actual" API expenses
 - **Add** line item for "Contingency Fund", when authorized
 - **Footnote** USHSC and T&E pages, indicating that "actual expenses" are from Progress Reports, and do not reflect grant payments
 - **Add** "disbursement" or "grant payment" rows to Summary page
 - **Move** "Cash Flow Statement" to front section of book
 - **Delete** "names" column from Sponsor Payments sheet
 - **Shrink** width of columns to compress size of spreadsheets
 - **Print** 2-sided, on legal size paper

Next Meeting

- A conference call was scheduled for Friday, Nov 7th at 2:00pm EST

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

From: Bruce Jarnot <jarnotb@api.org>
Sent: Tuesday, October 21, 2003 4:11 PM (GMT)
To: benzconsort-oc@listserve.api.org
Cc: benzconsort-tc@listserve.api.org
Subject: BHRC-OC... Shanghai contracts for review
Attach: APCO Amendment.pdf; APCO Contract.pdf; AHS Contract.pdf; Albertini SRP Contract.pdf; Irons T&E Contract.pdf; UCHSC Grant.pdf

Benzene Health Research Consortium - Oversight Committee (BHRC-OC)

For those attending the Oct 28 Contract Review, attached are pdf copies of several contracts (with any modifications) for your preview:

- AHS - Contract, Addendum & Extension
- Albertini - Contract & Extension (a sample SRP/ERP contract)
- APCO - Contract & Addendum (2 files)
- Irons T&E - Contract & Extension
- UCHSC - Grant & Addendum

The Communication committee plans to review the APCO contract during their Thursday conference call, and the completed APCO contract review form will be circulated once it's available.

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Dr. Richard Irons
Health Sciences Center
University of Colorado
Campus Box C238
4200 East Ninth Avenue
Denver, CO 80262

API Reference No. 01-0000-4788

Dear Dr. Irons:

The American Petroleum Institute ("API"), as the representative for the Benzene Health Research Consortium, is pleased to provide a Grant totaling \$13,665,017.00 to fund the University of Colorado Health Sciences Center's ("UCHSC") five-year research study of lymphohematopoietic health risks from occupational exposure to benzene in the Peoples Republic of China. This Grant is being provided to accomplish the research as set forth in the most recent versions of the "Research Protocol and Criteria Document established by the investigators and approved by the review panels as specified in paragraph iv below and the budget approved by the Benzene Health Research Consortium for this program.

1. Grant monies will be disbursed to UCHSC according to the following schedule:

- 30% in Year One (payable in two installments)
- 25% in Year Two
- 15% in Year Three
- 15% in Year Four
- 15% in Year Five

subject to the following conditions:

- i. UCHSC acknowledges that the research study will be conducted consistent with the research proposal and budget developed by the Principal Investigator and the Benzene Health Research Consortium.
- ii. UCHSC will establish cooperative agreements with Fudan University in Shanghai, China; the Shanghai Municipal Center for Disease Control and Prevention; the Shanghai Municipal Institute for Public Health Supervision; and Exxon Mobil Biomedical Sciences in Annandale, N.J. (collectively known as "cooperative entities") to assist in performance of the research study.

- iii. It is recognized that payments made by UCHSC to the cooperative entities will be of a pass through nature and that UCHSC will not be responsible for the management of such contracts. It is also recognized that the agreements with Fudan University in Shanghai, the Shanghai Municipal Center for Disease Control and Prevention, and the Shanghai Municipal Institute for Public Health Supervision will not involve cost accounting of funds transferred as part of this Grant given the nature of those institutions and the reporting otherwise provided by the Principal Investigator pursuant to the research proposal and budget.
 - iv. UCHSC acknowledges that the protocols and conduct of the research during the life of the Grant are subject to annual review and approval by an independent scientific review panel as well as by an ethics review panel, both of which will be established by API. These panels shall be notified immediately when a change in protocol is proposed. No significant changes in protocol that would effect the scope of work will be exercised without approval by both the scientific review panel and ethics review panel.
 - v. API, or an agent or representative of API, will have access to, and may periodically review, the record of funds disbursed by UCHSC as part of the research study, including disbursements by UCHSC to the cooperative entities.
 - vi. Dr. Richard Irons, the Principal Investigator, will have budget authority to reallocate funds between and among different budget categories and may authorize the transfer of funds to the cooperative entities identified in this agreement, provided the Grant monies disbursed to UCHSC are used and expended consistent with the research program and operating budget proposed by, and as may necessarily be modified by, API.
 - vii. Dr. Richard Irons will provide satisfactory biannual reports of all expenditures, as provided by the research proposal and budget. Biannual reports are due January and July of each calendar year. Continuance of funding is contingent on API approval of these biannual reports.
 - viii. The research study and expenditure of the Grant monies are in compliance with all applicable laws, both foreign and domestic, including the United States Foreign Corrupt Practices Act.
2. This Grant shall be effective upon signature of Grantee below and shall terminate on December 31, 2006.
3. API, however, reserves the right to terminate this Grant by giving thirty (30) days notice of such termination to UCHSC. Upon receipt of such notice of termination, UCHSC shall cease incurring costs on this project, except with the prior approval of

API for such costs on this project, which are necessary to close out the project. In the event of such termination, API's sole obligation will be to reimburse UCHSC for actual costs incurred as of the date of termination and such subsequent costs incurred with prior approval of API. In no event shall such payment include costs and/or anticipated fees for unperformed work or exceed the maximum amount of the annual Grant disbursement for the year in which the Grant is terminated.

4. It is understood that if any of the funds provided under this Grant are not used for this project by the termination date, Grantee shall return such unused funds to API.

If the terms of the Grant agreement are acceptable, please sign both copies and return one to API.

UNIVERSITY OF COLORADO

By: _____

Date: _____

AMERICAN PETROLEUM INSTITUTE

By: 
Red Cavaney
President

By: 
G. William Frick
Vice President, General Counsel
& Secretary

Date: 10/2/01

October 16, 2001

Dr. Richard Irons
Health Sciences Center
University of Colorado
Campus Box C238
4200 East Ninth Avenue
Denver, CO 80262

API Reference No. 01-0000-4788
Amendment No. 1 01-0000-4804

Dear Dr. Irons:

The October 2, 2001 grant agreement between the American Petroleum Institute ("API"), as the representative for the Benzene Health Research Consortium, and the University of Colorado Health Sciences Center (UCHSC), for a five-year research study of lymphohematopoietic health risks from occupational exposure to benzene in the Peoples Republic of China, is amended as follows:

1. Paragraph 1(ii) is amended to include the Children's Hospital Medical Center of Cincinnati as a cooperative entity.
2. Paragraph 1(vii) is amended by replacing the current paragraph with the following text:

Dr. Richard Irons will provide biannual progress reports as provided by the research proposal. UCHSC will prepare and provide biannual financial reports of expenditures made by UCHSC. Biannual reports are due January and July of each calendar year. Continuance of funding is contingent upon API approval of these biannual reports.

3. Paragraph 3 is amended by replacing the current paragraph with the following text:

API, however, reserves the right to terminate this Grant by giving thirty (30) days notice of such termination to UCHSC. Upon receipt of such notice of termination, UCHSC shall cease incurring costs on this project, except with the prior approval of API, which shall not be unreasonably withheld, for such costs that are necessary to close out the project. In the event of such termination, API's sole obligation will be to reimburse UCHSC for actual costs incurred, including UCHSC's legal commitments to third parties for activities under this grant agreement, as of the date of termination, and subsequent costs incurred with prior approval of API. However, API shall not be responsible for third-party obligations that UCHSC incurs more than one year following termination of this Grant agreement. Furthermore, UCHSC agrees to use its best efforts to minimize the duration of its third-party obligations under this agreement. In no event shall such payment include costs and/or anticipated fees for unperformed work or exceed the maximum amount of the annual Grant disbursement for the year in which the Grant is terminated.

In all other respects, the terms and conditions of the October 2, 2001 grant agreement shall remain in full force and effect.

If the foregoing is acceptable, please sign below and return one copy of this letter to API.

UNIVERSITY OF COLORADO



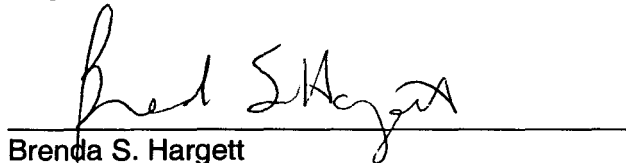
Twila Fisher Reighley
Director, Grants and Contracts

10/19/01
Date

AMERICAN PETROLEUM INSTITUTE



Howard J. Feldman
Regulatory Analysis & Scientific Affairs Director



Brenda S. Hargett
Chief Financial Officer

10/16/01
Date

Dr. Richard Irons
4800 Baseline Road
#E104-253
Boulder, Colorado 80303

Contract No. 2002-100092

Dear Dr. Irons:

This letter of agreement between the American Petroleum Institute (API) and *Dr. Richard Irons (Contractor)* authorizes *Contractor* to continue efforts on a multi-year study of benzene-exposed workers in China. Specifically, the agreement allows *Contractor* to continue work with the Chinese collaborators on the study by supporting travel and ancillary expenses relating to the research program. The agreement will also support the living expenses of American researchers, including rent of an apartment in Shanghai, China. This agreement will provide a cash advance for this effort, and shall be in accordance with *Contractor's* estimate of related expenses, which is attached and made a part hereof. This agreement is subject to the following terms and conditions:

1. *Dr. Richard Irons* shall be the project manager. *Contractor* shall give API prior written notice of the replacement ~~of the project manager~~ ^{change in responsibilities} of the project manager. API shall have the right to approve a reduction in effort and, in the case of replacement of the project manager, API shall have the right to approve a successor. RDI
2. Technical and administrative aspects of this agreement will be under the direction of *Howard J. Feldman*, Director, Regulatory and Scientific Affairs, American Petroleum Institute, 1220 L Street, NW, Washington, D.C. 20005, or whomever he designates. The designated API representative for work conducted hereunder is *George Woodall* (202-682-8067, email: woodallg@api.org). *Contractor* shall send all correspondence and reports relating to this agreement to his attention at the foregoing address.
3. API is providing a cash advance in the amount of three hundred ninety-three thousand one hundred four dollars (\$393,104) for expenses for calendar year 2002, as outlined in *Contractor's* attached estimate. API shall disburse the cash advance in three (3) installments: (a) \$178,210 for the 1st and 2nd quarter of 2002 by March 25, 2002; (b) \$81,289 by July 1, 2002; and (c) \$133,605 by October 1, 2002. On a quarterly basis, *Contractor* shall provide API with a detailed statement of expenses, including documentation, for costs incurred during that quarter. Such expense statements shall indicate the nature of expenditures, and shall express expenditure amounts in U.S. dollars (or have documented exchange rate and conversion).

Specific types of expenses have the following additional documentation requirements:

- **For airline travel** — original receipts and boarding passes. Travel expenses shall be limited to coach class accommodations for domestic travel and business class accommodations for international travel.
- **For hotel** — original receipts. Expenses shall be limited to reasonable accommodations.
- **For resident quarters** — receipt for monthly rent payments.
- **For monthly services (e.g., telephone, internet, utilities, etc.)** — copy of contracts or monthly bills.
- **Other** — must be detailed and any in excess of \$50 require an original receipt.

Contractor shall submit quarterly expense statements and documentation, referencing above contract number, to George Woodall within twenty-one (21) days of the end of each calendar quarter.

After reviewing the expense statement from the third calendar quarter, API will use the data from the first three (3) calendar quarters to project expenditures through the end of the calendar year, for purposes of disbursing *Contractor's* cash advance for the first calendar quarter of the next year. Any funds that are not projected for use by year-end will be subtracted from *Contractor's* first cash advance of the next calendar year. In reviewing *Contractor's* financial statement from the fourth calendar quarter, API will make any adjustments based on actual expenditures reported.

4. This agreement shall cover the period January 1, 2002 through December 31, 2002.
5. API shall have the right at all reasonable times during the course of the study, and for a reasonable period following completion of the study, to inspect *Contractor's* financial records relating to the work conducted hereunder, for the purpose of insuring conformance with this agreement and with generally accepted good scientific practices, and to verify the accuracy of invoices. Such inspection shall include the right to photocopy records pertaining to work conducted hereunder, excluding individual timesheets.
6. It is agreed that API shall have the right to terminate this agreement at any time by providing a notice of such termination to *Contractor*. Such notice may be provided either through oral or written communication from API. Upon receipt of such notice of termination, *Contractor* shall cease incurring costs on this project except with the prior approval of API for such costs which are necessary to close out the project. *Contractor* shall submit to API a final financial statement within thirty (30) days of the effective termination date. API agrees, however, to reimburse *Contractor* for the outstanding amounts due under the 3-year lease referenced in paragraph 3 executed by the *Contractor* on API's behalf. The final financial statement shall include documentation required under paragraph 3 and reimbursement for any unspent funds. API shall not reimburse *Contractor* for costs that are not actually incurred or costs which exceed the maximum amount of the agreement as set forth in paragraph 3.
7. Upon termination of this agreement, *Contractor* shall return to API any information furnished hereunder by API, together with all documents, data or other material developed therefrom.

8. It is understood that *Contractor* is acting as an independent contractor in its performance of any and all work hereunder. *Contractor* shall be solely responsible and liable for reasonable attorneys' fees incurred by API due to *Contractor's* performance hereunder, and the payment of all legal damages awarded to its employees or agents, or to any other person(s), on account of any property damage, personal injury, or death of any person(s) arising from, or in connection with, the performance of this agreement due to any act or omission on *Contractor's* part. *Contractor* shall hold API, its members, officers and employees harmless from such claims, liability or damages.
9. Contractor is responsible for complying with all applicable laws, both foreign and domestic in performance of this contract.
10. Any change, modification, extension, termination, or waiver of this agreement or any of its provision must be in writing and signed by both parties.
11. *Contractor* will not use the trademark or name of the American Petroleum Institute or any abbreviation thereof, in any publicity, advertising, or for other promotional purposes without the prior written approval of API.
12. District of Columbia law shall govern the terms of this agreement.
13. In the event of inconsistencies between this agreement and its attachments, the express terms of this agreement shall govern.
14. Paragraphs 5-14 shall survive the termination of this agreement.

If the above terms and conditions are acceptable, please sign below and return one original signed copy of this agreement to API.

RICHARD IRONS

By: _____



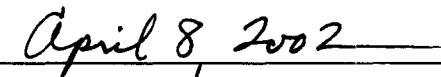
AMERICAN PETROLEUM INSTITUTE

By: _____

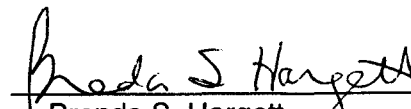


G. William Frick
Vice President, General Counsel
& Secretary

Date: _____

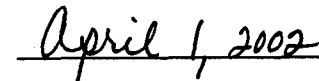


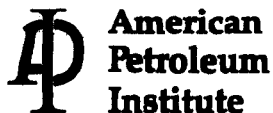
By: _____



Brenda S. Hargett
Chief Financial Officer

Date: _____





1220 L Street, Northwest
Washington, DC 20005-4070
Tel 202-682-8340
Fax 202-682-8270
E-mail feldman@api.org

Howard Feldman
Director
Regulatory Analysis & Scientific Affairs

DEC 27 2002

Dr. Richard Irons
4800 Baseline Road
#E104-253
Boulder, CO 80303

Contract No. 2002-100092
Date Extension and Change in
API Representative

Dear Dr. Irons:

The above agreement between the American Petroleum Institute (API) and you, for expenses related to a multi-year study of benzene-exposed workers in China, is amended as follows:

1. The termination date is extended from December 31, 2002 to December 31, 2003.
2. The API representative for this agreement is changed to Lorraine Twerdok, Ph.D., DABT (202-682-8344; e-mail: twerdokl@api.org). All correspondence, reports and invoices related to this agreement shall be sent to her attention at the above address.

In all other respects, the terms and conditions of the above agreement shall remain in full force and effect.

Sincerely,

A handwritten signature in black ink, appearing to read 'Howard Feldman', is written below the word 'Sincerely,'.

c: Lorraine Twerdok, Ph.D., DABT
James M. Vail, Ph.D.

An equal opportunity employer

SHELL-MCCLURG-052716

AGREEMENT

(Not valid for more than \$25,000.00)

Richard Albertini, M.D., Ph.D.
Pleasant Valley Road
P. O. Box 168
Underhill Center, Vermont 05490

API Dept: Regulatory Analysis & Scientific Affairs
Contract Number: 2002-100057

This agreement, executed on the last date written below, by and between the American Petroleum Institute (hereinafter "API"), and the party named above (hereinafter "Contractor") is as follows:

Scope of Work

The work to be performed by Contractor under the terms and conditions of this agreement (hereinafter "work") is as follows: Contractor will serve as an independent expert on the Scientific Review Panel for the Benzene Health Effects Research Program, and review and approve study protocols, as well as comment on proposed changes in the scope of the research program as described in *Roles and Responsibilities of the Scientific Review Panel for the Benzene Health Effects Research Program*. Contractor will travel to designated meeting places, and will participate in critiquing protocols, offering suggestions to improve study design.

Authorized Representative

API's authorized representative for this agreement shall be George Woodall (202-682-8067; e-mail: woodallg@api.org). Contractor's authorized representative shall be Richard Albertini, M. D., Ph.D. Neither party shall change authorized representatives without prior written notice to the other party.

Duration

The work shall commence upon signature and shall terminate January 31, 2003. All work performed hereunder shall be completed to the satisfaction of API.

Compensation and Manner of Payment

(complete either A. or B.)

- A. Compensation to the Contractor for the work shall be a fixed price of \$_____.
- or-
- B. Compensation to the Contractor for the work shall be at a rate of \$ 125 per hour and shall not exceed a total of \$8,000 for the entire agreement. Contractor will be reimbursed for certain expenses incurred in the performance of the work. Expenses may include coach class domestic travel or business class international travel, food, lodging, telephone, and other reasonable expenses as determined by API. Contractor must provide appropriate documentation when requesting reimbursement for expenses. For the purpose of this agreement, expenses will not exceed \$1,200. The total obligation to Contractor under this agreement shall not exceed (total of fees and expenses) \$9,200.
- C. To receive payment for work performed under this agreement, the Contractor shall submit a detailed invoice to API's authorized representative as agreed above. Each invoice shall state the date; a summary of the work accomplished and hours worked during the invoice period; itemization and documentation for all reimbursable expenses, including receipts for all reimbursable expenses over \$50; and the total dollar amount requested. Payment will be made within thirty (30) days of API's receipt of the invoice.

Restrictions on Publicity

Contractor shall not use the trademark or name "American Petroleum Institute," or any abbreviations thereof, in any publicity, advertising, or for other promotional purposes without the prior written approval of API. This provision shall survive the termination of this agreement.

An equal opportunity employer

Termination

API shall have the right to terminate this agreement at any time upon written notice to Contractor. In the event of termination, API's only obligation to Contractor shall be to compensate Contractor for the services provided prior to the date of termination.

Indemnification

It is understood that Contractor is acting as an independent contractor in its performance of any and all work hereunder. Contractor shall be solely responsible and liable for reasonable attorneys' fees incurred by API due to Contractor's performance hereunder, and the payment of all legal damages awarded to its employees or agents, or to any other person or persons, on account of any property damage or personal injury sustained or suffered by, or death of any person or persons arising out of or in connection with the performance of this agreement due to any act or omission on Contractor's part in connection therewith. Contractor shall hold API, its members, officers and employees harmless from such claims, liability, or damages.

Ownership

All reports, papers, and other documents developed hereunder, and the right to copyright such reports, papers, and other documents, shall be the property of API. API may use such materials in any manner which API, in its sole discretion, deems fit and proper, including submission to governmental agencies, use in litigation, or use in proceedings before governmental bodies.

Financial Records and Examination

API shall have the right at reasonable times to inspect and/or copy the financial and technical records used in and relating to the work conducted hereunder, or to perform an audit in order to determine the accuracy of the invoices and technical reports submitted hereunder. API may audit all relevant records of Contractor and any such vendor or subcontractor in connection with the work and all transactions related thereto for the sole purpose of determining whether there has been compliance with this paragraph.

Supporting Documents

Any specifications developed either separately or jointly by API and/or Contractor, any bid or proposal submitted by Contractor, and/or any other supporting documents deemed necessary by API to clarify this agreement, or any part thereof, shall become incorporated herein. In the event of inconsistencies between the terms of this agreement and its attachment(s), the express terms of this agreement shall govern. For purposes of this agreement and this paragraph, the following document(s) is (are) attached and made a part hereof: *Roles and Responsibilities of the Scientific Review Panel for the Benzene Health Effects Research Program*.

Governing Law

The laws of the District of Columbia shall govern this agreement.

Entire Agreement

This agreement and the supporting documents designated herein above represent the entire agreement of the parties. This agreement may not be changed except by written agreement of the parties.

RICHARD ALBERTINI, M.D., PH.D.

AMERICAN PETROLEUM INSTITUTE



Howard J. Feldman
Regulatory Analysis & Scientific Affairs Director

Brenda S. Hargett
Chief Financial Officer

Date

Date



1220 L Street, Northwest
Washington, DC 20005-4070
Tel 202-682-8340
Fax 202-682-8270
E-mail feldman@api.org

Howard Feldman
Director
Regulatory Analysis & Scientific Affairs

DEC 27 2002

Richard Albertini, M.D., Ph.D.
Pleasant Valley Road
P. O. Box 168
Underhill Center, Vermont 05490

Contract No. 2002-1000057
Date Extension and Change In
API Representative

Dear Dr. Albertini:

The above agreement between the American Petroleum Institute (API) and you, for work related to a multi-year study of benzene-exposed workers in China, is amended as follows:

1. The termination date is extended from December 31, 2002 to December 31, 2004.
2. The API representative for this agreement is changed to Lorraine Twerdok, Ph.D., DABT (202-682-8344; e-mail: twerdokl@api.org). All correspondence, reports and invoices related to this agreement shall be sent to her attention at the above address.

In all other respects, the terms and conditions of the above agreement shall remain in full force and effect.

Sincerely,

A handwritten signature in black ink, appearing to read 'Howard Feldman', is located below the 'Sincerely,' text.

c: Lorraine Twerdok, Ph.D., DABT
James M. Vail, Ph.D.

An equal opportunity employer

SHELL-MCCLURG-052719

Otto Wong, Sc.D.
Applied Health Sciences
181 Second Avenue, Suite 628
P. O. Box 2078
San Mateo, CA 94401

Contract No. 2002-100093

Dear Dr. Wong:

This letter of agreement between the American Petroleum Institute (API) and *Applied Health Sciences (AHS)* authorizes *AHS* to continue work under a five-year program in collaboration with Fudan University (Dr. Fu Hua) to conduct case-control studies of acute myeloid leukemia and non-Hodgkin's lymphoma from occupational exposure to benzene in the Peoples Republic of China (outlined in the attached Table 1, which is made a part hereof). This agreement shall fund activities for calendar year 2002 (representing year 1, quarters 2-4, and year 2, quarter 1 of the five-year program). This agreement is subject to the following terms and conditions:

1. *AHS* agrees that the project manager for this agreement shall be Dr. Otto Wong. *AHS* shall give API prior written notice of the replacement or reduction in the level of effort of the project manager. API shall have the right to approve a reduction in effort and, in the case of replacement of the project manager, API shall have the right to approve a successor.
2. Technical and administrative aspects of this agreement will be under the direction of Howard J. Feldman, Regulatory Analysis & Scientific Affairs Director, American Petroleum Institute, 1220 L Street, NW, Washington, D.C. 20005, or whomever he designates. The designated API representative for work conducted hereunder is *George Woodall* (202-682-8067; e-mail: woodallg@api.org). *AHS* shall send all correspondence and reports relating to this agreement to his attention at the foregoing address.
3. *AHS* agrees to perform the work for calendar year 2002 for an amount not to exceed four hundred thirty-five thousand five hundred fourteen dollars (\$435,514). This represents the relevant portions of the year 2002 budget as detailed in Tables 2, 3, 4 and 5, which are attached and made a part hereof. *AHS* shall invoice API on a monthly basis for work completed under this agreement. API shall pay invoices within thirty (30) days of API's receipt. Said invoices must reference the above contract number and shall be submitted to *George Woodall*. Reimbursement of travel expenses shall be limited to coach class for domestic travel or business class for international travel and reasonable accommodations associated with the conduct of this project. An original receipt or copy thereof must support claims for reimbursement of expenses of fifty dollars (\$50.00) or more. API may withhold up to fifteen percent (15%) of the agreement amount, pending API's acceptance of all work products and programs as specified in the milestone table in paragraph 5.
4. This agreement shall cover work authorized by API prior to signature below, and shall terminate December 31, 2002.

5. The schedule and requirements for deliverables under this agreement are as follows:

Due Date	Task/Deliverable	# of copies and medium
21 days after the end of each calendar quarter	Quarterly progress reports	e-mail to George Woodall – woodallg@api.org
May 2002	IRB Approval of Protocols	Electronic version in MS Word
Begin 4 th Quarter 2002	Enrollment of study subjects (AML and NHL patients and controls)	Electronic version in MS Word
Begin 4 th Quarter 2002	Interviews of study subjects	Electronic version in MS Word
Begin 4 th Quarter 2002	Acquisition of employment records of study subjects	Electronic version in MS Word
Begin 4 th Quarter 2002	Acquisition of exposure data from Shanghai CDC and factories	Electronic version in MS Word
Begin 4 th Quarter 2002	Exposure assessment of individual study subjects	Electronic version in MS Word

6. AHS and Fudan University have the exclusive right to publish the findings derived from the case-control studies of acute myeloid leukemia and non-Hodgkin's lymphoma. However, AHS shall grant API a royalty-free, irrevocable license to use all reports, drawings, and drafts submitted to API by AHS. API may use such materials in any manner in which API, in its sole discretion, deems fit and proper, including submission to governmental agencies, use in litigation, or use in other proceedings before governmental bodies. AHS agrees to preserve the confidentiality of information furnished hereunder by API.
7. AHS acknowledges that the protocols and conduct of the research during the life of the agreement are subject to annual review and approval by an independent Scientific Review Panel (SRP), as well as by an Ethics Review Panel (ERP), both of which API will establish. These panels shall be notified immediately when a change in protocol is proposed. Both the SRP and the ERP must approve any significant changes in protocol that would affect the scope of work.
8. Draft presentations and manuscripts will be provided to the SRP for comment in advance. Applied Health Sciences and Fudan University Medical Center will carefully consider each and every comment from the SRP. However, the preparation of presentations and manuscripts is the sole responsibility of AHS in collaboration with Fudan University. AHS and Fudan University will have complete control of the content of the presentations and manuscripts.
9. API shall have the right at all reasonable times during the course of the study, and for a one (1) year period following completion of the study, to inspect AHS' facilities, including equipment and technical and financial records relating to the work conducted hereunder, for the purpose of insuring conformance with this agreement and with generally accepted good scientific practices, and to verify the accuracy of invoices. Such inspection shall include the right to photocopy records pertaining to work conducted hereunder, excluding individual timesheets of project personnel and information on study participants.
10. It is agreed that either party (API or AHS) shall have the right to terminate this agreement by giving a thirty (30) day written notice of such termination to the other party. Upon receipt of such notice of termination, AHS shall cease incurring costs on this project, except with the prior approval of API for such costs which are necessary to close out the project. In the event of such termination, API's sole obligation will be to reimburse AHS for actual costs (professional fees and direct expenses) incurred as of the date of termination and

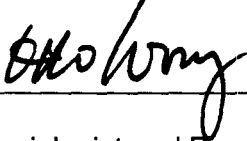
subsequent costs (professional fees and direct expenses) incurred with prior approval of API. In no event shall such payment include costs and/or anticipated fees for unperformed work or exceed the maximum amount of the agreement as set forth in paragraph 3. AHS agrees to complete any tasks in progress, should API so request.

11. It is understood that AHS is acting as an independent contractor in its performance of any and all work hereunder. AHS shall hold API, its members, officers and employees harmless from any omissions or acts of negligence on the part of AHS or its designates.
12. Upon request of API, AHS agrees to defend its work hereunder and to offer testimony thereon to governmental bodies (legislative, executive or judicial). API shall pay expenses (professional fees and direct costs) for such services at AHS' billing rates in effect at the time the services are rendered.
13. NO CHANGE, MODIFICATION, EXTENSION, TERMINATION, OR WAIVER OF THIS AGREEMENT OR ANY OF THE PROVISIONS HEREOF SHALL BE EFFECTIVE UNLESS MADE IN WRITING AND SIGNED BY A DULY AUTHORIZED OFFICER OF THE PARTY AGAINST WHOM IT IS SOUGHT TO BE ENFORCED. CHANGES BINDING ON API MUST BE IN WRITING AND SIGNED BY AN AUTHORIZED API OFFICIAL.
14. AHS will not use the trademark or name of the American Petroleum Institute or any abbreviation thereof, in any publicity, advertising, or for other promotional purposes without the prior written approval of API. However, AHS may acknowledge API as the sponsor of the research, and shall so advise API in writing.
15. In the event of inconsistencies between this agreement and its attachments, the express terms of this agreement shall govern.
16. Paragraphs 6-16 shall survive the termination of this agreement.

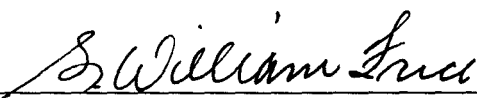
If the above terms and conditions are acceptable, please sign below and return one original signed copy of this agreement to API.

APPLIED HEALTH SCIENCES

AMERICAN PETROLEUM INSTITUTE

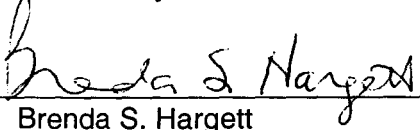


Otto Wong
Chief Epidemiologist and President



G. William Frick
Vice President, General Counsel
& Secretary

Date: March 22, 2002



Brenda S. Hargett
Chief Financial Officer

Date: March 20, 2002



1220 L Str. Northwest
Washington, DC 20005-4070
(202) 682-8240
Fax (202) 682-8029
E-mail frick@api.org

G. William Frick
Vice President, General
Counsel & Secretary

Otto Wong, Sc.D.
Applied Health Sciences
181 Second Avenue, Suite 628
P. O. Box 2078
San Mateo, CA 94401

Contract No. 2002-100093
Amendment No. 1

Dear Dr. Wong:

The above agreement between the American Petroleum Institute (API) and Applied Health Sciences (AHS), for work related to a multi-year study of benzene-exposed workers in China, is further amended as follows:

1. The API representative for this agreement is changed to Bruce Jarnot, Ph.D. (202-682-8473; e-mail: jarnotb@api.org).
2. This amendment shall fund activities for calendar year 2003 (representing year 2, quarters 2-4 and year 3, quarter 1) of the 5-year program as outlined in the attached Table 1.
3. AHS agrees to perform the work for calendar year 2003 for an amount not to exceed \$432,511. This represents the relevant portions of the year 2003 budget as detailed in the attached Tables, 2, 3 4 and 5.
4. AHS shall submit semi-annual progress reports to Dr. Jarnot via e-mail.

In all other respects, the terms and conditions of the above agreement, as amended, shall remain in full force and effect.

If the foregoing is acceptable, please sign below and return one copy of this letter to API.

APPLIED HEALTH SCIENCES

Otto Wong
Chief Epidemiologist and President

Date: 3-14-03

AMERICAN PETROLEUM INSTITUTE

G. William Frick
Vice President, General Counsel
& Secretary

Brenda S. Hargett
Chief Financial Officer

Date: 3-11-03

An equal opportunity employer

SHELL-MCCLURG-052723



1220 L Street, Northwest
Washington, DC 20005-4070
Tel 202-682-8340
Fax 202-682-8270
E-mail feldman@api.org

Howard Feldman
Director
Regulatory Analysis & Scientific Affairs



Otto Wong, Sc.D.
Applied Health Sciences
181 Second Avenue, Suite 628
P. O. Box 2078
San Mateo, CA 94401

Contract No. 2002-1000093
Date Extension and Change in
API Representative

Dear Dr. Wong:

The above agreement between the American Petroleum Institute (API) and Applied Health Sciences (AHS), for work related to a multi-year study of benzene-exposed workers in China, is amended as follows:

1. The termination date is extended from December 31, 2002 to December 31, 2003.
2. The API representative for this agreement is changed to Lorraine Twerdok, Ph.D., DABT (202-682-8344; e-mail: twerdokl@api.org). All correspondence, reports and invoices related to this agreement shall be sent to her attention at the above address.

In all other respects, the terms and conditions of the above agreement shall remain in full force and effect.

Sincerely,

A handwritten signature in black ink, appearing to read 'Howard Feldman', is placed below the word 'Sincerely,'.

c: Lorraine Twerdok, Ph.D., DABT
James M. Vail, Ph.D.

An equal opportunity employer

SHELL-MCCLURG-052724

Mr. Robert Schooling
APCO Worldwide Inc.
1615 L Street, NW
Suite 900
Washington, DC 20036

Contract No. 2002-100098

Dear Mr. Schooling:

This letter confirms the agreement between the American Petroleum Institute (API) and APCO Worldwide Inc. (APCO) for the provision of public affairs, public relations and government relations support to the Benzene Health Research Consortium (BHRC). The agreement shall be comprised of (1) a monthly retainer with associated tasks (Section III, Process, of APCO's February 14, 2002 memorandum to BHRC Members), and (2) development and implementation of a communications plan for the BHRC (Section II, Recommended Tactics, of APCO's memorandum mentioned above. APCO shall perform the work under this agreement as specified in its February 14, 2002 memorandum BHRC members and accompanying table (Appendix A) and fee schedule (Appendix B), which are attached and made a part hereof. The following terms and conditions will govern the agreement:

1. The entire agreement shall begin on March 1, 2002. The retainer portion of the agreement shall terminate February 28, 2003, and the remainder of the agreement shall terminate upon API's acceptance of all deliverables outlined in paragraph 8 below.
2. APCO's principal representative for this agreement shall be *Robert Schooling*. APCO shall give API prior written notice of any replacement of the principal representative or material reduction in the level of effort of the principal representative in fulfilling this agreement. API shall have the right to approve a material reduction in effort and, in the case of replacement of the principal representative, API and APCO shall jointly agree on a replacement.
3. This agreement will be under the direction of Howard J. Feldman, Regulatory Analysis & Scientific Affairs Director, American Petroleum Institute, 1220 L Street, NW, Washington, D.C. 20005, or whomever he designates. The designated API representative for work conducted hereunder is *Matthew Todd* (202-682-8319; e-mail: toddm@api.org). APCO shall send all correspondence and reports relating to this agreement to his attention at the foregoing address.
4. API's total obligation to APCO for this agreement shall not exceed four hundred sixty thousand five hundred dollars (\$460,500) as follows:
 - a. A monthly retainer of \$20,000 per month. API shall make the first two retainer payments within 10 days of receiving a signed agreement from APCO. Thereafter, API shall pay

the monthly retainer fee to APCO by the first of each month for that month. The total retainer fee for this agreement shall not exceed \$240,000. Services outlined in Section III of APCO's February 14, 2002 memorandum shall be defined as "retainer services," and shall be applied against the retainer. Unused retainer fees can be carried over to the next month(s). (For the avoidance of doubt, API shall continue to make monthly retainer fee payments of \$20,000, notwithstanding any unused fees.) At the end of the agreement period, APCO shall return any unused retainer balance to API.

- b. An amount not to exceed \$180,500 for the following tasks under Section II of APCO's February 14, 2002 memorandum and Appendix A to this agreement: II.B, II.F, II.H, II.K1, II.K2, and II.M. APCO shall bill API at the rates set forth in Appendix B to this agreement, and the cost for each individual task shall not exceed the associated amount shown in Appendix A. API and APCO shall contract for additional tasks via task order and amendment to this agreement, which both parties shall sign before work commences. Such task orders and amendments shall include a scope of work, deliverables and associated costs, including compensation and expenses, and shall be automatically incorporated by reference herein upon execution by the parties.
- c. Related expenses not to exceed \$40,000. Such expenses shall include but not be limited to reproduction, postage, telephone and travel. APCO shall receive advance written authorization from API before committing to any travel expenses or other expenses over \$2,500. Reimbursement of travel expenses shall be limited to coach class transportation and reasonable accommodations if travel is requested by API. An original receipt or copy thereof must support claims for reimbursement of expenses of fifty dollars (\$50.00) or more.

APCO shall invoice API on a monthly basis for work completed during that month, payable within thirty (30) days of API's receipt of the invoice. Each invoice shall separately list the amount being billed for each task. Said invoices **must** reference the above contract number and shall be submitted to *Matthew Todd*. API may withhold up to ten percent (10%) of the agreement amount, pending API's acceptance of all work products and programs under this agreement.

- 5. APCO shall comply with all applicable laws and regulations in its performance hereunder, and shall be responsible for such registration and reporting as may be required for both APCO and API. Further, APCO agrees to comply with any other applicable lobbying or ethics laws and regulations in its performance hereunder. Finally, APCO's relationships with public officials and candidates for public office will be maintained in such a manner as to avoid any impropriety.
- 6. During the period of this agreement, APCO shall not represent or engage in efforts for any other party or entity on matters or issues that conflict with positions taken by API with respect to benzene health research. APCO shall immediately notify the API designee if he/she becomes aware of the existence of a conflict or potential conflict. APCO shall not release any information concerning work hereunder to anyone outside API, without prior written approval of API, except for reports required by law.
- 7. No director, employee or agent of APCO shall give or receive any commission, fee, rebate, gift or entertainment of significant cost or value in connection with the work hereunder, nor

enter into any business arrangement with any director, employee, or agent of API other than as a representative of API. APCO shall promptly notify API of any violation of this paragraph. Any consideration received as a result of such violation shall be paid over or credited to API. API may audit relevant records of APCO and any such vendor or subcontractor in connection with the work performed hereunder, for the sole purpose of determining compliance with this paragraph.

8. APCO shall perform the tasks and prepare deliverables specified in APCO's February 14, 2002 memorandum. Upon signature of this agreement, APCO and API shall establish a mutually agreeable schedule for tasks and deliverables to ensure the objectives of the benzene health research program and this agreement are met in a timely manner. The schedule shall be signed by both parties and automatically incorporated by reference herein upon execution.
9. All reports, drawings, drafts, data and other documents developed hereunder, and the right to copyright such reports, drawings, drafts, data and other documents, shall be the property of API. API may use such materials in any manner in which API, in its sole discretion, deems fit and proper, including submission to governmental agencies, use in litigation, or use in other proceedings before governmental bodies. APCO will not use the aforementioned items or other material developed therefrom, or release the content or findings of the work performed hereunder to parties outside API without prior review and written approval from API, unless they are in the public domain or are otherwise publicly released by API. APCO agrees to preserve the confidentiality of information furnished hereunder by API.
10. API shall have the right at all reasonable times during the course of the agreement, and for a reasonable period following termination of the agreement, to inspect APCO's offices, including financial records relating to the work conducted hereunder, for the purpose of ensuring conformance with this agreement, and to verify the accuracy of invoices. Such inspection shall include the right to photocopy records pertaining to work conducted hereunder, excluding individual timesheets.
11. It is agreed that API shall have the right to terminate this agreement by giving a thirty (30) day written notice of such termination to APCO. Upon receipt of such notice of termination, APCO shall cease incurring costs on this project, except with the prior approval of API for such costs which are necessary to close out the project. In the event of such termination, API will reimburse APCO for actual costs incurred as of the date of termination and subsequent costs incurred with prior approval of API, and APCO will return any unused retainer fees to API. In no event shall such payment include costs and/or anticipated fees for unperformed work or exceed the maximum amount of the agreement as set forth in paragraph 4.
12. Upon termination of this agreement, APCO shall return to API any information furnished hereunder by API, together with all documents, data or other material developed therefrom.
13. It is understood that APCO is acting as an independent contractor in its performance of any and all work hereunder. APCO shall be solely responsible and liable for reasonable attorneys' fees incurred by API due to APCO's negligent or willful misconduct, and the payment of all legal damages awarded to its employees or agents, or to any other person or persons, in

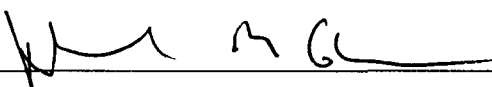
connection with the performance of this agreement due to any negligent act or omission on APCO's part in connection therewith. APCO shall hold API, its members, officers and employees harmless from such claims, liability, or damages.

API shall be solely responsible and liable for any loss or expense, including reasonable attorneys' fees incurred by APCO as the result of any claim, suit or proceeding made or brought against APCO, or in which APCO is asked to participate, based upon any materials provided by API, as well as any claim or suit arising out of the nature or use of API's products, except for losses or expenses that result from APCO's negligence or willful misconduct. API shall hold APCO, its members, officers and employees harmless from such claims, liability, or damages.

14. APCO will not use the trademark or name of the American Petroleum Institute or any abbreviation thereof, in any publicity, advertising, or for other promotional purposes without the prior written approval of API.
15. The laws of the District of Columbia (except the conflict of laws provision thereof) shall govern this agreement.
16. The terms and conditions of this agreement may only be modified in writing and signed by an authorized official of the both parties.
17. Paragraphs 7-17 shall survive the termination of this agreement.

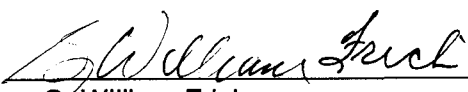
If the above terms and conditions are acceptable, please sign below and return one original signed copy of this agreement to API.

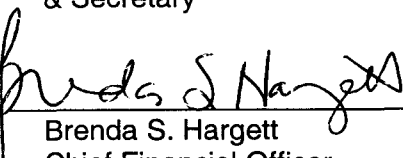
APCO WORLDWIDE INC.

By: 

Date: 5-7-02

AMERICAN PETROLEUM INSTITUTE

By: 
G. William Frick
Vice President, General Counsel
& Secretary

By: 
Brenda S. Hargett
Chief Financial Officer

Date: May 6, 2002

APCO

worldwide

February 14, 2002

MEMORANDUM

TO: BHRC Members

FROM: APCO Worldwide

RE: Communications Plan

Overview and Mission Statement

Our charge is to develop a strategic communications plan for the “Shanghai Health Study” incorporating the issues and agreements reached during the Washington, D.C. meeting with members of the Benzene Health Research Consortium (BHRC).

Targeted audience comprehension and ultimate acceptance of the study and its results in approximately five years is the primary purpose for employing a strategic communications plan. Informing and updating the key audiences prior to the study’s commencement, and consistently throughout the project, demonstrates transparency and maximizes opportunities for study acceptance by removing “process” obstacles at the outset. Accomplishing these objective requires:

- Actively engaging key audiences through effective outreach;
- Conveying consistent messages; and
- Defining the study clearly and emphasizing its potential to advance currently limited scientific and medical conclusions regarding benzene.

I. Strategy

The project’s overarching communications principle is discreet and direct conversations with interested parties, rather than a broad and sustained media campaign. Attaining and preserving credibility, both in the study results when they become available and the information distributed during the investigations, is critical. Three strategic benchmarks for all ensuing communications follow:

- **Ensure actual and perceived transparency of process, within the accepted norms of scientific research protocols** – If the study is to be useful to the Consortium as an instrument to shape public policy it must be conducted, and just as importantly, perceived to be conducted, under absolutely transparent conditions. This means putting in place a variety of mechanisms to ensure that perception aligns with reality throughout the process. Ensuring transparency of process should not in any way impact or interfere with the scientific research protocol.
- **Engage in early and constructive dialogue with stakeholders** – The relevant stakeholders: benzene “thought leaders”, NGOs such as the Leukemia Society of America, regulators, remaining industry, trade media, *etc.* will be the ultimate arbiters of the study’s credibility.
- **Demonstrate leadership through open and honest communications** – The participating companies have already demonstrated their desire to fulfill their product stewardship responsibilities by funding this study. It will be important to ensure that all actions at all times are conducted in a manner consistent with societal expectations and that the resulting plan recognizes the skepticism with which the work will be viewed by many involved in the process.

The known and anticipated challenges to industry related studies only reinforce the need to implement and adhere to a disciplined communications system. Clearly conveying the industry’s corporate social responsibility in undertaking this rigorous, independent and scientifically substantial study is the final essential strategic element.

II. Recommended Tactics

The strategies outlined above provide guiding principles for determining the tools necessary to obtain study acceptance. While the plan’s success requires extended involvement by both the BHRC and APCO, once a communications plan is approved, lead responsibility for each tactic will be decided. In this case, lead responsibility means tactic development or production with input from the remaining organization. The BHRC and API possess the comprehensive scientific, technical and industry perspectives while APCO will contribute assessments from the regulatory, governmental, issues management and strategic communications perspective.

Listed below are tactics discussed at the Strategy Session; please note that many of these items will be developed simultaneously rather than sequentially.

- A. ***Develop Priority Messages*** — utilizing the existing fact sheets and input we have already received, APCO will review and recommend priority messages to effectively inform and prepare the targeted audiences for the study upon completion.
- B. ***Develop Effective Materials*** — written materials created for internal and external consumption will vary in purpose and substance.

1. ***Internal:***

- Regular updates to BHRC members and identified affiliates as appropriate;
- Briefing books for spokespeople; and

2. ***External:*** existing documents will be reviewed to incorporate the agreed upon priority messages as well as any necessary updates; the finally approved materials will be consistent but also designed to apply to the diverse key audiences as appropriate.

- Q & A;
- Study one-pager;
- Fact sheets: study aims and objectives; unique study features; previous study conclusions; how different from previous studies; PI backgrounds;
- On location in China: laboratory pictures, official endorsement statements;
- A complete packet of each of these materials would comprise a “leave-behind” at the conclusion of each audience outreach contact.

C. ***Use of Inter/Intranet***

- A web-site offering study information and materials for the broadest possible audience provides further transparency and precludes charges of secrecy by making the information accessible. As discussed, to attain utmost credibility, the most appropriate venue to host the site would be a university.
- Using an Intranet site facilitates exchanging information on in one central location on intelligence

gained, audience outreach summaries, contact clearinghouse and calendar updates.

- D. ***Design a Brand*** — to ensure ‘credit’ and minimize confusion for distributed study information, APCO recommends branding study-related materials. Instituting and maintaining a brand conveys professionalism and contributes additional credibility to the initiative by utilizing coordinated and consistent:
- collateral materials;
 - logos;
 - color schemes;
 - contacts;
 - letterhead;
 - an e-mail account; and
 - and a toll-free telephone number.

Naming the study is a fundamental part of creating and implementing a brand. The “Shanghai Health Study” was discussed at the Strategy Session as a potential brand.

Once a brand has been selected, it would apply to everything as outlined above. Ideally, the brand should reinforce the concept of the study as an independent entity. For clarification, a brand such as the “Shanghai Health Study” refers to the study itself while the BHRC and other involved individuals or organizations would retain and operate under their names rather than adopt the brand or something supplementary.

- E. ***Audit Targeted Audiences*** — conducting soft soundings among the key audiences to identify what may or may not already be known about the study will assist message and materials development and provide priorities other than those already determined.
- F. ***Construct Outreach Matrix*** — as agreed upon at the Strategy Session, compiling a matrix of all contacts and outreach on the study will be useful in defining the appropriate audience categories and lead to a better assessment of study issues.
- G. ***Engage Spokespeople*** — engaging the correct spokespeople is perhaps the most critical element to successful study acceptance. Since this project is dependent on soft soundings, one-on-one meetings and timely

communications, the spokespeople will be key. To establish credibility, ideally they will have backgrounds similar to their targeted audience and be persuasive study advocates.

2. *Internal:*

- BHRC members;
- Company colleagues recommended by BHRC members;
- Principal investigators or other involved researchers if available and willing to participate.

2. *External:*

- Advisory Council members or “Endorsers”.

H. ***Train Spokespeople*** — message training is highly recommended for all spokespeople since it can be different from skills each person regularly employs in their professional lives. APCO could provide training sessions on:

- what to expect;
- effectively delivering main messages;
- matching message with targeted audience;
- how to handle hostile meetings; and
- medium techniques as appropriate.

I. ***Enlist Endorsers*** — as possible, enlisting noted experts in the field of benzene research or related fields for whom the research will be a major contribution, such as the Leukemia Society of America, bring additional credibility to the project. It should be expected that their main project messages will be narrowly focused on the benefit to be derived from their perspective. Although confirming involvement of ideal Advisory Council caliber might prove challenging, their participation would be valuable to enlist. Potential Advisory Council members can be identified through:

- the soft soundings outreach;
- benzene thought leaders’ contributions; and
- primary investigators’ assessments.

- J. ***Create a Calendar of Year One Events*** — a carefully assembled calendar of events, containing both study specific and external activities that may create interest in benzene issues, is a useful tool for “outreach” pegs. Such events can provide reasons to contact the appropriate audiences to inform or alert them of the event to reinforce transparency, credibility and communication channels. Event calendars are works in progress that will be updated as information is received.

1. *Study-specific:*

- Internal Review Board approval;
- Funding complete;
- Laboratory complete;
- China Strategy Session;
- Patient recruitment begins; and
- Research commences.

2. *External:*

- *HealthWatch* release;
- *Lancet* article;
- German Risk Assessment Report;
- Official “launch” in China; and
- Benzene Symposium (2003).

- K. ***Convene Special Events*** — some of the events, such as the China Strategy Session, the official “launch” in China and the Benzene Symposium will require additional planning, strategies and materials once confirmed.

1. *China Strategy Session:* to determine the protocol to follow in China with officials, trade publications, investigators, member and non-member industry representatives in country and others, a Strategy Session focused solely on China will be held.
2. *Official Launch in China:* study principals and APCO China report that hosting an official launch ceremony is customary and

expected by Chinese officials to celebrate, commemorate and commence the study. Exact timing and launch details will be decided at the China Strategy Session but the initial recommendations have stated that a banquet for the appropriate audiences would constitute an official launch. Therefore, the concept is more an internal debut among those already involved or aware of the study rather than a broad public announcement and media event.

3. *Potential Benzene Symposium:* As discussed, the Benzene Symposium as envisioned would not be a BHRC initiative but rather a study presentation if such a symposium is convened. Any role to be played by associates of the Shanghai Health Study would be relegated to contacting previous planners to gauge their interest in holding another Benzene Symposium, perhaps in 2003.

L. ***Utilize Monitoring*** — intelligence gathering will rely heavily on conversations and information learned at conferences and through talking to colleagues.

1. *Technology:*

- Internet – both general and specific sites;
- Nexis/Lexis article searches generally; and
- Relevant list-servs.

2. *Human Intelligence Gathering:* most of this information will be gleaned through conversations and conferences on other relevant subjects. For the information to have the most impact, it will need to be supplied to a central clearinghouse for other BHRC members to access as appropriate.

Since networking will play such a major role in monitoring these issues – for both electronic news items a friend sends or colleague tips mentioned casually -- devising an effective way to communicate and maintain this information in a central location for all to access will be important. If agreed upon, an Intranet or closed list-serv could serve this function.

- M. ***Anticipate Challenges*** — as discussed in the Strategy Session, numerous situations could provoke a crisis necessitating additional and immediate communications. Although many scenarios can be envisioned, the essential element to implement at the outset is the process to activate in the case of any emergency or potential emergency erupting.

That is, although each situation is different, it is necessary to identify core response team components now and think through exactly how to provide authority to act, especially within the BHRC committee structures. APCO has extensive crisis communications experience and can provide a response tool-kit: categories of people to involve, main messages, methods to get in front of a story and ways to contain or neutralize stories, if possible. All activities will naturally depend on the crisis dimensions and location where it occurs – US, EU or China.

APCO also recommends familiarizing the chosen core response team with their exact responsibilities by running a role-playing exercise to allow “real-time” participation and thereby identify strengths and weaknesses of the response.

III. Process

Anticipating and clearly defining internal channels assists effective external communications delivery. Therefore, the three primary strategic communication principles – transparency, engaged stakeholders and open communications – are also applicable to internal exchanges. To ensure consistent information updates, APCO recommends instituting regularly scheduled information updates. Please note, specific updates or reports can be revised to reflect emerging events as well as to better meet committee members’ needs to supply updates to their individual companies.

- A. ***Quarterly Conference Calls*** — established and regular team conference calls to provide information exchanges and opportunities to gauge study progress as a group. As discussed at the Strategy Session, these calls are likely to increase during periods of intense activities; such increases will supplement rather than supplant the quarterly calls.
- B. ***Activity Reports*** — APCO will provide monthly activity reports to ensure BHRC members are able to regularly update member companies. As requested, these reports can be expanded for clarification.
- C. ***Intranet*** — given the different time zones involved in this project, an Intranet system would allow communications and information exchanges accessible to the whole team.

- D. ***Quality Control*** — to ensure all documents are ready for targeted audience consumption, an approved quality control system must be devised and implemented at the beginning. In addition to providing quality information, it will also allow participating members to build in the time necessary to meet project deadlines.

Conclusion

APCO is enthusiastic about assisting the BHRC members craft and implement an effective communications component to the Shanghai Health Study. We believe the strategies and tactics outlined above are important tools to ensuring ultimate study acceptance by the targeted audiences.

Clearly, the study and its results constitute the project's substance. Communicating the study's goals and identifying the context that stimulated the investigators to seek answers to the questions they posited, while secondary in terms of significance, can be considered primary in terms of the role it can play in determining ultimate study success.

**AMERICAN PETROLEUM INSTITUTE
COMMUNICATIONS PLAN FOR BENZENE HEALTH RESEARCH CONSORTIUM**

API Contract No. 2002-100098
Appendix A

Tasks	Sub-Tasks	TIMELINE			Lead Organization	Supporting Organization(s)	Cost Estimate	Comments
		Current	Med.-Term	Long-Term				
II. A. Develop Priority Messages		X			APCO		Retainer	
II. B. Develop Effective Materials	Internal	X			APCO	API, BHRC	\$15,000	APCO internal report on their work activity
	External	X			APCO		\$7,500	
II. C. Create Web Site	Intranet			X	API			
	Technical Web Site	X			API			
	Semi-Public Web Site for Endorsers		X		API			
II. D. Design A Brand			X		APCO/API			
II. E. Audit Targeted Audiences			X		BHRC	APCO	**	
II. F. Construct Outreach Matrix		X			APCO	API, BHRC	**\$90,000	
II. G. Engage Spokespeople			X		API	BHRC		
II. H. Train Spokespeople			X		APCO	BHRC	up to \$14,000	Fee based on numbers trained
II. I. Enlist "Endorsers"			X	X	BHRC	APCO	**	
II. J. Create A Calendar Of One Year Events	Study-Specific	X			API	BHRC		
	External	X			API	BHRC		

**AMERICAN PETROLEUM INSTITUTE
COMMUNICATIONS PLAN FOR BENZENE HEALTH RESEARCH CONSORTIUM**

API Contract No. 2002-100098

Appendix A

Tasks	Sub-Tasks	TIMELINE			Lead Organization	Supporting Organization(s)	Cost Estimate	Comments
		Current	Med.-Term	Long-Term				
II. K. Convene Special Events	K.1. China Strategy Session	X			APCO	BHRC	\$20,000	
	K.2 Official Launch in China		X		APCO	BHRC	\$20,000	
	K.3 Benzene Symposium		X		API, BHRC			
II. L. Monitoring	L.1 Technology		X		API	BHRC		
	L.2 Human Intelligence Gathering		X		APCO	API, BHRC	**	APCO maintains inventory
M. Anticipate Challenges				X	APCO, API	BHRC	\$14,000	Action plan to address critics, "bad news"
III. Process	Quarterly Conference Calls	X			API	APCO	Retainer	
	Activity Reports	X			API	APCO	Retainer	
	Intranet	X			API	APCO	Retainer	
	Quality Control	X			API	APCO	Retainer	

** Includes third party work: Audit of target audiences, managing outreach programs, assisting with enlisting endorsees, and human intelligence gathering.

APCO CHINA 2002 TITLES AND PERSONNEL RATES

<u>Title</u>	<u>2002 Rate</u>
Managing Director	\$400.00
Director	\$300.00
Account Manager	\$150.00
Consultant	\$150.00

APCO EUROPE 2002 TITLES AND PERSONNEL RATES

<u>Title</u>	<u>2002 Rate</u>
Managing Director	\$320.00
Associate Director	\$240.00
Senior Associate	\$200.00

APCO DC 2002 TITLES AND PERSONNEL RATES

<u>Title</u>	<u>2002 Rate</u>
Senior Vice President/Director	\$315.00
Senior Vice President	\$295.00
Vice President/Director	\$260.00
Vice President/Director	\$230.00
Senior Associate	\$200.00
Manager	\$170.00
Associate	\$140.00
Junior Associate	\$115.00
Project Assistant	\$85.00
Administrative Assistant	\$65.00
Intern	\$60.00



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Howard Feldman
Director
Regulatory Analysis & Scientific Affairs

Mr. Robert Schooling
APCO Worldwide Inc.
1615 L Street, NW
Suite 900
Washington, DC 20036

Contract No. 2002-100098
Amendment No. 1

Dear Mr. Schooling:

The above agreement between the American Petroleum Institute (API) and APCO Worldwide Inc. (APCO), for the provision of public affairs, public relations and government relations support to the Benzene Health Research Consortium (BHRC), is amended as follows:

1. The references to "Retainer" in the agreement and Appendix A to the agreement are deleted. Appendix A is replaced with Appendix A (revised), which is attached and made a part hereof.
2. In the first paragraph of the agreement, delete the second sentence.
3. In paragraph no. 1, delete the second sentence and replace with:

The termination date for the agreement is changed to February 28, 2004.

4. The following changes are made to paragraph no. 4:

- a. Delete paragraphs 4 a. and 4 b., and replace with a new 4a. as follows:

4. a. Compensation not to exceed \$420,500. APCO shall perform the tasks specified in its February 14, 2002 memorandum and Appendix A revised at the rates set forth in Appendix B.

- b. Paragraph 4 c. shall become paragraph 4 b.

In all other respects, the terms and conditions of the above agreement shall remain in full force and effect.

If the foregoing is acceptable, please sign below and return one copy of this letter to API.

APCO WORLDWIDE INC.

Nelson

Date: 4/17/03

AMERICAN PETROLEUM INSTITUTE

Howard J. Feldman

Howard J. Feldman
Regulatory Analysis &
Scientific Affairs Director

Brenda S. Hargett

Brenda S. Hargett
Chief Financial Officer

Date: 3/3/03

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, October 20, 2003 1:51 PM (GMT)
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org
Cc: Matt Todd <ToddM@api.org>; benzene-srp@listserve.api.org
Subject: Shanghai SRP... Memo to the Consortium
Attach: SRP Memo to Consortium 20 Oct 2003.doc; SRP Memo to Consortium 20 Oct 2003.pdf

Benzene Health Research Consortium (BHRC) Technical and Oversight Committees -

Attached for your review and consideration is a "Memo to the Consortium" from the Scientific Review Panel (SRP) chair, Dr. Jerry Rice, which documents SRP review of Shanghai Health Study research following the 2003 Asilomar annual conference.

By copy to Matt, please post a pdf copy of the Memo to the SHS website, Panel Info page, in SRP Member Doc's... thanks!

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Shanghai Health Study

Jerry M. Rice, PhD
Chair, Scientific Review Panel
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Chevy Chase, Maryland 20815
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Fax: +1-301-986-5438
E-mail: jmricewas@aol.com

Memorandum

To: Technical Oversight Committee and Members of the Consortium

From: Jerry M. Rice, Ph.D., Chair, Scientific Review Panel

Date: October 17, 2003

Subject: Conclusions of the Scientific Research Panel –
Annual Research Meeting, Asilomar, California, August 2003

Executive Summary

- A fully equipped and staffed Central Diagnostic Laboratory has been satisfactorily established. This is an important first milestone for all three (CC, DP & ME) studies.
- The next milestones to be monitored are:
 1. Progress in recruitment of cases and controls for all studies;
 2. Cost-effective implementation of HIV serology for control subjects in the case-control study;
 3. Timely peer-reviewed publication of findings in the scientific literature.
- Additional endpoints have been identified, which the investigators should consider (with external funding if required).
- The SRP and ERP have jointly decided to hold future panel meetings during annual research meetings, and to defer recruitment for 3 SRP vacancies. These actions will significantly reduce the budget required for the two external Panels in future years.

Current status of investigations in view of the formal objectives and goals previously proposed and accepted for funding by sponsors of the Shanghai Health Study

Establishment of the central diagnostic laboratory as a functioning reality, and expanding the number of cooperating institutions to include 23 of the 24 major Shanghai hospitals, are major achievements. It is especially significant that the hospitals that have most recently joined the Study are those that treat the majority of benzene poisoning cases in Shanghai. The enrollment of cases, which has just commenced (July 2003), constitutes a highly significant milestone in this overall research program. The investigators are now in an excellent position to accomplish the specific goals of their respective protocols. As these studies progress, a transition plan for identified cases and an ongoing local role for the clinical laboratory should be considered.

For the NHL component of the case-control study, it is imperative to document exposures of both cases and controls to all risk factors for NHL other than benzene, notably to HIV. For HIV, a questionnaire alone is insufficient. Performing the requisite blood test should not be a technical difficulty for the diagnostic laboratory, but the current case-control protocol does not provide for blood samples from controls, and is not funded to do this. As an action item, Drs. Irons and Wong agreed to confer and propose an approach to obtaining HIV data from control subjects.

Suggestions for further and/or expanded future studies

As the goals of the current studies are progressively reached in future years, the investigators should give consideration to exploring new sources of funding for additional studies that lie outside the work scopes of the current protocols:

1. Establish a Leukemia Tissue Bank

An established leukemia tissue bank, consisting of stored frozen cells and serum, will provide a major international resource for future research. These clinically and biologically well characterized tissues could be made available to future studies of many kinds and thus provide a significant asset to the investigators and their institutions. A mechanism should be developed for other investigators to apply for access to these preserved tissues. The National Cancer Institute Clinical Cooperative Groups have developed and published criteria for reviewing concepts or research proposals from other laboratory investigators for access to their tissue

banks. [See: Schilsky RL, Dressler LM, Bucci D, Monovich L, Jewell S, Suster S, Caligiuri MA, Kantoff PW, Compton C. Cooperative group tissue banks as research resources: the Cancer and Leukemia Group B tissue repositories. Clin Cancer Res. 2002 May; 8(5): 943-8].

2. Include Commonly Evaluated Benzene Biomarkers

The current studies of benzene toxicity and carcinogenicity in many ways will be the most sophisticated ever undertaken, notably in the application of modern diagnostic criteria. It is highly desirable that the results of these studies be directly comparable to results of previous studies. This can best be accomplished by adding commonly evaluated biomarkers of benzene exposure and effect. All three of the study protocols describe dose response, and the study protocol of the Molecular Epidemiology Study describes identification of sensitive biomarkers, as a specific aim. These include specific metabolites of benzene present in urine, and chromosome aberrations assessed in peripheral blood lymphocytes by conventional methods. Enumerations of peripheral blood granulocytes and lymphocytes are already being made by standard hematological assays. The urinary concentrations of S-phenylmercapturic acid (S-PMA) and trans, trans-muconic acid (T,T-MA), which are minor metabolites of benzene, have recently been validated as highly specific biomarkers of recent benzene exposures (Qu et al. HEI Report #11, 2003). Correlations with external exposures, as measured by personal monitors, have been excellent, with linear relationships even between 0.1 to 1.0 ppm. Other benzene metabolites, such as phenol, catechol and hydroquinone do not show such sensitivity or specificity. It is recommended to include at least urinary excretion of S-PMA in studies that investigate acutely exposed workers.

In this same study, conventional chromosome analyses of peripheral blood lymphocyte metaphase spreads also were correlated with benzene exposures. Furthermore, chromosome aberrations and chromatid breaks were correlated also with long term cumulative benzene exposures, as assessed by work histories, etc. FISH analyses of interphase cells (granulocytes and non-stimulated lymphocytes), as well as of metaphase spreads of cultured lymphocytes, showed more variability, suggesting that these newer methods require additional development. Decreases in peripheral blood granulocyte and lymphocyte numbers were also correlated with measured

benzene exposures, even though the white blood cell numbers did not drop below normal levels.

The reason for including these additional biomarkers in this component of the overall study is to assess benzene internal doses by the best-validated methods currently available. This will add validity to the estimates of (current) external benzene exposures being made by worker histories, work area measurements, etc., that are now the only measures of current exposure levels for the subjects in the Molecular Epidemiological Study. As these latter measures are also those being used to quantify benzene exposures retrospectively in the other two components of the overall study, *i.e.* the Disease Progression Study and the Case Control Study, the Molecular Epidemiology Study will serve as an internal validation study of the methods, adding credibility to them and thereby to the exposure assessment in the other two studies.

Conventional chromosome aberration studies using peripheral blood lymphocytes will not be as sensitive or specific for benzene exposures as the urine metabolite concentrations, but good correlations have traditionally been shown between frequencies of chromosome aberrations and chromatid breaks and benzene – as again verified in the Qu study. This biomarker will link the SHS with the many other studies of benzene's human effects that have preceded it. Furthermore, chromosome aberration frequencies are also correlated with long term benzene exposure levels – something that cannot be assessed using the urine metabolites. Finally, chromosome aberrations appear to have predictive value for the subsequent occurrence of cancer, as shown by studies of Hagman and Bonassi over recent decades. (Note: these chromosome studies will not be mechanistic probes; they will be used as biomarkers of exposure to add validity to the methods currently used to assess exposure.)

These biomarker suggestions apply to the Molecular Epidemiology Study only. Urinary metabolites will have no use for measuring the distant past benzene exposures of relevance in the other two studies of the overall SHS, and chromosome changes, although reflecting long-term cumulative exposures, will be difficult to interpret in patients with leukemia and associated diseases.

Participants

Richard Albertini
Patrick Beatty (*observer*)
Stuart Cagen (*observer*)
Harvey Checkoway
John Cherrie
Helmut Greim
Robert Herrick
Juhana E. Idänpään-Heikkilä
Bruce Jarnot (*API staff*)
Richard Larson
Guilan Li
Jerry Rice
Howard Rockette
Zong-Liang Xu

SHANGHAI HEALTH STUDY

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Chevy Chase, Maryland 20815
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Fax: +1-301-986-5438
E-mail: jmrice@aol.com

Memorandum

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Bruce Jarnot (*API staff*)
Richard Larson
Guilan Li
Jerry Rice
Howard Rockette
Zong-Liang Xu

From: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Sent: Friday, October 17, 2003 7:13 PM (GMT)
To: Sullivan, Nancy E SCC-CBAR <nancy.sullivan@shell.com>; Tholstrup, Susan C SCC-HSE <susan.tholstrup@shell.com>
Cc: Iannarone, Lauren B SCC-CSEA <Lauren.Iannarone@shell.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Cagen, Stuart Z SCC-HSE <stuart.cagen@shell.com>; Tsai, Shan SP SHLOIL-SHLOIL-HE <Shan.Tsai@shell.com>
Subject: API Program Oversight Group - Shanghai Health Study
Attach: letter to Self-Supporting Review Group.doc

I have just learned this week that the API Program Oversight Committee is the official API home for the Shanghai Health Study. This is a relatively newly formed committee that is responsible for "non-subscription" programs (i.e. programs not funded by API dues) run by API. Interestingly, Shell has 2 representatives on this committee.

Doug Quinn, Shell Oil Products

Bruce Reynolds, ChevronTexaco

Peter Velez, Shell Exploration and Production

To my knowledge, they have not been briefed internally about the program. I would suggest that we offer an opportunity to brief them. Who would be the appropriate person to initiate the contact?

Regards,

Patsy

Patsy Clegg

Product Steward

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 **Fax:** 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>

-----Original Message-----

From: Lorraine Twerdok [mailto:Twerdokl@api.org]

Sent: Thursday, October 16, 2003 8:18 AM

To: Benzene OC listserve (E-mail)

Cc: Kathleen Combs

Subject: BHRC - info. on API Program Oversight Group

To BHRC Oversight Committee:

As requested on the 10/7/03 conference call, the current members of the API Program Oversight Group - AP I- Self-Supporting and Special Solicitation Programs are:

Doug Quinn, shell Oil Products

Bruce Reynolds, ChevronTexaco

Peter Velez, Shell Exploration and Production

<<letter to Self-Supporting Review Group.doc>>

A 2001 letter setting out the charter for this group is attached. This letter better explains the group's mission.

Also, in requesting this information, Kathleen Combs of API mentioned that the current members are involved only with self-supporting activities, and that the group would welcome participation by a member familiar with the subscription research (termed special solicitation in the letter) programs.

Please don't hesitate to contact me with comments or questions on this information.

-lorraine

Lorraine E. Twerdok, Ph.D., DABT
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American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

tel: 202-682-8344

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email: twerdokl@api.org <<mailto:twerdokl@api.org>>

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Friday, February 21, 2003 7:56 PM (GMT)
To: toxicology tf (E-mail) <toxtf@api.org>; Benzene consort tech (E-mail) <benzconsort-
tc@api.org>; Benzene TF listserve (E-mail) <Benztf@api.org>
Subject: API welcomes Bruce Jarnot!

To the Toxicology TF, Benzene TF and the SHS Technical Committee:

This note is to announce the addition of Bruce Jarnot to API RASA staff. Bruce is our new Senior Toxicologist, replacing George Woodall. Bruce will be staffing the Toxicology and Benzene Task Forces, working on our subscription research Shanghai Health Study on benzene, and handling other health issues as they arise.

Bruce has considerable experience with the petroleum industry; before joining API, he provided product stewardship and regulatory support for ExxonMobil Fuels, Lubricants and Solvents businesses, and chaired ACC's Ketones Panel and Hydrocarbon Solvents Toxicology Task Force. Earlier in his toxicology career, Bruce worked with the US Air Force, providing product safety support for jet fuels, lubricants, and additives. While there, he was an assistant professor at Wright State and Antioch Universities, and coordinated Air Force-funded academic research programs in hydrocarbon metabolism and toxicology. Bruce holds a Ph.D. in Biochemistry and Molecular Biology from Wesleyan University, and is a diplomate of the American Board of Toxicology.

In his spare time, Bruce is an active field mineralogist and teaches SCUBA diving. Bruce and his wife, Miranda, are looking forward to moving to this area with their two boys, Alex (age 7) and Nick (5), after the school year.

Bruce can be reached at 202-682-8473 or jarnotb@api.org

Lorraine E. Twerdok, Ph.D., DABT
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Washington, DC 20005

tel: 202-682-8344
fax: 202-682-8031
email: twerdokl@api.org <<mailto:twerdokl@api.org>>

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Friday, February 21, 2003 7:00 PM (GMT)
To: Benzene consort comm (E-mail) <benzconsort-cc@api.org>; Benzene consort tech (E-mail) <benzconsort-tc@api.org>; Benzene OC listserve (E-mail) <BenzConsort-OC@api.org>
Cc: 'myron. c. harrison@exxonmobil. com' (E-mail) <myron.c.harrison@exxonmobil.com>
Subject: BHRC - revised API Exec Brief
Attach: China Benzene Paper API Exec Comm 2-18-03 Draft.doc

<<China Benzene Paper API Exec Comm 2-18-03 Draft.doc>>

To All -

Attached for your review for our 2/25 conference call, is the revised briefing paper for the March 18 API Executive Committee meeting.

We were not successful in getting Red Cavaney's feedback on the document.

I have highlighted one change suggested by Mark Fitzsimmons, since this deletion does change the meaning of the phrase.

Thanks,
Lorraine

For Action

API Executive Committee

Issue: The Benzene Health Research Consortium is seeking guidance on options to address a shortfall in funding the industry-sponsored Shanghai Health Study (SHS). A five-year project designed to investigate the potential health effects of benzene, the study has secured \$16.5 million of the \$22.8 million required to carry it to fruition. Although preparations for the research have begun, this funding gap - - if not closed - - will either compromise the study or lead to its demise.

Background: Continued concern about the potential health effects of benzene is reflected by two recent studies that suggest a link between benzene exposure and certain cancers not previously associated with the chemical. The Consortium is thus sponsoring a five-year study in Shanghai, China, which could significantly decrease the uncertainty surrounding the issue. A joint investigation primarily managed by the University of Colorado and Fudan University, the SHS includes protocols developed with the assistance of a 12-member international scientific review panel and Chinese, European and American bio-ethics specialists. It also has strong support and active participation from Chinese universities, hospitals and regulatory agencies. The USEPA has agreed to actively participate in the project.

The quality of Shanghai's occupational benzene exposure records offers an unprecedented opportunity, and perhaps the last of its kind, to study the relationship between benzene exposure and the risk of certain blood diseases. The SHS will enhance industry's product stewardship, while providing the scientific, regulatory and business communities with better information on benzene.

Project Status: Three inter-related studies are underway: (1) a Case-Control Epidemiology study; (2) a Disease Progression Study; and (3) a Molecular Epidemiology Study. Laboratory construction, technical training and exposure assessments are nearing completion and individual case acceptance will begin in spring, 2003. Legal and public affairs expertise has been retained to facilitate Consortium activities.

Funding Status: Current funding for the program is projected to run out during the first quarter of 2004. Five companies (BP, ChevronTexaco, ConocoPhillips, ExxonMobil and Shell Chemical Company) have contributed \$16.5 million. The initial cost estimate for the study was \$19.8 million; the study was initiated with a funding shortfall requiring recruitment of additional funding sponsors to fully fund the study. Subsequent protocol enhancements recommended by independent scientific and ethics review panels led to the final budget of \$22.8 million as necessary to complete the five-year study.

The Consortium has made presentations to IPIECA, CONCAWE, ARPEL, ACC, and NPRA; held focused discussions with Marathon Ashland, Dow Chemical Company, and Sunoco, and approached Citgo, Dupont, BASF, Lyondell-Equistar, TotalFinaElf, Statoil, AGIP-ENI, ARPEL and Petronas. To date, none of these entities has agreed to join the Consortium and contribute funds.

Implications of funding shortfall: The Consortium Technical Committee has studied the impacts of a funding shortfall and determined that, at best, only one of the three studies could be completed with current funds. The reality, however, is that an unclosed gap would result in loss of Chinese collaboration, in which case none of the studies could be completed. In addition to the lost scientific and product stewardship opportunities, this situation could have public relations and legal ramifications.

At this point, recruitment of additional members has been unsuccessful and Consortium members are not optimistic that any will commit. Given that the study would benefit the entire industry, the Consortium is requesting that API leadership consider whether API can provide support to eliminate the current shortfall. Possible options include API (1) providing direct funding for the study; (2) underwrite the remaining shortfall while recruitment efforts continue with the expectation of being repaid in full or in part by the Consortium; or (3) provide no additional funding for the study.

For Action: The Executive Committee is requested to advise the Consortium what assistance API can provide to eliminate the shortfall and allow the SHS to be completed.

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Thursday, February 20, 2003 3:51 PM (GMT)
To: BenzConsort-OC@api.org; BenzConsort-TC@api.org; BenzConsort-CC@api.org
Subject: Benzene Recruitment Minutes
Attach: feb 13 03 Call Summary.doc

Attached for your review are the minutes from the 2/13/03 conference call.

**BHRC Recruitment Committee Conference Call
13 February 2003**

Participants:

Patsy Clegg, Shell
Bill Broddle, ConocoPhillips
Brian Doll, Exxon Mobil
Don Burnett, BP
Patrick Beatty, ChevronTexaco
Shannon Stewart, APCO
Jay Stuller, Chevron Texaco
Stu Cagen, Shell

Lorraine Twerdok, API
John Wagner, API
Bill Frick, API
Matt Todd, API
Paula Podhasky, API
Jim Vail, API Consultant

Agenda Items

Introductions and Roll Call – Patsy Clegg

Lorraine Twerdok informed participants that the new Benzene Health Research staff toxicologist would begin work on Tuesday, 18 February 2003.

Discussion of Draft Briefing paper for Executive Committee- Lorraine Twerdok

- The committee reviewed the draft briefing paper, identified a few additional changes and requested edits be made immediately with the revised document circulated to the committee as soon as possible. (Lorraine Twerdok and Bill Frick took action item; possibility that Red Cavaney will also review.) Some points:
 - The consortium is not in cost overrun
 - Study would benefit all of API

Discussion of “Call Sheet” – Lorraine Twerdok

- Crafted as “talking points” for Mr. O’Reilly.
- Document needs to emphasize there are no epidemiological studies available to respond to the NCI studies

Update on NPRA Presentation – Bill Frick

- Bill Frick and Myron Harrison gave a presentation to the NPRA Issues Committee Meeting in Houston, TX.
 - Approximately 16 individuals from the Petrochemical industry
 - Presentation went well with good questions from audience

Discussion of “Why Join Now” Document – Lynn Russo, Matt Todd, Shannon Stewart

- Finalized

Approval of Draft Minutes - Patsy Clegg

- 29 January 2003 minutes approved

DRAFT

Action Item Update - Patsy Clegg

- Sunoco internal discussion complete
 - Waiting for consent to have O'Reilly call
- European Union NGO activity
 - Patsy Clegg is identifying correct people within Shell to work the issue.
- PACE: Patsy Clegg is arranging for chief labor negotiator at Shell to contact VP at Pace
- Communications Committee have update on status of the Laboratory opening ceremony on the 24 February 2003 Call.

Other Business – Patsy Clegg

- OSHA contact is Amanda Edens
- Member companies need to discuss with their legal representatives whether to have Mark Fitzsimmons participate in the 2003 Annual Meeting
- Everyone is to review action items
- Fund for Peace (identified by Genevieve LafflyMurphy) is a human rights group with an interest in China; John Wagner will follow-up by identifying who from BP is a representative to the organization
- Lorraine Twerdok informed participants that Bruce Jarrot, Ph.D., DABT, will begin working at API the following week.

13 February 2003

ACTION ITEMS

✓ in status column indicates task completed

Owner	Action Item	Due Date	Status
Lorraine & Bill Frick	Make requested changes to Briefing paper and circulate to committee	ASAP	✓
Matt Todd	Post 29 January 2003 minutes (Paula forward finalized version)		
Communications Committee	Status of laboratory opening ceremony	25 Feb 2003	
All	Consider whether Mark Fitzsimmons needs to attend annual meeting		
John Wagner	Follow-up on who within BP is a representative on Fund for Peace		

BHRC Recruitment Committee Conference Call

29 January 2003

ACTION ITEMS

Owner	Action Item	Due Date	Status
Lorraine Twerdok	Make requested changes to Briefing paper and forward to Patrick Beatty and Jay Stuller	ASAP	✓

DRAFT

Patrick Beatty & Paula Podhasky	Adapt project payout to API calendar year budget		draft under review
Lynn Russo	Forward names of Exxon Mobil people in Europe to Patsy Clegg		
All	Get your companies' view on whether BHRC should contact OSHA / Ms Edens		

BHRC Recruitment Committee Conference Call

15 January 2003

ACTION ITEMS

Owner	Action Item	Due Date	Status
Recruiters	Send to Matt information on the organizational level of your contacts and their responses to joining the consortium	20 Jan 03	
Recruitment Committee	Follow-up on European NGO activity	End of March 2003	

BHRC Recruitment Committee Meeting

11 December 2002

ACTION ITEMS

Owner	Action Item	Due Date	Status
Stu Cagen	Provide update on Tier 1 recruitment efforts		
Patrick Beatty	Talk to Chevron CEO about Marathon follow-up (CEO-CEO)		On hold
Bill Broddle	Follow-up on likelihood of share increase for ConocoPhillips	monthly	Reviewing issue internally
Patrick & Bill Frick	Look into recruiting from Caprolactam producers/users		
Paula & Patrick	Draft structure slide	mid February 2003	In progress
	Review QA document to screen for repetition across recruitment documents		
Lynn	Strengthen science perspective in "Why " join now document	1/29/03	In progress
	Elaborate on internal benefits gained by a company through participating in a high quality, state of the art research project		
CC / All	Review distributed documents and provide comments back to communication Committee CC will	Revised 1/15/03	

DRAFT

	circulate with due date		
CC / All	Verify that roles and responsibilities are consistent between recruitment documents CC will circulate with due date	Revised 1/15/03	
Bill Frick	Identify House Committee Contact/meeting invite		
Lynn	Contact Nike for additional information on footwear makers		
John Wagner	Talk to Genevieve Laffly about international organizations that would have interest in program		
ALL	Think about other possible organizations/groups and forward info to Matt	ongoing	Ongoing

BHRC Recruitment Committee Conference Call

21 November 2002

ACTION ITEMS

Owner	Action Item	Due Date	Status
Lynn	Forward Patrick's early "Ethics paper" to Matt for posting on website	12/10/2002	
Lynn	Review presentation of ethics: ¹ Request narrative on Ethics; ² consider adding paragraph to key messages document; ³ Review slides and decide whether ethics can be addressed more proactively	12/11/2002	
Recruiters	Receive prior approval from an individual before using their name in recruitment	ongoing	
John Wagner	Develop wording for arguments for joining		
Stu Cagen	Develop wording for scientific argument for joining		
Shan Tsai	Forward CAPA conference information to Lynn		
Shannon	Include conferences in recruitment opportunities list	ongoing	
John	Review member contract for TSCA 8e issues		

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Wednesday, February 12, 2003 1:04 PM (GMT)
To: BenzConsort-OC@api.org; BenzConsort-CC@api.org; BenzConsort-TC@api.org;
myron.c.harrison@exxonmobil.com
Subject: BHRC
Attach: SHS - exec briefing & call sheets - latest draft.msg; Jan 29 03 Call Summary.doc

The Recruitment Committee Call is **Thursday, 13 February 2003 at 1:00 PM EST.**

Dial-In #: 866/262-1780 (US)
205/354-0100 (International)
Meeting Room: *0495614* (stars required)

Agenda

- Introductions and Roll Call.....(Patsy Clegg)
- Discussion of revised BHRC *Briefing paper* for the Executive Committee.....(Lorraine Twerdok)
- Discussion of *Call Sheet*.....(Jay Stuller, Lorraine Twerdok)
- NPRA Presentation Update..... (Bill Frick, Myron Harrison)
- Establish Time/Date for next call(Patsy Clegg) (*everyone come with calendars available*)
- Discussion of *Why Join Now* document(Lynn Russo, Matt Todd, Shannon Stewart)
- Approval of 29 January 2003 Draft Minutes.....(Patsy Clegg)
- Action Item Update.....(Patsy Clegg)
- Other Business

Paula Podhasky

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**BHRC Recruitment Committee Conference Call
29 January 2003**

Participants:

Patsy Clegg, Shell	Lorraine Twerdok, API
Bill Broddle, ConocoPhillips	
Brian Doll, Exxon Mobil	Bill Frick, API
Lynn Russo, ExxonMobil	Matt Todd, API
Don Burnett, BP	Jim Vail, API Consultant
Patrick Beatty, ChevronTexaco	Paula Podhasky, API
Shannon Stewart, APCO	
Mark Fitzsimmons, Steptoe & Johnson	
Jay Stuller, Chevron Texaco	
Shan Tsai, Shell	
Stu Cagen, Shell	

Agenda Items

Introductions and Roll Call – Patsy Clegg

Discussion of Draft Briefing paper for Executive Committee- Lorraine Twerdok

- The committee reviewed the draft briefing paper, identified changes and requested edits be made immediately and the revised document forwarded to Patrick Beatty and Jay Stuller. New draft needs to be circulated to the committee prior to the next conference call.
 - Include implications of no additional funding; direct consequences need to be clearly stated
 - BHRC asking for guidance therefore **no** funding options included in Briefing paper
 - For funding options to be discussed need to be brought up by consortium's member company executive committee representatives during the meeting in March
 - BHRC committee members need to brief their executive committee member; message needs to be consistent.
 - Lorraine Twerdok will inquire on format to insure BHRC briefing paper is viewed as an action item and not a discussion piece.

Establish Time/Date for Next Conference Call – Patsy Clegg

- Next Conference Call scheduled for Thursday, 13 February 2003 at 1:00 PM EST
- Following Call scheduled for Tuesday, 25 February 2003 at 4:00 PM EST

Discussion of “Why Join Now” Document – Lynn Russo, Matt Todd, Shannon Stewart

- The participants reviewed the document and identified changes
- Lynn Russo and Shannon Stewart will incorporate recommended changes

DRAFT

- Lynn Russo will add sentences regarding science and forward to Patrick Beatty and Mark Fitzsimmons.

Update on NPRA Presentation – Bill Frick

- Bill Frick has secured time for BHRC to present at the NPRA Issues Committee Meeting in Houston, TX.
- Persuasive tact needed to show why this is critical issue for a Downstream CEO.
- Bill Frick will try to get NPRA Committee roster and forward to BHRC members.
- Matt Todd will provide BHRC presentation packets for distribution

Discussion of “Call Sheet” – Lorraine Twerdok

- Bullet format recommended
- Need make case that study is in jeopardy
- Contact information: add Don Burnett and Nancy Sullivan
- Jay Stuller will work on document and circulate revised version to committee by 13 February 2003

Approval of Draft Minutes - Patsy Clegg

- 15 January 2003 minutes approved

Other Business – Patsy Clegg

- OSHA contact is Amanda Edens
- Member companies need to decide whether BHRC should contact OSHA (MS Edens)
- Patsy following up internally at Shell on BHRC approaching PACE
- Sunoco recruitment
 - Sunoco undergone reorganization
 - New corporate HSE manager at Sunoco
 - Don Burnett is keeping tabs on status of issue
 - Don Burnett will keep Brian Doll in the loop
- Lorraine Twerdok informed participants that there are 3 members of the ERP (Baruch Brody, Zongliang Xu and Juhana Idanpaan-Heikkila)

.....

BHRC Recruitment Committee Conference Call

29 January 2003

ACTION ITEMS

✓ in status column indicates task completed

Owner	Action Item	Due Date	Status
Lorraine Twerdok	Format Briefing paper so API Executive Committee views it as “action Item” (not discussion piece)	ASAP	✓

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Lorraine Twerdok	Make requested changes to Briefing paper and forward to Patrick Beatty and Jay Stuller	ASAP	√
Patrick Beatty & Paula Podhasky	Adapt project payout to API calendar year budget		
Lynn Russo & Shannon Stewart	Make requested changes to "Why Join Now" document and forward to Patrick Beatty and Mark Fitzsimmons	ASAP	√
Bill Frick & Myron Harrison	Prepare for NPRA presentation		√
Matt Todd	Put together BHRC recruitment packets for Bill Frick and Myron Harrison		√
Lorraine Twerdok	Make requested changes to Call Sheet		√
Jay Stuller	Revise format of "Call Sheet" (Dow)		√
Paula Podhasky	Finalize 1/15/03 minutes forward to Matt Todd for posting		√
Lynn Russo	Forward names of Exxon Mobil people in Europe to Patsy Clegg		
All	Get your companies' view on whether BHRC should contact OSHA / Ms Edens		
Don Burnett	Keep Brian Doll in loop with regards to Sunoco recruitment		

BHRC Recruitment Committee Conference Call

15 January 2003

ACTION ITEMS

Owner	Action Item	Due Date	Status
Matt Todd	Add column to recruitment matrix to record level in organization that was approached	ASAP	√
Recruiters	Send to Matt information on the organizational level of your contacts and their responses to joining the consortium	20 Jan 03	
Lorraine Twerdok	Write Recruitment "script" for O'Reilly	27 Jan 03	√
Lorraine Twerdok	Write and Circulate 1 st draft of executive committee briefing paper	27 Jan 03	√
Lorraine Twerdok	Contact Bill Frick about following-up on action items	16 Jan 03	√
Paula Podhasky	Contact John Wagner about following up on action items		√
Recruitment Committee	Follow-up on European NGO activity	End of March	

DRAFT

		2003	
Shannon Stewart	Identify Benzene contact within OSHA	ASAP	√
Matt Todd	Draft consortium letterhead; forward to John Wagner for legal review	ASAP	√
Lorraine Twerdok	Follow through on IRB issues/ inform Dr. Brody of committee discussion		√

BHRC Recruitment Committee Meeting

11 December 2002

ACTION ITEMS

Owner	Action Item	Due Date	Status
Mark Fitzsimmons	Contact Lyondell (Joe Spielman)		√ Lyondell is aware of project; in poor shape financially
Matt Todd	Forward Tier 1 spreadsheet to Mark F.		√
Stu Cagen	Provide update on Tier 1 recruitment efforts		
Matt Todd	Provide recruitment information packages (folders)		√
Patrick Beatty	Talk to Chevron CEO about Marathon follow-up (CEO-CEO)		On hold
Bill Broddle	Follow-up on likelihood of share increase for ConocoPhillips	monthly	Reviewing issue internally
Lynn Russo	Identify Sinopec contact		√
Patrick & Bill Frick	Look into recruiting from Caprolactam producers/users		
Paula & Patrick	Draft structure slide	mid February 2003	In progress
	Review QA document to screen for repetition across recruitment documents		
Lynn	Strengthen science perspective in "Why " join now document	1/29/03	In progress
	Elaborate on internal benefits gained by a company through participating in a high quality, state of the are research project		
Matt	Check on ability to blackout website links		√

DRAFT

	in dreamweaver		Can blackout
CC / All	Review distributed documents and provide comments back to communication Committee CC will circulate with due date	Revised 1/15/03	
Communications	Update slide presentation (AHS, IRB review)		√
CC / All	Verify that roles and responsibilities are consistent between recruitment documents CC will circulate with due date	Revised 1/15/03	
All	Discuss internally whether PACE should be solicited for attendance at annual meeting		√
John Wagner	Identify contact at AFL/CIO		√ Peg Seminario
Bill Frick	Identify House Committee Contact/meeting invite		
Lynn	Contact Nike for additional information on footwear makers		
Bill Frick	Give BHRC presentation at NPRA		√
Matt	Change "US" NGO to "North American"		√
John Wagner	Talk to Genevieve Laffly about international organizations that would have interest in program		
ALL	Think about other possible organizations/groups and forward info to Matt	ongoing	Ongoing
All	Forward list of European NGOs to most appropriate person within your company; forward their recommendations to Matt		√
All	Plan to participate on a Conference Call in January		√

BHRC Recruitment Committee Conference Call

21 November 2002

ACTION ITEMS

Owner	Action Item	Due Date	Status
Paula	Draft minutes forward to legal	ASAP	√
Matt	Notify members in Friday Update of any finalized minutes; post minutes to website	Ongoing	Ongoing

SHELL-MCCLURG-052769

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Members	Check website; if you are unable to access website contact Matt	Weekly	
Matt	Remove <i>Draft</i> from final documents	As needed	
Members	Contact Matt for documents you are unable to download from site	As needed	
Lynn	Forward Patrick's early "Ethics paper" to Matt for posting on website	12/10/2002	
Lynn	Review presentation of ethics: ¹ Request narrative on Ethics; ² consider adding paragraph to key messages document; ³ Review slides and decide whether ethics can be addressed more proactively	12/11/2002	
Patsy Lynn	Draft 1-pager on committees		√
Paula Matt	Prepare packet of all available recruitment documents have available for participants of 12/11/02 meeting	12/11/2002	√
Matt	Post Dr. Brody's ethics review of the protocols		
Recruiters	Receive prior approval from an individual before using their name in recruitment	ongoing	
John Wagner	Develop wording for arguments for joining		
Stu Cagen	Develop wording for scientific argument for joining		
Communications	Review and Edit document list of responses for "Why join now"		√
Lorraine	Draft paragraph that succinctly responds to why join now; forward to Bill Frick and Howard Feldman		Morphed into script for recruitment calls
Matt	Remove from document title "Joint Sino-US..."		√
Members	Review "Joint Sino..." and "Scope Statement" documents and send comments to Matt	12/05/2002	√
Shan Tsai	Forward CAPA conference information to Lynn		
Shannon	Include conferences in recruitment opportunities list	ongoing	
Patrick /Don	Forward Conoco Phillips email regarding share increase to Lorraine		√
Lorraine	Circulate newest version of Rolls and		√

DRAFT

	Responsibilities paper		
Paula	Include review and approval of Rolls and Responsibilities in OC meeting agenda		√
John	Review member contract for TSCA 8e issues		
Paula	Add CC critical presentation review to 12/11/2002 recruitment meeting agenda		√

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Monday, February 10, 2003 10:06 PM (GMT)
To: Benzene consort comm (E-mail) <benzconsort-cc@api.org>; Benzene consort tech (E-mail) <benzconsort-tc@api.org>; Benzene OC listserve (E-mail) <BenzConsort-OC@api.org>
Subject: SHS - exec briefing & call sheets - latest draft
Attach: China Benzene Paper API Exec Comm 1-26-03 Draft.doc; Shanghai Fundraising Brief.ppt

TO BHRC:

Latest version of the API Exec. paper and the call sheet for your review for our 1 PM recruitment call on 2/13.

Dial in: 1-866-262-1780

Meeting #: *045613* (stars required)

These will also be posted to the website under SHS Update, along with information to join the call.

Talk to your Thursday,

Lorraine

-----Original Message-----

From: Lorraine Twerdok

Sent: Monday, February 10, 2003 3:22 PM

To: Patrick Beatty (E-mail)

Cc: Mark Fitzsimmons (E-mail)

Subject: FW: SHS - exec briefing & call sheets - latest draft

Patrick -

Information in the ppt presentation is fine.

The API executive paper is a much more forceful document than it had been previously. I personally like it this way, but we definitely need input from the rest of the consortium, as well as Bill Frick. Also - I have added a point of clarification (highlighted in yellow), requested by Don, on the fact that we always had a shortfall of funds - Don felt the previous version looked like we let the PIs just up the price on us from an original estimate of \$16.5 million.

Are these ready to circulate for our call next week?

Lorraine

-----Original Message-----

From: Beatty, Patrick (PatrickBeatty) [mailto:PatrickBeatty@ChevronTexaco.com]

Sent: Thursday, February 06, 2003 9:05 PM

To: Fitzsimmons, Mark; Lorraine Twerdok; lynn.b.russo@exxonmobil.com

Cc: Stuller, Jay (JayStuller)

Subject: FW: SHS - exec briefing & call sheets - latest draft

ALL,

Attached are two documents that Jay and I (mostly Jay) developed to be used by Dave O'Reilly for discussions with other company CEOs. The word document is also to be submitted to the API Exec. Com. I have reviewed them for accuracy. Mark, please review from the legal perspective. Lorraine and Lynn, If you have serious problems with wording let me know. If you have less serious concerns especially with the PPT document, I don't want to slow this down. Fine tuning on the word document is more valuable for the Word document that will eventually go to the Exec. Com. I really don't want these to have to wait for whole committees to weigh in on the wording.

Patrick

-----Original Message-----

SHELL-MCCLURG-052772

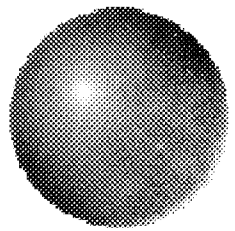
From: Stuller, Jay (JayStuller)
Sent: Tuesday, February 04, 2003 8:55 AM
To: Beatty, Patrick (PatrickBeatty)
Subject: SHS

<<China Benzene Paper API Exec Comm 1-26-03 Draft.doc>> <<Shanghai Fundraising Brief.ppt>>

Hi Patrick:

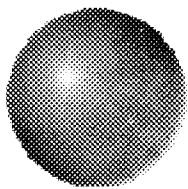
Thanks for the thoughts. I made a few more changes to the briefing paper, to deal with the fact that DJO might be calling someone who'd not really heard of the Consortium or what it's about. As for the background paper, why don't you remove the editing remarks permanently, and then send the package to the folks who need to see it.

Jay



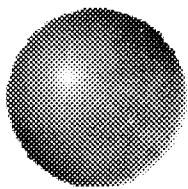
The Shanghai Health Study

Closing the Gap



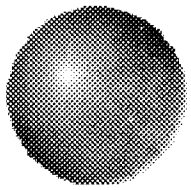
The Benzene Health Research Consortium

- ✦ Formed under auspices of API
- ✦ Primary sponsors of Shanghai Health Study
- ✦ Comprised of five companies: BP, Shell Chemical, ChevronTexaco, ExxonMobil and ConocoPhillips
- ✦ Consortium in need of wider sponsorship



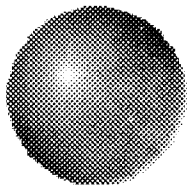
Benzene and Health

- Effects of low-level benzene exposure on health is not well understood
- Two recent studies suggest link between benzene and cancers not previously associated with the chemical
- Benzene an ongoing concern for science, health and regulatory communities
- Uncertainty drives current and future policies and regulations



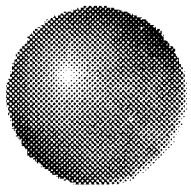
An Unprecedented Opportunity

- ❖ Strong collaboration between U. of Colorado, Fudan U., Chinese Hospitals, regulatory agencies
- ❖ Designed with international bio-ethics advisors and meets WHO ethics standards
- ❖ Exceptional health and benzene exposure records maintained by cooperating Shanghai authorities
- ❖ \$16.5 million of \$22.8 million required is already committed.



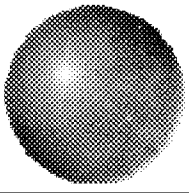
Additional Sponsors Needed

- However, the \$6.3 million gap jeopardizes the entire study
- Funds sufficient to launch but not complete the SHS
- We are seeking a one share/\$1.5million commitment over next 3 to 4 years
- Shares proportional to size of sponsor companies



Benefits of Consortium Membership

- Answer questions, provide updates
- Annual summaries
- Interactions with other sponsors, investigators and participants
- Opportunity to help SHS gain greater acceptance from health officials, regulators governments and NGO's



Conclusions

- ✦ Study will advance benzene science;
- ✦ Enhance Product Stewardship;
- ✦ Advance Corporate Social Responsibility;
- ✦ Add vital new data to accepted body of scientific research on benzene;
- ✦ Be used as reference by government, industry and regulatory decision-makers.

For Action

API Executive Committee

Issue: The Benzene Health Research Consortium is seeking guidance on options to address a shortfall in funding the industry-sponsored Shanghai Health Study (SHS). A five-year project designed to investigate the potential health effects of benzene, the study has secured \$16.5 million of the \$22.8 million required to carry it to fruition. Although preparations for the research have begun, this funding gap - - if not closed - - will either compromise the study or lead to its demise.

Background: Continued concern about the potential health effects of benzene is reflected by two recent studies that suggest a link between benzene exposure and certain cancers not previously associated with the chemical. The Consortium is thus sponsoring a five-year study in Shanghai, China, which could significantly decrease the uncertainty surrounding the issue. A joint investigation primarily managed by the University of Colorado and Fudan University, the SHS includes protocols developed with the assistance of Chinese, European and American bio-ethics specialists. It also has strong support and active participation from Chinese universities, hospitals and regulatory agencies.

The quality of Shanghai's occupational benzene exposure records offers an unprecedented opportunity - - and perhaps the last of its kind - - to study the relationship between benzene exposure and the risk of certain blood diseases. While providing the scientific, regulatory and business communities with new information on benzene, the SHS would also enable industry to enhance its product stewardship reputation.

Project Status: Three inter-related studies are proposed: (1) a Case-Control Epidemiology study; (2) a Disease Progression Study; and (3) a Molecular Epidemiology Study. The pre-initiation program is currently nearing completion and the principal investigators expect to begin accepting subjects and processing samples from study participants in March or April of 2003. Previous and current Shanghai workplace exposures are being evaluated, while the training of exposure assessment technicians and interviewers is underway. Legal and public affairs expertise has been retained to facilitate Consortium activities.

Funding Status: Current funding for the program is projected to run out during the first quarter of 2004. Five companies - - BP, ChevronTexaco, ConocoPhillips, ExxonMobil and Shell Chemical Company - - have contributed \$16.5 million. The initial cost estimate for the study was \$19.8 million, the study was initiated with a funding shortfall requiring recruitment of additional funding sponsors to fully fund the study. Based on the protocol enhancements recommended by independent scientific and ethics review panels, the Consortium approved a \$22.8 million program to complete the five-year study. In seeking additional participation, the Consortium has made general presentations to IPIECA, ACC, CONCAWE and NPRA, and held more focused discussions with Marathon Ashland, Dow Chemical Company, and Sunoco. Several others have been approached, including Citgo, Dupont, BASF, Lyondell-Equistar, TotalFinaElf, Statoil, AGIP-ENI, and Petronas. To date, none of these entities have agreed to contribute funds.

Implications of funding shortfall: The Consortium Technical Committee has studied the impacts of a funding shortfall and determined that at best, only one of the three studies could be completed with current funds. The reality however, is that an unclosed gap would result in loss of all Chinese collaboration, in which case none of the studies could be completed. Aside from lost opportunity, this situation could have public relations and legal ramifications.

Draft for March 18, 2003 Meeting

First revision 1/29/03

Second revision 2/7/03

For Action: The Executive Committee is requested to decide by [insert date] whether API will (1) provide direct funding for the study; (2) provide funds to allow the study to continue while recruitment efforts continue, anticipating to be repaid in full or in part by the Consortium; or (3) provide no additional funding for the study.

From: Clegg, Patsy M SCC-CHSE-PC <paty.clegg@shell.com>
Sent: Friday, June 10, 2005 3:43 PM (GMT)
To: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Christopher Roythorne (E-mail) <chris.roythorne@uk.bp.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-CF-SS <sc724012@shell.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>
Cc: Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Matthew Todd (E-mail) <toddm@api.org>; Lorraine Twerdok <twerdokl@api.org>
Subject: BHRC Committee Chairs Call - June 3 2005 Minutes
Attach: June 3 2005 Committe Chairs Conference Call - Minutes.ZIP

Regards,

Patsy

Patsy Clegg
Product Steward, HSSE
Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916
Tel: +1 713 241 2521 **Fax:** 3325
Email: paty.clegg@shell.com
Internet: <http://www.shell.com/chemicals>
Business Success through HSSE Excellence

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Wednesday, June 1, 2005 5:55 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>
Cc: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>; Benzene consort comm (E-mail) <benzconsort-cc@listserve.api.org>
Subject: FW: BHRC OC Minutes from 5/3/05 mtg
Attach: BHRC OC Minutes 5 3 05.doc

To BHRC OC Members -
Please find minutes attached.
-lorraine

-----Original Message-----

From: brian.e.doll@exxonmobil.com [mailto:brian.e.doll@exxonmobil.com]

Sent: Wednesday, June 01, 2005 1:22 PM

To: Lorraine Twerdok

Cc: lynn.b.russo@exxonmobil.com

Subject: BHRC OC Minutes

Lorraine,

Attached are the minutes from the last OC meeting on May 3 at API.

Regards,

Brian

(See attached file: BHRC OC Minutes 5 3 05.doc)

BHRC Oversight Committee Meeting Minutes May 3, 2005

Introduction

Facility review and antitrust accomplished.

Quorum was established.

Present:

- Mike Johnston - Conoco Phillips
- Russ White - ChevronTexaco
- Brian Doll - ExxonMobil
- Lynn Russo - ExxonMobil
- Pasty Clegg - Shell Chemical
- Don Burnett - BP
- Lorraine Twerdock - API
- John Wagner - API
- Mark Fitzsimmons - Steptoe
- Howard Feldman - API
- Bruce Jarnot - API

Budget Discussion

- Lorraine Twerdock presented the 1Q05 Budget stewardship report which was approved by the Oversight Committee (OC). Minor clarifications were made to several spreadsheets.
- A final program budget of \$26,133,000.00 was approved.
- The OC discussed and approved the member contribution schedule to ensure API maintains adequate funds to meet financial obligations.

ACTION:

- The payment schedule (Schedule B) will be deleted from Amendment 3.
- API will work with member company counsel to make minor wording changes to the amendment and will get the final amendment to the OC for approval via email.
- Technical Committee (TC) contacts will notify Principal Investigators (PI's) once contract Amendment #3 has been executed by all members.
- API will revise all grants and contracts as appropriate to reflect the new budget.

Annual Meeting

- Lynn Russo presented the Annual Meeting 2005 planning timeline.

ACTION:

- Lynn will work with Jennifer Galvin to see if Jerry Rice would be interested in hosting or participating in a meeting or symposium on November 1 with regulators and interested parties in conjunction with the Annual Meeting;
- Follow-up discussions would be held with the PI's by the TC contacts;
- TC to determine if Gary Krieger should be part of SRP/ERP meetings with PI's.
- TC contacts will work with PI's to revise presentation titles to provide speakers with flexibility.
- Panel session to be added at the end of the first plenary session chaired by Jerry Rice with a lead off overview by Rich Irons.

- OC/TC will meet with PI's for information exchange on sunseting the study upon its completion and transferring the lab to Fudan.
- TC will talk with Richards Irons on whether another annual meeting should be held after 2005 or whether a symposium should be scheduled to review results.
- June 3 Chair's call will be broadened to include TC discussion on Annual Meeting.

Process for Media Response

- Response to the April 29 Houston Chronicle article was discussed
ACTION: Patsy Clegg to tell Shawn Tsai to inform Chinese PI about media articles.

Technical Committee Update

- TSCA 8(e) process discussed
ACTION:
 - TC to document the process and bring it to the OC for approval.
 - TC contacts to suggest they review the publication process with the PI's as documented in their respective approved protocols.

Action Item List

- List was reviewed and updated.

Next Meeting: Conference call was scheduled for June 27, 2-4 pm.

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Wednesday, June 1, 2005 6:02 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>; Benzene consort comm (E-mail) <benzconsort-cc@listserve.api.org>; Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Subject: FW: BHRC [Committee Chair] Call June 3 @ 9 AM (EDT)
Attach: Annual Meeting Milestones.doc; BHRC OC Minutes 5 3 05.doc

To all BHRC Committee Members -

At the last Oversight Committee meeting, it was decided to open up this weeks Committee Chair call to all members, due to the nature of some of the updates - TC action items from OC, Annual meeting planning, SRP/ERP, & funding/budgets.

These calls are intended to enhance communication between committees - not to actually work issues. Consequently, they last approx. 45 min - 1 hr at most.

The agenda and information to join the call are below.

As usual, minutes for the call will be posted to the website once they are finalized. So if you miss the call, you can always review the minutes.

Regards,
Lorraine

-----Original Message-----

From: Lorraine Twerdok
Sent: Friday, April 29, 2005 1:46 PM
To: Lorraine Twerdok; 'Patsy Clegg (E-mail)'; 'Brian Doll (E-mail)'; 'Jennifer B Galvin (E-mail)'; 'Lynn B. Russo (E-mail)'; 'Stuart Cagen (E-mail)'
Cc: John Wagner; 'Mark Fitzsimmons (E-mail)'
Subject: BHRC Committee Chair Call June 3 @ 9 AM (EDT)

As agreed on our call this morning, the next BHRC Committee Chair call will be:

Date: Friday June 3, 2005
Time: 9- 10 AM, EDT
Dial in: 1-770-765-9147
Pin: 2026828319#

Operator Assistance: *0

Draft Agenda:

- Antitrust - lorraine
- Assignment of note-taker
- OC update - Patsy
 - review of 5/3/05 OC action items for Tech Cmtte (minutes attached below)
 - status of consortium amendments (all)
- budget update, if required - Stuart
- Communications update - Lynn
 - review Annual Meeting milestones (see attached document)

SHELL-MCCLURG-052787

- Technical update - Jennifer
- SRP/ERP update - Stuart/Bruce
- Legal update - John
- API update - Lorraine
- AOB
- Schedule next call

<<Annual Meeting Milestones.doc>> <<BHRC OC Minutes 5 3 05.doc>>

Regards,

Lorraine

Lorraine E. Twerdok, Ph.D., DABT
Manager, Health Sciences
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

tel: 202-682-8344
email: twerdoki@api.org
fax: 202-682-8031

From: Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>
Sent: Wednesday, June 8, 2005 2:15 PM (GMT)
To: 'lynn.b.russo@exxonmobil.com'; Lorraine Twerdok <Twerdokl@api.org>
Cc: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Christopher Roythorne (E-mail) <chris.roythorne@uk.bp.com>; Richard Herold (E-mail) <heroldra@bp.com>; Bruce Jarnot <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Michael Johnston <Mike.d.Johnston@conocophillips.com>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Matt Todd <ToddM@api.org>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>
Subject: RE: Shanghai Health Study Annual Meeting - Symposium Day for Investigators

I think Patsy should call him as Chair of the Oversight Committee

Stuart Cagen

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 Fax: 3325 Other Tel: +1 832 646 3987

Email: stuart.cagen@shell.com

Internet: <http://www.shell.com/chemicals>

"Business Success through HSSE Excellence"

-----Original Message-----

From: lynn.b.russo@exxonmobil.com [mailto:lynn.b.russo@exxonmobil.com]

Sent: Wednesday, June 08, 2005 8:55 AM

To: Lorraine Twerdok

Cc: Brian Doll (E-mail); Burnett, Don (E-mail); Christopher Roythorne (E-mail); Richard Herold (E-mail); Bruce Jarnot; Jennifer Galvin (E-mail); Michael Bird (E-mail); Michael Johnston; Myron Harrison (E-mail); Clegg, Patsy M SCC-CHSE-PC; Russell White (E-mail); Colletti, Sarah J SCC-CSEA; Tsai, Shan P SHLOIL-SHS; Stephen Bowes (E-mail); Cagen, Stuart Z SCC-CF-SS; Matt Todd; Valerie Crissey (E-mail); Zach Wong (E-mail)

Subject: RE: Shanghai Health Study Annual Meeting - Symposium Day for Investigators

Lorraine: Jerry is in charge on this one, and he has asked to work with Bruce. I think a single point of contact is a good idea. If Madeleine is needed Bruce should work with her. I'll call Jerry with the news and establish the path forward: from here on out he'll be working with Bruce and the Technical Committee.

Lynn

"Lorraine Twerdok"

<Twerdokl@api.org> To: "Clegg, Patsy M SCC-CHSE-PC" <patsy.clegg@shell.com>, "Lynn Russo

(E-mail)" <lynn.b.russo@exxonmobil.com>, "Jennifer Galvin (E-mail)"

<jennifer.b.galvin@conocophillips.com>

06/08/05 09:48 AM cc: "Brian Doll (E-mail)" <brian.e.doll@exxonmobil.com>, "Burnett, Don (E-mail)" <burnetdm@bp.com>, "Michael Johnston"

<Mike.d.Johnston@ConocoPhillips.com>, "Zach Wong (E-mail)"
<ZachWong@chevrontexaco.com>, "Bruce Jarnot" <jarnotb@api.org>, "Christopher Roythorne (E-mail)" <chris.roythorne@uk.bp.com>, "Michael Bird (E-mail)"
<michael.g.bird@exxonmobil.com>, "Russell White (E-mail)"
<russellwhite@chevrontexaco.com>, "Shan Tsai (E-mail)" <Shan.Tsai@shell.com>,
"Stephen Bowes (E-mail)" <stephen.m.bowes@exxonmobil.com>, "Stuart Cagen (E-mail)" <stuart.cagen@shell.com>, "Colletti, Sarah J SCC-CSEA"
<sarah.colletti@shell.com>, "Matt Todd" <ToddM@api.org>, "Myron Harrison (E-mail)" <myron.c.harrison@exxonmobil.com>, "Richard Herold (E-mail)"
<heroldra@bp.com>, "Valerie Crissey (E-mail)" <vcrissey@chevrontexaco.com>
Subject: RE: Shanghai Health Study Annual Meeting - Symposium Day for Investigators

Patsy -

Do you want to contact Jerry Rice with the news, or should API?

I am planning on having Madeleine work on the arrangements, unless committee members have other suggestions to facilitate the organization of the workshop.

Thanks,

Lorraine

-----Original Message-----

From: Clegg, Patsy M SCC-CHSE-PC [mailto:patsy.clegg@shell.com]

Sent: Tuesday, June 07, 2005 5:17 PM

To: Lynn Russo (E-mail); Jennifer Galvin (E-mail); Lorraine Twerdok

Cc: Brian Doll (E-mail); Burnett, Don (E-mail); Michael Johnston; Zach Wong

(E-mail); Bruce Jarnot; Christopher Roythorne (E-mail); Michael Bird

(E-mail); Russell White (E-mail); Shan Tsai (E-mail); Stephen Bowes

(E-mail); Stuart Cagen (E-mail); Colletti, Sarah J SCC-CSEA; Matt Todd;

Myron Harrison (E-mail); Richard Herold (E-mail); Valerie Crissey (E-mail)

Subject: Shanghai Health Study Annual Meeting - Symposium Day for Investigators

The BHRC Oversight Committee has approved \$10,000 for use in sponsoring a symposium for the SHS investigators to meet with and present to government, academies, etc as an additional activity prior to or immediately after the annual meeting this year.

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: U' 713 241 2521 Fax: 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>

Business Success through HSSE Excellence

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, October 21, 2004 8:29 PM (GMT)
To: benzconsort-tc@listserve.api.org
Subject: BHRC-TC... conf call SUNDAY (10/24) to review draft 3Q04 Financial Report
Attach: BHRC Program Expenses 3Q04 rpt.xls

BHRC Technical Committee (TC) -

Attached is the Shanghai Health Study draft **3Q04 Financial Report** for discussion & review during a conference call on SUNDAY, October 24th. Fortunately, this was an "off" quarter with little reflected activity, but I do apologize for the short notice and the not-so-great scheduling of this conference call...

Schedule & Dial-In Information

- Sunday, October 24th
- 6:00am California, 8:00am Houston, 9:00am Eastern
- Phone: toll-free 866/448-6756
- PIN: 6828319#

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Benzene Health Research Consortium
3Q04 Financial Report Overview

	A	B	C	D	E	F	G
1							
2	RESEARCH PROGRESS:						
3							
4	Case Diagnosis: JCML clinical lab operating at 100% capacity, processing 30% more cases than anticipated with 99+% concordance between primary diagnosis & secondary pathology review. CDC						
5	transferred & validated at JCML. JCML budget expected to allow case accrual through 4Q06.						
6							
7	Case Accrual: Logistical issues affecting NHL accrual rate have been successfully resolved. All hospital cases presented are now referred to JCML for diagnosis. Annualized Sept '03 -> Sept '04 refe						
8							
9							
10	Exposure Assessment: Exposure Assessment fully operational, and Exposure Re-creation Committee reorganized apart from IPHS. Exposure activities will be highlighted at annual meeting.						
11							
12	External Review Panels: ERP Chair will be chosen at Asilomar, and Ethics panel will resume independent operation following the annual meeting. New contract for John Cherrie placed with IOM.						
13							
14	EXPENSE DISCUSSION:						
15							
16	Fund Balance at API 2Q04:			\$4,152,436			
17							
18							
19	Irons Field Expenses: Total T&E expenses are currently 1% (\$15K) over budget and need to be closely tracked.						
20							
21	UCHSC: \$874,030 was disbursed in 3Q04. First-half 2004 total expenses were 100+% (~\$1MM) above budget for current period. Operations, subcontract & equipment expense increases attributed m						
22							
23	Subcontracts: Total UCHSC Subcontractor expenses were ~\$800K above projected budget, attributed mainly to increased case review and diagnosis. Detailed subcontractor expenses for the period.						
24							
25	AHS: Labor costs high due to length of time in Shanghai						
26	length of time in Shanghai, but travel savings have kept total expenses 1% (\$28K) under budget.						
27							
28	Fudan University: 30% additional case load, and transfer of CDC & IPHS activities has increased rate of expenditure, but operations remain well within total budget.						
29							
30	SRP/ERP: Total expenses 2% (\$9K) over budget following 1Q04 budget adjustment and unanticipated 2Q expenses. Unfavorable variance expected to resolve by year end 2004.						
31							
32	Communications (APCO): cumulative variance of 13% under budget						
33							
34	Outside Legal Council: cumulative variance of 16% under budget						
35							
36	QA/QC: proposal requested from Judy Baldwin, per Technical Committee recommendation.						
37							
38	API Administrative Costs: 3Q04 15% under budget; cumulative variance is 2% under budget.						
39							
40	FORWARD GUIDANCE:						
41							
42	SRP/ERP projected expenses need to be re-analyzed to include international travel expenses for the 2005 (Shanghai) and 2006 (Munich) Annual Meetings. These expenses were not included in the 11						
43							
44	UCHSC grant requires close monitoring due to large 3Q04 expenses and new case-based cost structure						
45							
46	API administrative expenses requires close monitoring to contain costs. Projected expenses for 2005 will require a substantial decrease in API staff time. Budget projections were based on the assumpt						
47							
48	Establish new Fudan University and Dr. Irons field expense contracts (in progress).						

Benzene Health Research Consortium
3Q04 Financial Report Overview

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46	tion that API staffing	
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Benzene Health Research Consortium
3Q04 Financial Report Overview

	A	B	C	D	E	F	G
49							
50	Need to reconcile UCHSC statement - they have a \$105 error (from 4Q03 rpt)						
51							
52	Technical Budget Work Group Acceptance:						
53	Oversight Committee Acceptance:						
54	Posted to website:						
55							
56							
57	LT 10/20/04						
58	BJ 10/21/04						

Benzene Health Research Consortium
3Q04 Financial Report Overview

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Benzene Health Research Consortium
Approved Program Budget
3Q04 Financial Report

	A	B	C	D	E	F	G
1			Original Cost	Approved	Unapproved	Approved	Approved
2	Item		Estimate (Jan. 2001)	Revised Cost Estimate (Dec. 2001)	Changes not approved (June 2003)	11 NOV 03 OC mtg	21 APR 04 OC mtg
3	AHSciences Case-Control Study		\$1,595,000	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095
4	DP & ME Studies (UCHSC)		\$13,665,017	\$15,258,017	\$15,258,000	\$14,508,000	\$14,508,000
5	Irons(T & E)		\$1,253,428	\$1,253,428	\$1,597,273	\$1,413,428	\$1,413,428
6	Fudan University		\$165,700	\$190,555	\$661,000	\$230,000	\$230,000
7		Total Research Costs	\$16,679,145	\$18,985,095	\$19,799,368	\$18,434,523	\$18,434,523
8	Scientific Review Panel			\$648,000	\$551,736	\$300,000	\$300,000
9	Ethics Review Panel			\$216,000	\$192,000	\$64,000	\$64,000
10	External Pathology & Cytogenetics Workgroups(Cost in UC cost)			\$130,000	\$0	\$0	\$0
11		Total Panel Costs	\$450,000	\$994,000	\$743,736	\$364,000	\$364,000
12	API Seed Monies		\$500,000	\$0	\$0	\$0	\$0
13	Outside Counsel			\$500,000	\$100,576	\$100,000	\$100,000
14	Public Affairs		\$1,000,000	\$1,000,000	\$960,600	\$550,000	\$550,000
15	QA/QC Activities			\$225,000	\$100,000	\$100,000	\$100,000
16	UCHSC Interest					(\$100,000)	\$0
17	contingency		\$190,855	\$0	\$0	\$390,272	\$290,272
18		Miscellaneous Costs	\$1,690,855	\$1,725,000	\$1,161,176	\$1,040,272	\$1,040,272
19		Subtotal	\$18,820,000	\$21,704,095	\$21,704,280	\$19,838,795	\$19,838,795
20		API Admin.	\$941,000	\$1,085,205	\$1,085,019	\$1,245,205	\$1,245,205
21	GRAND TOTAL		\$19,761,000	\$22,789,300	\$22,789,299	\$21,084,000	\$21,084,000
22							
23	Notes by API						
24	Notes/Assumptions for Dec. 2001 revised budget:						
25		- The total research costs have changed as a result of the					
26		- Panel costs assume that there will be only one face-to-face					
27		meeting for each panel each year.					
28							
29	LT 10/18/04						

Benzene Health Research Consortium
Executive Summary
3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3			Actuals					Budget (actual + projected income & expense)							
4			Inception				Cumulative								
5			Thru	Actuals			Actuals								
6			December	Jan - Sept		Program	Inception								
7	<u>Cost Centers</u>	<u>Project #</u>	2003	2004		to Date	Thru 2Q04		2004		2005		2006		
8															
9	<u>Income</u>		\$ 15,257,275	\$ 1,499,127		\$ 16,756,401	\$ 16,756,401				\$ 1,461,334		\$ 1,461,333		
10															
11															
12	<u>Cost Centers</u>														
13	UCHSC*	X8105	7,515,759	1,748,061		9,263,820	9,263,820		874,030		1,748,060		1,748,060		
14	Irons-Field Expense*	X8106	539,486	189,320		728,806	728,806		55,508		222,032		222,030		
15	Applied Health Sciences	X8107	951,892	274,131		1,226,023	1,226,023		196,681		441,867		449,985		
16	Fudan University	X8108	31,981	27,755		59,736	59,736		7,287		29,148		29,148		
17	Scientific & Ethics Panels	X8109	82,854	15,029		97,883	97,883		72,000		79,250		74,250		
18	Communications	X8103	290,866	2,025		292,891	292,891		15,000		60,000		60,000		
19	Outside Legal Counsel	X8104	33,208	5,230		38,437	38,437		4,175		16,698		16,698		
20	QA/QC Support	X8110	-	-		-	-		6,250		25,000		25,000		
21	API Administrative	X8100	594,670	200,226		794,896	794,896		64,400		123,330		123,200		
22	Contingency		101,473	-		101,473	101,473		-		188,799		-		
23															
24	Total Expenses		\$ 10,142,189	\$ 2,461,776		\$ 12,603,965	\$ 12,603,965		\$ 1,295,330		\$ 2,934,184		\$ 2,748,371		
25															
26	Fund Balance		\$ 5,115,086	\$ (962,650)		\$ 4,152,436 **			\$ 2,857,106		\$ 1,384,256		\$97,218		
27															
28															
29	blue is projected fund balanced to project					**\$1,333,587 of fund									
30	* amount disbursed by API					balance committed									
31															
32															
33	LT 10/18/04														
34															
35															
36															
37															
38															

Benzene Health Research Consortium
Executive Summary
3Q04 Financial Report

	P	Q	R	S
1				
2				
3	ses)			
4				
5				
6		Projected	Program	
7	2007	Expenses	Budget	
8				
9	\$ 1,461,333	\$ 21,140,401	\$ 21,084,000	
10				
11				
12				
13	874,030	14,508,000	14,508,000	
14	222,028	1,450,404	1,413,428	
15	45,833	2,360,388	2,283,095	
16	29,148	154,467	230,000	
17	47,396	370,779	364,000	
18	79,135	507,026	550,000	
19	16,698	92,706	100,000	
20	25,000	81,250	100,000	
21	123,200	1,229,026	1,245,205	
22	-	290,272	290,272	
23				
24	\$ 1,462,468	\$ 21,044,317	\$ 21,084,000	
25				
26	\$96,084			
27				
28				
29				
30				
31	Income Detail			
32	sponsors	\$16,500,000		
33	2001 seed	\$15,000		
34	MAP contrib.	\$200,000		
35	API interest	\$41,401		
36	UCHSC interest	\$0		
37				
38	TOTAL	\$16,756,401		

Benzene Health Research Consortium
Case Accrual 3Q04

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Case Accrual (Case Predictions)	2003			2004				2005				2006				2007			
2	Reported Cumulatively	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	AML (120/yr; 450 total)																			
4	Cases Predicted	0	0	35		120				240				360		390				
5	Cases Accrued	0	0	42		150				150				150		150				
6	Variance	0	0	7		30				-90				-210		-240				
7	NHL (120/yr; 450 total)																			
8	Cases Predicted	0	0	35		120				240				360		390				
9	Cases Accrued	0	0	66		139				139				139		139				
10	Variance	0	0	31		19				-101				-221		-251				
11	AA (50/yr; 188 total)*																			
12	Cases Predicted	0	0	12		50				100				300		312				
13	Cases Accrued	0	0	17		58				58				58		58				
14	Variance	0	0	5		8				-42				-242		-254				
15	MDS (60/yr; 225 total)*																			
16	Cases Predicted	0	0	15		60				120				180		195				
17	Cases Accrued	0	0	26		97				97				97		97				
18	Variance	0	0	11		37				-23				-83		-98				
19	Benzene Poisoning (10/yr; 38 total)*																			
20	Cases Predicted	0	0	3		10				20				30		33				
21	Cases Accrued	0	0	0		12				12				12		12				
22	Variance	0	0	-3		2				-8				-18		-19				
23	(+) Variance: above predicted rate of accrual, (-) Variance: below predicted rate of accrual.																			
24																				
25	* Case predictions based on historical estimates; these are not target numbers of cases required for study completion.																			
26																				
27																				
28	LT 8/30/04																			
29	BJ 8/25/04																			

&[DATE]

Benzene Health Research Consortium
Case Accrual 3Q04

	U	V
1	ESTIMATED	STUDY
2	TOTAL	PREDICTION
3		
4	390	450
5	150	150
6	-240	-300
7		
8	390	450
9	139	139
10	-251	-311
11	0	
12	312	188
13	58	58
14	-254	-130
15	0	
16	195	225
17	97	97
18	-98	-128
19	0	
20	33	38
21	12	12
22	-19	-26
23		
24		
25		
26		
27		
28		
29		

Benzene Health Research Consortium
Cash Flow Statement 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		2000	2001	2002		2003				2004				2005				2006
2		1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
3	INCOME																	
4	Income for Reporting Period	\$60,246	\$2,113,132	\$8,367,446	\$448,024	\$3,186	\$4,265,241	\$1,485,875	\$6,746	\$6,506	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Income, Cumulative	\$60,246	\$2,173,378	\$10,540,824	\$10,988,848	\$10,992,034	\$15,257,275	\$16,743,149	\$16,749,895	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401
6	EXPENSE																	
7	Actual API Expenses	24,600	1,577,811	7,652,678	318,759	258,097	310,244	66,019	1,348,626	1,047,131								
8	Expense, Cumulative	\$24,600	\$1,602,411	\$9,255,088	\$9,573,847	\$9,831,945	\$10,142,189	\$10,208,207	\$11,556,834	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965
9	INCOME LESS EXPENSE																	
10	Reporting Period	\$35,646	\$535,321	\$714,768	\$129,265	(\$254,911)	\$3,954,997	\$1,419,856	(\$1,341,880)	(\$1,040,825)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Cumulative	\$35,646	\$570,967	\$1,285,736	\$1,415,001	\$1,160,089	\$5,115,086	\$6,534,942	\$5,193,061	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436
12																		
13		NOTE:	\$4,152,436	in bank at API														
14	blue designates projected income or																	
15	expense																	
16	LT 10/18/04																	

Benzene Health Research Consortium
Cash Flow Statement 3Q04 Financial Report

	S	T	U	V	W	X
1	2007					TOTALS
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3						
4	\$0	\$0	\$0	\$0	\$0	\$16,756,401
5	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	
6						
7						\$12,603,965
8	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	\$12,603,965	
9						
10	\$0	\$0	\$0	\$0	\$0	
11	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	\$4,152,436	
12						
13						
14						
15						
16						

Benzene Health Research Consortium
Program Expense Summary 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	
2	Cost Centers	2000 1st - 4th Qtr.	2001 1st - 4th Qtr.	2002 1st - 4th Qtr.	2003 1st & 2nd Qtr.	2003 3rd Qtr.	2003 4th Qtr.	2004 1st Qtr.	2004 2nd Qtr.	2004 3rd Qtr.	2004 4th Qtr.	2004 1st Qtr.	2004 2nd Qtr.	
3	UCHSC													
4	Disbursed		1,225,000	6,339,598	0	0	(48,839)	0		874,031	874,030	874,030	0	874,030
5	Budgeted	0	648,390	3,969,140	1,230,711	0	2,039,466	0		827,532	0	827,532	0	827,532
6	Actual expense	0	523,807	3,248,834	1,717,169	0	553,672	0		2,045,114	0	0	0	0
7	Current/Variance	0	124,583	720,306	(486,458)	0	1,485,794	0		(1,217,582)	0	827,532	0	827,532
8	Cumm Variance	0	124,583	844,889	332,137	332,137	1,813,804	1,813,804		586,386	586,386	1,404,082	1,404,082	2,221,778
9	Irons - Field Expenses													
10	Disbursed		145,763	393,723	0	0	0	0		189,320	0	0	0	0
11	Budgeted	0	3,200	259,060	138,359	69,179	55,508	55,508		55,508	55,508	55,508	55,508	55,508
12	Actual expense	0	3,157	195,549	89,577	54,382	169,606	43,945		95,409	0	0	0	0
13	Current/Variance	0	43	63,511	48,782	14,797	(114,098)	11,563		(39,901)	55,508	55,508	55,508	55,508
14	Cumm Variance	0	43	63,554	112,336	127,133	13,035	24,598		(15,303)	40,205	95,713	151,221	206,729
15	Applied Health Sciences													
16	Budgeted	0	84,025	435,513	216,256	108,128	108,128	98,340		98,340	98,340	98,340	110,467	110,467
17	Actual expense	0	136,329	435,406	140,665	149,389	90,103	0		168,623	105,508	0	0	0
18	Current/Variance	0	(52,304)	107	75,591	(41,261)	18,025	98,340		(7,168)	98,340	110,467	110,467	110,467
19	Cumm Variance	0	(52,304)	(52,197)	23,394	(17,868)	157	98,497		28,215	21,047	119,387	229,854	340,321
20	Fudan University - Case/Control Study													
21	Budgeted	0	31,303	42,751	21,376	10,688	7,288	7,288		7,288	7,288	7,287	7,287	7,287
22	Actual expense	0	0	15,470	6,492	8,851	1,168	0		27,755	0	0	0	0
23	Current/Variance	0	31,303	27,281	14,883	1,837	6,120	7,288		(20,467)	7,288	7,287	7,287	7,287
24	Cumm Variance	0	31,303	58,584	73,467	75,305	81,425	88,713		68,246	75,534	82,821	90,108	97,395
25	Scientific & Ethics Panels/cyto wkshop													
26	Budgeted	0	30,240	120,960	60,480	30,240	4,508	(163,074)		3,000	4,750	72,000	1,500	1,000
27	Actual expense	0	18,673	5,122	9,994	16,984	32,081	500		12,029	2,500	0	0	0
28	Current/Variance	0	11,567	115,838	50,486	13,256	(27,573)	(163,574)		(9,029)	2,250	72,000	1,500	1,000
29	Cumm Variance	0	11,567	127,405	177,891	191,147	163,574	0		(9,029)	(6,779)	65,222	66,722	67,722
30	Communications - APCO													
31	Budgeted	0	60,000	240,000	125,000	62,500	(196,636)	15,001		15,000	15,000	15,000	15,000	15,000
32	Actual expense	0	0	240,738	14,564	7,877	27,688	0		790	1,235	0	0	0
33	Current/Variance	0	60,000	(738)	110,436	54,623	(224,324)	15,001		14,210	13,765	15,000	15,000	15,000
34	Cumm Variance	0	60,000	59,262	169,699	224,322	(2)	14,999		29,209	42,974	57,974	72,974	87,974
35	Outside Legal Counsel													
36	Budgeted	0	30,000	120,000	62,500	31,250	(210,542)	4,175		4,175	4,175	4,175	4,175	4,175
37	Actual expense	0	0	13,565	1,728	0	17,915	365		2,995	1,870	0	0	0
38	Current/Variance	0	30,000	106,435	60,772	31,250	(228,457)	3,810		1,180	2,305	4,175	4,175	4,175
39	Cumm Variance	0	30,000	136,435	197,207	228,457	0	3,810		4,990	7,294	11,469	15,643	19,818
40	QA/QC Support													
41	Budgeted	0	13,500	54,000	28,126	14,063	(109,689)	6,250		6,250	6,250	6,250	6,250	6,250
42	Actual expense	0	0	0	0	0	0	0		0	0	0	0	0
43	Current/Variance	0	13,500	54,000	28,126	14,063	(109,689)	6,250		6,250	6,250	6,250	6,250	6,250
44	Cumm Variance	0	13,500	67,500	95,626	109,689	0	6,250		12,500	18,750	25,000	31,250	37,500
45	Contingency Funds													
46	Budgeted	0	0	0	0	0	290,272	0		0	0	0	0	0
47	Actual expense	0	0	0	0	0	101,473	0		0	0	0	0	0
48	Current/Variance	0	0	0	0	0	188,799	0		0	0	0	0	0
49	Cumm Variance	0	0	0	0	0	188,799	188,799		188,799	188,799	188,799	188,799	188,799
50	API Administrative and Overhead													
51	Budgeted	0	65,113	260,448	135,654	67,826	75,934	66,700		66,700	72,700	64,400	29,350	26,680
52	Actual expense	24,600	52,046	209,056	145,316	74,997	88,655	65,154		73,084	61,988	0	0	0
53	Current/Variance	(24,600)	13,067	51,392	(9,662)	(7,171)	(12,721)	1,546		(6,384)	10,712	64,400	29,350	26,680
54	Cumm Variance	(24,600)	(11,533)	39,859	30,197	23,026	10,305	11,851		5,467	16,179	80,579	109,929	136,609
55	TOTALS	2000	2001	2002	2003	2003			2004					20
56	Budgeted	0	965,771	5,501,872	2,018,461	393,874	2,064,237	90,188		1,083,793	264,011	1,150,492	229,536	1,053,898
57	Actual expense	24,600	734,012	4,363,739	2,125,505	312,479	1,082,361	109,964		2,425,798	173,101	0	0	0
58	Current/Variance	(24,600)	231,759	1,138,133	(107,044)	81,394	981,876	(19,776)		(1,342,006)	90,910	1,150,492	229,536	1,053,898
59	Cumm Variance	(24,600)	207,159	1,345,292	1,238,248	1,319,642	2,301,518	2,281,742		939,736	1,030,646	2,181,138	2,410,674	3,464,572
60	CUMULATIVE TOTALS	2000	2001	2002	2003	2003			2004					20
61	Budgeted	0	965,771	6,467,643	8,486,104	8,879,977	10,944,214	11,034,402		12,118,195	12,382,205	13,532,697	13,762,233	14,816,132
62	Expense	24,600	758,612	5,122,351	7,247,856	7,560,335	8,642,696	8,752,660		11,178,458	11,351,559	11,351,559	11,351,559	11,351,559
63	Variance	(24,600)	207,159	1,345,292	1,238,248	1,319,642	2,301,518	2,281,742		939,736	1,030,646	2,181,138	2,410,674	3,464,572
64	Blue: future cumulative variance has no meaning until Expense entered.													
65	LT 10/18/04			API disbursed		\$12,603,965		\$1,175,224	unspent at UCHSC as of 6/30/04 (no expense reporting for 3Q04)					
66		Amt. At UCHSC & Irons Field exp. Bank acct		Amt Expensed		\$11,351,559		\$77,182	In Irons' field exp bank acct as of 6/30/04 (3Q04 exp report outstanding)					
67						\$1,252,406		\$1,252,406	Total as of 6/30/04					
68														
69														
70	API disbursed by period	24,600	1,577,811	7,652,678	318,759	258,097	310,244	66,019		1,348,626	1,047,131	874,030	0	874,030
71	(includes pre-payments													
72	for UCHSC & Irons Field)													

**Benzene Health Research Consortium
Program Expense Summary 3Q04 Financial Report**

	N	O	P	Q	R	S	T	U	V	W	X
1	05										
2	2006						2007				TOTALS
3	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
4	0	874,030	0	874,030	0	874,030	0	874,030	0	0	14,508,000
5	0	827,532	0	827,539	0	827,542	0	827,542	0	827,542	14,508,000
6	0	0	0	0	0	0	0	0	0	0	8,088,596
7	0	827,532	0	827,539	0	827,542	0	827,542	0	827,542	827,542
8	2,221,778	3,039,474	3,039,474	3,857,170	3,857,170	4,674,866	4,674,866	5,492,562	5,492,562	6,310,268	6,419,404
9											
10	0	0	0	0	0	0	0	0	0	0	0
11	55,508	55,508	55,508	55,508	55,507	55,507	55,507.0	55,507	55,507	55,507	1,413,428
12	0	0	0	0	0	0	0	0	0	0	651,624
13	55,508	55,508	55,508	55,508	55,507	55,507	55,507	55,507	55,507	55,507	539,775
14	262,237	317,745	373,253	428,761	484,268	539,775	595,282	650,789	706,296	761,803	761,803
15											
16	110,467	110,467	112,496	112,496	112,496	112,496	45,833	0	0	0	2,283,095
17	0	0	0	0	0	0	0	0	0	0	1,226,023
18	110,467	110,467	112,496	112,496	112,496	112,496	45,833	0	0	0	0
19	450,787	561,254	673,750	786,247	898,743	1,011,239	1,057,072	1,057,072	1,057,072	1,057,072	1,057,072
20											
21	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	230,000
22	0	0	0	0	0	0	0	0	0	0	59,736
23	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287	7,287
24	104,682	111,969	119,256	126,543	133,830	141,117	148,404	155,691	162,978	170,265	170,265
25											
26	4,750	72,000	1,000	1,000	4,250	68,000	1,000	1,000	4,250	41,146	364,000
27	0	0	0	0	0	0	0	0	0	0	97,883
28	4,750	72,000	1,000	1,000	4,250	68,000	1,000	1,000	4,250	41,146	41,146
29	72,472	144,472	145,472	146,472	150,722	218,722	219,722	220,722	224,972	266,118	266,118
30											
31	15,000	15,000	15,000	15,000	15,000	15,000	19,783	19,783	19,784	19,784	550,000
32	0	0	0	0	0	0	0	0	0	0	292,891
33	15,000	15,000	15,000	15,000	15,000	15,000	19,783	19,783	19,784	19,784	177,974
34	102,974	117,974	132,974	147,974	162,974	177,974	197,757	217,541	237,325	257,109	257,109
35											
36	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	100,000
37	0	0	0	0	0	0	0	0	0	0	38,437
38	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	4,175	61,563
39	23,992	28,167	32,341	36,516	40,690	44,865	49,039	53,214	57,388	61,563	61,563
40											
41	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	100,000
42	0	0	0	0	0	0	0	0	0	0	0
43	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	100,000
44	43,750	50,000	56,250	62,500	68,750	75,000	81,250	87,500	93,750	100,000	100,000
45											
46	0	0	0	0	0	0	0	0	0	0	290,272
47	0	0	0	0	0	0	0	0	0	0	101,473
48	0	0	0	0	0	0	0	0	0	0	0
49	188,799	188,799	188,799	188,799	188,799	188,799	188,799	188,799	188,799	188,799	188,799
50											
51	40,650	26,650	29,250	26,650	40,650	26,650	29,250	26,650	40,650	26,650	1,245,205
52	0	0	0	0	0	0	0	0	0	0	770,296
53	40,650	26,650	29,250	26,650	40,650	26,650	29,250	26,650	40,650	26,650	474,909
54	177,259	203,909	233,159	259,809	300,459	327,109	356,359	383,009	423,659	450,309	474,909
55	05						2006				2007
56	244,086	1,124,868	230,966	1,055,905	245,615	1,122,907	169,085	948,194	137,903	988,341	21,084,000
57	0	0	0	0	0	0	0	0	0	0	11,326,959
58	244,086	1,124,868	230,966	1,055,905	245,615	1,122,907	169,085	948,194	137,903	988,341	9,732,441
59	3,708,659	4,833,527	5,064,493	6,120,397	6,366,012	7,488,919	7,658,004	8,606,197	8,744,100	9,732,441	9,757,041
60	05						2006				2007
61	15,060,218	16,185,086	16,416,052	17,471,957	17,717,571	18,840,478	19,009,563	19,957,756	20,095,659	21,084,000	21,084,000
62	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559	11,351,559
63	3,708,659	4,833,527	5,064,493	6,120,397	6,366,012	7,488,919	7,658,004	8,606,197	8,744,100	9,732,441	9,732,441
64											
65											
66											
67											
68											
69											
70	0	874,030	0	874,030	0	874,030	0	874,030	0	0	17,094,739
71											
72											

**Benzene Health Research Consortium
UCHSC Grant 3Q04 Financial Report**

	A	B	C	D
1	UCHSC (x8105)	2001	2002	
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.
3	Grant Payments			
4	Disbursed	1,225,000	6,339,598	0
5	Personnel			
6	Budgeted	172,140	573,160	331,316
7	Actual expense	172,140	714,888	314,703
8	CurrentVariance	0	-141,528	16,613
9	Cumm Variance	0	-141,528	-124,915
10	Operating Expenses			
11	Budgeted	13,131	378,462	198,373
12	Actual expense	12,177	301,522	158,850
13	CurrentVariance	954	76,940	39,523
14	Cumm Variance	954	77,894	117,417
15	Subcontracts			
16	Budgeted	123,829	1,795,030	549,014
17	Actual expense	0	1,025,372	845,860
18	CurrentVariance	123,829	769,658	-296,846
19	Cumm Variance	123,829	893,287	596,441
20	Travel			
21	Budgeted	0	23,947	11,340
22	Actual expense	0	8,647	346
23	CurrentVariance	0	15,300	10,994
24	Cumm Variance	0	15,300	26,284
25	Equipment			
26	Budgeted	\$291,568	\$918,645	\$0
27	Actual expense	\$291,568	\$899,642	\$274,508
28	CurrentVariance	\$0	\$19,003	(\$274,508)
29	Cumm Variance	\$0	\$19,003	(\$255,505)
30	Indirect			
31	Budgeted	\$47,922	\$279,896	\$140,688
32	Actual expense	\$47,922	\$298,963	\$122,902
33	CurrentVariance	(\$0)	(\$19,067)	\$17,786
34	Cumm Variance	(\$0)	(\$19,067)	(\$1,301)
35	TOTALS	2001	2002	
36	Budgeted	\$648,380	\$3,969,140	\$1,230,711
37	Actual expense	\$523,807	\$3,248,834	\$1,717,169
38	CurrentVariance	\$124,583	\$720,306	(\$486,458)
39	Cumm Variance	\$124,583	\$844,889	\$332,137
40	CUMULATIVE TOTALS	2001	2002	
41	Budgeted	\$648,380	\$4,617,530	\$5,848,241
42	Expense	\$523,807	\$3,772,641	\$5,489,810
43	Variance	\$124,583	\$844,889	\$358,431
44				
45	Blue: future cumulative variance has no meaning until Expense entered.	Note: Actual expenses from Progress Report or UC Grants & Contracts Financials.		
46				
47	LT 10/19/04	Amt. paid UCHSC to date:		\$9,263,820
48	BJ 10/21/04	Amt. expensed to date:		\$9,088,596
49		Amt. In UCHSC bank acct:		\$1,175,224

**Benzene Health Research Consortium
UCHSC Grant 3Q04 Financial Report**

	E	F	G	H	I
1	2003			2004	
2	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
3					
4	0	-48,839	0	874,031	874,030
5					
6	0	293,007	0	195,778	0
7	0	58,188	0	211,016	0
8	0	234,819	0	-15,238	0
9	-124,915	109,904	109,904	94,666	94,666
10					
11	0	259,003	0	195,773	0
12	0	150,657	0	364,542	0
13	0	108,346	0	-168,769	0
14	117,417	225,763	225,763	56,994	56,994
15					
16	0	988,733	0	286,990	0
17	0	565,870	0	1,128,507	0
18	0	422,863	0	-841,517	0
19	596,441	1,019,304	1,019,304	177,787	177,787
20					
21	0	4,127	0	9,836	0
22	0	0	0	0	0
23	0	4,127	0	9,836	0
24	26,284	30,421	30,421	40,257	40,257
25					
26	\$0	\$350,000	\$0	\$48,050	\$0
27	\$0	(\$274,568)	\$0	\$192,340	\$0
28	\$0	\$624,568	\$0	(\$144,290)	\$0
29	(\$255,505)	\$369,063	\$369,063	\$224,773	\$224,773
30					
31	\$0	\$144,596	\$0	\$91,105	\$0
32	\$0	\$53,525	\$0	\$148,709	\$0
33	\$0	\$91,071	\$0	(\$57,804)	\$0
34	(\$1,301)	\$89,770	\$89,770	\$32,166	\$32,166
35	2003			2004	
36	\$0	\$2,039,466	\$0	\$827,532	\$0
37	\$0	\$553,672	\$0	\$2,045,114	\$0
38	\$0	\$1,485,784	\$0	(\$1,217,582)	\$0
39	\$332,137	\$1,813,804	\$1,813,804	\$586,386	\$586,386
40	2003			2004	
41	\$5,848,241	\$7,887,707	\$7,887,707	\$8,715,239	\$8,715,239
42	\$5,489,810	\$6,043,482	\$6,043,482	\$8,088,596	\$8,088,596
43	\$358,431	\$1,844,225	\$1,844,225	\$626,643	\$626,643
44					
45				UCHSC statement error for travel, off by +\$105 (4Q03)	
46					
47	(Adjusted 4Q03: \$48,839 attributed to UCHSC in 3Q03 Report has been reallocated to Contingency: \$25,000 <i>pre-consortium grant in 2001</i> ; \$3,600 for IRB Review in 2002; \$20,239 for EMBSI "feasibility study" in 2002)				
48	(Adjusted 4Q03: 2001 costs had been double expensed in 2002 column; (-\$523,807) adjustment made in 4Q03)				
49					

Benzene Health Research Consortium
UCHSC Grant 3Q04 Financial Report

	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	2005				2006				2007				TOTALS	
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3														
4	874,030	0	874,030	0	874,030	0	874,030	0	874,030	0	874,030	0		14,508,000
5														
6	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	2,935,847
7	0	0	0	0	0	0	0	0	0	0	0	0	0	1,470,735
8	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	0	195,778	195,778
9	290,444	290,444	486,222	486,222	682,000	682,000	877,778	877,778	1,073,556	1,073,556	1,269,334	1,269,334	1,465,112	1,465,112
10														
11	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	2,415,153
12	0	0	0	0	0	0	0	0	0	0	0	0	0	987,748
13	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	0	195,773	195,773
14	252,767	252,767	448,540	448,540	644,313	644,313	840,086	840,086	1,035,859	1,035,859	1,231,632	1,231,632	1,427,405	1,427,405
15														
16	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	5,752,326
17	0	0	0	0	0	0	0	0	0	0	0	0	0	3,565,609
18	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	0	286,990	286,990
19	464,777	464,777	751,767	751,767	1,038,757	1,038,757	1,325,747	1,325,747	1,612,737	1,612,737	1,899,727	1,899,727	2,186,717	2,186,717
20														
21	9,836	0	9,836	0	9,836	0	9,843	0	9,846	0	9,846	0	9,846	118,139
22	0	0	0	0	0	0	0	0	0	0	0	0	0	8,983
23	9,836	0	9,836	0	9,836	0	9,843	0	9,846	0	9,846	0	9,846	9,846
24	50,093	50,093	59,929	59,929	69,765	69,765	79,608	79,608	89,454	89,454	99,300	99,300	109,146	109,146
25														
26	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$1,944,613
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,383,490
28	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$0	\$48,050	\$48,050
29	\$272,823	\$272,823	\$320,873	\$320,873	\$368,923	\$368,923	\$416,973	\$416,973	\$465,023	\$465,023	\$513,073	\$513,073	\$561,123	\$561,123
30														
31	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$1,341,922
32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$672,021
33	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$0	\$91,105	\$91,105
34	\$123,271	\$123,271	\$214,376	\$214,376	\$305,481	\$305,481	\$396,586	\$396,586	\$487,691	\$487,691	\$578,796	\$578,796	\$669,901	\$669,901
35	2005				2006				2007					
36	\$827,532	\$0	\$827,532	\$0	\$827,532	\$0	\$827,539	\$0	\$827,542	\$0	\$827,542	\$0	\$827,542	\$14,508,000
37	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,088,596
38	\$827,532	\$0	\$827,532	\$0	\$827,532	\$0	\$827,539	\$0	\$827,542	\$0	\$827,542	\$0	\$827,542	\$827,542
39	\$1,404,082	\$1,404,082	\$2,221,778	\$2,221,778	\$3,039,474	\$3,039,474	\$3,857,170	\$3,857,170	\$4,674,866	\$4,674,866	\$5,492,562	\$5,492,562	\$6,310,258	\$6,419,404
40	2005				2006				2007					
41	\$8,542,771	\$8,542,771	\$10,370,303	\$10,370,303	\$11,197,835	\$11,197,835	\$12,025,374	\$12,025,374	\$12,852,916	\$12,852,916	\$13,680,458	\$13,680,458	\$14,508,000	\$14,508,000
42	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596	\$8,088,596
43	\$1,454,175	\$1,454,175	\$2,281,707	\$2,281,707	\$3,109,239	\$3,109,239	\$3,936,778	\$3,936,778	\$4,764,320	\$4,764,320	\$5,591,862	\$5,591,862	\$6,419,404	\$6,419,404
44														
45														
46														
47														
48														
49														

Benzene Health Research Consortium
UCHSC Subcontract 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	UCHSC	2001	2002		2003			2004					2005
2	Subcontracts	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.		3rd & 4th Qtr.		1st & 2nd Qtr.		3rd & 4th Qtr.		1st & 2nd Qtr.	
3	Fudan University												
4	Actual expense	0	0	411,935		468,341		1,088,352		0		0	
5	IPHSC												
6	Actual expense	0	0	8,339		27,496		7,683		0		0	
7	SMCDGP												
8	Actual expense	0	0	45,563		24,766		2,500		0		0	
9	EMBSI												
10	Actual expense	0	0	372,725		0		0		0		0	
11	Children's Hospital Cincinnati												
12	Actual expense	0	0	7,298		45,267		29,972		0		0	
13	TOTALS	2001	2002		2003			2004				2005	
14	Actual expense	\$0	\$1,025,372	\$845,860		\$565,870		\$1,128,507		\$0		\$0	
15								\$1,128,507					
16													
17		*Total subcontractor expenses* from study report (preliminary figure); *actual expenses* from UC Office of Grants & Contracts spreadsheet (final figures).											
18	LT 8/6/04												
19	BJ 8/25/04												

	N	O	P	Q	R	S	T	U	V	W
1										
2			2006			2007				TOTALS
3	3rd & 4th Qtr.		1st & 2nd Qtr.		3rd & 4th Qtr.		1st & 2nd Qtr.		3rd & 4th Qtr.	
4	0		0		0		0		0	1,968,628
5	0		0		0		0		0	43,518
6	0		0		0		0		0	72,829
7	0		0		0		0		0	372,725
8	0		0		0		0		0	82,537
9	0		0		0		0		0	
10	0		0		0		0		0	
11	0		0		0		0		0	
12	0		0		0		0		0	
13			2006			2007				
14	\$0		\$0		\$0		\$0		\$0	\$2,540,237
15										
16										
17										
18										
19										

Benzene Health Research Consortium
Irons Field Expenses 3Q04 Financial Report

	A	B	C	D	E
1	IRONS T&E (X8106)	2001	2002		
2	Cost Centers	4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.
3	Payments				
4	Disbursed		\$145,763	\$393,723	\$0
5	Airfare & related expenses				
6	Budgeted		\$1,280	\$103,624	\$55,343
7	Actual expense		\$1,606	\$75,179	\$27,359
8	CurrentVariance		(\$326)	\$28,445	\$27,984
9	Cumm Variance		(\$326)	\$28,119	\$56,103
10	Apartment / hotel & related expenses				
11	Budgeted		\$1,280	\$103,624	\$55,343
12	Actual expense		\$1,024	\$89,717	\$45,291
13	CurrentVariance		\$256	\$13,907	\$10,052
14	Cumm Variance		\$256	\$14,163	\$24,216
15	Other expenses e.g. taxi, limo, misc.				
16	Budgeted		\$640	\$51,812	\$27,672
17	Actual expense		\$528	\$30,653	\$16,926
18	CurrentVariance		\$112	\$21,159	\$10,746
19	Cumm Variance		\$112	\$21,272	\$32,017
20	TOTALS	2001	2002		
21	Budgeted		\$3,200	\$259,080	\$138,359
22	Actual expense		\$3,157	\$195,549	\$89,577
23	CurrentVariance		\$43	\$63,511	\$48,782
24	Cumm Variance		\$43	\$63,554	\$112,336
25	CUMULATIVE TOTALS	2001	2002		
26	Budgeted		\$3,200	\$262,280	\$400,619
27	Expense		\$3,157	\$198,708	\$288,283
28	Variance		\$43	\$63,554	\$112,336
29					
30	Blue: future cumulative variance has no meaning until Expense entered.	"Actual expense" is from quarterly expense reports, and does not reflect contract prepayments			
31					
32		Amt paid to Irons to date:		\$728,806	numbers as of 06/30/04
33		Amt Irons has spent:		\$651,624	
34	LT 10/20/04	Amt. In Irons bank acct:		\$77,182	
35	BJ 10/21/04				
36					
37					
38					
39					
40					
41					

Benzene Health Research Consortium
Irons Field Expenses 3Q04 Financial Report

	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2003	2004				2005				2006				2007			
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3																	
4	\$0	\$0	\$189,320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5																	
6	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200
7	\$74,850	\$18,124	\$32,651	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	(\$52,650)	\$4,076	(\$10,451)	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200
9	\$6,046	\$10,122	(\$329)	\$21,871	\$44,071	\$66,271	\$98,471	\$110,671	\$132,871	\$155,071	\$177,271	\$199,471	\$221,671	\$243,871	\$266,071	\$288,271	\$310,471
10																	
11	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205
12	\$81,131	\$20,041	\$55,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	(\$58,926)	\$2,164	(\$32,895)	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205	\$22,205
14	(\$28,239)	(\$28,075)	(\$58,970)	(\$36,765)	(\$14,560)	\$7,645	\$28,850	\$52,055	\$74,260	\$96,465	\$118,670	\$140,875	\$163,080	\$185,285	\$207,490	\$229,695	\$251,900
15																	
16	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102
17	\$13,625	\$5,780	\$7,658	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	(\$2,522)	\$5,323	\$3,445	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,103	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102	\$11,102
19	\$76,735	\$82,058	\$85,503	\$96,606	\$107,709	\$118,812	\$129,915	\$141,018	\$152,121	\$163,224	\$174,327	\$185,429	\$196,531	\$207,633	\$218,735	\$229,837	\$240,939
20	2003	2004				2005				2006				2007			
21	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507
22	\$169,606	\$43,945	\$95,409	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	(\$114,098)	\$11,563	(\$39,901)	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,508	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507	\$55,507
24	\$13,035	\$24,598	(\$15,303)	\$40,205	\$95,713	\$151,221	\$206,729	\$262,237	\$317,745	\$373,253	\$428,761	\$484,268	\$539,775	\$595,282	\$650,789	\$706,296	\$761,803
25																	
26	\$525,306	\$580,814	\$636,322	\$691,830	\$747,338	\$802,846	\$858,354	\$913,862	\$969,370	\$1,024,878	\$1,080,386	\$1,135,893	\$1,191,400	\$1,246,907	\$1,302,414	\$1,357,921	\$1,413,428
27	\$512,270	\$556,215	\$601,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624	\$651,624
28	\$13,035	\$24,598	(\$15,303)	\$40,205	\$95,713	\$151,221	\$206,729	\$262,237	\$317,745	\$373,253	\$428,761	\$484,268	\$539,775	\$595,282	\$650,789	\$706,296	\$761,803
29	4Q03 ADJUSTMENT - 2001/2002 expense underrecorded; +\$114,289 adjustment																
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41	7																

Benzene Health Research Consortium
Irons Field Expenses 3Q04 Financial Report

	W
1	TOTALS
2	
3	
4	
5	
6	\$565,319
7	\$254,848
8	\$221,671
9	\$310,471
10	
11	\$565,404
12	\$313,504
13	\$163,080
14	\$251,900
15	
16	\$282,705
17	\$83,273
18	\$196,531
19	\$199,432
20	
21	\$1,413,428
22	\$651,624
23	\$539,775
24	\$761,803
25	
26	\$1,413,428
27	\$651,624
28	\$761,803
29	
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Benzene Health Research Consortium
AHS 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K
1	AHS (X8107)	2001	2002			2003			2004		
2	Cost Centers	4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.
3	Labor										
4	Budgeted	\$84,025	\$290,013	\$157,756	\$78,878	\$78,878	\$72,090	\$72,090	\$72,090	\$72,090	\$84,217
5	Actual expense	\$134,134	\$394,505	\$124,124	\$137,280	\$73,690	\$0	\$149,980	\$92,201	\$0	\$0
6	Current Variance	(\$50,109)	(\$104,492)	\$33,632	(\$58,402)	\$5,188	\$72,090	(\$77,890)	(\$20,111)	\$72,090	\$84,217
7	Cumm Variance	(\$50,109)	(\$154,601)	(\$120,970)	(\$179,372)	(\$174,184)	(\$102,094)	(\$179,984)	(\$200,094)	(\$128,004)	(\$43,787)
8	Travel & expenses										
9	Budgeted	\$0	\$140,000	\$57,000	\$28,500	\$28,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500
10	Actual expense	\$2,118	\$39,458	\$16,541	\$12,109	\$16,413	\$0	\$18,534	\$12,522	\$0	\$0
11	Current Variance	(\$2,118)	\$100,542	\$40,459	\$16,391	\$12,087	\$25,500	\$6,966	\$12,978	\$25,500	\$25,500
12	Cumm Variance	(\$2,118)	\$98,424	\$138,883	\$165,274	\$167,361	\$192,861	\$199,827	\$212,805	\$238,305	\$263,805
13	Other direct expenses										
14	Budgeted	\$0	\$5,500	\$1,500	\$750	\$750	\$750	\$750	\$750	\$750	\$750
15	Actual expense	\$77	\$1,443	\$0	\$0	\$0	\$0	\$109	\$785	\$0	\$0
16	Current Variance	(\$77)	\$4,057	\$1,500	\$750	\$750	\$750	\$641	(\$35)	\$750	\$750
17	Cumm Variance	(\$77)	\$3,980	\$5,480	\$6,230	\$6,980	\$7,730	\$8,371	\$8,336	\$9,086	\$9,836
18	TOTALS	2001	2002			2003			2004		
19	Budgeted	\$84,025	\$435,513	\$216,256	\$108,128	\$108,128	\$98,340	\$98,340	\$98,340	\$98,340	\$110,467
20	Actual expense	\$136,329	\$435,406	\$140,665	\$149,389	\$90,103	\$0	\$168,623	\$105,508	\$0	\$0
21	Current Variance	(\$52,304)	\$107	\$75,591	(\$41,261)	\$18,025	\$98,340	(\$70,283)	(\$7,168)	\$98,340	\$110,467
22	Cumm Variance	(\$52,304)	(\$52,197)	\$23,394	(\$17,868)	\$157	\$98,497	\$28,215	\$21,047	\$119,387	\$229,854
23	CUMULATIVE TOTALS	2001	2002			2003			2004		
24	Budgeted	\$84,025	\$519,538	\$735,794	\$843,921	\$952,049	\$1,050,389	\$1,148,730	\$1,247,070	\$1,345,410	\$1,455,877
25	Expense	\$136,329	\$571,735	\$712,400	\$861,789	\$951,892	\$951,892	\$1,120,515	\$1,226,023	\$1,226,023	\$1,226,023
26	Variance	(\$52,304)	(\$52,197)	\$23,394	(\$17,868)	\$157	\$98,497	\$28,215	\$21,047	\$119,387	\$229,854
27	Blue: future cumulative variance has no meaning until Expense entered.					4Q03 Adjustment: expense reduced by \$52,634; transferred to contingency since these were pre-consortia expenses					
28											
29											
30	LT 10/19/04										
31	BJ 10/21/04										

Benzene Health Research Consortium
AHS 3Q04 Financial Report

	L	M	N	O	P	Q	R	S	T	U	V	W
1	2005			2006			2007			TOTALS		
2	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3												
4	\$84,217	\$84,217	\$84,217	\$76,746	\$76,746	\$76,746	\$76,746	\$10,033	\$0	\$0	\$0	\$1,631,795
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,105,914
6	\$84,217	\$84,217	\$84,217	\$76,746	\$76,746	\$76,746	\$76,746	\$10,033	\$0	\$0	\$0	\$0
7	\$40,430	\$124,646	\$208,863	\$285,609	\$362,356	\$439,102	\$515,848	\$525,881	\$525,881	\$525,881	\$525,881	\$525,881
8												
9	\$25,500	\$25,500	\$25,500	\$35,000	\$35,000	\$35,000	\$35,000	\$32,000	\$0	\$0	\$0	\$630,000
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$117,695
11	\$25,500	\$25,500	\$25,500	\$35,000	\$35,000	\$35,000	\$35,000	\$32,000	\$0	\$0	\$0	\$0
12	\$289,305	\$314,805	\$340,305	\$375,305	\$410,305	\$445,305	\$480,305	\$512,305	\$512,305	\$512,305	\$512,305	\$512,305
13												
14	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$3,800	\$0	\$0	\$0	\$21,300
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,414
16	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$3,800	\$0	\$0	\$0	\$0
17	\$10,586	\$11,336	\$12,086	\$12,836	\$13,586	\$14,336	\$15,086	\$18,886	\$18,886	\$18,886	\$18,886	\$18,886
18	2005			2006			2007					
19	\$110,467	\$110,467	\$110,467	\$112,496	\$112,496	\$112,496	\$112,496	\$45,833	\$0	\$0	\$0	\$2,283,095
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,226,023
21	\$110,467	\$110,467	\$110,467	\$112,496	\$112,496	\$112,496	\$112,496	\$45,833	\$0	\$0	\$0	\$0
22	\$340,321	\$450,787	\$561,254	\$673,750	\$786,247	\$898,743	\$1,011,239	\$1,057,072	\$1,057,072	\$1,057,072	\$1,057,072	\$1,057,072
23	2005			2006			2007					
24	\$1,566,344	\$1,676,810	\$1,787,277	\$1,899,773	\$2,012,270	\$2,124,766	\$2,237,262	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095	\$2,283,095
25	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023	\$1,226,023
26	\$340,321	\$450,787	\$561,254	\$673,750	\$786,247	\$898,743	\$1,011,239	\$1,057,072	\$1,057,072	\$1,057,072	\$1,057,072	\$1,057,072
27												
28												
29												
30												
31												

Benzene Health Research Consortium
Fudan 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	FUDAN	2001	2002	2003			2004				2005				2006				
2	Cost Centers			1Q/2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05	1Q06	2Q06	3Q06	4Q06	1Q07
3	Labor (salary + benefits)																		
4	Budgeted	\$9,620	\$8,775	\$4,388	\$2,194	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548
5	Actual expense	\$0	\$8,774	\$6,482	\$0	\$0	\$0	\$14,385	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Current Variance	\$9,620	\$1	(\$2,105)	\$2,194	\$1,548	\$1,548	(\$12,837)	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548	\$1,548
7	Cumm Variance	\$9,620	\$9,621	\$7,516	\$9,709	\$11,257	\$12,805	(\$32)	\$1,516	\$3,064	\$4,612	\$6,160	\$7,708	\$9,256	\$10,804	\$12,352	\$13,900	\$15,448	\$16,996
8	Expenses																		
9	Budgeted	\$17,600	\$28,400	\$14,200	\$7,100	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645
10	Actual expense	\$0	\$4,870	\$0	\$8,851	\$1,168	\$0	\$9,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Current Variance	\$17,600	\$23,530	\$14,200	(\$1,751)	\$3,477	\$4,645	(\$5,105)	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645	\$4,645
12	Cumm Variance	\$17,600	\$41,130	\$55,330	\$53,579	\$57,056	\$61,701	\$56,596	\$61,241	\$65,886	\$70,531	\$75,176	\$79,821	\$84,466	\$89,111	\$93,756	\$98,401	\$103,046	\$107,691
13	Overhead (15%)																		
14	Budgeted	\$4,083	\$5,576	\$2,788	\$1,394	\$1,095	\$1,095	\$1,095	\$1,095	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094
15	Actual expense	\$0	\$1,825	\$0	\$0	\$0	\$0	\$3,620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	Current Variance	\$4,083	\$3,751	\$2,788	\$1,394	\$1,095	\$1,095	(\$2,525)	\$1,095	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094	\$1,094
17	Cumm Variance	\$4,083	\$7,834	\$10,622	\$12,016	\$13,111	\$14,206	\$11,681	\$12,776	\$13,870	\$14,964	\$16,058	\$17,152	\$18,246	\$19,340	\$20,434	\$21,528	\$22,622	\$23,716
18	TOTALS	2001	2002	2003			2004				2005				2006				
19	Budgeted	\$31,303	\$42,761	\$21,376	\$10,688	\$7,288	\$7,288	\$7,288	\$7,288	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287
20	Actual expense	\$0	\$15,470	\$6,482	\$8,851	\$1,168	\$0	\$27,755	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	Current Variance	\$31,303	\$27,281	\$14,883	\$1,837	\$6,120	\$7,288	(\$20,467)	\$7,288	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287	\$7,287
22	Cumm Variance	\$31,303	\$58,584	\$73,467	\$75,305	\$81,425	\$88,713	\$68,246	\$75,534	\$82,821	\$90,108	\$97,395	\$104,682	\$111,969	\$119,256	\$126,543	\$133,830	\$141,117	\$148,404
23	CUMULATIVE TOTALS	2001	2002	2003			2004				2005				2006				
24	Budgeted	\$31,303	\$74,054	\$85,430	\$106,117	\$113,405	\$120,693	\$127,981	\$135,269	\$142,556	\$149,843	\$157,130	\$164,417	\$171,704	\$178,991	\$186,278	\$193,565	\$200,852	\$208,139
25	Expense	\$0	\$15,470	\$21,962	\$30,813	\$31,981	\$31,981	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736	\$59,736
26	Variance	\$31,303	\$58,584	\$73,467	\$75,305	\$81,425	\$88,713	\$68,246	\$75,534	\$82,821	\$90,108	\$97,395	\$104,682	\$111,969	\$119,256	\$126,543	\$133,830	\$141,117	\$148,404
27	Blue: future cumulative variance has no meaning until Expense entered.															Note: budget is in 2001 \$.			
28																			
29	LT 10/20/04																		
30	BJ 10/21/04																		

Benzene Health Research Consortium
Fudan 3Q04 Financial Report

	T	U	V	W
1	2007			TOTALS
2	2Q07	3Q07	4Q07	
3				
4	\$1,548	\$1,548	\$1,548	\$51,292
5	\$0	\$0	\$0	\$29,652
6	\$1,548	\$1,548	\$1,548	\$1,548
7	\$18,544	\$20,092	\$21,640	\$21,640
8				
9	\$4,645	\$4,645	\$4,645	\$146,265
10	\$0	\$0	\$0	\$24,639
11	\$4,645	\$4,645	\$4,645	\$4,645
12	\$112,336	\$116,981	\$121,626	\$121,626
13				
14	\$1,094	\$1,094	\$1,094	\$32,443
15	\$0	\$0	\$0	\$5,445
16	\$1,094	\$1,094	\$1,094	\$11,094
17	\$24,810	\$25,904	\$26,998	\$26,998
18	2007			
19	\$7,287	\$7,287	\$7,287	\$230,000
20	\$0	\$0	\$0	\$59,736
21	\$7,287	\$7,287	\$7,287	\$7,287
22	\$155,691	\$162,978	\$170,265	\$170,265
23	2007			
24	\$215,426	\$222,713	\$230,000	\$230,000
25	\$59,736	\$59,736	\$59,736	\$59,736
26	\$155,691	\$162,978	\$170,265	\$170,265
27				
28				
29				
30				

Benzene Health Research Consortium
SRP + ERP 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
	SRP + ERP (X8109)	2001	2002	2003	2004	2005	2006	2007	TOTALS														
	Cost Centers	4th Qtr	1st - 4th Qtr	1st & 2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	TOTALS
1	Albertini																						
2	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$13,073)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$17,529
3	Actual expense	\$2,000	\$0	\$0	\$0	\$2,529	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,529
4	Current Variance	\$160	\$8,640	\$4,320	\$2,160	(\$2,207)	(\$13,073)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$3,000
5	Cumm Variance	\$160	\$8,800	\$13,120	\$15,280	\$13,073	\$0	\$0	\$250	\$3,250	\$3,250	\$3,250	\$3,500	\$6,500	\$6,500	\$6,500	\$6,750	\$9,750	\$9,750	\$9,750	\$10,000	\$13,000	\$13,000
6	Brody (DB5200X1503, resigned 4Q03)																						
7	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$17,602)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500
9	Current Variance	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$17,602)	(\$1,500)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Cumm Variance	\$2,160	\$10,800	\$15,120	\$17,280	\$17,602	\$0	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	\$0
11	Checkoway																						
12	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$14,180)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$16,422
13	Actual expense	\$1,000	\$0	\$0	\$2,422	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,422
14	Current Variance	\$1,160	\$8,640	\$4,320	(\$2,262)	\$322	(\$14,180)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$3,000
15	Cumm Variance	\$1,160	\$9,800	\$14,120	\$13,858	\$14,180	\$0	\$0	\$250	\$3,250	\$3,250	\$3,250	\$3,500	\$6,500	\$6,500	\$6,500	\$6,750	\$9,750	\$9,750	\$9,750	\$10,000	\$13,000	\$13,000
16	Cherrie / IOM																						
17	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$15,480)	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$6,000	\$0	\$0	\$250	\$2,000	\$27,122
18	Actual expense	\$0	\$2,122	\$0	\$0	\$0	\$0	\$7,029	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,151
19	Current Variance	\$2,160	\$6,518	\$4,320	\$2,160	\$322	(\$15,480)	(\$7,029)	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$6,000	\$0	\$0	\$250	\$2,000	\$2,000
20	Cumm Variance	\$2,160	\$8,678	\$12,998	\$15,158	\$15,480	(\$0)	(\$7,029)	(\$6,779)	\$1,221	\$1,221	\$1,221	\$1,471	\$9,471	\$9,471	\$9,471	\$9,721	\$15,721	\$15,721	\$15,721	\$15,971	\$17,971	\$17,971
21	Grim																						
22	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$10,268)	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$6,000	\$0	\$0	\$250	\$2,000	\$32,334
23	Actual expense	\$0	\$0	\$0	\$0	\$7,334	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,334
24	Current Variance	\$2,160	\$8,640	\$4,320	\$2,160	(\$7,012)	(\$10,268)	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$6,000	\$0	\$0	\$250	\$2,000	\$2,000
25	Cumm Variance	\$2,160	\$10,800	\$15,120	\$17,280	\$10,268	\$0	\$0	\$250	\$8,250	\$8,250	\$8,250	\$8,500	\$16,500	\$16,500	\$16,500	\$16,750	\$22,750	\$22,750	\$22,750	\$23,000	\$25,000	\$25,000
26	Herrick																						
27	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$11,148)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$18,454
28	Actual expense	\$2,000	\$0	\$0	\$0	\$4,454	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,454
29	Current Variance	\$160	\$8,640	\$4,320	\$2,160	(\$4,132)	(\$11,148)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$2,000
30	Cumm Variance	\$160	\$8,800	\$13,120	\$15,280	\$11,148	\$0	\$0	\$250	\$3,250	\$3,250	\$3,250	\$3,500	\$6,500	\$6,500	\$6,500	\$6,750	\$9,750	\$9,750	\$9,750	\$10,000	\$12,000	\$12,000
31	Idanpaan-Heikkila																						
32	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$13,078)	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$37,524
33	Actual expense	\$0	\$0	\$4,344	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,524
34	Current Variance	\$2,160	\$8,640	(\$24)	\$1,980	\$322	(\$13,078)	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$0	\$0	\$250	\$8,000	\$8,000
35	Cumm Variance	\$2,160	\$10,800	\$10,776	\$12,756	\$13,078	\$0	\$0	\$250	\$8,250	\$8,250	\$8,250	\$8,500	\$16,500	\$16,500	\$16,500	\$16,750	\$24,750	\$24,750	\$24,750	\$25,000	\$33,000	\$33,000
36	Larson																						
37	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$12,839)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$16,763
38	Actual expense	\$2,127	\$0	\$0	\$2,636	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,763
39	Current Variance	\$33	\$8,640	\$4,320	\$0	(\$476)	(\$12,839)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$2,000
40	Cumm Variance	\$33	\$8,673	\$12,993	\$12,517	\$12,839	\$0	\$0	\$250	\$3,250	\$3,250	\$3,250	\$3,500	\$6,500	\$6,500	\$6,500	\$6,750	\$9,750	\$9,750	\$9,750	\$10,000	\$12,000	\$12,000
41	Li																						
42	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	\$5,288	\$0	\$250	\$10,000	\$0	\$0	\$250	\$10,000	\$0	\$0	\$250	\$10,000	\$0	\$0	\$250	\$4,000	\$57,890
43	Actual expense	\$6,796	\$3,000	\$0	\$0	\$13,094	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,890
44	Current Variance	(\$4,636)	\$5,640	\$4,320	\$2,160	(\$12,772)	\$5,288	\$0	\$250	\$10,000	\$0	\$0	\$250	\$10,000	\$0	\$0	\$250	\$10,000	\$0	\$0	\$250	\$4,000	\$4,000
45	Cumm Variance	(\$4,636)	\$1,004	\$5,324	\$7,484	(\$5,288)	\$0	\$0	\$250	\$10,250	\$10,250	\$10,250	\$10,500	\$20,500	\$20,500	\$20,500	\$20,750	\$30,750	\$30,750	\$30,750	\$31,000	\$35,000	\$35,000
46	Minden / Ontario Cancer Institute																						
47	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$16,602)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$13,000
48	Actual expense	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
49	Current Variance	\$1,160	\$8,640	\$4,320	\$2,160	\$322	(\$16,602)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$2,000
50	Cumm Variance	\$1,160	\$9,800	\$14,120	\$16,280	\$16,602	\$0	\$0	\$250	\$3,250	\$3,250	\$3,250	\$3,500	\$6,500	\$6,500	\$6,500	\$6,750	\$9,750	\$9,750	\$9,750	\$10,000	\$12,000	\$12,000
51	Mueller (resigned 2Q03)																						
52	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$16,352)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,260
53	Actual expense	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,260
54	Current Variance	\$910	\$8,640	\$4,320	\$2,160	\$322	(\$16,352)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
55	Cumm Variance	\$910	\$9,550	\$13,870	\$16,030	\$16,352	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
56	Rice																						
57	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$5,410)	\$3,000	\$1,500	\$4,000	\$1,500	\$1,000	\$1,500	\$4,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,000	\$1,000	\$1,000	\$3,000	\$41,692
58	Actual expense	\$0	\$0	\$4,000	\$5,692	\$2,000	\$500	\$3,500	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,192
59	Current Variance	\$2,160	\$8,640	\$320	(\$3,532)	(\$1,678)	(\$5,910)	(\$500)	(\$1,000)	\$4,000	\$1,500	\$1,000	\$1,500	\$4,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,000	\$1,000	\$1,000	\$3,000	\$3,000
60	Cumm Variance	\$2,160	\$10,800	\$11,120	\$7,588	\$5,910	(\$0)	(\$500)	(\$1,500)	\$2,500	\$4,000	\$5,000	\$6,500	\$10,500	\$11,500	\$12,500	\$13,500	\$17,500	\$18,500	\$19,500	\$20,500	\$23,500	\$23,500
61	Rockette																						
62	Budgeted	\$2,160	\$8,640	\$4,320	\$2,160	\$322	(\$14,932)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$14,670
63	Actual expense	\$0	\$0	\$0	\$0	\$2,670	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,670
64	Current Variance	\$2,160	\$8,640	\$4,320	\$2,160	(\$2,348)	(\$14,932)	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$3,000	\$0	\$0	\$250	\$2,000	\$2,000
65	Cumm Variance	\$2,1																					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
93	Blue: future cumulative variance has no meaning until Expense entered.																						
94																							
95	LT 10/20/04						1004 budget adjustments to zero our variance to develop more useful																
96	BJ 10/21/04						budget projections for remainder of program. Change approved by OC at																
							4/21/04 meeting																

**Benzene Health Research Consortium
Communications 3Q04 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L
1	COMMUNICATIONS	2001	2002	2003	2003		2004					20
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr. ¹	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.
3	APCO											
4	Budgeted	\$57,600	\$230,400	\$120,000	\$60,000	(\$187,396)	\$14,401	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400
5	Actual expense	\$0	\$232,229	\$14,483	\$7,351	\$26,541	\$0	\$790	\$1,235	\$0	\$0	\$0
6	CurrentVariance	\$57,600	(\$1,829)	\$105,517	\$52,649	(\$213,937)	\$14,401	\$13,610	\$13,165	\$14,400	\$14,400	\$14,400
7	Cumm Variance	\$57,600	\$55,771	\$161,288	\$213,937	(\$0)	\$14,401	\$28,011	\$41,176	\$55,576	\$69,976	\$84,376
8	Travel											
9	Budgeted	\$1,800	\$7,200	\$3,750	\$1,875	(\$5,876)	\$450	\$450	\$450	\$450	\$450	\$450
10	Actual expense	\$0	\$7,091	\$0	\$526	\$1,132	\$0	\$0	\$0	\$0	\$0	\$0
11	CurrentVariance	\$1,800	\$109	\$3,750	\$1,349	(\$7,008)	\$450	\$450	\$450	\$450	\$450	\$450
12	Cumm Variance	\$1,800	\$1,909	\$5,659	\$7,008	\$0	\$450	\$900	\$1,350	\$1,800	\$2,250	\$2,700
13	Other ¹											
14	Budgeted	\$600	\$2,400	\$1,250	\$625	(\$3,364)	\$150	\$150	\$150	\$150	\$150	\$150
15	Actual expense	\$0	\$1,417	\$80	\$0	\$15	\$0	\$0	\$0	\$0	\$0	\$0
16	CurrentVariance	\$600	\$983	\$1,170	\$625	(\$3,379)	\$150	\$150	\$150	\$150	\$150	\$150
17	Cumm Variance	\$600	\$1,583	\$2,753	\$3,378	(\$2)	\$148	\$298	\$448	\$598	\$748	\$898
18												
19	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
20	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
22	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
23												
24	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
25	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
26	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
27	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
28												
29	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
31	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
32	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
33												
34	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
35	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
36	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
37	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
38	TOTALS	2001	2002	2003	2003		2004					20
39	Budgeted	\$60,000	\$240,000	\$125,000	\$62,500	(\$196,636)	\$15,001	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
40	Actual expense	\$0	\$240,738	\$14,564	\$7,877	\$27,688	\$0	\$790	\$1,235	\$0	\$0	\$0
41	CurrentVariance	\$60,000	(\$738)	\$110,436	\$54,623	(\$224,324)	\$15,001	\$14,210	\$13,765	\$15,000	\$15,000	\$15,000
42	Cumm Variance	\$60,000	\$59,262	\$169,699	\$224,322	(\$2)	\$14,999	\$29,209	\$42,974	\$57,974	\$72,974	\$87,974
43	CUMULATIVE TOTALS	2001	2002	2003	2003		2004					20
44	Budgeted	\$60,000	\$300,000	\$425,000	\$487,500	\$290,864	\$305,865	\$320,865	\$335,865	\$350,865	\$365,865	\$380,865
45	Expense	\$0	\$240,738	\$255,301	\$263,178	\$290,866	\$290,866	\$291,656	\$292,891	\$292,891	\$292,891	\$292,891
46	Variance	\$60,000	\$59,262	\$169,699	\$224,322	(\$2)	\$14,999	\$29,209	\$42,974	\$57,974	\$72,974	\$87,974
47	- Telecommunications, Consulting Services, Duplicating/Copies Internal, Postage, Couriers, Telephone, Meals, Lexis Nexis Searches											
48	Blue: future cumulative variance has no meaning until Expense entered.											
49	¹ - Budget adjustment reflects budget reduction from \$1MM to \$550k											
50												
51	LT 7/19/04											

Benzene Health Research Consortium
Communications 3Q04 Financial Report

	M	N	O	P	Q	R	S	T	U	V	W
1	2006				2007				TOTALS		
2	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3											
4	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$18,865	\$18,865	\$18,866	\$18,866	\$528,867
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$282,629
6	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$18,865	\$18,865	\$18,866	\$18,866	\$246,238
7	\$98,776	\$113,176	\$127,576	\$141,976	\$156,376	\$170,776	\$189,641	\$208,506	\$227,372	\$246,238	\$246,238
8											
9	\$450	\$450	\$450	\$450	\$450	\$450	\$689	\$689	\$689	\$689	\$16,904
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,749
11	\$450	\$450	\$450	\$450	\$450	\$450	\$689	\$689	\$689	\$689	\$8,155
12	\$3,150	\$3,600	\$4,050	\$4,500	\$4,950	\$5,400	\$6,089	\$6,778	\$7,466	\$8,155	\$8,155
13											
14	\$150	\$150	\$150	\$150	\$150	\$150	\$230	\$230	\$230	\$230	\$4,229
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,513
16	\$150	\$150	\$150	\$150	\$150	\$150	\$230	\$230	\$230	\$230	\$2,717
17	\$1,048	\$1,198	\$1,348	\$1,498	\$1,648	\$1,798	\$2,028	\$2,257	\$2,487	\$2,717	\$2,717
18											
19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
23											
24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
28											
29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
33											
34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
38	2006				2007						
39	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$19,783	\$19,783	\$19,784	\$19,784	\$550,000
40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$292,891
41	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$19,783	\$19,783	\$19,784	\$19,784	\$177,974
42	\$102,974	\$117,974	\$132,974	\$147,974	\$162,974	\$177,974	\$197,757	\$217,541	\$237,325	\$257,109	\$257,109
43	2006				2007						
44	\$395,865	\$410,865	\$425,865	\$440,865	\$455,865	\$470,865	\$490,648	\$510,431	\$530,216	\$550,000	\$550,000
45	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891	\$292,891
46	\$102,974	\$117,974	\$132,974	\$147,974	\$162,974	\$177,974	\$197,757	\$217,541	\$237,325	\$257,109	\$257,109
47											
48											
49											
50											
51											

Benzene Health Research Consortium
Legal 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	LEGAL	2001	2002	2003		2004				2005				2006				2007				
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.*	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	Step toe & Johnson																					
4	Budgeted	\$30,000	\$120,000	\$62,500	\$31,250	(\$210,542)	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175
5	Actual expense	\$0	\$13,565	\$1,728	\$0	\$17,915	\$365	\$2,995	\$1,870	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Current Variance	\$30,000	\$106,435	\$60,772	\$31,250	(\$228,457)	\$3,810	\$1,180	\$2,305	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175	\$4,175
7	Cumm Variance	\$30,000	\$136,435	\$197,207	\$228,457	\$0	\$3,810	\$4,990	\$7,294	\$11,469	\$15,643	\$19,818	\$23,992	\$28,167	\$32,341	\$36,516	\$40,690	\$44,865	\$49,039	\$53,214	\$57,388	\$61,563
8	CUMULATIVE TOTALS	2001	2002	2003		2004				2005				2006				2007				
9	Budgeted	\$30,000	\$150,000	\$212,500	\$243,750	\$33,208	\$37,383	\$41,557	\$45,732	\$49,906	\$54,081	\$58,255	\$62,430	\$66,604	\$70,779	\$74,953	\$79,128	\$83,302	\$87,477	\$91,651	\$95,826	\$100,000
10	Expense	\$0	\$13,565	\$15,293	\$15,293	\$33,208	\$33,572	\$36,567	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437	\$38,437
11	Variance	\$30,000	\$136,435	\$197,207	\$228,457	\$0	\$3,810	\$4,990	\$7,294	\$11,469	\$15,643	\$19,818	\$23,992	\$28,167	\$32,341	\$36,516	\$40,690	\$44,865	\$49,039	\$53,214	\$57,388	\$61,563
12	Blue: future cumulative variance has no meaning until Expense entered.																					
13																						
14	* budget adjustment to lower program budget from \$500K to \$100K, as approved by OC on 11/11/03																					
15																						
16	LT 7/19/04																					
17	RT 7/16/2004																					

Benzene Health Research Consortium
Legal 3Q04 Financial Report

	W
1	TOTALS
2	
3	
4	\$100,000
5	\$38,437
6	\$61,563
7	\$61,563
8	
9	\$100,000
10	\$38,437
11	\$61,563
12	
13	
14	
15	
16	
17	

**Benzene Health Research Consortium
QA-QC 3Q04 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	QA-QC	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
3	Contractor																					
4	Budgeted	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250
5	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	CurrentVariance	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250
7	Cumm Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$25,000	\$31,250	\$37,500	\$43,750	\$50,000	\$56,250	\$62,500	\$68,750	\$75,000	\$81,250	\$87,500	\$93,750	\$100,000
8	Travel																					
9	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13																						
14	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18																						
19	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23																						
24	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28																						
29	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
33																						
34	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	TOTALS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
39	Budgeted	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250
40	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41	CurrentVariance	\$13,500	\$54,000	\$28,126	\$14,063	(\$109,689)	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250	\$6,250
42	Cumm Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$25,000	\$31,250	\$37,500	\$43,750	\$50,000	\$56,250	\$62,500	\$68,750	\$75,000	\$81,250	\$87,500	\$93,750	\$100,000
43	CUMULATIVE TOTALS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
44	Budgeted	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$25,000	\$31,250	\$37,500	\$43,750	\$50,000	\$56,250	\$62,500	\$68,750	\$75,000	\$81,250	\$87,500	\$93,750	\$100,000
45	Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	Variance	\$13,500	\$67,500	\$95,626	\$109,689	\$0	\$6,250	\$12,500	\$18,750	\$25,000	\$31,250	\$37,500	\$43,750	\$50,000	\$56,250	\$62,500	\$68,750	\$75,000	\$81,250	\$87,500	\$93,750	\$100,000
47	Blue: future cumulative																					
48	variance has no meaning																					
49	until Expense entered.																					
50																						
51	* budget adjustment to lower program																					
52	budget from \$225K to \$100K, as																					
53	approved by OC on 11/11/03																					
54																						
55	LT 7/19/04																					

Benzene Health Research Consortium
QA-QC 3Q04 Financial Report

	W
1	TOTALS
2	
3	
4	\$100,000
5	\$0
6	\$100,000
7	\$100,000
8	
9	\$0
10	\$0
11	\$0
12	\$0
13	
14	\$0
15	\$0
16	\$0
17	\$0
18	
19	\$0
20	\$0
21	\$0
22	\$0
23	
24	\$0
25	\$0
26	\$0
27	\$0
28	
29	\$0
30	\$0
31	\$0
32	\$0
33	
34	\$0
35	\$0
36	\$0
37	\$0
38	
39	\$100,000
40	\$0
41	\$100,000
42	\$100,000
43	
44	\$100,000
45	\$0
46	\$100,000
47	
48	
49	
50	
51	

**Benzene Health Research Consortium
API Administration 3Q04 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	API	2000	2001	2002	2003			2004				2005				
2	Cost Centers	1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.
3	Salaries															
4	Budgeted	\$0	\$26,045	\$104,180	\$54,260	\$27,130	\$22,250	\$22,000	\$22,000	\$22,000	\$20,000	\$12,000	\$10,000	\$14,000	\$10,000	\$12,000
5	Actual expense	\$9,039	\$18,749	\$89,669	\$57,297	\$32,217	\$32,800	\$26,745	\$25,357	\$21,839	\$0	\$0	\$0	\$0	\$0	\$0
6	CurrentVariance	(\$9,039)	\$6,552	\$14,511	(\$3,037)	(\$5,087)	(\$10,550)	(\$4,745)	(\$3,357)	\$161	\$20,000	\$12,000	\$10,000	\$14,000	\$10,000	\$12,000
7	Cumm Variance	(\$9,039)	(\$2,487)	\$12,024	\$8,987	\$3,900	(\$6,650)	(\$11,395)	(\$14,752)	(\$14,591)	\$5,409	\$17,409	\$27,409	\$41,409	\$51,409	\$63,409
8	Employee Benefits															
9	Budgeted	\$0	\$3,256	\$13,022	\$ 6,783	\$ 3,391	\$2,750	\$ 3,000	\$ 3,000	\$ 3,000	\$2,900	\$1,100	\$1,000	\$1,400	\$1,000	\$1,100
10	Actual expense	\$774	\$2,329	\$11,209	\$7,163	\$4,027	\$4,100	\$3,343	\$3,169	\$2,730	\$0	\$0	\$0	\$0	\$0	\$0
11	CurrentVariance	(\$774)	\$927	\$1,813	(\$380)	\$ (636)	(\$1,350)	(\$1,350)	(\$1,169)	\$270	\$2,900	\$1,100	\$1,000	\$1,400	\$1,000	\$1,100
12	Cumm Variance	(\$774)	\$153	\$1,966	\$1,586	\$950	(\$400)	(\$743)	(\$912)	(\$642)	\$2,258	\$3,358	\$4,358	\$5,758	\$6,758	\$7,858
13	Travel															
14	Budgeted	\$0	\$3,256	\$13,022	6,783	\$3,391	\$7,500	1,000	\$1,000	\$3,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$1,000
15	Actual expense	\$342	\$1,487	\$8,004	\$308	\$1,683	\$7,313	\$0	\$1,152	\$2,027	\$0	\$0	\$0	\$0	\$0	\$0
16	CurrentVariance	(\$342)	\$1,769	\$5,018	\$6,475	\$1,708	\$187	\$1,000	(\$152)	\$973	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$1,000
17	Cumm Variance	(\$342)	\$1,427	\$6,445	\$12,920	\$14,628	\$14,815	\$15,815	\$15,663	\$16,636	\$17,636	\$18,636	\$19,636	\$24,636	\$25,636	\$26,636
18	Other Operating Expenses (& mtgs)															
19	Budgeted	\$0	\$651	\$2,604	\$1,359	\$679	\$16,184	\$2,000	\$2,000	\$6,000	\$2,000	\$500	\$430	\$5,000	\$400	\$400
20	Actual expense	\$1,673	\$9,196	\$16,270	\$13,292	\$72	\$26,276	\$3,600	\$3,808	(\$3,223)	\$0	\$0	\$0	\$0	\$0	\$0
21	CurrentVariance	(\$1,673)	(\$8,545)	(\$13,666)	(\$11,933)	\$607	(\$10,092)	(\$1,600)	(\$1,808)	\$9,223	\$2,000	\$500	\$430	\$5,000	\$400	\$400
22	Cumm Variance	(\$1,673)	(\$10,218)	(\$23,884)	(\$35,817)	(\$35,210)	(\$45,302)	(\$46,902)	(\$48,710)	(\$39,487)	(\$37,487)	(\$36,987)	(\$36,557)	(\$31,557)	(\$31,157)	(\$30,757)
23	API Recovered Overhead															
24	Budgeted	\$0	\$8,465	\$33,858	\$ 17,635	\$ 8,817	\$6,250	\$ 6,200	\$ 6,200	\$ 6,200	\$ 6,000	\$3,500	\$3,000	\$4,000	\$3,000	\$3,500
25	Actual expense	\$5,752	\$4,687	\$25,110	\$16,043	\$9,021	\$9,185	\$7,489	\$7,099	\$6,115	\$0	\$0	\$0	\$0	\$0	\$0
26	CurrentVariance	(\$5,752)	\$3,778	\$8,748	\$1,592	(\$204)	(\$2,935)	(\$1,289)	(\$899)	\$85	\$6,000	\$3,500	\$3,000	\$4,000	\$3,000	\$3,500
27	Cumm Variance	(\$5,752)	(\$1,974)	\$6,774	\$8,366	\$8,162	\$5,227	\$3,938	\$3,039	\$3,124	\$9,124	\$12,624	\$15,624	\$19,624	\$22,624	\$26,124
28	API Allocated Costs															
29	Budgeted	\$0	\$16,929	\$67,717	\$35,269	\$17,635	\$15,250	\$28,000	\$28,000	\$28,000	\$28,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
30	Actual expense	\$0	\$13,886	\$58,794	\$34,213	\$19,478	\$17,231	\$28,000	\$27,999	\$28,000	\$0	\$0	\$0	\$0	\$0	\$0
31	CurrentVariance	\$0	\$3,043	\$8,923	\$1,056	(\$1,843)	(\$1,981)	\$0	\$1	\$0	\$28,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
32	Cumm Variance	\$0	\$3,043	\$11,966	\$13,022	\$11,179	\$9,198	\$9,198	\$9,199	\$9,199	\$37,199	\$47,199	\$57,199	\$67,199	\$77,199	\$87,199
33	Supported Expense															
34	Budgeted	\$0	\$6,511	\$26,045	\$ 13,565	\$ 6,783	\$5,750	\$ 4,500	\$ 4,500	\$4,500	\$4,500	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
35	Actual expense	\$7,020	\$1,712	\$0	\$17,000	\$8,499	(\$8,250)	(\$4,023)	\$4,500	\$4,500	\$0	\$0	\$0	\$0	\$0	\$0
36	CurrentVariance	(\$7,020)	\$4,799	\$26,045	(\$3,435)	(\$1,716)	\$14,000	\$8,523	\$0	\$0	\$4,500	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
37	Cumm Variance	(\$7,020)	(\$2,221)	\$23,824	\$20,389	\$18,673	\$32,673	\$41,196	\$41,196	\$41,196	\$45,696	\$46,946	\$48,196	\$49,446	\$50,696	\$51,946
38	TOTALS	2000	2001	2002	2003			2004				2005				
39	Budgeted	\$0	\$65,113	\$260,448	\$135,654	\$67,826	\$75,934	\$66,700	\$66,700	\$72,700	\$64,400	\$29,350	\$26,680	\$40,650	\$26,650	\$29,250
40	Actual expense	\$24,600	\$52,046	\$209,056	\$145,316	\$74,997	\$88,655	\$65,154	\$73,084	\$61,988	\$0	\$0	\$0	\$0	\$0	\$0
41	CurrentVariance	(\$24,600)	\$13,067	\$51,392	(\$9,662)	(\$7,171)	(\$12,721)	\$1,546	(\$6,384)	\$10,712	\$64,400	\$29,350	\$26,680	\$40,650	\$26,650	\$29,250
42	Cumm Variance	(\$24,600)	(\$11,533)	\$39,859	\$30,197	\$23,026	\$10,305	\$11,851	\$5,467	\$16,179	\$80,579	\$109,929	\$136,609	\$177,259	\$203,909	\$233,159
43	CUMULATIVE TOTALS	2000	2001	2002	2003			2004				2005				
44	Budgeted	\$0	\$65,113	\$325,561	\$461,215	\$529,041	\$604,975	\$671,675	\$738,375	\$811,075	\$875,475	\$904,825	\$931,505	\$972,155	\$998,805	\$1,028,055
45	Expense	\$24,600	\$76,646	\$285,702	\$431,018	\$506,015	\$594,670	\$659,824	\$732,908	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896
46	Variance	(\$24,600)	(\$11,533)	\$39,859	\$30,197	\$23,026	\$10,305	\$11,851	\$5,467	\$16,179	\$80,579	\$109,929	\$136,609	\$177,259	\$203,909	\$233,159
47																
48	LT 7/19/04															
49	RT 7/16/2004															
50																
51	Assumptions:															
52	Year 5, 6,7 Less than 1 FTE allocated, based allocated cost on 1/2 FTE															
53	T&E and Other \$15K for Annual Meeting (3rd Quarter)															
54	Supported Expense, drop off left some funds for consultant															

Benzene Health Research Consortium
API Administration 3Q04 Financial Report

	Q	R	S	T	U	V	W	X
1	2006			2007				TOTALS
2	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
3								
4	\$10,000	\$14,000	\$10,000	\$12,000	\$10,000	\$14,000	\$10,000	\$411,865
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$304,673
6	\$10,000	\$14,000	\$10,000	\$12,000	\$10,000	\$14,000	\$10,000	\$106,448
7	\$73,409	\$87,409	\$97,409	\$109,409	\$119,409	\$133,409	\$143,409	\$107,192
8								
9	\$1,000	\$1,400	\$1,000	\$1,100	\$1,000	\$1,400	\$1,000	\$54,602
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$38,070
11	\$1,000	\$1,400	\$1,000	\$1,100	\$1,000	\$1,400	\$1,000	\$16,532
12	\$8,858	\$10,258	\$11,258	\$12,358	\$13,358	\$14,758	\$15,758	\$16,532
13								
14	\$1,000	\$5,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$63,952
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,974
16	\$1,000	\$5,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$41,978
17	\$27,636	\$32,636	\$33,636	\$34,636	\$35,636	\$40,636	\$41,636	\$41,978
18								
19	\$400	\$5,000	\$400	\$400	\$400	\$5,000	\$400	\$52,207
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$69,291
21	\$400	\$5,000	\$400	\$400	\$400	\$5,000	\$400	(\$17,084)
22	(\$30,357)	(\$25,357)	(\$24,957)	(\$24,557)	(\$24,157)	(\$19,157)	(\$18,757)	(\$17,084)
23								
24	\$3,000	\$4,000	\$3,000	\$3,500	\$3,000	\$4,000	\$3,000	\$140,125
25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,749
26	\$3,000	\$4,000	\$3,000	\$3,500	\$3,000	\$4,000	\$3,000	\$55,376
27	\$29,124	\$33,124	\$36,124	\$39,624	\$42,624	\$46,624	\$49,624	\$55,376
28								
29	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$384,800
30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$227,601
31	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$157,199
32	\$97,199	\$107,199	\$117,199	\$127,199	\$137,199	\$147,199	\$157,199	\$157,199
33								
34	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$91,654
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,938
36	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$67,716
37	\$53,196	\$54,446	\$55,696	\$56,946	\$58,196	\$59,446	\$60,696	\$67,716
38	2006			2007				
39	\$26,650	\$40,650	\$26,650	\$29,250	\$26,650	\$40,650	\$26,650	\$1,245,205
40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$770,296
41	\$26,650	\$40,650	\$26,650	\$29,250	\$26,650	\$40,650	\$26,650	\$474,909
42	\$259,809	\$300,459	\$327,109	\$356,359	\$383,009	\$423,659	\$450,309	\$474,909
43	2006			2007				
44	\$1,054,705	\$1,095,355	\$1,122,005	\$1,151,255	\$1,177,905	\$1,218,555	\$1,245,205	\$1,245,205
45	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896	\$794,896
46	\$259,809	\$300,459	\$327,109	\$356,359	\$383,009	\$423,659	\$450,309	\$450,309
47								
48								
49								
50								
51								
52								
53								
54								

Benzene Health Research Consortium
Contingency Fund 3Q04 Financial Report

	A	B	C	D	E	F	G
2		2000	2001	2002			2003
3	Contingency Funds	1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.
5	Budgeted	\$0	\$0	\$0	\$0	\$0	\$290,272
6	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
7	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$290,272
8	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$290,272
9	Reallocations from UCHSC						
10	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
11	Actual expense	\$0	\$0	\$0	\$0	\$0	\$48,839
12	CurrentVariance	\$0	\$0	\$0	\$0	\$0	(\$48,839)
13	Cumm Variance	\$0	\$0	\$0	\$0	\$0	(\$48,839)
14	Reallocations from AHS						
15	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
16	Actual expense	\$0	\$0	\$0	\$0	\$0	\$52,634
17	CurrentVariance	\$0	\$0	\$0	\$0	\$0	(\$52,634)
18	Cumm Variance	\$0	\$0	\$0	\$0	\$0	(\$52,634)
19							
20	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
21	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
22	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
23	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
24							
25	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
26	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
27	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
28	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
29							
30	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
31	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
32	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
33	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
34							
35	Budgeted	\$0	\$0	\$0	\$0	\$0	\$0
36	Actual expense	\$0	\$0	\$0	\$0	\$0	\$0
37	CurrentVariance	\$0	\$0	\$0	\$0	\$0	\$0
38	Cumm Variance	\$0	\$0	\$0	\$0	\$0	\$0
39	TOTALS	2000	2001	2002			2003
40	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$290,272.00
41	Actual expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$101,473.00
42	CurrentVariance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$188,799.00
43	Cumm Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$188,799.00
44	CUMULATIVE TOTALS	2000	2001	2002			2003
45	Budgeted	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$290,272.00
46	Expense	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$101,473.00
47	Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$188,799.00
48							
49							
50	LT 7/19/04						4Q03 Adjustment - per Technical Committee, transfer \$48,839 from UCHSC expense detail to contingency because expenses not part of UCHSC gr
51							
52							
53							
54							
55							AHS - expense transfer of \$52,634 from AHS expense detail to contingency because expenses not part of AHS full study budget

Benzene Health Research Consortium
Contingency Fund 3Q04 Financial Report

	H	I	J	K	L	M	N	O
2	2004				2005			
3	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
33	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34								
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	2004				2005			
40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
43	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00
44	2004				2005			
45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
46	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
48								
49								
50								
51	Grant budget:							
52	1. June 2001 \$25K grant to UCHSC; seed money exhausted (API & sponsor), expense not included in final grant cost estimate							
53	2. \$3600 IRB fees to U of CO (this will be a yearly fee, since IRB must review at least once per year)							
54	3. 2002 invoice (\$20,239) from EMBSI for final feasibility study work (very late billing to API)							
55								

Benzene Health Research Consortium
Contingency Fund 3Q04 Financial Report

	P	Q	R	S	T	U	V	W	X
2	2006				2007				TOTALS
3	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
4									
5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$290,272
6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272	\$290,272
9									
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,839
12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)	(\$48,839)
14									
15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,634
17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)	(\$52,634)
19									
20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24									
25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29									
30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
33	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34									
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	2006				2007				
40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$290,272.00
41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$101,473.00
42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
43	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00	\$188,799.00
44	2006				2007				
45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
46	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
48									
49									
50									
51									
52									
53									
54									
55									

Benzene Health Research Consortium
Income 3Q04 Financial Report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		2000	2001	2002		2003			2004				2005				2006	
2		1st - 4th Qtr.	1st - 4th Qtr.	1st - 4th Qtr.	1st & 2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
3	INCOME																	
4	Sponsor Payments	\$60,000	\$2,105,509	\$8,355,629	\$448,024	\$0	\$ 4,259,965	\$1,485,875	\$ -									
5	API Interest	\$246	\$7,623	\$11,817	\$0	\$3,186	\$5,276	\$0	\$6,746	\$6,506								
6	UCHSC Interest	\$0	\$0	\$0	\$0	\$0	\$0	\$0										
7	TOTALS																	
8	Reporting Period	\$60,246	\$2,113,132	\$8,367,446	\$448,024	\$3,186	\$4,265,241	\$1,485,875	\$6,746	\$6,506	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Cumulative	\$60,246	\$2,173,378	\$10,540,824	\$10,988,848	\$10,992,034	\$15,257,275	\$16,743,149	\$16,749,895	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401
10																		
11																		
12	projected income																	
13																		
14	LT 7/19/04																	
15	RT 7/16/2004																	

Benzene Health Research Consortium
Income 3Q04 Financial Report

	S	T	U	V	W	X	
1			2007				TOTALS
2	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.		
3							
4							
5							
6							
7							
8	\$0	\$0	\$0	\$0	\$0		
9	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401	\$16,756,401		
10							
11							
12							
13							
14							
15							

**Benzene Health Research Consortium
Sponsor Invoice Detail 3Q04 Financial Report**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1					2001			2002			3rd - 4th Qtr.			2003			
2	Company Name	(Seed Money)	Inv. #	Date Paid	22-Aug-01	Inv. #	Date Paid	9-Jan-02	Inv. #	Date Paid	27-Aug-02	Inv. #	Date Paid	23-Sep-03	Inv. #	Date Paid	TOTAL
3	BP	\$15,000	522922	8-Nov-00	\$768,941	529301	4-Oct-01	\$806,441	532263	22-Feb-02	\$1,344,069	535033	11-Oct-02	\$1,431,041.00	544951	4-Dec-03	
4		\$22,500	528453	19-Jun-01							\$112,008		2-Oct-02				\$4,500,000
5																	
6	ChevronTexaco	\$15,000	522923	7-Nov-00	\$522,627	529302	9-Oct-01	\$537,627	532244	22-Feb-02	\$896,046	535034	5-Nov-02	\$1,028,700.00	544953	19-Nov-03	\$3,000,000
7																	
8	ConocoPhillips	\$15,000	522924	31-Oct-00	\$246,314	529309	17-Sep-01	\$268,814	532245	16-Jan-02	\$448,023	535035	26-Sep-02	\$514,349.00	544954	27-Oct-03	\$1,500,000
9		\$7,500	528574	31-Jul-01													
10																	
11	ExxonMobil	\$0	523540					\$1,612,882	532246		\$1,344,069	535036	13-Sep-02	\$1,543,049.00	544956		\$4,500,000
12								\$806,441		23-Jan-02				\$771,524.50		3-Oct-03	
13								\$806,441		11-Feb-02				\$771,524.50		22-Mar-04	
14																	
15	Shell	\$15,000	523054	24-Oct-00	\$507,627	529305	25-Sep-01	\$537,627	532247	7-Feb-02	\$896,046	535037		\$1,028,700.00	544958		
16		\$15,000	528333	15-May-01							\$448,023		25-Sep-02	\$514,350		28 Oct 03	\$3,000,000
17											\$448,023		10-Feb-03	\$514,350		14 Jan 04	
18	Marathon	\$15,000	528541	14-Aug-01								Marathon Ashland		\$150,000	548582	20-Jan-04	\$215,000
19												Marathon Oil		\$50,000	548581	3-Feb-04	
20																	
21	Total	\$120,000			\$2,045,509			\$5,376,273			\$5,936,307			\$8,317,588.00			\$16,715,000
22																	
23	LT 7/19/04																

Benzene Health Research Consortium
Sponsor Payment Detail 3Q04 Financial Report

	A	B	C	D	E	F
1	ID	CompanyName	PaymentDate	PaymentAmount	TOTALS	
2	19982	Shell Chemical	10/24/2000	\$ 15,000.00		
3	20086	ConocoPhillips	10/31/2000	\$ 15,000.00		
4	20972	ChevronTexaco	11/7/2000	\$ 15,000.00	yr 2000	
5	20239	BP International Limited	11/8/2000	\$ 15,000.00	\$ 60,000.00	
6	28285	Shell Chemical	5/15/2001	\$ 15,000.00		
7	28929	BP International Ltd	6/19/2001	\$ 22,500.00		
8	29861	ConocoPhillips	7/31/2001	\$ 7,500.00		
9	30179	Marathon Ashland Petroleum, LLC.	8/14/2001	\$ 15,000.00		
10	30853	ConocoPhillips	9/17/2001	\$ 246,314.00		
11	31000	Shell Chemical	9/25/2001	\$ 507,627.00		
12	31141	BP p.l.c.	10/4/2001	\$ 768,941.00	yr 2001	
13	31179	ChevronTexaco	10/9/2001	\$ 522,627.00	\$ 2,105,509.00	
14	33206	ConocoPhillips	1/16/2002	\$ 268,814.00		
15	34334	ExxonMobil Research and Engineering	1/23/2002	\$ 806,441.00		
16	34823	Shell Chemical	2/7/2002	\$ 537,627.00		
17	34889	ExxonMobil Research and Engineering	2/11/2002	\$ 806,441.00		
18	35200	ChevronTexaco	2/22/2002	\$ 537,627.00		
19	35207	BP p.l.c.	2/22/2002	\$ 806,441.00		
20	38625	ExxonMobil	9/13/2002	\$ 1,344,069.00		
21	38748	Shell Chemical	9/25/2002	\$ 448,023.00		
22	38779	ConocoPhillips	9/26/2002	\$ 448,023.00		
23	39101	BP p.l.c.	10/2/2002	\$ 112,008.00		
24	39214	BP p.l.c.	10/11/2002	\$ 1,344,069.00	yr 2002	
25	39493	ChevronTexaco	11/5/2002	\$ 896,046.00	\$ 8,355,629.00	
26	42934	American Petroleum Institute	1/17/2003	\$ 1.09	1+2Q03	
27	44094	Shell Chemical	2/10/2003	\$ 448,023.00	\$ 448,024.09	
28	51153	ExxonMobil	10/3/2003	\$ 771,524.50		3Q03
29	51869	ConocoPhillips	10/27/2003	\$ 514,349.00		\$ -
30	51891	Shell Chemical	10/28/2003	\$ 514,350.00		
31	52332	ChevronTexaco	11/19/2003	\$ 1,028,700.00	4Q03	
32	52633	BP p.l.c.	12/4/2003	\$ 1,431,041.00	\$ 4,259,964.50	
33	54618	Marathon Ashland Petroleum, LLC.	1/20/2004	\$ 150,000.00		
34	54472	Shell Chemical	1/13/2004	\$ 514,350.00		
35	55187	Marathon Oil Company	2/3/2004	\$ 50,000.00	1Q04	
36	57362	ExxonMobil	3/22/2004	\$ 771,524.50	\$ 1,485,874.50	
37				\$ 16,715,001.09	\$ 16,715,001.09	
38	RT 5/5/04		(note - does not include interst income)			
39	LT 7/19/04					

	A	B	C	D
1	Company	Date Paid	Amount	
2	American Petroleum Institute	1/17/2003	\$ 1.09	(I am trying to get this \$1.09 removed from the books)
3	BP International Limited	11/8/2000	\$ 15,000.00	
4	BP International Ltd	6/19/2001	\$ 22,500.00	
5	BP p.l.c.	10/4/2001	\$ 768,941.00	
6	BP p.l.c.	2/22/2002	\$ 806,441.00	
7	BP p.l.c.	10/2/2002	\$ 112,008.00	
8	BP p.l.c.	10/11/2002	\$ 1,344,069.00	BP Total
9	BP p.l.c.	12/4/2003	\$ 1,431,041.00	\$ 4,500,000.00
10	ChevronTexaco	11/7/2000	\$ 15,000.00	
11	ChevronTexaco	10/9/2001	\$ 522,627.00	
12	ChevronTexaco	2/22/2002	\$ 537,627.00	
13	ChevronTexaco	11/5/2002	\$ 896,046.00	ChevronTexaco Total
14	ChevronTexaco	11/19/2003	\$ 1,028,700.00	\$ 3,000,000.00
15	ConocoPhillips	10/31/2000	\$ 15,000.00	
16	ConocoPhillips	7/31/2001	\$ 7,500.00	
17	ConocoPhillips	9/17/2001	\$ 246,314.00	
18	ConocoPhillips	1/16/2002	\$ 268,814.00	
19	ConocoPhillips	9/26/2002	\$ 448,023.00	ConocoPhillips Total
20	ConocoPhillips	10/27/2003	\$ 514,349.00	\$ 1,500,000.00
21	ExxonMobil Research and Engineering	1/23/2002	\$ 806,441.00	
22	ExxonMobil Research and Engineering	2/11/2002	\$ 806,441.00	
23	ExxonMobil	9/13/2002	\$ 1,344,069.00	
24	ExxonMobil	10/3/2003	\$ 771,524.50	ExxonMobil Total
25	ExxonMobil	3/22/2004	\$ 771,524.50	\$ 4,500,000.00
26	Marathon Ashland Petroleum, LLC.	8/14/2001	\$ 15,000.00	
27	Marathon Ashland Petroleum, LLC.	1/20/2004	\$ 150,000.00	Marathon Ashland Total
28	Marathon Oil Company	2/3/2004	\$ 50,000.00	\$ 215,000.00
29	Shell Chemical	10/24/2000	\$ 15,000.00	
30	Shell Chemical	5/15/2001	\$ 15,000.00	
31	Shell Chemical	9/25/2001	\$ 507,627.00	
32	Shell Chemical	2/7/2002	\$ 537,627.00	
33	Shell Chemical	9/25/2002	\$ 448,023.00	
34	Shell Chemical	2/10/2003	\$ 448,023.00	
35	Shell Chemical	10/28/2003	\$ 514,350.00	Shell Chemical Total
36	Shell Chemical	1/13/2004	\$ 514,350.00	\$ 3,000,000.00
37			\$ 16,715,001.09	
38	LT 7/19/04			

From: Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>
Sent: Thursday, June 23, 2005 10:21 PM (GMT)
To: Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>; Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>; Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Subject: FW: BHRC-TC... Handout for EA Conf Call - Fri 12/10, 11am EST
Attach: 121004 DRAFT SHS EA ver 4.ppt

Memories... Of possible use for the call tomorrow morning. Looks like there will be a combined call tomorrow, with Otto joining the call with Tom, et al at 930 am Houston time

Stuart Cagen

Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 **Fax:** 3325 **Other Tel:** +1 832 646 3987
Email: stuart.cagen@shell.com
Internet: <http://www.shell.com/chemicals>

"Business Success through HSSE Excellence"

-----Original Message-----

From: Bruce Jarnot [mailto:jarnotb@api.org]
Sent: Thursday, December 09, 2004 5:47 PM
To: benzconsort-tc@listserve.api.org
Cc: Lorraine Twerdok; Howard Feldman
Subject: BHRC-TC... Handout for EA Conf Call - Fri 12/10, 11am EST

Attached is Tom Armstrong's handout (ppt file) for Friday morning's Exposure Assessment conference call...

Best Regards - Bruce.

-----Original Message-----

From: Bruce Jarnot
Sent: Tuesday, December 07, 2004 10:50 AM
To: benzconsort-tc@listserve.api.org
Cc: Howard Feldman
Subject: BHRC-TC... REMINDER - EA Conf Call - Fri 12/10, 11am EST
Importance: High

Benzene Health Research Consortium (BHRC) Technical Committee -

REMINDER... we have a conference call scheduled this Friday, Dec 10th, to review Exposure Assessment (EA) progress in the Shanghai Health Studies with Tom Armstrong, Rob Schnatter and Yimei Zhou:

Date: Friday, Dec 10

Time: 11:00am - 2:00pm EST

Dial-in: 763/315-6900 (or toll free 866/448-6756)

PIN code: 6828319#

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Room 1025)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org <<mailto:jarnotb@api.org>>

Review of SHS Exposure Assessment

10 December 2004

Tom Armstrong

Rob Schnatter

Yimei Zhou

DRAFT

1

Overall Study Aims and Values

Case Control (PI: Otto Wong / Fu Hua)

- Is NHL associated with benzene?
 - If so, is NHL / benzene specific to NHL subtype?
- What is shape of dose-response curve for NHL and AML?
- Provide comment on NCI NHL / benzene study

Disease Progression (PI: Rich Irons / Fu Hua)

- Does benzene-induced disease have a distinct pattern?
- Does benzene-induced cancer progress through requisite steps?
- What is shape of dose-response curve for MDS and AA?
- May have impact on “safe” levels

Molecular Epidemiology (PI: Rich Irons / Fu Hua)

- What is shape of dose-response for blood effects? (Phase 1, 2A)
- What is earliest marker for effects? (Phase 1, 2A, 2B)
- Does benzene induce toxicity more readily in susceptible workers? (Phase 2A, 2B)
 - Provides mechanistic insight; possible protection strategy in some settings
- Are there requisite steps for later markers (blood count decrements)? (Phase 2A, 2B)
- Does benzene act on bone marrow differently than peripheral blood? (Phase 2B)
 - If so, provides insight on mechanisms, thresholds
 - Could provide new basis for dose-response

Study Positives

State-of-the-art lab

- Improved diagnostic capabilities
- New WHO scheme for LH disease classification enabled
- Tissue storage allows future research
- Patient population directly benefiting from improved diagnoses / treatment
- Reputation for diagnosis reflected by more signatory hospitals

Unique resource for research

- Preliminary results already suggest threshold for blood effects
- Preliminary results suggest bone marrow changes in absence of peripheral blood
- Could be unique benzene signature for myelodysplasia
- Enhancing IH capabilities in Shanghai / China

Comments / review

- Study obtained positive feedback at recent worldwide conference
- Esteemed SRP and ERB has favorably reviewed study
- Study may be helping to reduce benzene exposure in Shanghai

EA Progress Summary

	CC/DP	BP	ME I	ME IIA	ME IIB
Planned Recruitement Total	5400	50	2000	1000	200
Planned Recruitment YTD	3150	22	896	448	133
Actual Recruitment YTD	2328	32	192	230	3
Outlook (w/o + \$\$)	5310	50	852	518	10?
Outlook (w + \$\$)	6730	>50	2000	1000	100-200?
Planned EA (Bnz) Total	540	50	2000	1000	200
Planned EA (Bnz) YTD	315	22	192	448	-
Actual Preliminary EA (Bnz) YTD	84	32	192	230	-
Actual Final EA (Bnz) YTD	50	22	192	230	-
Percentage EA Quantitative	??	~100%	~100%	100%	100%
Prevalence BNZ Exposure	5%	100%	100%	100%	100%
Outlook (w/o + \$\$)	160	50	852	518	10?
Outlook (w + \$\$)	202	>50	2000	1000	100-200?
	CC	BP	ME	ME II total	
Factory Recruited	27	1	1	5	
No. of EA Samples	300+	900	N/A	5000+	

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4

Deliverables Associated with Each Study

Molecular Epidemiology

		EMBSI Activities / Deliverables	Status	Actual Effort
Scope Phase 1: 2000 workers Phase 2A: 1000 workers Phase 2B: 200 workers		Design	Complete	+5%
		Questionnaires Design	Complete	-
		Training of staff	Complete	(see CC)
		Abstraction forms	Complete	-
		Factory selection	In progress	2X
		Exposure assessment	In progress	(see CC)
		QA / QC	In progress	-
		Statistical analysis	Future	Future
		Publication assistance	Future	Future
		Presentations assistance	Future	Future

Deliverables Associated with Each Study

(cont'd)

Disease Progression / Case Control

		EMBSI Activities / Deliverables	Status	Actual Effort
Planned Scope		Design	Complete	+20%
		Questionnaires design	Complete	+60–70%
		Training of staff	Complete	Retune +30%
		- Quest. administrators	Complete	“
BZ poisoning cases: 50		- Clinical coordinators	Complete	+ 20-30%
Aplastic anemia: 250		- Exposure Assessment	Complete	“
MDS: 300		Control selection	Complete	+20–30%
AML: 600		Exposure assessment	In progress	+2-3X
NHL: 600		QA / QC	In progress	In progress
Controls: 3600		Some statistical analysis (DP)	Future	Future
Total: 5400		Some publications (DP)	Future	Future
		Some presentations (DP)	Future	Future

EMBSI Timeline

		Sep 00	Jan 01	Jan 02	Jan 03	Aug 03	Jan 04	Oct 04
EMBSI \$ Plan				212 K	718 K		1,213K	1,576K
\$ Actual				132 K	624 K		1,192K	1,533K
Project Mile-stones		Protocols approved Agreements with Fudan, CDC, IPHS		Lab & Studies Start Field testing, ME Pilots		Lab & Studies Start		
EMBSI Planned Work		Staffing, EA support materials, training		Troubleshoot, Monitor, Reviews				
	Protocols: write, review, approve	Design & oversight for EA - AML/NHL Study (2)						
		Questionnaire development						
EMBSI Actual Work		Staffing, EA support materials, training; (1)						
	Protocol write, review, approve	Design & oversight for EA - AML/NHL Study				Troubleshoot, Monitor, Reviews		
		JCML Database for EA (3)						
		Questionnaire development (4)				EMBSI reviews CDC lab & provides lab QA support(5)		

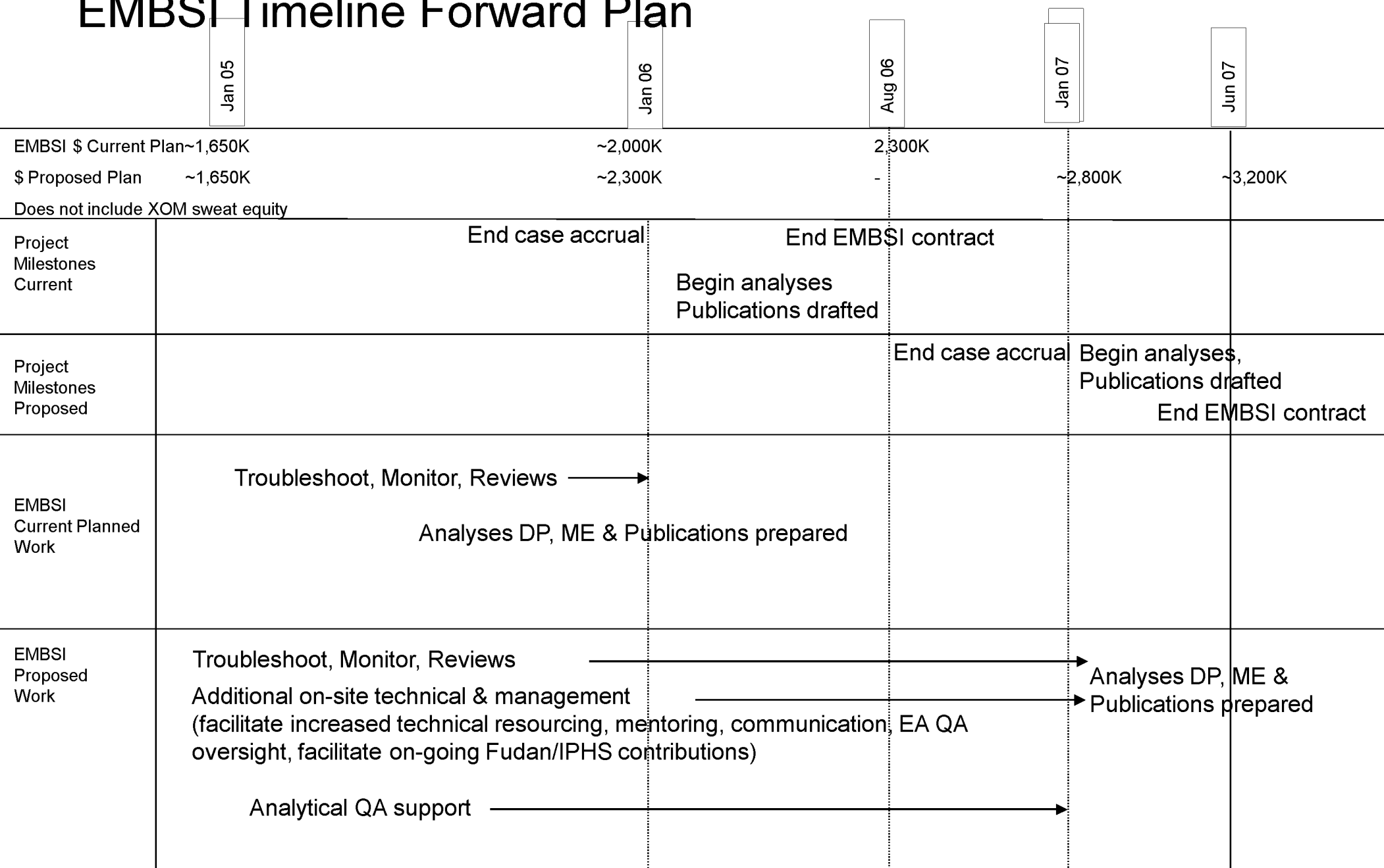
		Import delays (Chines regulation driven)	IPHS Role Change	EA crew to questionnaires
Comments		Agreements & revisions with Fudan, IPHS, CDC	Fudan recruiting EA	YZ begins support Turnover
			SARS	New IH Lab

Notes: (1) Extended due to project start delays, changing agreements and Fudan staff reassignments
(2) Added per SRB request and budget increased
(3) Need identified by PI Team
(4) Extended due to add in of AML/NHL Study EA support
(5) Unanticipated need covered by EMBSI

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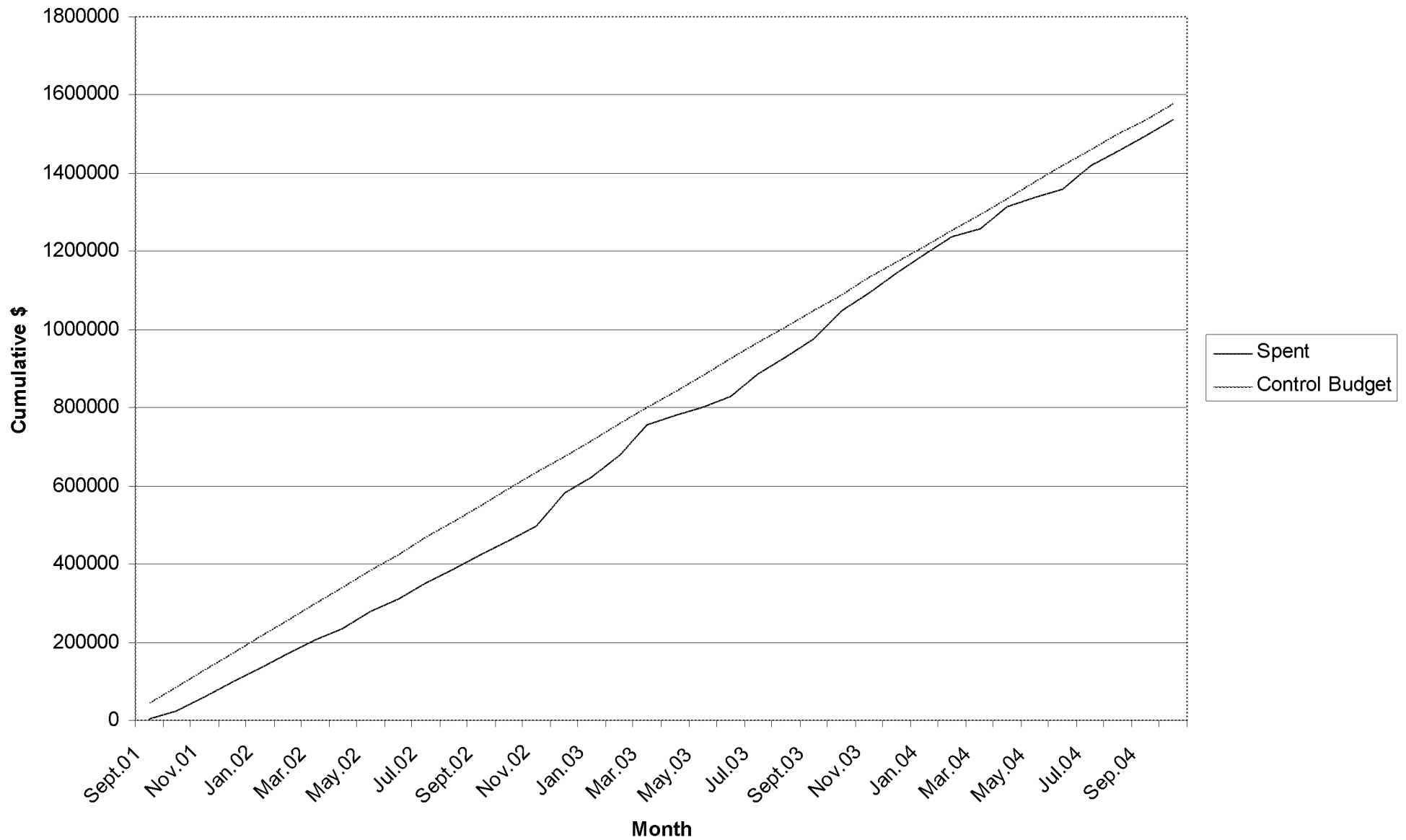
EA Reviews, EA Committee,
Local management issues

EMBSI Timeline Forward Plan



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SHS EMBSI BUDGET



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Exposure Assessment Options

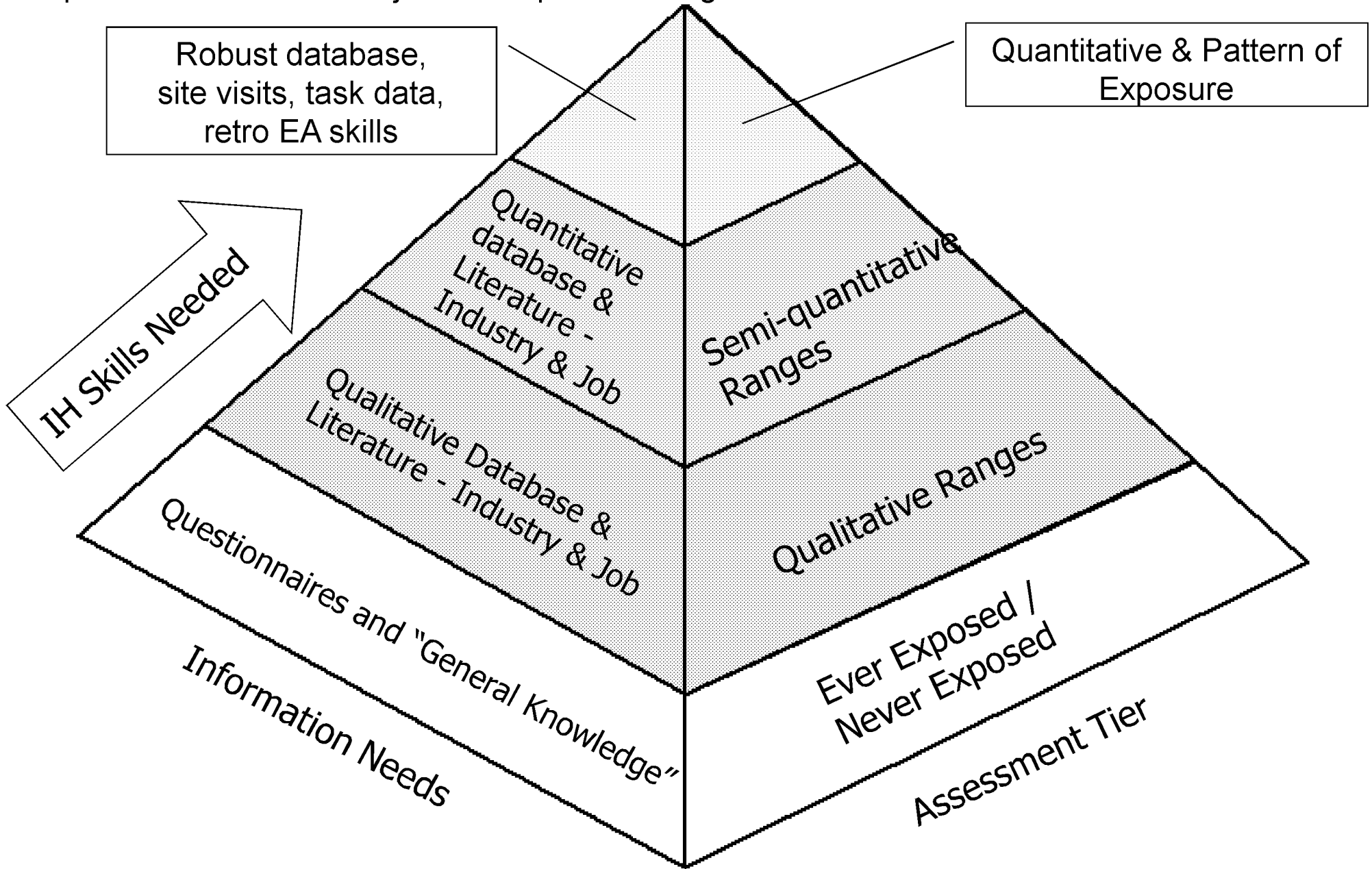
Review of strategies and study
impacts

Case Control Studies Tiered Design:

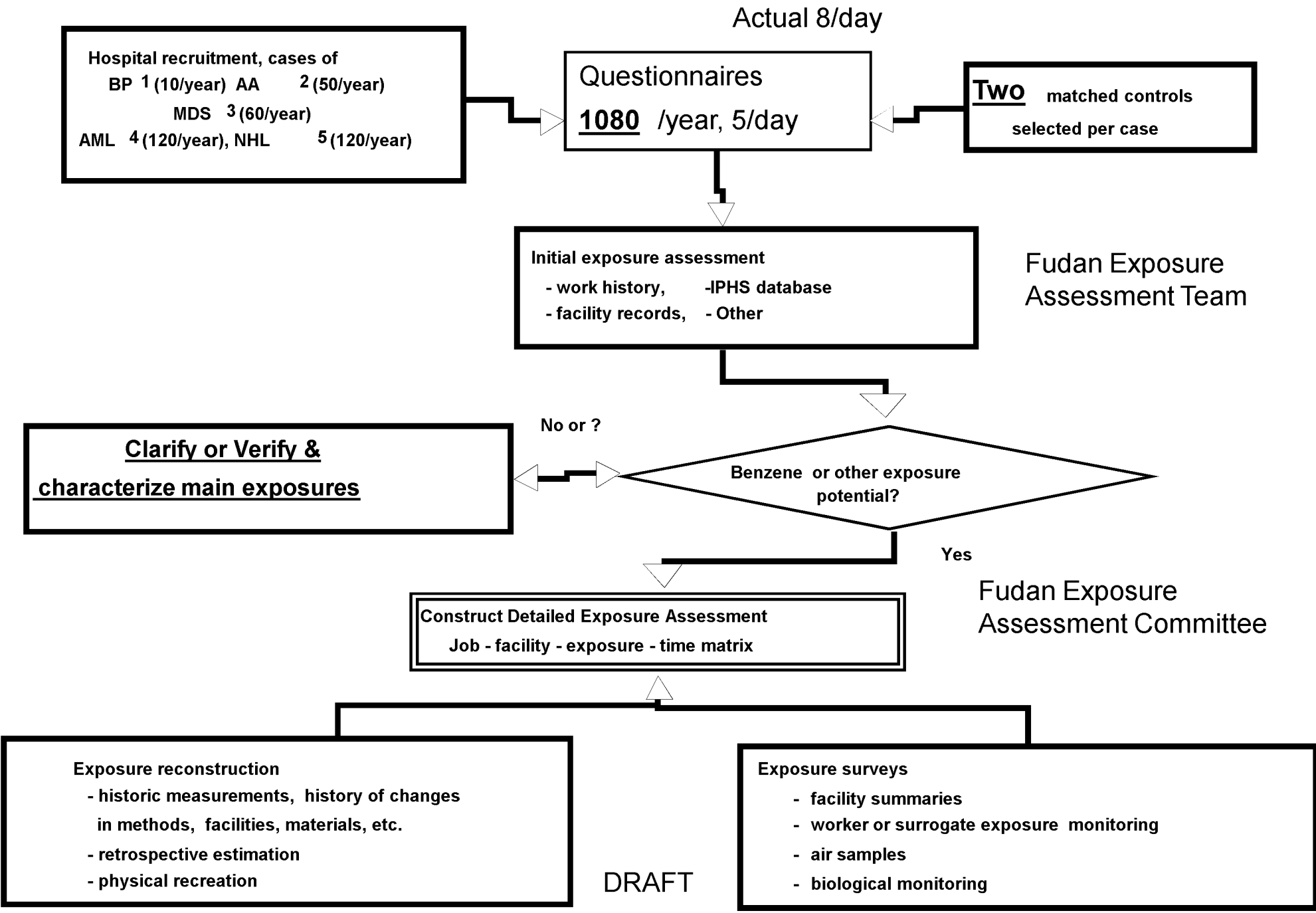
Expectation of Fewer Subjects Completed at Higher Tiers

Robust database,
site visits, task data,
retro EA skills

Quantitative & Pattern of
Exposure



CC / DP Exposure Assessment Design



EA Tiers: Design Basis for SH Studies

	Case Control Studies AML/NHL, Broad DP (1)	DP Case Series (1)	ME Studies (2)	
			Phase 1	Phase 2A Phase 2B
Quantitative	•Quantitative dose-response •Links to studies used in risk assessments	•Quantitative dose-response •Links to studies used in risk assessments	Underway as planned Quantitative dose-response Links to studies used in risk assessments	
Semi-Quantitative Ranks	•Semi-quant. “dose” response •Semi-quant. causal link •Semi-quant. link to studies used in risk assessments	•Semi-quant. “dose” response •Semi-quant. causal link •Semi-quant. link to studies used in risk assessments	•Semi-quant. “dose” response •Semi-quant. causal link •Semi-quant. link to studies used in risk assessments	
Qualitative Ranks	Group differences in risk	Group differences in risk		
Ever Exposed Never exposed	Association with disease	Association with disease		

Note 1: For the CC/DP studies, all tiers have a “certainty” rating and these generally decrease at the higher tiers

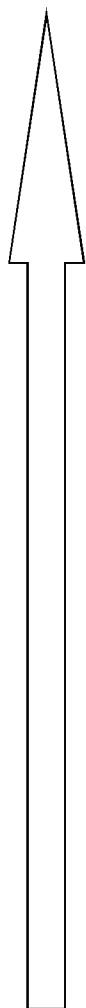
Note 2: “lower tiers” not planned or needed in the ME studies. Semi-quantitative ranks may be applied in some factories for Phase 1, but full quantitative assessment planned.

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13

CC/DP Studies - Bz EA Impact Analysis

Stop Point	Study Impact	Discussion
Quantitative	•Best evidence of causal links •Data for use in risk assessment •Currently planned for ~10% of subjects	•Requires additional investigative effort for site reviews, additional retrospective EA skills, robust analysis of IPHS database and other quantitative data sources •Most difficult tier to complete •Costs - medium - high •Probability of Success - low •Value -high
Semi Quantitative 0 - 0.3 mg/m3 0.3 to 3 3 to 40 > 40	•Improved evidence of causal links •Semi-quant. link to quantitative risk assessments	•Work site screening visits •Difficulty - medium •Costs - medium •Probability of Success - medium •Value - medium
Qualitative range No Low Medium High	•Risks by groups for stronger information or possible causal link for diseases of concern	•Difficulty - low - medium •Costs - low •Probability of Success - high •Value - low-medium
Ever exposed, never exposed	•Only potential relationship of benzene or other exposures to diseases of concern	•Questionnaire driven •Difficulty - low •Probability of Success - high •Value - low



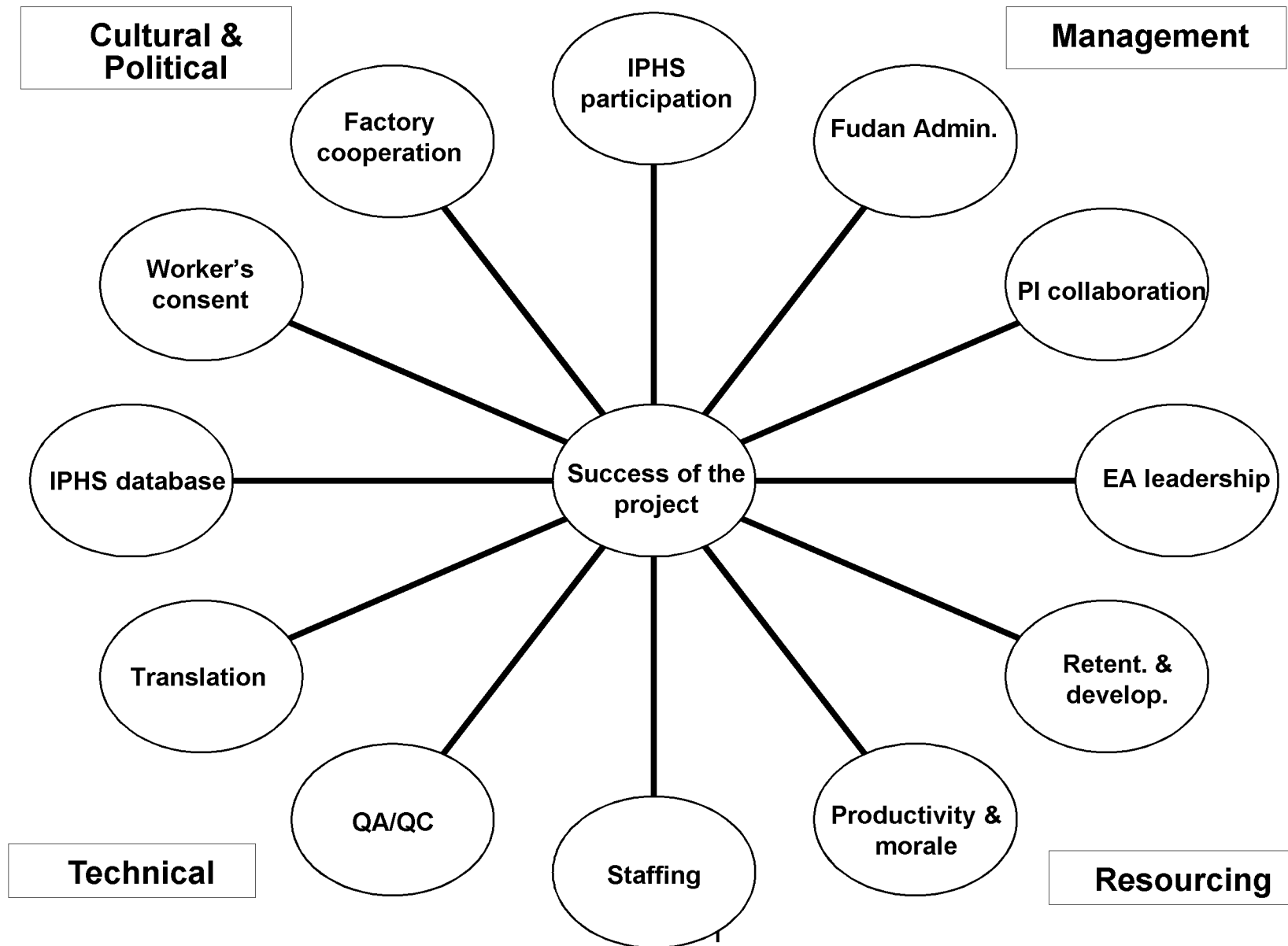
Read
Here to
Top

Go-forward Options

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15

Many Factors Lead to Project Success



Opportunities

Action Item	Expected Benefits	Implementor	Enabler
#1 <i>YZ assignment to Shanghai and more EA support</i>	EA staff morale, productivity, leadership; understanding Fudan / IPHS drivers, EA qualifications, less EA staff resource diversion	EMBSI	Technical/Oversight Committees FU's support PI involvement in EA
#2 <i>Fund extension of the study</i>	Increase subject numbers, more insight on disease mechanisms (from ME/DP), more power for case control less chance of spurious findings	Oversight Committee	Technical/Oversight Committees Factory access through IPHS
#3 <i>Re-engage IPHS</i>	More efficient factory selection, EA, more insight on IPHS database limitations	PI's	PA/Member Companies
#4 <i>Further support the Fudan team</i>	Continuous Improvement of PI collaboration, YZ effectiveness, post-study prob. of lab utilization	Oversight Committee	Technical/Oversight Committees
#5 <i>Perform independent QA/QC audits of Fudan IH laboratory and field (questionnaire EA) work</i>	Ensure data integrity	Member CO's, external resource	Technical Committee

Recommendations:

Maintain Full Scope of SHS

- Continue Planned Quantitative EA for CC/DP Studies
- Continue Recruitment of Subjects for ME IIB
- Maximizes Value of Study Results for Risk Assessments
- Requires Extension through 2007
- Requires Additional \$3.3M Funding

From: Matt Todd <ToddM@api.org>
Sent: Thursday, June 30, 2005 8:35 PM (GMT)
To: BHRC Oversight Committee (E-mail) <benzconsort-oc@listserve.api.org>; BHRC
Technical Committee (E-mail) <benzconsort-tc@listserve.api.org>; BHRC
Communications Committee (E-mail) <benzconsort-cc@listserve.api.org>
Subject: Shanghai Health Study Update: July 1, 2005

Shanghai Health Study Update

Announcements:

- Please register for the 2005 SHS Annual Meeting. The registration form is posted on the SHS Update page under the 2005 SHS Annual Meeting heading. Please e-mail the registration form directly to Matt Todd and contact the Ritz-Carlton directly to arrange for your stay.
- The 2005 SHS Annual Meeting draft agenda is posted on the SHS Update page.
- The Communications Committee has scheduled a conference call on July 11th at 3PM EDT.
- The Technical Committee has scheduled a conference call on August 25th at 11 AM EDT.
- The final minutes from the Oversight Committee conference calls (July 27th, 28th, and 30th) will be posted on the Oversight page upon receipt.
- If you have any announcements that you would like to be posted, please send an email to Matt Todd.

Matthew Todd
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
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f: (202)682-8031
www.api.org

SHANGHAI HEALTH STUDY

Patsy Clegg
Oversight Committee Chair

1220 L Street, NW
Washington, D. C., 20005

July 18, 2005

Dear Dr. Mehlman,

As chair of the Shanghai Health Study Oversight Committee, it has come to my attention that you sent letters to various executives of the companies sponsoring the study. This independent scientific study being conducted in Shanghai, China is sponsored by a group of companies who have a strong commitment to public health, safety and product stewardship. With the Shanghai Health Study, the sponsors seek to advance the medical and scientific knowledge about any disease process or potential health risk from exposure to benzene

Continued scientific investigation is recognized by the scientific and medical communities as the basis for effective assessments of the toxicity and potential health risk of substances such as benzene. The present study was designed by preeminent scientists independent of the sponsoring companies and is being conducted by Principal Investigators who are research scientists at Fudan University in Shanghai, the University of Colorado Health Services Center and Applied Health Sciences, an independent research firm in San Francisco. The research is being overseen by scientific and ethics review panels composed of 14 world-renowned, independent experts in relevant field.

The independent Principal Investigators conducting the study have full responsibility for the research as well as conclusions that may be drawn from the data when the study is completed. It is my understanding that upon completion the researchers intend to submit study findings for publication in peer-reviewed scientific journals.

Sincerely,

Patsy Clegg

From: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Sent: Tuesday, July 19, 2005 6:45 PM (GMT)
To: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Cagen, Stuart Z SCC-CF-SS <stuart.cagen@shell.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; John Wagner (E-mail) <wagner@api.org>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>
Subject: Mehlman Letter
Attach: Shanghai Health Study.ZIP

Team,
Attached is the letter to Dr. Mehlman.

Regards,

Patsy

Patsy Clegg
Product Steward, HSSE
Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916
Tel: +1 713 241 2521 Fax: 3325
Email: patsy.clegg@shell.com
Internet: <http://www.shell.com/chemicals>
Business Success through HSSE Excellence

From: Matt Todd <ToddM@api.org>
Sent: Monday, August 1, 2005 6:33 PM (GMT)
To: BHRC Oversight Committee (E-mail) <benzconsort-oc@listserve.api.org>; BHRC Technical Committee (E-mail) <benzconsort-tc@listserve.api.org>; BHRC Communications Committee (E-mail) <benzconsort-cc@listserve.api.org>
Subject: Shanghai Health Study Update: August 1, 2005

Shanghai Health Study Update

Announcements:

- The Technical Budget Subcommittee has scheduled a conference call to review the 2Q 2005 draft financial report tomorrow, August 2nd at 2:30 PM EDT.
- The Oversight Committee has scheduled a conference call on August 11th at 2:00 PM EDT. Agenda details are located on the SHS Update page.
- All BHRC Committee Members are invited to attend a meeting scheduled on August 18th in Bartlesville, OK at ConocoPhillips. Agenda details are located on the SHS Update page.
- The Technical Committee has scheduled a conference call on August 25th at 11 AM EDT. Agenda details are located on the SHS Update page.
- The final minutes from the Oversight Committee conference calls (July 27th, 28th, and 30th) are posted on the Oversight page.
- If you have any announcements that you would like to be posted, please send an email to Matt Todd.

Matthew Todd
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street NW
Washington, DC 20005
p: (202)682-8319
f: (202)682-8031
www.api.org

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, August 22, 2005 3:36 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC-TC... 3rd Mid-Year SHS Progress Report: Exposure Assessment
Attach: Fudan Progress Rpt 08 2005.pdf

BHRC Technical Committee (-TC)
With copy to Oversight, Technical Committees

Attached is a copy of the mid-year 2005 SHS Progress Report from Dr. Fu Hua (Fudan University). This is the final pending semi-annual report; those received from Drs. Irons (DP & ME Studies) and Wong (CC Study) were sent under separate cover last week.

Copies of all progress reports are also available on the SHS web site...

With best regards - Bruce.

PDF Attach.

SHS Semi-annual Report

July 14, 2005

By Fudan University School of Public Health

1. Summary

During the last 6 months, Questionnaire Takers interviewed 830 subjects for CC/DP Study, for an average of about 40 cases per week. The EA team visited 15 factories, gathered historical industry information and drafted a comprehensive benzene exposure historical summaries for shoe-making and textile printing industries; conducted site monitoring at 25 factories and collected 350 personal, area and bulk samples. Out of the total of 3775 Questionnaires collected so far, 3308 went through preliminary exposure assessment and the current “benzene exposed rate” remains around 7%. Due to the lack of availability and accessibility of complete historical IPHS information, Exposure assessment for the CC/DP study has shifted its focus from a case-to-case based study to sector analysis.

For the ME phase I study, medical records of 1600 cases were collected and entered into an Access database. Exposure Assessment, although slower than expected due to limited factory and information access, is progressing. So far, the EA team visited 11 factories for the ME Phase I, and additional 7 factories have exposure assessment site investigations pending.

No progress was made for ME phase II study because factory managers couldn't accept consent forms.

Issues, challenges and suggestions were summarized as follows:

- Evaluate second level questionnaires to make them more feasible and valuable
- Inadequate involvement of IPHS is still an obstacle against prompting the EA process. More efforts (resources) are needed from IPHS to speed up factory visit.
- Very limited access to IPHS database. Negotiation with CDC is necessary to get more data.
- Fudan investigators should be kept informed on the exposure assessment focus and strategy.
- More workers are needed for ME phase I study. But, it seems difficult to find information out of Shanghai.
- Factories couldn't accept ethical requirements of ME phase II study. A meeting is proposed to discuss factory enrollment in August. Senior occupational physicians and bioethical scientists should attend this meeting.

2. General Management

After dialog and interaction among the PIs of the study during the early part of the year, the Fudan EA team has worked on improving communications. Through weekly staff meetings and monthly reports to PIs, the Fudan team maintained communication with both the team members and the PIs overseas. These monthly reports not only captured progress made, but also communicated the technical questions raised by the EA team.

During this period, the team welcomed two new members who joined the team to fill in gaps left by a graduation and a pregnancy. With the project deadline approaches so far, we have not lost any team members. Keeping the team together in a cohesive and motivated unit is increasingly important as we get closer to the project completion.

The Fudan EA team also played a key role in interacting with IPHS. Fudan has initiated meetings with IPHS at least once a month to address issues related to data and factory access.

However, keeping EA team members of Fudan fully informed and transparent on a strategic basis of foreseeing EA approaches remains to be further prompted. In addition to the “personnel management”, more technical supports and team capacity building are preferably appreciated. Task should ideally assign through the group leader instead of delivering to individual team member directly.

3. Technical PROGRESS

3.1 CC and DP studies

3.1.1 Questionnaire administration

Up to June 25th, 2005, 3375 subjects have been interviewed; 1885 secondary questionnaires were applied. A total number of 850 subjects, including both case and controls, were interviewed in the last half year, and of these, 484 subjects had the secondary questionnaires applied.

Data collected from the Questionnaires was reviewed immediately after the collection and phone interviews were used as follow up to further clarify any questions that the QA coordinator may have. The first time pass rate is at around 89%.

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QA has worked closely with the hospital coordinators to ensure that control

selection adheres to the selection criteria, only 1.1% was found being selected from the same departments of the relevant hospitals; and 2 controls (0.4%) were repeatedly selected. All of these selected controls were excluded out; and the new controls were selected according to the selection criteria.

Control distribution: see the annexed table: distribution of inpatients in 68 hospitals (2002, Shanghai) vs. CC/DP controls.

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In the last six months, data entry has kept with the pace of Questionnaires Administration, only one week lag behind the interview.. The data entry error rate remained at about 2%.

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- Completed preliminary assessments and make qualitative judgments of cases or controls that are exposed to benzene and other substances based on information on the Questionnaires.
- Gathered historical exposure data from IPHS or follow-up site investigations. During the last six months, the EA team visited 15 factories and collected personal, area and bulk samples.
- Completed summary reports and documented information collected for all cases and controls accumulated since last year.

Table 1 Current status of the case distribution in CC/DP Study.

Table 1 Summary of CC/DP exposure assessment (2003.5-2005.5)

Preliminary exposure assessment Completed to date	No. subjects that needs further follow-up by EAC	No. of subjects exposed to other substances	Interim benzene exposure rate (7%)	
			Benzene exposed	Benzene potentially exposed
3308	277	2631	112	121

During the last 6 months, 1228 subjects were assessed to clarify their potential exposures. 1130 of the 1228 subjects (92.02%) were identified as “non-exposed” or “exposed to other chemicals only except benzene”; 98

subjects (7.98%) were identified as “potentially benzene exposed” that were followed-up for further quantitative assessment. Of these, 52 subjects were accomplished for a qualitative EA; and 4 for the quantitative EA.

Although the estimated benzene exposure rate is at about 7%, the final assessment may be slightly lower. These “potentially benzene exposed” subjects are mainly from the following industries.

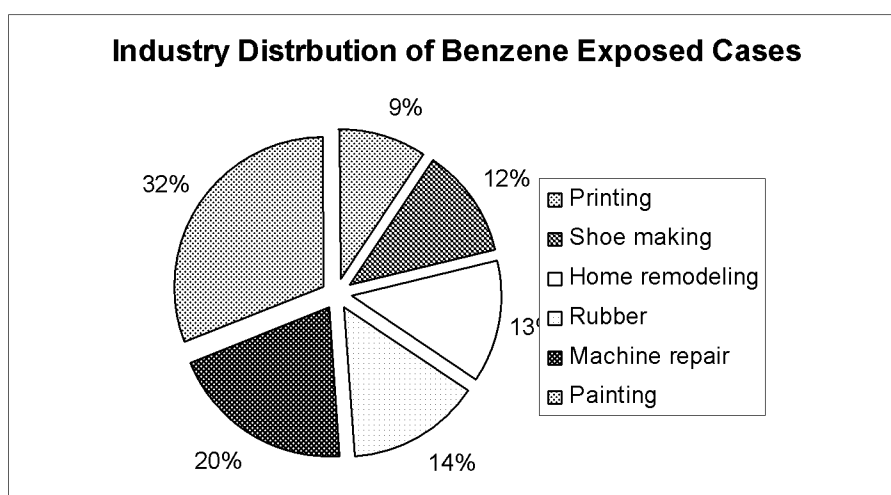


Figure 1. The distribution of Benzene exposed subjects by industry

During the last six months, the EA team has found that one-on-one matching of a subject’s working place based on IPHS database has proven to be far from fully effective. Only 3-5% factories of the subjects worked can be identified in the IPHS database, and the area samples taken often do not match the work area/task or time period the subject worked in that factory.

Therefore, the project is forced to further evaluate an alternative from the protocol for the retrospective Exposure Assessment strategy. A closer look at the IPHS database by industry, breaking down the database by the factors that contribute most to the exposure level – production scale and facility environment, time period, location and task could render some useful information, at least on the range of exposure level. Such information needs to be further verified through other information resources such as published literature, expert input and most important of all when possible, site investigations.

The access of the whole database has been withheld by IPHS and that has hindered the effort for sector analysis. Nevertheless, the Fudan EA team has been focusing on the following areas:

- Continued efforts to follow up on information regarding the exposure of each individual subjects
- Grouped all cases from the same industry together and analyze its commonalities and difference
- Sought information to better understand the industrial process and job/tasks that are related to benzene exposure and gather information that could contribute to the re-construction of historical exposure scenarios.
- Collected over 200 Chinese literature related to the benzene exposure
- Visit to factories and district IPHS, worked with people who directly conducted site monitoring, interviewed service personnel, and conducted current site exposure monitoring.

3.2 ME Study

3.2.1 ME phase I

3.2.1.1 Medical records collection

For 2221 cases, historical medical records from 25 factories were collected by the Yangpu Central Hospital. Historical IH background information and monitoring data were collected from three sources – factory records, IPHS database and/or occupational hospital records. As the critical regulatory requirements for record keeping did not effectively enforced until the passage of Occupational Disease Prevention and Control Act in 2001, often historical data were no longer available. Two factories with a total of 255 cases were disqualified due to inadequate supporting records.

3.2.1.2 Standardization and data entry

Before data entry, names of job titles of workers were standardized through factory managers, senior workers. Medical records from 15 of the 20 factories were double-entered per QA procedures, and validation is currently under way.

3.2.1.3 Exposure Assessment

Re-construction of historical exposure levels takes several steps and the only way to reconcile historical hematological data is through site investigations.

So far, 10 of the 18 factories were visited by the EA team, with a total of 250 exposure assessment samples taken at the sites.

Once the data are available, the EA team associates each of the worker's historical exposures to a job location/task through a coding system. So far, re-construction of historical exposure is completed for about 300 cases from 6

factories.

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Although Fudan has been negotiating with factories, no worker has been successfully recruited for ME II study. A file has been submitted to Dr Irons to help him understand the critical problems of ME II study.

4. Issues, Challenges and suggestions

4.1 CC and DP studies

4.1.1 The second level questionnaires

FUSPH (Fudan School of Public Health) translated all the 63 types of occupations/jobs into Chinese. Although the second level questionnaires were used successfully in USA, the questionnaires often make both interviewer and interviewee confused and lost confidence in responding them. Very limited valuable information could be collected through 2nd questionnaire. Fewer questionnaires were used by EAC to support exposure assessment. Comments on 2nd questionnaires were collected from questionnaire administrators. The Fudan team would like to suggest that US experts evaluate current status of 2nd questionnaire usage and make them more feasible and more useful.

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Inadequate involvement of IPHS is still an obstacle against prompting the EA process. It was agreed early this year that IPHS staff would participate weekly EAC meeting. However, IPHS participated in only 2 EAC meetings. Field visits to 17 factories were arranged in the first half of this year. The IPHS coordinator could spend only 1 day per week for CC/DP and ME studies. Recruitment of a full-time staff, which is ideally familiar with the role of IPHSs and the trendy changes of relevant industries, is needed, so that we can visit factory under a more responsive and effective way.

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Full access to the IPHS database is essential to the sector analysis approach. Currently, IPHS has refused to provide full access, citing complains from other study parties with which IPHS is collaborating. Actions to prompt IPHS re-engaging are under reviewed.

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EAC was directed to focus on “sector analysis” and to estimate the exposure level in terms of ‘high’, ‘medium’ and ‘low’ according to the factory size in May. The questions are: 1) how to define factory size; and 2) the factory size doesn't

necessary proportionally relate to exposure level. However, no further clear and constructive guidelines have been provided by US experts, which need to be more transparent and technically supportive.

Further communication between US and Fudan investigators is needed. Fudan investigators should be kept informed about the adjustment of exposure assessment strategy. Fudan investigators understand that the EA is one of the most complicated issues for SHS, and it's difficult to answer all questions at the moment. However, we are hoping that all important decisions would be made based on scientific judgment and agreed with the PIs .

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After the qualification process, only a little more than half of the cases collected for ME Phase I study will be usable. Therefore, more factories need to be recruited. The Fudan Team and Dr. Ni both explored the possibility of reaching out to other sources for the information out-side Shanghai. However, historical records were not kept in these areas as complete and systematic as in Shanghai.

4.2.2 ME Phase II Study

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**Annexed table 1 : Disease distribution of inpatients in
68 hospitals (2002, Shanghai) vs. CC/DP controls (between Jan. to Jun.
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sort of disease	number of discharged patient	proportion(%)	Number of SHS controls	Proportion (%)
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disease, metabolic disease,immune disease				
blood and hematopoietic organ related disease	4448	0.65	0	0.00
mental disease	941	0.14	0	0.00
Neurologic system disease and sense organ related disease	27642	4.05	51	9.55
Cirulation system disease	100827	14.79	84	15.73
Respiratory system disease	93602	13.73	55	10.30
Digestive system disease	105418	15.46	76	14.23
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cyesis,delivery and complication of the puerperium	82255	12.06	5	0.94
dermal and hypodermis disease	4542	0.67	5	0.94
muscle and skeletal system disease, connective tissue disease	16156	2.37	54	10.11
inherent abnormality	4472	0.66	0	0.00
condition from perinatal period	3461	0.51	0	0.00
unknown of sign and symptom	6040	0.89	12	2.25
impairment and intoxication	54607	8.01	5	0.94
others	43742	6.41	5	0.94

total	681883	100.00	534	100
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From: Fu Hua <hfu@shmu.edu.cn>
Sent: Thursday, August 18, 2005 1:26 PM (GMT)
To: 'shanghaihealthstudy' <info@shanghaihealthstudy.org>; 'Bruce Jarnot' <jarnotb@api.org>
Cc: Tsai, Shan P SHLOIL-SHS <shan.tsai@shell.com>
Subject: ??: Fudan University budget adjustment
Attach: SHS_semi-annual report_2005 June.doc

Dear Bruce

I am sending you our semi-annual report. I am sorry to delay so long time to send it to you because the cycle of review for American team cost much time.

If you have any questions and comments on it please don't hesitate to let me know.

As there is always some problem with the internet communication, I would appreciate if you would give me an acknowledgement.

Regards

Fu Hua

Fu Hua. MB, MPH, PhD
Deputy Dean and Professor
School of Public Health
Fudan University
PO Box 248
138 Yixueyuan Road
Shanghai 200032
PR China
Tel.: 86-21-5423 7202
Fax: 86-21-6422 3464

发件人: Bruce Jarnot [mailto:jarnotb@api.org] 代表 shanghaihealthstudy
发送时间: 2005年5月17日 21:50
收件人: Fu Hua
抄送: Shan P. Tsai (E-mail)
主题: RE: Fudan University budget adjustment

Dear Dr. Fu -

Yes, and thank you. We received your email yesterday morning (Monday May 16), and I spoke with Dr. Tsai this morning. Shan will call you soon to consider a way that we can use these comments (including English-to-Chinese translation of the contract), and also use a temporary contract to pay Fudan invoices now.

With best regards - Bruce.

-----Original Message-----

From: Fu Hua [mailto:hfu@shmu.edu.cn]
Sent: Tuesday, May 17, 2005 12:00 AM
To: Bruce Jarnot
Cc: 'Shan P. Tsai (E-mail)'; shanghaihealthstudy
Subject: ??: Fudan University budget adjustment

Pls give me a reply if you receive it, thanks

Dear Bruce

The lawyer of our university has reviewed the agreement of 2004-2007 and sent back her comments on it. They suggested adding 3 items to the agreement. As the statement of the sentences seems complicated, I could not translate them into English. Herewith pls find the attachment the scanned document in PDF format in Chinese. Please ask one Chinese people to help you to translate it into English. If you agree that, pls add them to the agreement and send back to us with signed one. I am sorry about that but it is an administrative problem I have to do that.

With best regards

Fu Hua

Fu Hua, MB, MPH, PhD

Deputy Dean and Professor

School of Public Health

Fudan University

PO Box 248

138 Yixueyuan Road

Shanghai 200032

China

Fax: 86-21-6422 3464

Tel: 86-21-5423 7202

SHS Semi-annual Report

July 14, 2005

By Fudan University School of Public Health

1. Summary

During the last 6 months, Questionnaire Takers interviewed 830 subjects for CC/DP Study, for an average of about 40 cases per week. The EA team visited 15 factories, gathered historical industry information and drafted a comprehensive benzene exposure historical summaries for shoe-making and textile printing industries; conducted site monitoring at 25 factories and collected 350 personal, area and bulk samples. Out of the total of 3775 Questionnaires collected so far, 3308 went through preliminary exposure assessment and the current “benzene exposed rate” remains around 7%. Due to the lack of availability and accessibility of complete historical IPHS information, Exposure assessment for the CC/DP study has shifted its focus from a case-to-case based study to sector analysis.

For the ME phase I study, medical records of 1600 cases were collected and entered into an Access database. Exposure Assessment, although slower than expected due to limited factory and information access, is progressing. So far, the EA team visited 11 factories for the ME Phase I, and additional 7 factories have exposure assessment site investigations pending.

No progress was made for ME phase II study because factory managers couldn't accept consent forms.

Issues, challenges and suggestions were summarized as follows:

- Evaluate second level questionnaires to make them more feasible and valuable
- Inadequate involvement of IPHS is still an obstacle against prompting the EA process. More efforts (resources) are needed from IPHS to speed up factory visit.
- Very limited access to IPHS database. Negotiation with CDC is necessary to get more data.
- Fudan investigators should be kept informed on the exposure assessment focus and strategy.
- More workers are needed for ME phase I study. But, it seems difficult to find information out of Shanghai.
- Factories couldn't accept ethical requirements of ME phase II study. A meeting is proposed to discuss factory enrollment in August. Senior occupational physicians and bioethical scientists should attend this meeting.

2. General Management

After dialog and interaction among the PIs of the study during the early part of the year, the Fudan EA team has worked on improving communications. Through weekly staff meetings and monthly reports to PIs, the Fudan team maintained communication with both the team members and the PIs overseas. These monthly reports not only captured progress made, but also communicated the technical questions raised by the EA team.

During this period, the team welcomed two new members who joined the team to fill in gaps left by a graduation and a pregnancy. With the project deadline approaches so far, we have not lost any team members. Keeping the team together in a cohesive and motivated unit is increasingly important as we get closer to the project completion.

The Fudan EA team also played a key role in interacting with IPHS. Fudan has initiated meetings with IPHS at least once a month to address issues related to data and factory access.

However, keeping EA team members of Fudan fully informed and transparent on a strategic basis of foreseeing EA approaches remains to be further prompted. In addition to the “personnel management”, more technical supports and team capacity building are preferably appreciated. Task should ideally assign through the group leader instead of delivering to individual team member directly.

3. Technical PROGRESS

3.1 CC and DP studies

3.1.1 Questionnaire administration

Up to June 25th, 2005, 3375 subjects have been interviewed; 1885 secondary questionnaires were applied. A total number of 850 subjects, including both case and controls, were interviewed in the last half year, and of these, 484 subjects had the secondary questionnaires applied.

Data collected from the Questionnaires was reviewed immediately after the collection and phone interviews were used as follow up to further clarify any questions that the QA coordinator may have. The first time pass rate is at around 89%.

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QA has worked closely with the hospital coordinators to ensure that control

selection adheres to the selection criteria, only 1.1% was found being selected from the same departments of the relevant hospitals; and 2 controls (0.4%) were repeatedly selected. All of these selected controls were excluded out; and the new controls were selected according to the selection criteria.

Control distribution: see the annexed table: distribution of inpatients in 68 hospitals (2002, Shanghai) vs. CC/DP controls.

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In the last six months, data entry has kept with the pace of Questionnaires Administration, only one week lag behind the interview.. The data entry error rate remained at about 2%.

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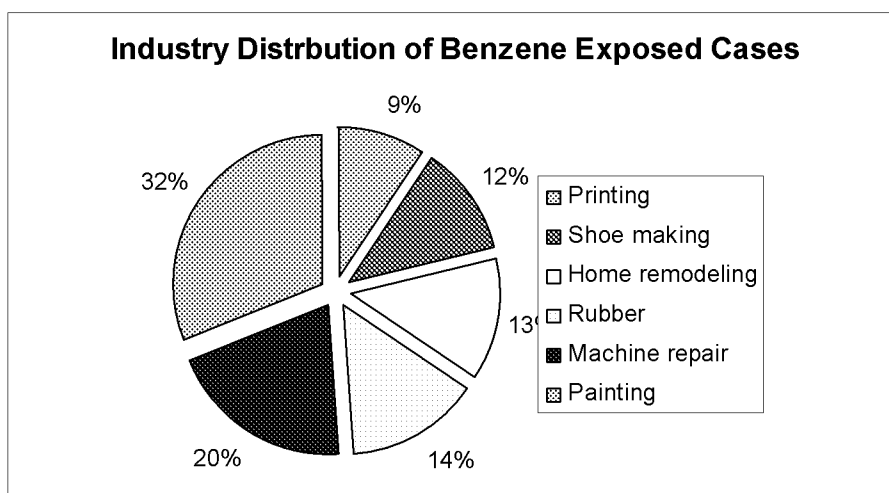


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From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, August 17, 2005 4:06 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC-TC... Mid-Year SHS Progress Reports: DP/ME & CC
Attach: DP ME Progress Report 07 2005.pdf; CC Progress report 07-26-2005.pdf

BHRC Technical Committee (-TC)

We have now received mid-year 2005 Progress Reports from both Drs. Irons (DP & ME Studies) and Wong (CC Study); pdf copies of these reports are attached for your review, and are also available on the SHS web site...

With best regards - Bruce.

PROGRESS REPORT

July 2005

**I. ANALYSIS OF DISEASE PROGRESSION FOR APLASTIC ANEMIA,
MYELOYDYSPLASTIC SYNDROME, ACUTE MYELOGENOUS
LEUKEMIA AND BENZENE POISONING IN SHANGHAI, CHINA**

**II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS IN
SHANGHAI, CHINA**

III. EXPOSURE ASSESSMENT

A MULTICENTER INTERNATIONAL STUDY

Molecular Toxicology and Environmental Health Sciences Program
Dept. of Pharmaceutical Sciences, School of Pharmacy
Department of Pathology, School of Medicine
University of Colorado Health Sciences Center, Denver, CO.

—

School of Public Health, Hua Shan Hospital, Cancer Hospital,
Fudan University Medical Center, Shanghai, China

EXECUTIVE SUMMARY

A. Overall Status of Budget

Attached is an official summary of the overall budget for the year ending June 30, 2005.

In April 2005, the consortium agreed to a revised budget (Appendix A). Based on this new budget, the overall status of the budget for the first half of this calendar year is as follows: We spent \$1,787,330 compared to a projected budget of \$2,018,301, resulting in savings of \$230,971 in funds during this period (Table 1). This savings is largely due to a reduction in operating expenses at UCHSC.

Table 1. Budget Summary (Reporting Period)

	Budgeted ¹	Expenditures	Variance
Personnel	\$227,260	\$235,437	(\$8,177)
Operating Expenses	\$247,000	\$104,457	\$142,543
Subcontracts	\$1,420,103	\$1,359,315	\$60,788
Travel	\$500	\$0	\$500
Equipment	\$0	\$0	\$0
Indirect	\$123,438	\$88,121	\$35,317
TOTALS	\$2,018,301	\$1,787,330	\$230,971

¹The budgeted amounts are the sum of each category from Jan-05 through Jun-05.

Table 2. Budget Summary (Entire Project)

	Budgeted ²	Expenditures	Variance
Personnel	\$2,176,813	\$1,935,436	\$241,377
Operating Expenses	\$1,592,787	\$1,329,463	\$263,324
Subcontracts	\$6,260,471	\$5,873,620	\$386,851
Travel	\$47,576	\$9,098	\$38,478
Equipment	\$1,560,213	\$1,383,491	\$176,722
Indirect	\$1,018,466	\$880,550	\$137,916
TOTALS	\$12,656,326	\$11,411,658	\$1,244,668

²The budgeted amounts are the sum of each category from Dec-01 through Jun-05.

Subcontract Summary (Entire Project)

Subcontracts	Expenditures (Dec 01 – Jun 05)
Fudan University	\$3,415,417
IPHS	\$167,577
SMCDC	\$153,004
EMBSI	\$1,873,555
Children's Hospital Cincinnati	\$264,067

B. Budget Analysis

Our projected costs for the remainder of the project are outlined in Table 3. These figures are consistent with projections from the last API progress report except that we have added the EMBSI estimated additional costs.

Table 3. Projected Budget (Remainder of Project)

	July1 – Dec 31 Year 2005	Year 2006	Year 2007 **
Personnel	\$236,350	\$482,154	\$203,265
Operating Expenses	\$254,380	\$396,360	\$0
Subcontracts*	\$1,264,180	\$2,683,219	\$609,595
Travel	\$500	\$1,000	\$0
Equipment	\$0	\$0	\$0
Indirect	\$127,720	\$228,677	\$52,849
TOTALS	\$1,883,130	\$3,791,410	\$1,015,709

*Subcontract figures now include EMBSI estimated additional costs.

**Post-study costs

Appendix A

	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Post-Study thru Jun-07	Total thru Post- Study
Personnel													
Apr '05 Budget	\$ 172,140	\$ 224,883	\$ 317,665	\$ 314,703	\$ 230,328	\$ 211,016	\$ 229,260	\$ 227,260	\$ 236,350	\$ 236,350	\$ 245,804	\$ 203,265	\$ 2,849,025
Actual	\$ 172,140	\$ 224,883	\$ 317,665	\$ 314,703	\$ 230,328	\$ 211,016	\$ 229,260	\$ 235,437					\$ 1,935,432
Operating Expenses													\$ -
Apr '05 Budget	\$ 13,131	\$ 94,401	\$ 193,990	\$ 158,850	\$ 162,834	\$ 364,542	\$ 237,258	\$ 247,000	\$ 254,380	\$ 235,580	\$ 160,780	\$ 150,000	\$ 2,272,746
Actual	\$ 13,131	\$ 94,401	\$ 193,990	\$ 158,850	\$ 162,834	\$ 364,542	\$ 237,258	\$ 72,156					\$ 1,297,162
Subcontracts													\$ -
Apr '05 Budget	\$ 123,629	\$ 688,452	\$ 213,291	\$ 845,860	\$ 565,870	\$ 1,128,507	\$ 948,696	\$ 1,420,103	\$ 1,264,180	\$ 1,454,051	\$ 1,229,168	\$ 609,595	\$ 10,491,402
Actual	\$ 123,629	\$ 688,452	\$ 213,291	\$ 845,860	\$ 565,870	\$ 1,128,507	\$ 948,696	\$ 1,359,315					\$ 5,873,620
Travel													\$ -
Apr '05 Budget	\$ -	\$ 8,429	\$ 218	\$ 346	\$ -	\$ -	\$ -	\$ 500	\$ 500	\$ 500	\$ 500		\$ 10,993
Actual	\$ -	\$ 8,429	\$ 218	\$ 346	\$ 105	\$ -	\$ -	\$ -					\$ 9,098
Equipment													\$ -
Apr '05 Budget	\$ 291,568	\$ 253,578	\$ 354,496	\$ 274,508	\$ 17,000	\$ 192,340	\$ -						\$ 1,383,490
Actual	\$ 291,568	\$ 253,578	\$ 354,496	\$ 274,508	\$ 17,000	\$ 192,340	\$ -	\$ -					\$ 1,383,490
Indirect													\$ -
Apr '05 Budget	\$ 47,922	\$ 111,454	\$ 139,587	\$ 122,902	\$ 101,447	\$ 148,709	\$ 120,408	\$ 123,438	\$ 127,720	\$ 122,832	\$ 105,845	\$ 52,849	\$ 1,325,112
Actual	\$ 47,922	\$ 111,454	\$ 139,587	\$ 122,902	\$ 101,447	\$ 148,709	\$ 120,408	\$ 79,722					\$ 872,151
TOTALS													\$ -
Apr '05 Budget	\$ 648,390	\$ 1,381,197	\$ 1,219,247	\$ 1,717,169	\$ 1,077,479	\$ 2,045,114	\$ 1,535,622	\$ 2,018,301	\$ 1,883,130	\$ 2,049,313	\$ 1,742,097	\$ 1,015,709	\$ 18,332,769
Actual	\$ 648,390	\$ 1,381,197	\$ 1,219,247	\$ 1,717,169	\$ 1,077,584	\$ 2,045,114	\$ 1,535,622	\$ 1,746,630	\$ -	\$ -	\$ -		\$ 11,370,953

Original Budget	\$ 14,508,000
Revised Budget	<u>\$ 18,332,953</u>
Increase	\$ 3,824,953

I. JCML OPERATIONS

A. Progress

Study diagnoses for the first 18 months of case accrual (Sep 03 – Feb 05) have been completed and 100% reviewed. During the first year a total of 740 cases were diagnosed and 732 were assigned ICD codes according to WHO and ICD-10. The remaining 8 unassigned cases are follow-ups for the DP study. There were a total of 147 cases of AML (WHO), 152 cases of lymphoid (WHO) (i.e. NHL+ALL+CLL) and 113 cases of NHL+CLL (ICD-10). There were 129 cases of MDS, 48 cases of AA and 20 cases of benzene poisoning diagnosed. At 18 months a total of 1131 cases were diagnosed and reviewed with 1108 ICD codes assigned. The remaining 23 unassigned cases are follow-ups for the DP study. There were a total of 269 cases of AML (WHO), 261 cases of lymphoid neoplasms (WHO), 188 cases of NHL+CLL (ICD-10), 192 cases of MDS, 61 cases of AA and 25 cases of benzene poisoning diagnosed. Further, a total of 400 patients were diagnosed over the past 6 months, bringing total cumulative case contact to 1531. Since January, a total of 4 cases of AA, 39 cases of MDS, 56 cases of AML, 55 cases of lymphoid neoplasms and 2 additional BP cases have been diagnosed, and a total of 137 cases remain unassigned to the study database as of the time of this writing. In addition, over the course of the project to date JCML has diagnosed approximately 40 *pro bono* cases for individuals, mostly children, who do not qualify for inclusion in our studies.

B. Nutritional Deficiencies

An important observation is the number of hematologic abnormalities that can be attributed to nutritional deficiencies. As of June, 2005 we have identified 72 cases, the majority of which would be misclassified as AA, MDS or even AML in a retrospective study. Consequently, nutritional deficiencies are involved in roughly 20% of the potential case accrual for these diseases, rendering nutrition an important confounding factor in the study of AA and MDS. The frequency of diagnosis of nutritional deficiencies at JCML also suggests that this represents an important public health issue in Shanghai. Professor Fu Hua has agreed to take responsibility for preparing an analysis of the influence of nutritional deficiencies in hematopoietic disease in Shanghai.

C. HIV Serology Testing

We have encountered difficulties in implementing approved changes to the protocol for directly determining the rate of HIV seropositivity in our lymphoma cases. This is due to a number of logistic problems, primarily the fact that the majority of lymphoma cases, especially low grade lymphomas, are outpatients who are reticent to provide a blood sample for procedures not directly related to the diagnosis of their condition. Other outpatients are not willing to return to the hospital for additional blood work after diagnosis. Alternatively, screening for HIV is becoming far more commonplace in Shanghai, and participating hospitals have agreed to share HIV serology data previously obtained from IC'd subjects. Nevertheless, an effective mechanism for doing this on a routine basis has yet to be implemented. In contrast to the issues related to sample collection for NHL, all hematology cases, including ALL and CLL cases,

diagnosed at JCML have been tested for HIV. To date, no confirmed cases of HIV have been identified in these subjects (N>650). Independently, the NHL subtypes diagnosed in our patient population are not consistent with immunodeficiency-associated lymphoid disorders. Therefore, although we have only a fraction of direct measurements on NHL cases, we believe that it is very unlikely that HIV constitutes a significant confounding factor for any of our studies.

II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS

A. Molecular Epidemiology Phase 1

The goal of the molecular epidemiology (phase 1) study is to: (a) study retrospective benzene exposure levels vs. blood counts present in worker exam records, and (b) identify candidate factories for subsequent phases (e.g. 2A, 2B) of the study.

Through the leadership of Dr. Ni, excellent progress has been made in abstracting hematology counts from physical examination data at a number of facilities. Over 1600 cases have been collected and entered into an Access database from 17 facilities. Not all of these records will qualify for the final study, since some cover only one year of readings, while the molecular epidemiology study requires at least two years (and preferably more) to be able to study potential effects on blood counts longitudinally.

A potential issue for the Phase 1 study is whether the records that have been abstracted are representative of the workforce. In some preliminary factory visits, it was noted that records for workers with 'normal' blood readings were stored at one location, while records for workers with 'abnormal' blood readings could be stored separately. Dr. Ni believes that this did not apply to the cases in the Yang-Pu hospital, where most of the records were collected. Nevertheless, frequency counts for 'normal' and 'abnormal' values of different blood parameters will be examined by factory and time period to ensure that this is the case.

Exposure assessment for the factories selected has been proceeding at a steady pace. So far, the EA team has visited 10 of the 17 factories, and 7 factories are awaiting a site visit from the team. The aim of these visits is to collect information beyond that which may be present in the IPHS database. This is needed to reliably link certain jobs/factory locations with appropriate retrospective data. In addition, the EA team has performed screening assessments with rapid-detecting instruments, consisting of over 250 measurements. The results of the initial assessments have been mixed: in some sites no records of benzene exposure can be found, while others have yielded good retrospective records. In other sites no current benzene exposure can be found, in others relatively low levels can be detected. So far, over 300 cases have useable exposure and blood data. We are actively working on exposure assessment and assessment of the hematologic data to assess how much useable data is present in these records.

While these efforts proceed, it seems reasonable to assume that less than half of the 1600 records will ultimately contain useable blood and exposure data. A

coordinated effort is underway to identify suitable factories outside of the Shanghai area that might be used to increase the number of workers in the Phase 1 study, while also identifying sites for Phase 2A.

B. Molecular Epidemiology Phase 2

A total of 42 factories have been visited in an effort to select appropriate facilities for Phase II studies. Extensive area and personal sampling has been performed in three facilities with 984 area samples analyzed with mean airborne benzene concentrations of benzene ranging between 0.01 and 326.7 ppm. A total of 231 workers have been recruited to the Phase IIa study.

Over the past year, the ME study has encountered a number of challenges which have impacted on its progress and resulted in some mid-course adjustments. First, our success in gaining access to acceptable study sites has been very limited. Out of 42 factories visited only 5 were considered to be appropriate for initial Phase IIa activities and only 3 have been extensively analyzed. Moreover, recruitment of workers to Phase IIb, as originally designed has proven to be problematic ($N = 3$). In addition to the obvious ramifications of documenting high benzene exposure in the workplace along with health effects, we have encountered a variety of difficulties in obtaining the cooperation of management in many facilities. The reasons for this are many and varied. Some frequently encountered problems are culturally based: First, in state-run companies market place competition has resulted in considerable financial stress, workers are at risk being laid-off and the anxiety is high. Therefore, management typically wants to avoid anything that may trigger trouble and reactions from their workers. Second, our use of informed consents and pledge to compensate workers for any problems arising from participation in the study stands in sharp contrast to similar recent or ongoing studies that do not acquire consents or offer any forms of compensation, thereby posing an indirect threat by example. Both local occupational physicians as well as Professor Xi have informed us that it is unlikely that this issue can be resolved without major changes to our ME informed consent (IC) procedures. Accordingly, I have asked a committee comprised of senior occupational physicians from local hospitals, the Vice Director of the CDC Physical Examination Center, Dr. Ye Xibiao, Lv Ling (JCML's lead occupational physician) and Professor Fu Hua to review the problem and to make suggestions for changing the IC procedure.

These issues notwithstanding, we identified factory workers with benzene poisoning, admitted them into hospital in Shanghai, and recruited them to the DP study. This strategy was inculcated in the original approved study design and has resulted in characterization of a case series of 23 individuals with persistent dysplasia following prolonged benzene exposure and for which we have robust exposure assessments. These cases also contribute quantitative exposure assessment data to the CC/DP EA matrix (see below). To date, we have identified approximately 30 such individuals using this mechanism. In addition, we have modified the original protocol by adding peripheral blood benzene metabolite and urinary sPMA analyses to Phase IIa as opposed to limiting metabolism studies to Phase IIb. To date, we have measured benzene metabolites in the blood of 103 exposed workers, conducted pre- and post- shift analyses of urinary sPMA

in 104 workers and have integrated hematology, exposure, metabolite and urinary sPMA data for 64 workers. In addition, utilizing PCR-RFLP methods, we have conducted preliminary genotyping of CYPE2E1, NQ01-465CT and -609CT, MPO-463GA, and GSST1 polymorphisms on all 231 Phase IIa subjects.

III. EXPOSURE ASSESSMENT

A. Introduction

The past 6 months have witnessed major developments in the EA process which are outlined below. This report represents the collective effort of a large group of individuals including the Fudan SHS Exposure Assessment Team under the direction of Prof. Fu Hua, Dr. Tom Armstrong and Yimei Zhou of EMBSI, with input from Dr. Schnatter and Prof. Irons.

B. Exposure assessment strategies and goals

The EA strategy originally designed for the DP study was adapted to all SHS hospital based studies upon the recommendation of the SRP in 2001. The primary goal of the CC study is to ascertain whether benzene exposures or other variables (e.g., viruses, nutritional deficiencies or other chemicals) are associated with certain diseases (e.g., NHL). Ordinal range assessments (no, low, medium, high exposure) or where feasible, quantified ranges such as <0.4, 0.4 to < 4, 4 to 40 and > 40 mg/m³ support these study objectives. This tiered approach (Figures 2 and 3) was originally outlined in the study protocol and endorsed by IH SRP members. Quantitative benzene assessment, which is the EA strategy employed for the ME study, is targeted for a fraction of the CC/DP subjects, and is dependent on feasibility. In the ME study, factories are selected based on good EA and health effects records and a willingness to participate in extensive concurrent personal and area monitoring activities. Thus, the detailed quantitative EA analysis performed in ME supplements and reinforces EA efforts in CC/DP. The timeline for EA is depicted in Figure 4. The integration of qualitative and quantitative EA processes is targeted for the second quarter of 2006 when validation and assembly of the final CC/DP EA matrix is slated to occur. The assignment of final benzene exposure will then follow.

C. Progress

1. Data collection

During the last 6 months, Questionnaire Takers interviewed 850 subjects for an average of about 40 cases per week. The EA team conducted site monitoring at 25 factories and collected 350 personal, area and bulk samples. A total of 3375 questionnaires have been collected to date with 3308 having completed preliminary exposure assessments (EA) for substances of interest, including benzene. A total of 1885 secondary questionnaires have been administered, including 484 during the last 6-month period. Data collected was immediately reviewed and telephone interviews conducted to clarify any remaining issues. Qualitative EA are now progressing at a rate consistent with subject accrual (See Figure 1). Semi-quantitative and quantitative exposure

assessment (EA) of benzene requires more detailed data assembly, and the time line on this effort naturally lags case accrual. Nevertheless, these analyses are on schedule for completion in conjunction with detailed benzene EA which is slated for third quarter 2006, for the cases accrued to that point. Initial projections for benzene-EA were based on predictions of a caseload of 500 cases per year and an expected prevalence of 10% benzene exposed in the study subjects. The caseload is approximately 50% higher than expected and the prevalence of benzene exposed subjects is about 7%.

Exposures other than benzene were assigned in over 2600 instances. The studies by design evaluate exposures to a range of risks other than benzene, since exposures to other hazards relevant to the diseases of interest may be indicated in a subject's work and life histories.

EA team members continue to close the gap on earlier shortfalls in EA assessments and progress is now meeting the expectations of the EA Coordinating Committee (EAC). Nevertheless, unanticipated challenges have required additional staffing, and we continue to experience a shortage of qualified EA personnel. Therefore, efforts are underway to recruit additional experienced staff.

Through the first half of 2005, 93 work site inspections (CC/DP and ME) have been completed. These work site inspections included extensive current exposure monitoring:

- 4300 UltraRAE screening measurements of benzene concentrations
- 2150 area samples (20 minute breathing zone by IPHS protocol)
- 1070 personal benzene exposure samples

Additional site reviews are planned.

2. Exposure analysis for the CC/DP studies

We have experienced limited success finding exact matches for factories with exposure data corresponding to time periods relevant to subject work histories. Many factories are closed and were not previously monitored by IPHS. Some subjects are from areas of China remote from Shanghai. Review of completed assessments using exact match or limited surrogate site data showed divergent results for apparently similar work histories. Therefore, the industry sector analysis previously described in the study protocol is being emphasized for providing quantitative data to support the final benzene EA. Sector analysis was further developed in April, with a pilot test conducted in May to evaluate the capabilities of performing sector analyses as part of a comprehensive EA strategy. The study focused primarily on the shoe industry and on a segment of the rubber industry. The exercise involved:

- Sorting available IPHS data for the industries of interest
- Sorting the data into sectors within each industry
- Adding supplemental task categories (not part of the IPHS database) based on sample location descriptions

- Qualitatively evaluating the frequency-concentration distributions of the sector, by task and time period
- Calculating preliminary summary statistics for the identified sector, task and time categories

As a result of this exercise for the test industry segments, sector analysis was determined to be a useful approach for evaluating other key industrial segments found in subject work histories, and is being integrated into an overall collaborative effort with IPHS. The sector analysis evaluation yielded insights that led to further research efforts that are currently underway. One main point from the pilot study is the need for additional coding based on area descriptions given for the samples in the IPHS database. The additional codes are needed to separate the data concerning where people worked, what tasks were done and by era. The additional coding will reduce heterogeneity in the data sets thereby allowing more precise exposure assignments. This additional coding and analyses will be conducted in collaboration with IPHS.

The main stages of the CC/DP process, with responsibilities and progress dates are shown in Table 4. It is important to recognize that until the EA matrix is completed, the process is dynamic and iterative, with the methods and degree of reliance on individual information sources differing for individual sectors. Several different sources of information are being used and periodically reviewed, and previous assessments are continually being compared with ongoing ones.

For approximately 13% of the CC/DP subjects qualitatively categorized as benzene exposed, quantitative analysis has been successfully completed as part of EA in the ME study. These quantitative assessments are based on current personal exposure measurements, current area concentration measurements, detailed compilations of factory changes over time that modulate exposure, use of retrospective exposure estimating techniques, and use of past IPHS monitoring data. This has resulted in a detailed exposure matrix for these subjects. Additional publications based upon this work are in preparation.

3. Changes to the data collection process

Many of the second level questionnaires were found to be of minimal value so the set has been reduced to 23. An additional summary of key task information (e.g. task description, materials used, frequency and duration) is being provided on a "key data summary" card to better prompt the staff during questionnaire interviews. Additional question-coded data recording sheets are being considered since the primary questionnaires do not always provide sufficient writing space for detailed answers.

4. Initial screening, qualitative assessment and relative ranking

The EAT and EAC have prioritized the completion of qualitative assessments and relative ranking of the subjects for benzene and the other exposures. This provides a basis for linking the subject's work history to the project exposure assessment matrix. Part of the review includes seeking current access to the work place for current

monitoring and evaluation of changes in the operation relevant to the time the subject worked.

5. Collaboration with IPHS

Collaboration with the Shanghai IPHS has been enhanced and restructured to provide an integration of database, factory site evaluation and sector information. This involves close interaction with IPHS District staff in order to conduct a comprehensive analysis of a single district, Yang Pu, that will serve as a centerpiece for the development of tools for validating individual data sets. Work with the District staff includes verifying data in the database, and completing current monitoring for factories operating in the District that coincide with study subject work histories. This collaboration provides additional resources to further code data and to develop summaries for industrial sectors important to the subject work histories.

Reviews of the CC/DP exposure assessments have been underway for the last year, and will be expanding in number and depth as the EA matrix supporting materials and their translations reach completion. It is proposed to have members of the SRP with expertise in EA participate in a review of exposure matrix in the second half of 2006.

6. Analysis of the Chinese EA literature

Professor Liang has been asked to complete the summary and analysis of the Chinese EA literature, including categorization of articles by quality, for use on the EA process. Another important aspect of the analysis that is underway is the preparation of summary reports that outline trends impacting exposure potential for key industries. An important part of this exercise is a summary of the benzene composition time trends for key materials (e.g., glues, solvents, paints, gasoline). This is an important and significant undertaking which is needed to complete the integration of EA processes into a final exposure matrix.

7. Management

Continued dialog and interaction among the Fudan and Western EA investigators and Consortium Committees has resulted in some streamlining of the EA committee process to improve organization and communications. The purpose of the EA Coordinating Committee (EAC) is to discuss progress and identify problems that have occurred during the past month and identify goals and approaches for the EA team (EAT) that will be followed for the next month. The EAC is under the direction of Professor Fu Hua and includes Tom Armstrong, Zhu Surong (IPHS) and Yimei Zhou (interpreter). The EAC reports directly to Dr. Irons.

The EAT, which is responsible for day-to-day EA operations, holds weekly staff meetings which are co-chaired by Ye Xibiao and Yimei Zhou. The purpose of these meetings is to manage EA operations, provide a list of weekly action items and to identify issues that need to be taken to the EAC. During the past 6 months, the team welcomed two new members who joined to fill in gaps left by a graduation and a pregnancy. Additional staffing efforts are underway to identify an experienced individual with both IH training and bilingual language skills.

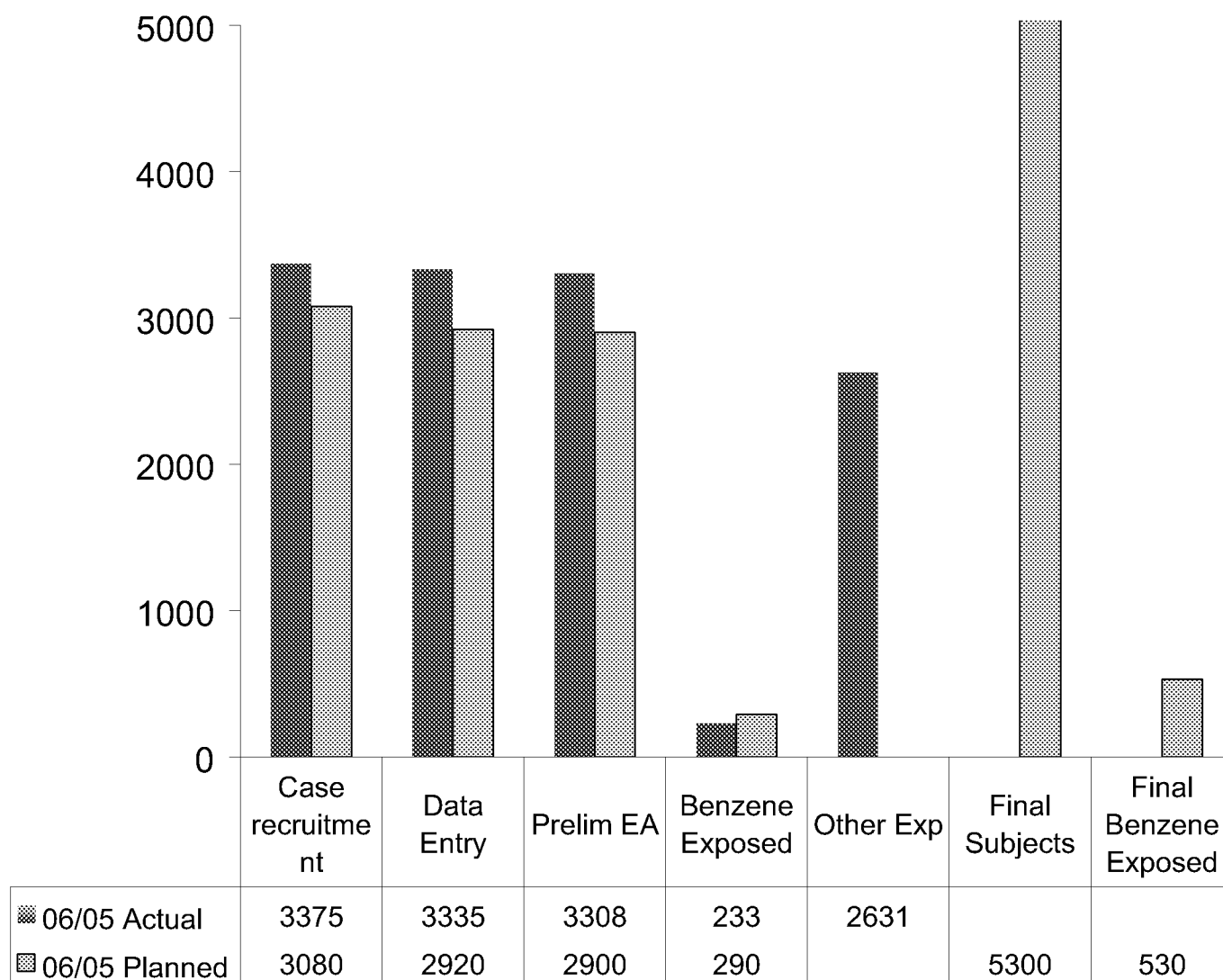
Figure 1. June 2005 CC/DP EA Status

Figure 2. CC/DP Exposure Assessment Process Overview

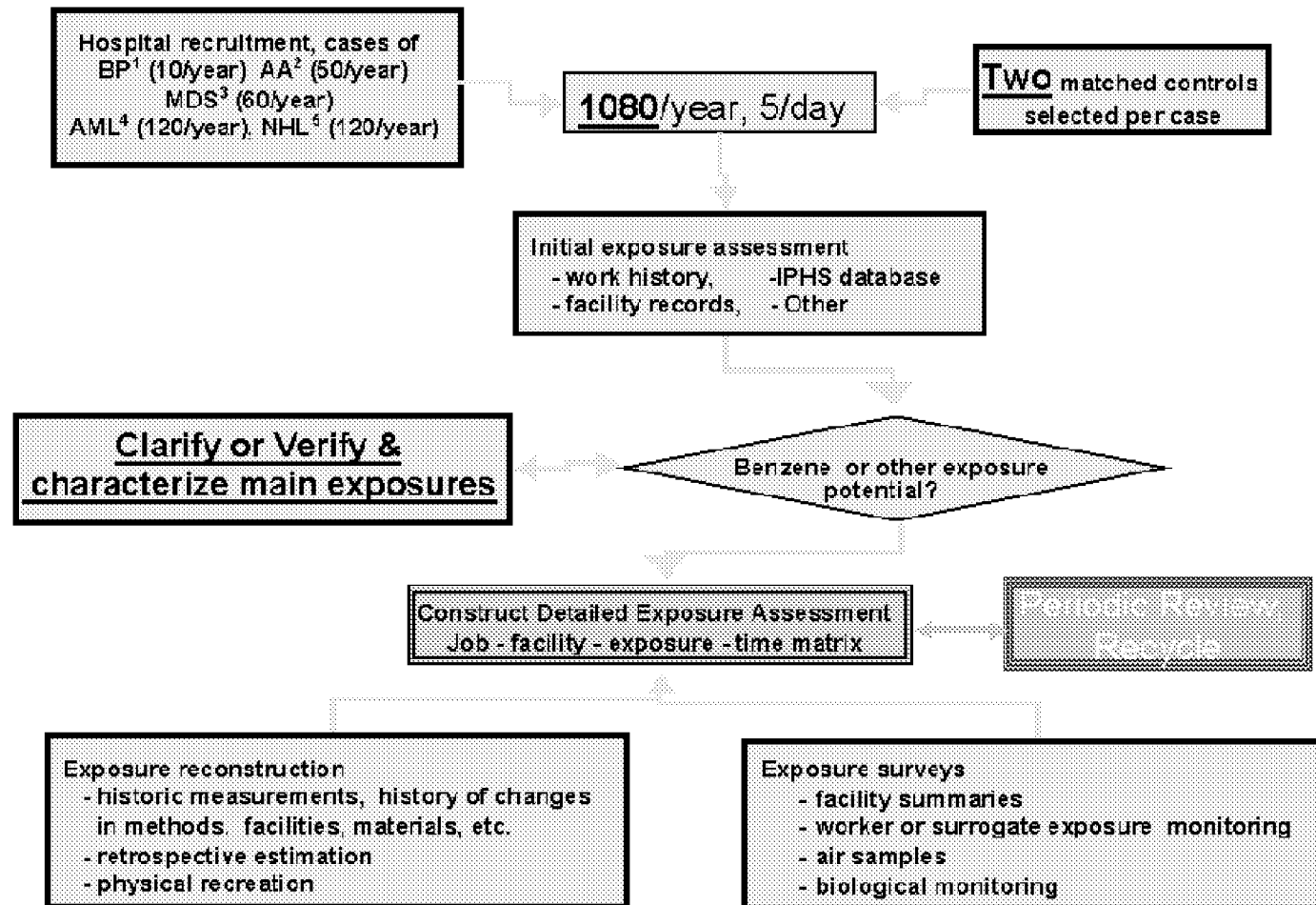


Figure 3. Case Control Studies Tiered EA Design:

Expectation of Fewer Subjects Completed at Higher Tiers

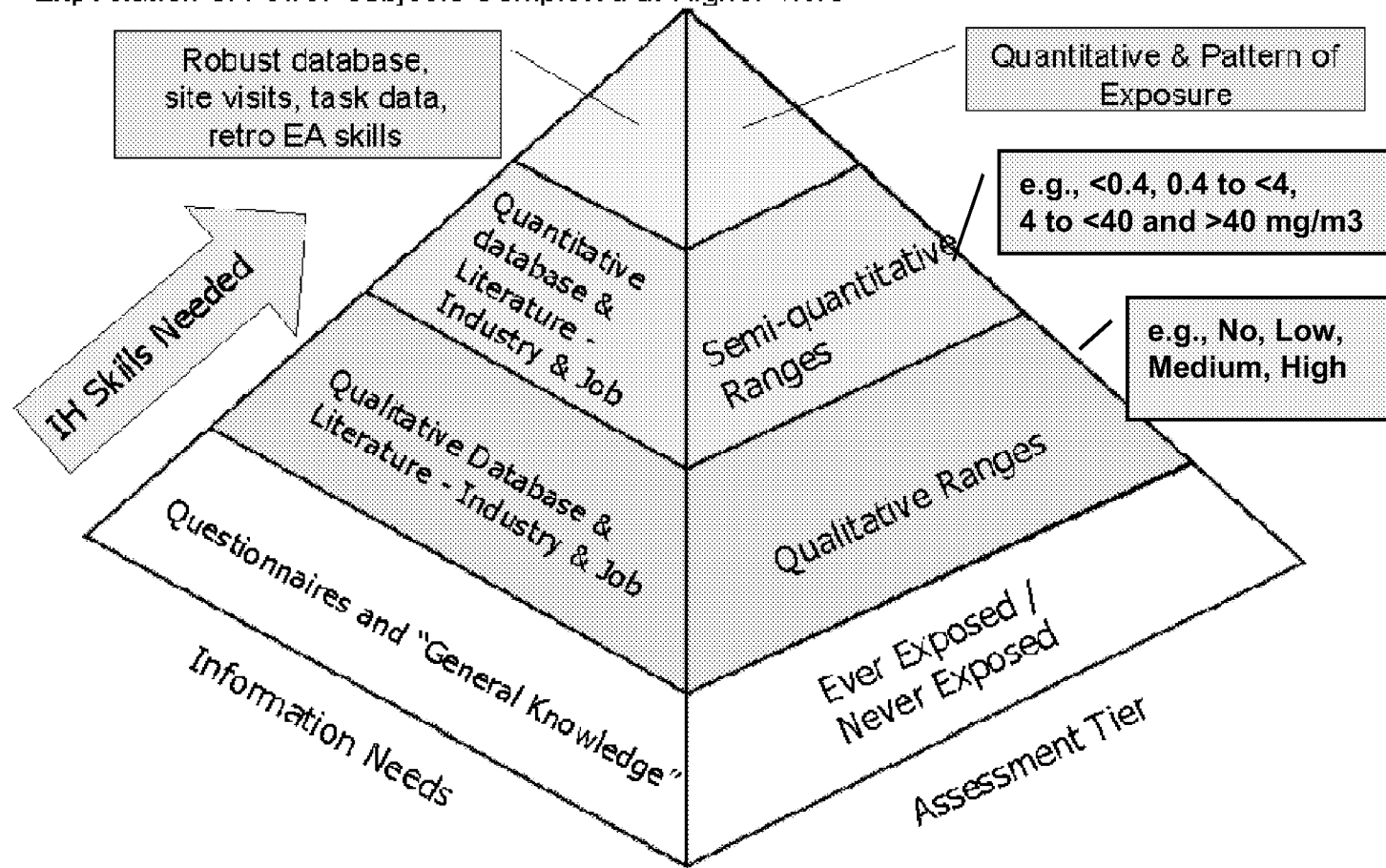
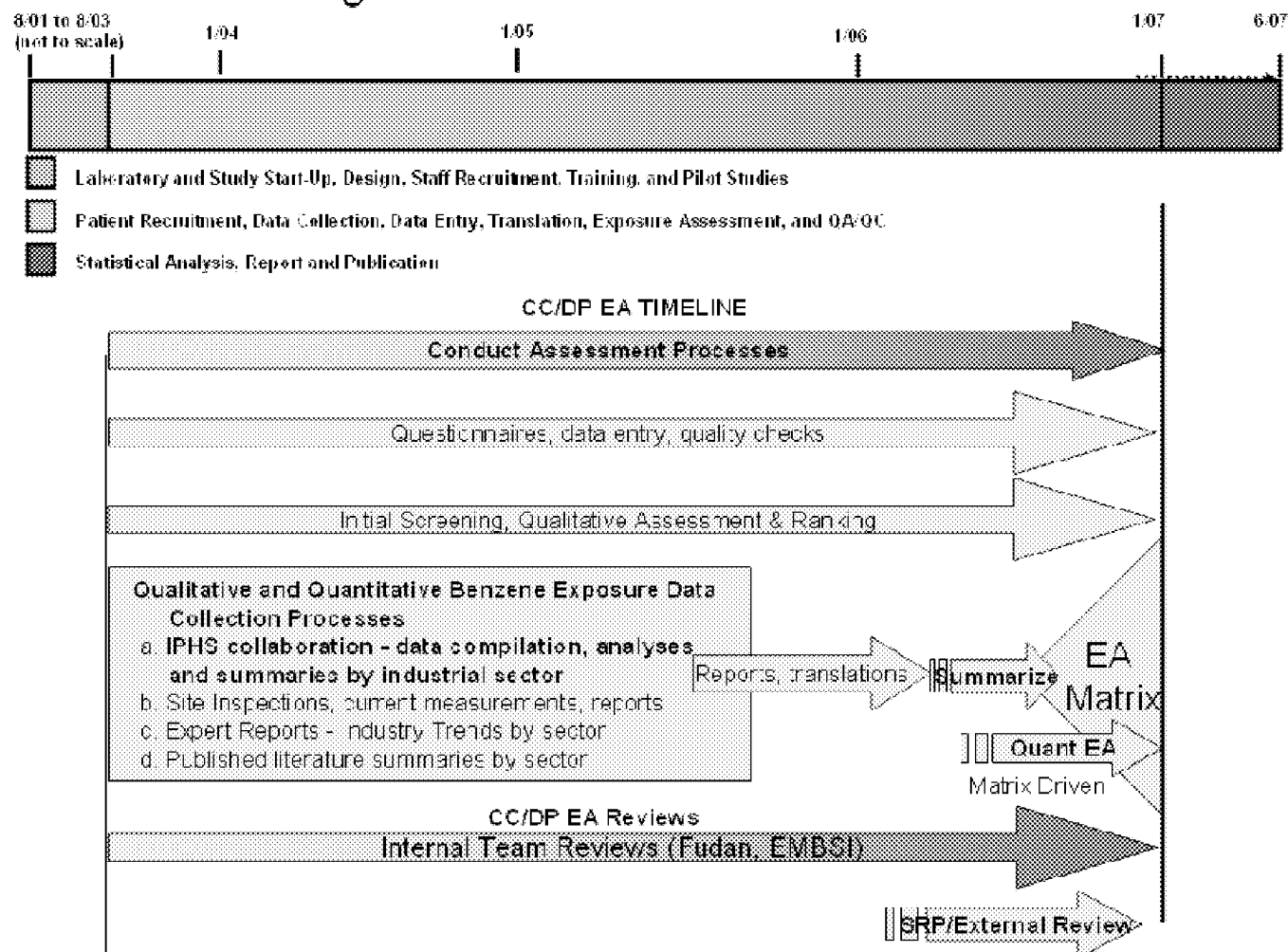


Figure 4. CC/DP EA Path Forward



**Figure 5. CC/DP Exposure Assessment
for PROBABLE “BENZENE” EXPOSED
Multiple Lines of Investigation and Information**

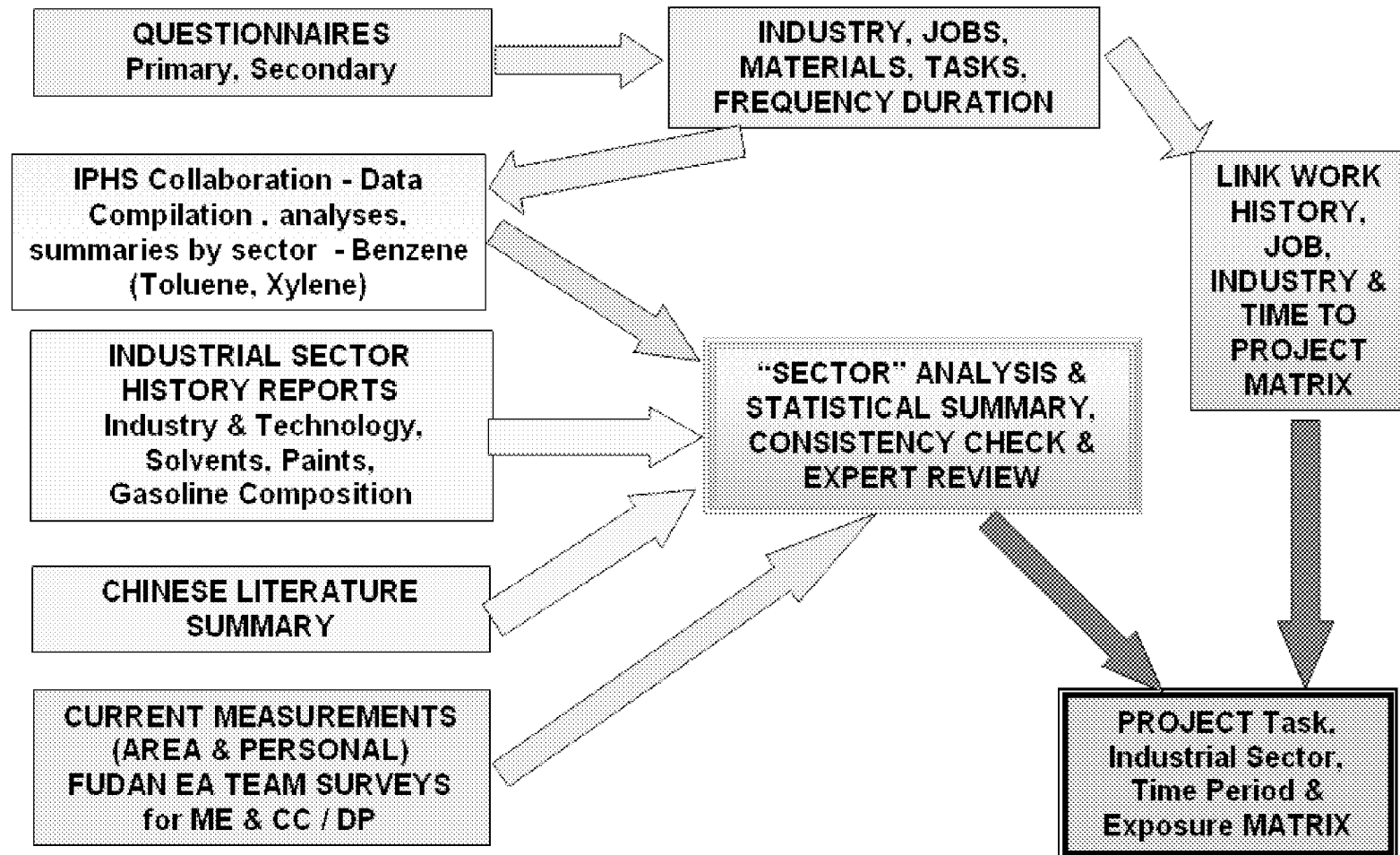


Table 4. Exposure Assessment Processes & Responsibilities for CC/DP Study

STEP	WHO	WHEN
Questionnaires – primary and secondary	Questionnaire Administration (QA)	On-going
Industry/job/materials/task/frequency/duration (key data for EA and follow-up planning)	QA/data entry/EAT	On-going
Industry codes assigned (to group work histories for consistency and follow-up planning)	EAT	On-going
Translations of key information to English	External resources	On-going
Task descriptions (essential to link to IPHS area descriptions)	EAC	On-going
Task coding (to group work histories for consistency and follow-up planning)	EAC	4Q 05'
Link work history/task/industry/time to reference data via EA matrix	EAC/EMBSI	06'
Access to IPHS data base	PIs	Continuing
Data extraction	IPHS/Fudan EAT	On-going
Industry coding (code system as for the work histories)	IPHS/Fudan EAT	Existing/verification
Key Tasks and time periods summaries	EAC	3Q 05'
Time/task coding	EAC	4Q 05'
Translation	External resources	4Q 05'
Statistical analysis of IPHS data	EMBSI	1Q 06'
Chinese literature searching/gathering (qualitative insights, quantitative information to supplement IPHS database)	Professor Liang Youxin	3Q 05'
Literature summary	Professor Liang Youxin	3Q 05'
Industry coding	Fudan EA	3Q 05'
Translation	External resources	3-4Q 05'
Exposure assessment by time/sampling objective	EAC/EMBSI	4Q 05'
Current site EA	IPHS/Fudan EA	On-going
Preliminary EA of CC/DP cases to plan follow-up actions and set investigation objectives, including site ea goals	EAC	On-going
Industry and task coding of the current data to facilitate its use including comparisons to IPHS data	EAC	4Q 05'

Translation	External resources	On-going
Expert reports – summary of industry, technology, time variations	EAC, <i>ad hoc</i> advisors (e.g, IPHS)	4Q 05'
Translation	External resources	4Q 05'
Consistency check	EMBSI	2Q 06'
Project time/industry/task exposure matrix	EMBSI/Fudan EA	3Q 06'
Final exposure assessment	EMBSI lead, Fudan support	2 – 4 Q 06'
External EA review	Fudan EA/EMBSI/External experts	4Q 06'
Final report	EMBSI/Fudan/IPHS	1Q 07'

EAT = Exposure Assessment Team. Responsible for initial screening and for field investigation work, including investigation of workplaces for current exposure sampling and historical information for the subject work history. The EAT is under the direction of the EAC.

EAC = Exposure Assessment Coordination Committee. Professor Fu Hua, Zhu Surong, Dr. Tom Armstrong, Yimei Zhou (interpreter).

From: Clegg, Patsy M SCC-CHSE-PC <paty.clegg@shell.com>
Sent: Sunday, July 24, 2005 7:29 PM (GMT)
To: Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Donald M. Burnett PhD (E-mail) <burnetdm@bp.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-CF-SS <sc724012@shell.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Michael Johnston (E-mail) <Mike.d.Johnston@ConocoPhillips.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>
Subject: BHRC committe Chairs Call - July 22, 2005 - Minutes
Attach: July 22 2005 Committe Chairs Conference Call - Draft Minutes.ZIP

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

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Business Success through HSSE Excellence

**Benzene Health Research Consortium – Committee Chairs Conference Call
Minutes – July 22, 2005**

Participants:

Committee Chairs

Patsy Clegg, Shell, Oversight Chair
Jennifer Galvin, ConocoPhillips, Technical Chair
Lynn Russo, ExxonMobil, Communications Chair
Stuart Cagen, Budget Chair

Additional Participants

Mark Fitzsimmons, Steptoe and Johnson
Brian Doll, Oversight Vice Chair

API Staff

Lorraine Twerdok

Antitrust: Lorraine Twerdok

Oversight Committee Update: Patsy Clegg

- Response to Mehlman letter sent

Budget Committee: Stuart Cagen

- 2Q05 Financial report will be ready for Aug 11 call/meeting

Communications Committee Update: Lynne Russo

- Annual meeting opening and closing remarks to be done in house
- Provided Jerry Rice a list of potential invitees to SHS Symposium on Nov 4, 2005

Technical Committee Update: Jennifer Galvin

- No update

API Update: Lorraine Twerdok

- All sponsors have signed contract amendment
- University of Colorado grant amendment will go out July 25, 2005
- Working on Fudan University and Applied Health Sciences contract amendments
- Possibility of financial audits of investigator organizations on agenda for August meeting
- List Serve change: change “Principal Investigators” to “Investigators”

AOB

- Aug 11 call: focus on financial report
- Aug 11, 17, or 18 meeting: ConocoPhillips in Bartlesville
 - Agenda to include:
 - Contracts
 - 2Q05 financial report
 - Annual meeting
 - Symposium
 - Potential audit of grantee/contractors
 - SRP/ERP Shanghai visit

Next Call:

- September 1, 9 AM EDT

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Monday, August 22, 2005 3:42 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>
Cc: Benzene consort comm (E-mail) <benzconsort-cc@listserve.api.org>; Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Subject: Minutes from BHRC OC Aug. 18 meeting
Attach: BHRC OVERSIGHT COMMITTEE MEETING MINUTES August 18, 2005.doc

To BHRC Committee Members -

Attached, courtesy of Russ White (thank you), please find the draft minutes from the BHRC meeting last week.

Please send any comments or corrections directly to Russ (russellwhite@chevrontexaco.com) by Tuesday, September 6, 2005.

Regards,
Lorraine

Lorraine E. Twerdok, Ph.D., DABT
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Regulatory Analysis and Scientific Affairs
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BHRC OVERSIGHT COMMITTEE MEETING DRAFT MINUTES
August 18, 2005

Attendees:

Patsy Clegg (Chair), Shell Chemical
Bruce Jarnot, API
Lynn Russo, ExxonMobil
Brian Doll, ExxonMobil
Mike Johnston, ConocoPhillips
Jennifer Galvin, ConocoPhillips
Russell White, Chevron
Lorraine Twerdok (by phone), API
Mark Fitzsimmons (by phone), Steptoe and Johnson

Action and Agreements:

- 1) The Oversight Committee approved the 2Q05 budget report with the following changes; (Lorraine to)
 - a. Delete word "slightly" and ""(APCO)" from Text Summary worksheet.
 - b. Add interest returned from UCHSC to Income worksheet.
 - c. Project future income from interest on Income worksheet but don't add interest income to any cost center.
 - d. Reconcile income on Invoice Detail worksheet with Executive Summary worksheet.
 - e. Revise income line on Executive Summary worksheet to reflect new invoice/payment schedule.
- 2) Patsy to add agenda item to future OC meeting to discuss when the BHRC will sunset.
- 3) Patsy to add agenda item to future OC meeting to discuss the BHRC position as to whether individual company requests for information from consortium counsel should be billed to the consortium.
- 4) The OC decided to initiate routine, "not for cause", financial audits of UCHSC and AHS by API for grant funds received for SHS. API will submit an audit plan including scope and timing to the OC in September. The audits must be done by year end 2005.
- 5) Jennifer and Bruce will contact Dr. Rice to discuss his recent invitation to visit Fudan University to discuss the laboratory. They will advise Dr. Rice to contact Dr. Irons to more fully understand purpose of visit and consider expanding purpose of visit to review other aspects of SHS. This may require the assistance of other SRP members.
- 6) The OC agreed to limit the mailing for the General Annual Meeting (GAM) to business logistics (agenda, directions, etc.). The information will be e-mailed to invited attendees and also paper mailed to Chinese investigators. This information will be added to the SHS website and a reminder sent to those people who have not already booked a room at the Ritz Carlton.
- 7) Jennifer and Patsy to develop agenda for Investigator/Sponsor meeting at the GAM.
- 8) Jennifer to "moderate" closing plenary session which should include fifteen minutes for Dr. Irons.
- 9) Lynn to make sure a room is available for Sponsor representatives from 11 to 3:30 at the GAM.

- 10) Jennifer and Bruce will clarify timing and structure of presentations with the speakers (30 minute talk, 15 minutes for discussion).
- 11) Lynn will check with the Ritz Carlton about having a reception there on Wednesday and moving dinner at the Peking Gourmet to Thursday.
- 12) The OC decided that no GAM summary was needed.
- 13) The OC decided to invite business sponsors to the SHS Benzene Symposium at Georgetown University.
- 14) Lynn will call ORC to seek a recommendation on which OHSA representatives should be invited to the Symposium in addition to any ORC members who would like to attend.
- 15) Lynn will draft a "1-pager" for the Symposium to help attendees understand why the SHS study was initiated and the overall structure of the study. Other handouts for the attendees should include a list of the investigators, their titles, and role in the SHS. Name tags should be provided to all attendees.
- 16) Bruce will contact Dr. Rice and recommend that the Symposium finish earlier to optimize participation. To help reduce the time, the session on the "Diagnostic Laboratory" could be a short part of Dr. Iron's other talk. The OC suggests that the Welcome session be 10 minutes for Dr. Rice and 20 minutes for Patsy to discuss the Sponsor's perspective.
- 17) The OC decided that no Symposium meeting summary was needed.
- 18) Jennifer will ask Mike Bird to contact Dr. Irons to; 1) determine his understanding of the distribution of the semi-annual reports and ask him to directly copy other PIs in the future, 2) remind him that publication submissions should go to the SRP and Sponsors per the protocols for Sponsor informational purposes, 3) please add a section to his semi-annual reports to include "papers in progress" (in-progress, submitted, accepted, published), 4) to please call Otto Wong to discuss recent progress made on the EA part of the SHS.
- 19) API to set up OC conference calls in mid-September and mid-October.

Draft Agenda

BHRC Joint Committee Meeting August 18, 2005

Terrace Room Private*
Frank Phillips Tower
ConocoPhillips
Bartlesville, OK

Conference call link:
Dial: 1-770-765-9147
Pin: 2026828319#

TIME**	ITEM	LEAD
7:30 A	Continental Breakfast	
8:00 A	Welcome Assignment of note taker Antitrust & establish OC quorum	Patsy Clegg Bruce Jarnot
8:05 A	2Q05 Financial report – OC review/approval Contract/grant update	Lorraine Twerdok
9:00 A	Contract/grant audits	Brian Doll
9:15 A	SRP/ERP study site visits	Jennifer Galvin
9:30 A	Annual meeting planning Logistics Update Agenda	Lynn Russo Jennifer Galvin

10:15 A	BREAK	
10:30 A	Continue annual meeting planning	
11:00 A	Symposium planning update Logistics Agenda	Bruce Jarnot Jennifer Galvin
11:45 A	Annual meeting/Symposium summaries	Patsy Clegg
12:15 P	LUNCH	
1:15 P	Communications Committee Update	Lynn Russo
1:30 P	Technical Update Exposure assessment Case Control study DP & ME	Jennifer Galvin
2:30 P	Review decisions/action items AOB Schedule next call/meeting	Note taker All Patsy Clegg
2:45 P	Adjourn	

* See building #3 on Bartlesville City Map; meeting room subject to change (may move to smaller room)

** Central time; all times approximate

Attendee's names and affiliations have been forwarded to COP; the building guard will have this list to permit access

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, July 28, 2005 5:13 PM (GMT)
To: Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Cc: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>
Subject: BHRC-TC... Conf Call *tomorrow* Fri 29 Jul, 2:00pm EDT
Attach: CC Progress report 07-26-2005.pdf

BHRC Technical Committee (TC) -

On short notice, we have scheduled a TC Conf Call on Friday (tomorrow), July 29th at 11:00am Eastern time...

AGENDA

- Develop process for engaging Principal Investigators (PIs) & other SHS investigators
- Review of CC Progress Report from Dr. Otto Wong (attached pdf)
- Possible SRP review of SHS protocols versus progress to date ?
- Possible SRP review of SHS EA protocol versus current EA plan ?
- Schedule TC Budget Subcommittee call to review 2Q 2005 Financial Report
- Other items?

CONFERENCE CALL

Date: Fri, 29 July
Time: 2:00pm Eastern (1:00pm Central, 11:00am Pacific)
Dial in: 1-770-765-9147
PIN: 2026828319#

Thank you! Bruce.

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, July 6, 2005 5:51 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@listserve.api.org>; Benzene consort tech (E-mail) <benzconsort-tc@listserve.api.org>
Subject: BHRC-OC/-TC... Pls review by 7/08 - minutes from recent conference calls
Attach: June 27-9 meeting minutes.doc

BHRC Oversight (OC) and Technical (TC) Committee Members -

Lynn Russo kindly provided draft summary minutes (attached) from the most recent series of OC/TC conference calls. Please review content and participant lists for accuracy, and reply to me with any changes or comments by close-of-business Friday, July 8th...

Thank you - Bruce.

<<June 27-9 meeting minutes.doc>>

-----Original Message-----

From: lynn.b.russo@exxonmobil.com [mailto:lynn.b.russo@exxonmobil.com]

Sent: Wednesday, July 06, 2005 10:15 AM

To: Lorraine Twerdok; Bruce Jarnot

Cc: mfitzsim@steptoe.com

Subject: meeting minutes

The Oversight and Technical Committees meeting minutes from our series of short phone calls are attached below. Mark F. has reviewed them so they are ready to go to the committees for review. Please ask that folks check the participant lists; I'm not sure I got all that right.

(See attached file: June 27-9 meeting minutes.doc)

Lynn

Lynn B. Russo

ExxonMobil

Downstream Public Affairs

Phone: 703-846-2500

Fax: 703-846-4169

Email: lynn.b.russo@exxonmobil.com << File: June 27-9 meeting minutes.doc >>

Oversight and Technical Committees
Meeting minutes
Joint conference calls June 27, 29 and 30, 2005

Participants

June 27

Don Burnett (BP)
Stuart Cagan (Shell Chemical)
Patsy Clegg (Shell Chemical)
Brian Doll (ExxonMobil)
Jennifer Galvin (ConocoPhillips)
Bruce Jarnot (API)
Mike Johnston (ConocoPhillips)
Lynn Russo (ExxonMobil)
Jim Tilson (ConocoPhillips)
Matt Todd (API)
Lorraine Twerdok (API)
John Wagner (API)
Russ White (Chevron)

June 29

Anita Balaraman (Chevron)
Steve Bowes (ExxonMobil)
Michael Bird (ExxonMobil)
Bryant Bremer (ExxonMobil)
Don Burnett (BP)
Stuart Cagan (Shell Chemical)
Patsy Clegg (Shell Chemical)
Brian Doll (ExxonMobil)
Jennifer Galvin (ConocoPhillips)
Bruce Jarnot (API)
Mike Johnston (ConocoPhillips)
Lynn Russo (ExxonMobil)
Shan Tsai (Shell Oil)
Lorraine Twerdok (API)
John Wagner (API)

June 30

Anita Balaraman (Chevron)
Steve Bowes (ExxonMobil)
Michael Bird (ExxonMobil)
Stuart Cagan (Shell Chemical)
Patsy Clegg (Shell Chemical)
Brian Doll (ExxonMobil)
Jennifer Galvin (ConocoPhillips)
Bruce Jarnot (API)
Lynn Russo (ExxonMobil)
Zachary Wong (Chevron)

Note: A joint Oversight and Technical Committee meeting was scheduled for June 27; because of the time restrictions of many participants, the meeting agenda was not completed in the allotted hour. The committees reconvened on June 29 for an hour and on June 30 as well.

- Before all calls, Patsy Clegg called the meeting to order, did a roll call of participants, and determined there was a quorum. She noted on the June 30 call there was not a quorum for financial actions.
- Before all calls, API's antitrust guidelines were reviewed (by John Wagner on June 27 and 29 and by Bruce Jarnot on June 30).

- Lorraine Twerdok summarized the status of company signatures on the consortium agreement amendment (to reflect budget revisions) and reviewed the status of invoicing and payments.
- Lorraine Twerdok reported revised agreements for the Principal Investigators reflecting the new budget totals would be issued as soon as all amendments had been received at API.
- Jennifer Galvin and Bruce Jarnot reported on the SRP/ERP discussion of possible visits to Shanghai. With the annual meeting having been moved to Virginia from Shanghai, they have written the Oversight Committee about visiting Shanghai at another time.
- Jennifer Galvin, assisted by other Technical Committee members, reported on the conference call they had on Friday June 24 with some of the Investigators (Otto Wong and Tom Armstrong).
- The group discussed logistics (location, timing) of the symposium Jerry Rice is putting together to brief interested parties in the Washington area on the study. The event will be held when the investigators are in the Washington area for the annual meeting. The Technical Committee will confirm the investigators' availability and provide suggestions on attendees. At Jerry Rice's request, the Technical Committee scheduled a conference call to talk with him about the symposium.
- Patsy and Jennifer reported on discussions they had with Richard Irons on several subjects. They concluded that some investigators, particularly those at Fudan who are less familiar with industry-sponsored science, were uncertain about the companies' role. As a result, they sent a note clarifying that the SHS is an independent study under the direction of the Principal Investigators.
- The Technical Committee agreed to evaluate their procedures for communications with investigators, clarify them where appropriate, and discuss them with the investigators.

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, June 16, 2005 9:01 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Jmricewas@aol.com
Subject: BHRC-TC... RE: Georgetown Symposium / Invitation questions
Attach: BZattendees8.3.04.xls

-----Original Message-----

From: Jmricewas@aol.com [mailto:Jmricewas@aol.com]
Sent: Thursday, June 16, 2005 4:49 PM
To: Bruce Jarnot
Subject: Re: FYI, re: BHRC... Georgetown Symposium / Invitation questions

Dear Bruce,

As first steps towards identifying individuals in the DC area who might usefully be invited to the Nov 4, 2005, meeting at Georgetown:

- (1) I attach an Excel file listing 40-plus attendees at the Munich Benzene Symposium in October 2004, with their e-mail addresses and affiliations, including several epidemiologists from the NCI with an active research interest in benzene;
- (2) Two organizations in the Washington area, other than government, where there is likely to be interest are the Society of Toxicology (www.toxicology.org) and the Risk Science Institute of ILSI. Specifically, I would propose Dr Steve Olin of ILSI (solin@ilsi.org) as a potential attendee.

As more potential attendees come to mind I will add them to the list for consideration.

Jerry

	A	B	C	D	E	F	G	H	I	J
1	Chair	Speaker	Last Name	First Name	Response	Email	Talk	Organization	Continent	Travel V1
2	II	n/a	Beatty	Patrick	Yes	patrickbeatty@chevrontexaco.com	N/A	ChevronTexaco	N. America	\$1,000
3	III Pt 3	n/a	Bird	Michael	Yes	michael.g.bird@exxonmobil.com	N/A	ExxonMobil	N. America	\$1,000
4	n/a	n/a	Bond	James	Yes	toxcon@earthlink.net	N/A	Chemico-Biological Interactions	N. America	\$1,000
5	n/a	VI Pt 3	Eastmond	David	Yes	david.eastmond@ucr.edu	Mechanistic Studies on the Inhibition of Topoisomerase II by Bioactivated Hydroquinone	UC Riverside	N. America	\$1,000
6	n/a	III Pt 1	Farmer	Peter B.	Yes	pbf1@le.ac.uk	The Use of Urinary S-phenylmercaptopuric Acid as a Biomarker in Molecular Epidemiology Studies of Benzene	University of Leicester	Europe	\$500
7	n/a	VI Pt 3	Felix	Carolyn	?	felix@email.chop.edu		University of Pennsylvania	N. America	\$1,000
8	n/a	VI Pt 1	French	Jef	Yes	french@niehs.nih.gov		NIEHS	Fed	\$0
9	n/a	I	Glass	Deborah C.	Yes	deborah.glass@med.monash.edu.au	The Health Watch Case Control Study: Exposure and Risk	Monash University, Australia	Australia	\$1,500
10	III Pt 1&2	n/a	Goldstein	Bernard	Yes	bdgold@pitt.edu	N/A	University of Pittsburgh	N. America	\$1,000
11	Panel	n/a	Greim	Helmut	Yes	helmut.greim@lrz.tu-muenchen.de	N/A	Technical University of Munich	Europe	\$500
12	n/a	Panel	Gundert-Remy	Ursula	Yes	u.gundert-remy@bfr.bund.de	N/A	Federal Institute of Risk Assessment, Berlin	Europe	\$500
13	n/a	I	Hayes	Richard B.	Yes	hayesr@mail.nih.gov	Benzene and Cancer in China	National Cancer Institute	Fed	\$0
14	VI Pt 3	n/a	Henderson	Rogene	Yes	rhenders@lrri.org	N/A	Lovelace Institute	N. America	\$0
15	n/a	VI Pt 2	Hirabayashi	Yoko	Yes	yokohira@nihs.go.jp	p53 Dependent Gene Profiling for Reactive Oxygen Species After Benzene Exposure	National Institute of Health Sciences, Tokyo, Japan	Asia	\$1,500
16	n/a	III Pt 3	Irons	Richard D.	Yes	richard.iron@uchsc.edu	The Shanghai Health Study: Preliminary findings on Benzene Poisoning in Shanghai, China Quinone Oxidoreductases in Protection Against Myelogenous Hyperplasia and Benzene Toxicity	University of Colorado	N. America	\$1,000
17	n/a	VI Pt 1	Jaiswal	Anil	Yes	ajaiswal@bcm.tmc.edu		Baylor College of Medicine	N. America	\$1,000
18	n/a	II	Kang	Seong-Kyu	Yes	skk@kosha.net	Occupational Exposure to Benzene in South Korea	Korean OSHA	Asia	\$1,500
19	VIII	n/a	Kipen	Howard	Yes	kipen@eohsi.rutgers.edu	N/A	University of Medicine and Dentistry of New Jersey	N. America	\$1,000
20	n/a	V	Kuang	Shouren	Yes	kuang_sr@21cn.com	Diagnosis and Treatment of Chronic Benzene Poisoning	Guangdong Occupational Disease Prevention Center	Asia	\$1,500
21	n/a	III Pt 2	Lan	Qing	Yes	qingl@mail.nih.gov	Benzene Exposure and Hematotoxicity	NCI	Fed	\$1,000
22	V	Panel	Larson	Richard	Yes	rlarson@medicine.bsd.uchicago.edu	N/A	Section of Hematology/Oncology, University of Chicago	N. America	\$1,000
23	n/a	II	Levy	Leonard	Yes	lsl1@le.ac.uk	Overview of Benzene Exposures and Regulatory Levels in Western Countries	University of Leicester	Europe	\$500
24	n/a	n/a	Li	Guilan	Yes	guilanli@263.net.cn	N/A	China CDC	Asia	\$1,500
25	n/a	II	Liang	Youxin	Yes	yxliang@shmu.edu.cn	An Overview of Benzene Exposure by Industry and its Historical Trends of Exposure Levels in China	China CDC	Asia	\$1,500
26	n/a	VIII	Morgan	Gareth	Yes	Gareth.Morgan@rmh.nthames.nhs.uk	The Impact of Xenobiotic Exposure on the Haemopoietic Stem Cell	Institute of Cancer Research, Sutton, UK	Europe	\$500
27	VI Pt 1,2	n/a	Oesch	Franz	Yes	oesch@mail.uni-mainz.de	N/A	University of Mainz	Europe	\$500
28	n/a	III Pt 1	Qu	Qingshan	Yes	qingshan@env.med.nyu.edu	Biomarkers of Benzene: Urinary Metabolites in Relation to Individual Genotype and Personal Exposure	New York University	N. America	\$1,000
29	n/a	III Pt 1	Rappaport	Stephen	Yes	smr@unc.edu	Protein Adducts as Biomarkers of Human Benzene Metabolism	University of North Carolina	N. America	\$1,000
30	IV	n/a	Rice	Jerry	Yes	jmricewas@aol.com	N/A	Georgetown University	N. America	\$1,000
31	n/a	VI Pt 1	Ross	David	Yes	david.ross@uchsc.edu	NQO1: Metabolic Multitasking and Clues to Benzene Toxicity	University of Colorado	N. America	\$1,000
32	n/a	III Pt 1	Rothman	Nathaniel	Yes	rothmann@epndce.nci.nih.gov		National Cancer Institute	Fed	\$1,000
33	n/a	II	Ruchirawat	Mathuros	Yes	mathuros@tubtim.cri.or.th	Environmental and Occupational Exposure to Benzene in Thailand	Mahidol University	Asia	\$1,500
34	n/a	I	Schnatter	Robert A.	Yes	a.r.schnatter@exxonmobil.com	Overview of Epidemiologic Studies on Benzene and Leukemia	ExxonMobil Biomedical Sciences, Inc.	N. America	\$1,000
35	n/a	III Pt 3	Smith	Martyn	Yes	martynts@berkeley.edu	Use of 'Omics' Technologies to Study Humans Exposed to Benzene	UC Berkeley	N. America	\$1,000
36	VII	n/a	Snyder	Robert	Yes	rsnyder@eohsi.rutgers.edu	N/A	Rutgers, The State University of New Jersey	N. America	\$1,000
37	n/a	Panel	Sonawane	Robert	Yes	sonawane.bob@epamail.epa.gov	N/A	Environmental Protection Agency	Fed	\$0
38	n/a	Panel	Trush	Michael	Yes	mtrush@jhsp.edu	N/A	Johns Hopkins University	N. America	\$1,000
39	n/a	VI Pt 2	Vaughan	Andrew	Yes	avaugha@lumc.edu	Apoptotic Effectors and Genomic Instability	UC Davis	N. America	\$1,000
40	n/a	VI Pt 2	Winn	Louise	Yes	winnl@biology.queensu.ca	The Role of c-Myb in Benzene-Initiated Toxicity	Queens University	N. America	\$1,000
41	n/a	I	Wong	Otto	Yes	ottowong@aol.com	Benzene Exposure and non-Hodgkin's Lymphoma	Applied Health Sciences	N. America	\$1,000
42	n/a	III Pt 3	Yin	Songnian	Yes	guilanli@263.net.cn	Advances in Cohort Study on Benzene and Leukemia in China	Chinese Academy of Preventive Medicine	Asia	\$1,500
43	IV	III Pt 2	Zhang	Luoping	Yes	luoping@berkeley.edu	Molecular Cytogenetics of Benzene-Exposed Workers	UC Berkeley	N. America	\$1,000
44										
45										\$39,000

&[DATE]

	K	L	M	N	O
1	Address Line 1	Address Line 2	Address Line 3	Address Line 4	Address Line 5
2	ChevronTexaco Energy Technology Company, P. O. Box 1627, 100 Chevron Way, Richmond, CA 94802	P. O. Box 1627	100 Chevron Way	Richmond, CA 94802	
3	ExxonMobil Biomedical Sciences	1545 Route 22 East	PO Box 971	Annandale, NJ 08801-0971	
4	ToxCon	5505 Frenchmans Creek	Durham, NC 27713		
5	Environmental Toxicology Graduate Program	5429 Boyce Hall	Riverside, CA 92521		
6	Cancer Biomarkers and Prevention Group, Biocentre	University of Leicester	University Road	Leicester LE1 7RH, United Kingdom	
7	Abramson Research Center, Room 902B	3615 Civic Center Blvd	Philadelphia, PA 19104-4318		
8	Laboratory of Molecular Toxicology	NIEHS, NIH	111 T.W. Alexander Drive	Rall Building, Rm F167	Research Triangle Park, NC 27709-2233
9	Department of Epidemiology and Preventive Medicine, Centre	Central and Eastern Clinical School	The Alfred Hospital	Commercial Road	Melbourne, Vic 3004, Australia
10	University of Pittsburgh	Graduate School of Public Health	A624 Crabtree Hall	130 DeSoto Street	Pittsburgh, Pennsylvania 15261
11	Technical University of Munich	Hohenbachernstrasse 15-17	D-85354 Freising	Weißenstephan	Germany
12	Federal Institute for Risk Assessment	Press and Public Relations Office	Thielallee 88-92	14195 Berlin GERMANY	
13	EPS 8114	National Cancer Institute	Bethesda MD 20892		
14	Lovelace Respiratory Research Institute	2425 Ridgecrest Dr SE	Albuquerque, NM 87108		
15	Cellular and Molecular Toxicology Division, Biolo	Biological Safety Research Center	National Institute of Health Sciences	1-18-1, Kamiyoga	Setagayaku, Tokyo-158-8501, Japan
16	University of Colorado	Health Science Center	Denver, CO 80262		
17	Department of Pharmacology	Baylor College of Medicine	One Baylor Plaza	Houston, TX 77030	
18	Korea Occupational Safety and Health Agency	34-6 Gusan-dong - Incheon 403-711	REP. OF KOREA		
19	Environmental & Occupational Health Sciences Institute	UMDNJ-Robert Wood Johnson Medical School	170 Frelinghuysen Rd.	Piscataway, NJ , 08854	
20	Guangdong Poison Control Center	165# Xin-gang Road	Haizhu District, Guangzhou 510300, P. R. CHINA		
21	Occupational Environmental Epidemiology Branch	Division of Cancer Epidemiology & Genetics	National Cancer Institute	6120 Executive Blvd., EPS Room 8109	Bethesda, Maryland 20892-7238
22	5841 South Maryland Ave.ve	MC 6092	AMB W604	Chicago, IL 60637	
23	MRC Institute for Environment & Health	University of Leicester	94 Regent Road	Leicester LE1 7DD United Kingdom	
24	National Occupational Health and Poison Control	China CDC	29 Nan Wei Rd	100050, Beijing, PR China	
25	School of Public Health	Fudan University	138 Yi Xue Yuan Rd	200032 Shanghai, P.R. China	
26	Department of Haemato-Oncology	Royal Marsden Hospital	Downs Road, Sutton	Surrey SM2 5PT, United Kingdom	
27	Institute of Toxicology	University of Mainz	Obere Zahlbacher Str. 67	D-55131, Mainz, Germany	
28	Nelson Institute of Environmental Medicine	New York University School of Medicine	57 Old Forge Road	Tuxedo, NY10987	
29	School of Public Health	CB#7431	University of North Carolina	Chapel Hill, NC 27599-7431	
30	Georgetown University	Lombardi Cancer Center	3213 Coquelin Terrace	Chevy Chase, MD 20815	
31	Department of Pharmaceutical Sciences	School of Pharmacy, C238	University of Colorado Health Sciences Center	Denver, CO 80262, USA.	
32	Occupational Studies Section	National Cancer Institute	6130 Executive Blvd	Executive Plaza North, Room 418	Rockville, MD 20892
33	Chulabhorn Research Institute	c/o Faculty of Science	Mahidol University	Rama 6 Road	Bangkok 10400, Thailand
34	Room LF-246,	ExxonMobil Biomedical Sciences, Inc.	PO Box 0971	1545 Route 22 East Annandale	NJ 08801-0971
35	School of Public Health	UC Berkeley	140 Warren Hall #7360	Berkeley, CA 94720	
36	Rutgers, The State University of New Jersey	160 Frelinghuysen Rd	Piscataway, NJ 08854-8020		
37	8623D, USEPA Headquarters	Ariel Rios Building	1200 Pennsylvania Avenue, N. W	Washington, DC 20460	
38	Johns Hopkins Bloomberg School of Public Health	615 North Wolfe St., Rm 7033	Baltimore, MD 21205		
39	12280 SW Duchilly Ct.	Tigard, OR 97224			
40	Department of Pharmacology and Toxicology	Queen's University	Kingston, Ontario, K7L 3N6, Canada		
41	Applied Health Sciences, Inc.	181 Second Avenue, Suite 628	PO Box 2078	San Mateo, CA 94401	
42	National Occupational Health and Poison Control	China CDC	29 Nan Wei Rd	100050, Beijing, PR China	
43	School of Public Health	UC Berkeley	140 Warren Hall #7360	Berkeley, CA 94720	
44					
45					

	A	B	C	D	E	F	G	H
1	Yin	Songnian		yinsn@public3.bta.net.cn	Chinese Academy of Preventive Medicine, Beijing, China	speaker		
2				guilanli@263.net.cn				

	I
1	
2	

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, November 18, 2004 9:01 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Howard Feldman <Feldman@api.org>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>
Subject: BHRC-TC... Draft Conf Call Minutes
Attach: Draft Minutes BHRC-TC Conf Call 11 18 2004.doc

BHRC Technical Committee & colleagues -

Attached are draft minutes for your review and feedback; due to the quick response needed for open action items, this DRAFT file is being circulated for parallel reviews vs. serial Legal and Chair preview...

Thanks in advance! Bruce.

Benzene Health Research Consortium Technical Committee

Draft Minutes

Conference Call – 18 Nov 2004

Participants

Patrick Beatty (ChevronTexaco)

Jennifer Galvin (ConocoPhillips)

Steve Bose (ExxonMobil)

Howard Feldman (API; part-time)

Don Burnett (BP)

Bruce Jarnot (API)

Stuart Cagen (Shell)

Administrative Items

- Call was conducted in accordance with API antitrust guidelines
- Agenda: discuss / review “action items” generated at early-November OC meeting in Houston
 - Expectation to provide update(s) by 10 December 2004

Background

- Most Action Items can likely be met by PI discussion(s)
- \$3.3MM gap identified by PIs has led to sense of urgency
 - OC deferred most action items to the TC
 - Funding required to carry the studies to completion
 - Approx 2x of Rich Irons Oct 2004 estimate
 - Possible BP \$1.7MM added contribution?
 - May not include Richard’s T&E increase, post-2007

General Discussion Items

- Action – Prioritization under current funding? (Alternate approach, still pending...)
 - Prioritization by SRP/ERP
 - Prioritization by PIs?
 - Consequences & implications noted if studies re-scoped by prioritization

Benzene Health Research Consortium

Technical Committee Meeting Notes

- OC has ID'ed ~\$600K possible cost savings ("sweat equity" approach)
- Added cost of exposure assessment
 - How much of Yimei's costs embedded in Richard's re-analysis?
- 2-month (longer?) replacement for Patrick not ID'ed (ChevronTexaco)
 - Patrick will be on short term disability starting end-of-December
- Proposal: Discuss "Action Items" in-person with Richard
 - Benefit seen of having Denver meeting with Richard & -TC
 - Invite Otto to attend/participate?
 - Action: Patrick/Stuart to call or email regarding possible meeting

Long-standing Action Items

- Action: Review Munich attendee list for possible scientific involvement follow-up
 - Defer to 2005, pending resolution of scope scale-back & budget reanalysis
 - Might this miss a window of opportunity (risk of becoming a "stale issue"?)
- Action: Do we need a formal QA/QC audit of Shanghai?
 - Proposal: affirm recommendation that this ~\$100K line-item be dropped
 - QA/QC will be internally covered by JCML lab accreditation
 - Co-proposal: TC delegation to visit & "spot check" lab operations
 - Goes toward demonstrating sponsor due diligence

New Action Items

- Nat Rothman (NCI Investigator) proposed NCI/Consortium collaboration
 - NCI China CC Study proposed, beginning 2007
 - Action: TC to discuss NCI's offer with PI's
 - Proposal: include in PI discussions
- Action: options for JCML continuation, via outside funding?
 - Contingent upon Fudan plans...

Benzene Health Research Consortium

Technical Committee Meeting Notes

- Continue within School of Public Health (i.e., likely to be shut down)
- Or establish JCML as separate, free-standing department
- Fudan decision possible by end-of-year
- **Proposal**: Ask Richard if he sees value in having Company rep's meeting with Fudan (risk of sponsors "taking sides" with internal Fudan politics?)
- **Proposal**: include in PI discussions
- **Action**: confirm Budget Re-analyses as being complete & comprehensive
 - Anything overlooked (e.g., Richard T&E cost increase)
 - Any "cost overlap" (e.g., Yimei's time-in-field in Richard's re-analysis vs. EMBSI funding her effort)
 - **Proposal**: include in PI discussions
- **Action**: reality check of exposure assessment
 - Do we need more than a yes/no for CC exposures?
 - Is there an association between Bz and NHL? AML?
 - CC dose-response may be "nice to have", but not critical to study
 - **Proposal**: check w/ SRP & PIs... can we cut back on level of assessment?
 - *don't need to hit a home run each time to win the game*
 - **Proposal**: include in PI discussion
 1. PIs to reconsider "what can really be done" in exposure assessment?"
 2. Will this provide some of the answers (may be an ethics consideration)

From: Matt Todd <ToddM@api.org>
Sent: Friday, October 29, 2004 2:36 PM (GMT)
To: BHRC Oversight Committee (E-mail) <benzconsort-oc@listserve.api.org>; BHRC Technical Committee (E-mail) <benzconsort-tc@listserve.api.org>; BHRC Communications Committee (E-mail) <benzconsort-cc@listserve.api.org>
Subject: FW: Economist article on China's health care system
Attach: China's Healthcare - Where are the Patients.doc

BHRC Committee Members:

The attached document is an article about the Chinese healthcare system that Lynn Russo has requested I forward on to you. Her note is below.

Best regards,

Matt

Matt, this article may be of interest the rest of the consortium. It appeared in the Economist in late August (this magazine circulates here in the office and I'm at the end of the chain of folks who read it). It's a special report on China's healthcare and is very interesting. There is a lot about the very poor health care situation in the countryside, which doesn't apply to Shanghai. (In fact, they say health indicators around Shanghai are as good as in many western countries.) But they explain the government as a big incentive for reforming the system--apparently concerns about health care costs are leading to lower personal savings, meaning less investment/growth. And they mention some of the options that could be considered, indicating it's all up in the air today.

The article describes the very difficult situation the PI's are working in and suggests some of the reasons decisions on the lab have been slow. (See attached file: China's Healthcare - Where are the Patients.doc)

Lynn

From: Lorraine Twerdok <Twerdokl@api.org>
Sent: Monday, August 26, 2002 3:27 PM (GMT)
To: Benzene OC listserve (E-mail) <BenzConsort-OC@api.org>
Cc: Benzene consort comm (E-mail) <benzconsort-cc@api.org>; Benzene consort tech (E-mail) <benzconsort-tc@api.org>; 'myron. c. harrison@exxonmobil. com' (E-mail) <myron.c.harrison@exxonmobil.com>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>
Subject: BHRC - Oversight Committee Call Summary 8/23/02
Attach: 08-23-2002 OC minutes.doc

<<08-23-2002 OC minutes.doc>>

To BHRC Oversight and Recruitment Committees:

Please find attached, for your review and comment draft minutes from the 8/23/02 conference call. As you recall, we scheduled a meeting to address recruitment issues for:

Date: Friday, September 13

Time: 8:30 AM - 3:30 PM

Location: Houston (location/hotel details to follow)

All members of all committees are invited to attend this meeting to develop consortium recruitment procedures for funding, regulatory and NGO participation.

Paula Podhasky will be handling the meeting logistics.

Thanks,
Lorraine

**BHRC Joint Oversight Committee/Recruitment WG Call Summary
August 23, 2002**

Participants:

Patrick Beatty, ChevronTexaco
Michael Bird, ExxonMobil (part-time)
Don Burnett, BP
Stuart Cagen, Shell
Patsy Clegg, Shell
Myron Harrison, ExxonMobil
Lynn Russo, ExxonMobil
Paula Podhasky, API
Matt Todd, API
Lorraine Twerdok, API
George Woodall, API
Mark Fitzsimmons, Council

Minutes from 8/5/02 Oversight Committee call approved; will be posted to committee website (Paula).

Purpose of call was to develop a clearer path forward for consortium recruitment efforts and to determine basis for 2003 invoicing of consortium sponsors. Recruitment includes of all types of stakeholders, funding sponsors, regulators, health organizations, labor, NGOs, etc.

Recruitment:

It was decided that recruitment require a face-to-face meeting to get procedures "written down on paper." Patsy Clegg and Patrick Beatty volunteered to organize this meeting, which will take place as follows:

Date: Friday, September 13, 2002

Time: 8:30 AM – 3:30 PM (tentative)

Location: Shell Woodlands training facility, Houston (travel details to follow)

Overall, it was decided that it is time to involve high-level company people in the recruitment efforts, and the Houston meeting will provide a strategy to accomplish this. One candidate company to approach at this senior level is Petronas. The following recruitment-related action items are to be accomplished in preparation for the meeting:

1. Formal recommendation to BHRC on regulator/NGO participation – **Patrick**, due 8/30/02.
2. Draft committee roles and responsibilities – **Patrick and Lorraine**, due 8/30/02.

3. A first contact with Petrochina (Houston) to set up a briefing will be made by 9/13/02 – **Myron and Stuart**.
4. A first contact with Sinopec (New York) to set up a briefing will be made by 9/13/02 – **Lorraine, Patrick, Bill Frick**.
5. Identify/contact key individuals within sponsor companies (API Board level) for aid in recruitment, particularly for funding sponsors – **all OC members**.
6. Draft recruitment/presentation package to be circulated to Oversight and Technical committees for review by 9/6/02 – **Communications Committee**.
7. Follow-up contact with Dow to be made by **Michael Bird** (technical – David Hunt) and **Lynn** (chemical company contact) by 9/13/02.
8. List of organizations for recruitment contact (all types, funding, regulators, NGOs) due to Lorraine 9/4/02 – **ALL**. Specific, i.e. individual names, contact information would be helpful. **Lorraine** will integrate list and circulate for use at 9/13/02 meeting.
9. Follow-up contact with Marathon Ashland will be made by 9/13/02 – **Patrick**.
10. Technical contact with Lyondell (Stacey Banton) will be made by 9/13/02 – **Stuart**.
11. 9/13/02 meeting logistic information to be distributed ASAP – **Paula and Patsy**.
12. Request list of potential funding opportunities from Rich Irons for 9/13/02 meeting – **George**.
13. Minutes of this call due out by noon, 9/26/02 – **Lorraine**

Invoicing:

- 2002 – invoice will be 25% of the original \$19.7 M estimate.
- 2003 – BP (3 shares), ChevronTexaco (2 shares) and Shell (2 shares) voted to invoice companies for the remaining not-to-exceed commitment for all companies. This amount will be slightly less than the 2002 invoice due out in two weeks.

ACTIONS:

1. 2002 invoice to go out by 9/6/02 – **Paula**
2. Inform Conoco of 2003 invoicing decision – **Lorraine**.
3. Develop spreadsheet for 2003 invoicing amounts and circulate to OC – **Paula**.

From: George Woodall <Woodallg@api.org>
Sent: Tuesday, August 6, 2002 5:53 PM (GMT)
To: BenzConsort-TC@api.org
Cc: Lorraine Twerdok <Twerdokl@api.org>; Paula Podhasky <Podhaskyp@api.org>; Matt Todd <ToddM@api.org>
Subject: Meeting Minutes - Technical Committee (July30, 2002)
Attach: Minutes-BHRC-TC-30July2002.doc

Technical Committee;

Attached are the draft meeting minutes of our meeting last week at API HQ in Washington, DC. This set of minutes have been reviewed and approved by legal counsel. As mentioned in the meeting, there will be a two-week review period after which the minutes will be made final. Please send comments and corrections to my attention or to the listserver (BenzConsort-TC@listserve.api.org) **before August 21, 2002**.

Thank you,

George M. Woodall, Ph.D.
Senior Toxicologist
American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

Tel. (202) 682-8067
Fax. (202) 682-8031

Meeting Minutes
Technical Committee – Benzene Health Research Consortium
API Headquarters – Washington, DC
July 30, 2002

Participants:

Patrick Beatty (Chair), ChevronTexaco
Stuart Cagen (Vice Chair), Shell
Shan Tsai, Shell

Bill Broddle, Conoco
Michael Bird (by Phone), ExxonMobil
Don Burnett (by Phone), BP

Issues:

Committee Business

- Draft meeting minutes and conference call summaries
 - o It was proposed and accepted by the committee that draft minutes will be sent out for review, and if no changes or corrections are sent that they will become final after a two-week period.
 - o Previously drafted minutes will become final following review by legal counsel.

Governmental Organization Status Recommendation – requested by the Oversight Committee.

- Proposal for a “Competent Authorities Body” to include the governmental organizations and NGOs, with a dotted line relationship to the Technical Committee was discussed but not endorsed.
- Technical Committee’s recommendation:
 - o Expand the Technical Committee to include members with observer status.
 - o Develop a list of regulatory/governmental bodies from throughout the world to invite to join (EPA, OSHA, Cal-EPA, NIOSH, WHO, Health Canada, NIH, EU, CDC/ATSDR, IARC, etc.)
 - o Convene a meeting of the invitees to describe the study in detail and to define their role within the Technical Committee.
 - o As a follow-up to that meeting, provide a list of activities that these organizations may be able to contribute to on an equity basis (types of analyses that might be performed – either in the current protocols or in addition to those in the protocols).
 - Proposed role:
 - Would participate in the Annual Meeting as a part of the Technical Committee.
 - Would participate in all Technical Committee meetings but not in discussion on financials – financial aspects would be covered during one-half of a full-day meeting with only the sponsor members, followed by the rest of the meeting open to the full membership.
- *Action Items*
 - o TC Members: Provide a list of regulatory/advisory governmental organizations (worldwide) to invite. [See request for similar information from the Communications Committee, sent out July 31, 2002.]

Progress/Financial Reporting – the following is a summary of the main issues identified from the June 2002 progress and financial reports.

1. Calendars - API operates on a fiscal year that begins on January 1. UCHSC operates on a calendar that begins on July 1. In his progress report, Dr. Irons refers to a fiscal year that ends on August 31. Dr. Irons reports finances in his progress report up to May 30, which does not match the financial reporting period coming from the University that ends on June 30. The proposal accepted by the TC was to establish one set of dates for both progress reports and financial reports (semi-annual), with periods ending June 30 and December 31. Every other fiscal year and reporting date should be adjusted to coincide with those dates. The invoices to the consortium sponsors are scheduled to go out in August, and that should not be affected by this proposal.
2. Reporting Frequency - Otto Wong has suggested that all reports be on a semi-annual basis. Currently he has a requirement to report quarterly in his contract, and Dr. Irons is required to report semi-annually. The proposal to have all contract/grant reporting frequencies to be semi-annual, based on the dates proposed under item 1 above was accepted.
3. Travel Expenses - The UCHSC financial reports are showing travel-related charges and projections for continued charges. It was understood that all the travel expenses for the DP and ME Studies would be under Dr. Irons' separate contract. Enquiries will be made to see what are these charges and if they are appropriate.
4. UCSHC Financial Report Form - The format was changed by UCSHC from the original format agreed to for this reporting. A revised format has been proposed that can be used from this point forward (see attached) that will track both actual and budgeted values for the following: total previous expenditures, current expenditures, expenditures to date, and project totals. Some other discrepancies in the report will also be investigated in consult with UCHSC.
5. UCHSC Contract Addendum - In his June, 2002 Progress Report, Dr. Irons lists an issue with the current grant not including the revised project budget. The TC agrees that this should be remedied and proposes that a letter from the OC indicating the decision to increase the budget be sent to UCHSC, and that an amendment to the Grant Agreement be instituted to reflect those changes in budget.
6. Fudan Contact Issue - The first contract with Fudan University (covering the last 5 months of 2001) was signed late but without significant revisions. The second contract (covering 2002) has been delayed significantly due to numerous revision requests by Fudan and negotiations with API. Additional delays were due to a revised budget for the contract (see next point) and an expectation by the officials at Fudan that the revised budget would be accepted as submitted. The signed contract has been signed so this issue has been resolved.
7. Fudan Case-Control Study Budget Issue - The original estimated budget total for Fudan University was \$191K; the revised budget total submitted by Fudan in June was \$661K. The increase in budget was reflective (at least in part) of the

increased exposure assessment activities required after the SRP review. My understanding, based on the January 2001 presentation given by Dr. Irons, was that the additional costs for staff involvement and other costs associated with the increases in the exposure assessment would be born by the UCHSC grant and was reflected in the increased budget (see attached spreadsheet IronsPost-SRP-Budget.XLS). In subsequent communications between Dr. Irons and Dr. Fu, it seems that there is some split among the costs being covered by UCHSC and the separate contract between Fudan University and API (see attached e-mail from Dr. Fu that includes an e-mail from Dr. Irons to Dr. Fu). At present, there is no clear indication what that split should be, and this is hampering the ability of API to modify the contract values for Fudan. A communication has been sent to Dr. Irons requesting clarification of the details for what is covered in the contract between Fudan and UCHSC, so that API will better be able to determine the outstanding need for resources on the contract with Fudan.

8. Ongoing IRB Fees - COMIRB has changed their policy and instead of charging a fee only when they review a protocol, they are also asking for funds on an annual basis (see attached e-mail "COMIRB Fees"). In addition to that information, G. Woodall was informed in a conversation with Wayne Stillman that this project has three protocols that were submitted for review (not two). The third protocol is for the Metabolism Feasibility Study (attached in e-mail titled "Documents").

- *Action Items*

- o G. Woodall: Investigate the nature of the travel budget in the grant. Understanding was that all travel would be through the separate contract with Dr. Irons.
- o G. Woodall: Send revised financial report format and other questions regarding the financial report to UCHSC for clarification. [Completed. See attached e-mail.]
- o Oversight/Technical Committee: Send a letter to UCHSC indicating that the approved budget has been increased as of January 2002, and that a revised grant agreement is forthcoming.
- o G. Woodall/L. Twerdok: Revise the grant agreement as indicated in the point above.
- o G. Woodall: Set-up a conference call with both Dr. Wong and Dr. Irons on-line to discuss the split in contract coverage for the Fudan University portion of the expanded exposure assessment. Both the OC and TC will be invited to have a representative join the call.
- o G. Woodall: Contact Dr. Irons and get clarification about the nature of the 3rd protocol (Metabolism Feasibility Study) and the review process that was undertaken on that protocol.

Milestones – Many of these for the DP and ME Studies have been taken from the list suggested by Dr. Irons in his progress report.

- Publication milestones should be added to all studies.
- Case-Control Study

- o Milestones will be based on case accrual by disease (NHL/AML - 500 total cases or 125/year for 4 years)
- Disease Progression Study
 - o Missing from the list are decision points along the way that would help determine if continuation along a line of research is warranted:
 - Determination of unique identifiers/markers for benzene-induced leukemia.
 - Assessments of whether certain assays/analyses are useful/feasible.
 - o Case accrual – need to break out by number of cases for each diseases and not as an aggregate alone (based on expected incidence)
 - The protocol mentions annual disease rates as follows: 50 cases AA/yr; 60 cases MDS/yr; 120 cases AML/yr.
 - Major Issue: Determine the number of cases needed to acquire adequate statistical power and the length of time that will be needed to accrue that number of cases (potential that it may take longer than the five year project length).
 - o Include reporting obligations in milestones
 - o Include expected/actual/deviation in the number of cases in the progress reports.
 - o Dr. Irons list has exposure assessment done prior to identifying cases – check on that detail.
- Molecular Epidemiology Study
 - o Need clarification on timing of the phases
 - Is the plan to identify all 200 highly exposed individuals first then look at feasibility of doing later phases, or
 - Do the factory-by-factory approach as shown in the draft milestones. If the latter, what are the costs for each factory and when do you reach a decision point on when the study will yield results.
- *Action Items*
 - o G. Woodall: Contact Dr. Irons to get clarification on his list of milestones on a number of issues related to case accrual rates, timing for phases within each of the studies, overall length of study, etc.
 - o G. Woodall: Set-up a conference call between the TC, and Drs. Irons and/or Schnatter to discuss the timing of phases within the ME study.
 - o Drs. Irons and Wong: Add publication milestones on all studies.

Prioritization – requested by the Oversight Committee to determine the options if additional sources of funds are not found.

- Regrets Analysis – based on the presentation in January 2001 by Dr. Irons.
 - o Incremental cuts suggested by Dr. Irons would get \$1.6M in cuts if all were adopted – would be accompanied by major regrets.
 - o However, this was based on the budget at that time of \$16.5M and does not include the budget increases due to the Scientific Review Panel (SRP) recommendations.
 - o Any changes would require approval by the SRP and the IRBs, which could call for a close to the project due to decreased scientific benefit from the pared-down study.

- Only way to get to \$3-4M in savings would be to cut out one of the studies (Case-Control; Disease Progression; or Molecular Epidemiology) which would effectively stop the project.
 - o Cutting any one of the studies would entail major regrets including the withdrawal of support for the project from the Chinese, thus ending the project.
- Recommendation from the Technical Committee (in order of preference):
 - o Get additional sponsors using a new marketing focus that emphasizes:
 - New studies such as HealthWatch raise additional questions that the Shanghai Study may help to answer.
 - That this is a unique opportunity to couple high exposure levels with modern analytical techniques when compared to previous studies.
 - Need to identify more potential sponsors with more active follow-up (e.g., Dow)
 - Need to act ASAP on additional funding efforts.
 - o Investigate potential for an API Safety Net.
 - API would only cover costs not covered by additional funding.
 - Need to find a “champion” among one of the sponsor company CEOs to plead the case to the other CEOs within API
 - o Investigate potential for other “partners” to help fund pieces of the project (e.g., EPA pay for one type of analysis to be performed in the ME Study).
 - May also include applying for grants.
 - o Pursue additional funding from the existing sponsors
 - All other potential funding avenues should be pursued first (those listed above as well as the options for cutting back) in order for this proposal to even be considered.
- September 11th effect
 - o Delays have resulted in increased costs
 - o More difficult to get visas for Chinese nationals to come to US for training.
 - o More difficult to get equipment into China.
- Funds from the Petroleum Product Stewardship Council
 - o \$300K in unspent funds
 - o Can this be used in BHRC? Who at API can answer that question?
- Timelines
 - o Annual API Meeting in October – need to identify any potential CEO champions and brief them prior to that meeting
 - o Follow-up with Dow in the next two weeks.
- *Action Items*
 - o Marketing Group: Needs to become more aggressive in attaining new sponsors. Need to revitalize marketing materials and change the marketing focus (adding governmental bodies as part of and expanded TC may be a positive aspect; answering the questions raised by HealthWatch may also be a useful inducement).
 - o TC Members: Identify a CEO Champion within the API member companies to encourage the "API Safety Net" as a consideration to secure the project if the marketing approach fails. Annual Meeting scheduled to occur October 14-15, 2002.

- o M. Bird/L. Twerdok: Follow-up with Dow to determine interest level and chance to add them as a sponsor.
- o G. Woodall: Get input from Dr. Irons on a revised "Regrets Analysis" based on the new budget and protocols; similar to his analysis presented at the January 2001 meeting.

2002 Invoice Recommendation – Request for a recommendation on whether the August 2002 invoice should be based on 25% of \$16.5M or \$22.8M

- Recommendation to send an invoice for the previously expected amount and then send an invoice in January for any adjusted funding needs.
- *Action Item*
 - o G. Woodall/P. Podhasky: Need to get total invoice requests for 2003 to the sponsor companies ASAP so they can plan appropriately. This should include any amounts that may be included in a January 2003 Invoice.

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Monday, August 5, 2002 5:33 PM (GMT)
To: BenzConsort-TC@api.org; Benzconsort-cc@api.org
Subject: FW: Shanghai Health Research Oversight cmte Call
Attach: 5 aug 2002 agenda OC Call.doc; ASILOMAR DRAFT AGENDA.doc; 2002 Invoice options.xls

fyi

-----Original Message-----

From: Paula Podhasky
Sent: Monday, August 05, 2002 9:33 AM
To: 'BenzConsort-OC@listserve.api.org'
Subject: Shanghai Health Research Oversight cmte Call
Importance: High

REMINDER - Oversight Committee Call scheduled as follows:

Date: Monday, August 5, 2002

Time: 2PM, EDT

Dial-in number: 1-866-262-1780 (domestic)

1-205-354-0100 (international)

Meeting #: * 0495614 * (stars required)

<<5 aug 2002 agenda OC Call.doc>> <<ASILOMAR DRAFT AGENDA.doc>> <<2002 Invoice options.xls>>

AUGUST 2002
INVOICE OPTIONS

	A	B	C	D	E	F	G	H	I
1		<i>Benzene invoicing</i>					YEAR 1		
2							August-01	January-02	
3	Company Name			Commitment		Share	15%	15%	
4				NOT TO EXCEED					
5	BP			4,224,000		3	806,441	806,441	
6									
7	Chevron			3,000,000		2	537,627	537,627	
8									
9	Conoco			1,408,000		1	268,814	268,814	
10									
11	ExxonMobil			5,000,000		3	806,441	806,441	
12									
13	Shell			3,000,000		2	537,627	537,627	
14									
15									
16	Column Total			16,632,000		11	2,956,950	2,956,950	
17									
18	Cumulative Total						2,956,950	5,913,900	
19									
20									
21									
22	2001 Program Cost			19,713,000 ¹			2002 Program Cost		
23		15% of total cost		2,956,950				25% of total cost	
24									
25									
26									
27							2002 Program Cost		
28								25% of total cost	
29									
30									
31									
32	Formula						Example:	(\$22,789,299 / 11) (1share) (.25) =	
33	(program cost/11) (#share/company) (%)						Example:	(\$16,632,000 / 11) (1share) (.25) =	
34									
35									
36	¹ Year 1 invoices billed as percent of 2001 estimated total program cost								

**AUGUST 2002
INVOICE OPTIONS**

	J	K	L	M	N
1	YEAR 2			COMPANY COST	
2	August-02			thru 2002	
3	25%			equivalent to 55%	
4	at \$22,789,299	at \$16,632,000		at \$22,789,299	at \$16,632,000
5	1,553,817	1,134,000		3,166,699	2,746,882
6					
7	1,035,878	756,000		2,111,132	1,831,254
8					
9	517,939	378,000		1,055,567	915,628
10					
11	1,553,817	1,134,000		3,166,699	2,746,882
12					
13	1,035,878	756,000		2,111,132	1,831,254
14					
15					
16	5,697,329	4,158,000			
17					
18	11,611,229	10,071,900			
19					
20					
21					
22		22,789,299			
23		5,697,325			
24					
25					
26					
27		16,632,000			
28		4,158,000			
29					
30					
31					
32		\$517,939			
33		\$378,000			
34					
35					
36					

July 3, 2002

SHELL-MCCLURG-052934

DRAFT

TENTATIVE

LOCATION: ASILOMAR Conference Center ♦ Monterey Peninsula ♦ CA

Comments

10:00 AM – 2:00 PM	Benzene 101	(primary audience: business people)
5:00 PM – 6:00 PM	Reception with cocktails	
6:00 PM -	Dinner	

Comments

8:30 AM- 4:00 PM	Plenary Session	All committee members and Consortium guests
6:00 PM – 8:00 PM	Dinner	

[illegible]

Comments

8:00 AM – 12:00 PM	Committee Meetings	(breakout sessions)
12:00 PM – 1:00 PM	Lunch	
1:00 PM - 5:00 PM	Plenary session	

Oversight Committee Call

Date: Monday, August 5, 2002

Time: 2PM, EDT

Dial-in number: 1-866-262-1780 (domestic)

1-205-354-0100 (international)

Meeting #: * 0495614 * (stars required)

Draft agenda:

1. Communications Update - L. Russo
2. Technical Update - P. Beatty
 - Gov't/NGO participation proposal
 - Alternate research plan proposal to address potential funding shortfall
3. Recruitment update - P. Beatty
4. Annual research mtg planning update - P. Podhasky
 - logistics
 - draft agenda
5. 2002 invoicing discussion/decision
6. Other business
7. Schedule next call/meeting

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, October 12, 2005 9:05 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org; Howard Feldman <Feldman@api.org>
Subject: BHRC-TC... In Press: Benzene-Induced Dysplasia
Attach: BIDS article (LR).pdf

BHRC Technical Committee (TC) –

The first Shanghai Health Study paper by Richard Irons *et al.*, titled **"Chronic exposure to benzene results in a unique form of dysplasia"**, has been peer-reviewed and accepted for fast-track publication in *Leukemia Research*. A copy of the 10-page preprint is attached in pdf format.

Dr. Irons' suggested that "fast track" likely means imminent publication for this journal.

Rich also noted that 2 additional papers have been submitted, but not yet accepted for publication.

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org



Chronic exposure to benzene results in a unique form of dysplasia

Richard D. Irons^{a,b,c,d,*}, Ling Lv^{a,e}, Sherilyn A. Gross^{a,c}, Xibiao Ye^{a,b}, Liming Bao^{a,f},
Xiao Qin Wang^{a,e}, John Ryder^{a,d}, Thomas W. Armstrong^g, Yimei Zhou^g, Lizhaung Miao^b,
Anh T. Le^c, Patrick J. Kerzic^c, Weimin Ni^h, Hua Fu^{a,b}

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^b School of Public Health, Fudan University, 138 Yi Xue Yuan Road, Shanghai 200032, China

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University of Colorado Health Sciences Center, Denver CO 20262, USA

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^f Division of Human Genetics, University of Cincinnati Children's Hospital Medical Center, 3333 Burnett Avenue,
Cincinnati OH 45229-3039, USA

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Abstract

Hematotoxicity following chronic benzene exposure has been recognized for over a century, although the mechanism remains unknown. We describe a novel form of bone marrow dysplasia in 23 workers exposed to high concentrations of benzene. Distinguishing features of benzene-induced dysplasia include: marked dyserythropoiesis, eosinophilic dysplasia and abnormal cytoplasmic granulation of neutrophilic precursors. Hematophagocytosis, stromal degeneration and bone marrow hypoplasia are also seen. Severe bone marrow dysplasia is frequently accompanied by clonal T cell expansion and alterations in T lymphocyte subsets. No clonal cytogenetic abnormalities were observed. These results suggest that autoimmune-mediated bone marrow injury is an early or predisposing event in the pathogenesis of benzene-induced persistent hematopoietic disease.

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Keywords: Myelodysplastic syndrome; Hematotoxicity; Benzene; Immunopathology

1. Introduction

Myelodysplastic syndrome (MDS) is a heterogeneous group of diseases characterized by ineffective hematopoiesis, dysplasia in one or more hematopoietic lineages, clonal evolution and a tendency to progress on to bone marrow (BM) failure or acute myelogenous leukemia (AML). The etiology and pathogenesis of MDS are unknown, with genetic, infectious and environmental influences variously suggested to play a role in conferring susceptibility to these diseases.

Clonal cytogenetic abnormalities, abnormal cytokine production and immune activation all are prominent features of MDS, and it has been hypothesized that damage to hematopoietic stem or progenitor cells leads to immunologic response directed against antigens in the hematopoietic environment [1–4]. Nevertheless, neither the initial clonal origin of MDS nor the cellular or molecular targets of activated immune cells, or even the order of events in the evolution of the disease have been identified, and a unifying hypothesis for the pathogenesis of MDS in general or for individual subtypes remains elusive.

Chronic exposure to benzene is known to result in bone marrow failure and increase the risk of AML [5–7]. Previous

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descriptions of AML associated with occupational exposure to pesticides or solvents that have contained benzene suggest a pattern of disease similar to therapy-related AML (tAML), although direct evidence linking benzene to tAML is lacking [8–11], and the mechanism of benzene-induced hematotoxicity remains unknown. Chronic exposure to high concentrations of benzene has long been associated with aplastic anemia (AA), diagnosed nearly always on the basis of pancytopenia, with hundreds of cases reported during the first half of the 20th century. However, direct evaluation of BM was almost never performed in these cases [12–14]. Although, AA and MDS are thought to be related conditions, MDS is distinguished from other forms of progressive BM failure by the presence of dysplasia and a tendency to progress or evolve into AML. MDS (non-specific) has previously been reported in a very small number of benzene workers who were generally described as having hypocellular bone marrow and dyserythropoietic changes [15]. In contrast, the majority of cases of de novo MDS present with hypercellular BM and abnormal hematopoietic cell morphology, while a hypocellular BM is observed only in a subset of de novo cases. In 2001, the World Health Organization (WHO) published new criteria for the diagnosis of MDS subtypes [16]. Dysplasia in one or more lineages is a central diagnostic feature of MDS, although cytopenia, anemia, or pancytopenia, together with BM hypercellularity and a blast cell count <20% are prominent characteristics of most subtypes of the disease.

We describe a novel pattern of dysplasia developing in 23 individuals who were previously exposed to high concentrations of benzene. The evaluation of these patients employing current diagnostic and molecular techniques has given us the opportunity to revisit and to further characterize the clinical paradigms associated with benzene-induced hematotoxicity and to examine early events in the pathogenesis of persistent benzene-induced blood disease. Most cases of benzene-induced dysplasia exhibited BM pathology that was characterized by: hypocellularity, multilineage dysplasia including megaloblastic changes, marked dyserythropoiesis and abnormal granulation in the cytoplasm of maturing neutrophilic precursors and neutrophils. A particular striking feature was a severe dysplasia in eosinophilic precursor cells. Additional findings were consistent with altered inflammatory and immune response, including prominent hematophagocytosis, increases in circulating large granular lymphocytes (LGLs) and altered distribution of CD4 and CD8 T cells which were often accompanied by evidence of clonal expansion of T cell subpopulations in BM. Significantly, the peripheral blood CBC was nearly normal in approximately 25% of cases. These findings suggest a distinct form of multilineage dysplasia in individuals chronically exposed to benzene, and provide evidence for a prominent role for altered immune response in the development of benzene-induced dysplasia. These findings further suggest that routine CBC may not be a reliable monitor for BM injury following chronic exposure to benzene.

2. Materials and methods

2.1. Patients

Patients were referred by physicians to Shanghai hospitals based on initial clinical presentation and/or a medical history of benzene intoxication. Participation was voluntary and the framework for consent was obtained according to the Declaration of Helsinki, 2004 and the NIH Common Rule (45 CFR 46). Informed consents were approved by both the Colorado Multiple Institutional Review Board and the Internal Review Board at Fudan University in Shanghai, China. All individuals were administered questionnaires requesting information on medical, occupational and environmental history. A total of 27 subjects employed in the rubber, petrochemical, pharmaceutical, manufacturing or painting industries were referred to our laboratory with a history of benzene poisoning. Previous occupational exposure to benzene was independently confirmed by: review of factory industrial hygiene monitoring records, real time quantitative industrial hygiene analysis, including personal samples ($n = 325$) and breathing zone analyses ($n = 225$), and/or previous evidence of hydrocarbon intoxication and anecdotal descriptions of solvent use and composition. Benzene from personal samples (3M 3500 organic vapor monitors) and area samples were measured according to the National Institute for Occupational Safety and Health (NIOSH) method with minor changes [17] and were performed using a Finnegan Trace Gas Chromatograph Ultra with a Flame Ionization Detector (FID), autosampler and SPB-1 capillary column (30 m $\times$ 0.25 mm $\times$ 0.25 m) (Agilent Technologies, Wilmington, DE). Individuals for which quantitative data was available ($n = 17$) were estimated to have full shift exposures averaging between 50 and 300 parts per million (ppm) benzene for varying periods of time ranging from 6 to 22 years and were removed from exposure an average of 2.7 years prior to evaluation in our laboratory (Table 1). Patients were evaluated for potential confounding factors, including: vitamin B12, folate or iron deficiencies and viral status (i.e. HCV, HIV). Two patients were excluded due to concurrent iron deficiency, and two patients were excluded because of inability to confirm exposure to benzene. The final study series consisted of 16 females and 7 males with a mean age of 44.4 year (S.D. = 7.8). This represents a small subset of individuals chronically exposed to high concentrations of benzene at the facilities studied.

2.2. Hematology and flow cytometry

Peripheral blood (PB), BM aspirates and core biopsies were collected in conjunction with diagnostic procedures and were evaluated in our laboratory. Peripheral blood smears were obtained by finger stick. Enumeration of LGL was performed by visual examination of Wright-Giemsa-stained smears. Blood samples were collected by venipuncture and processed for routine CBC (CellDyne 3700, Abbott, Park, IL), viral screen (HCV and HIV) (IMx[®], Abbott

Table 1
Initial presentation of occupational benzene poisoning^a

Case	Exposure duration (year) ^b	Time since last exposure (month) ^c	Signs/symptoms ^d	Laboratory findings ^d
1	17	48	Bleeding, fatigue	Pancytopenia
2	6	24	Bleeding, fatigue, dizziness	Thrombocytopenia/leukopenia
3	19	24	Bleeding, fatigue	Pancytopenia
4	13	48	ND	Granulocytopenia
5	ND	96	ND	Leukopenia
6	20	0	Bleeding, fatigue, dizziness	ND
7	8	3	Bleeding	Thrombocytopenia
8	22	36	Fatigue, dizziness	Pancytopenia
9	7	36	Bleeding, fatigue	Granulocytopenia/anemia
10	17	24	Bleeding, fatigue	Leukopenia
11	ND	24	ND	ND
12	8	48	Bleeding, dizziness	Anemia
13	7	48	Bleeding, fatigue	Pancytopenia
14	16	27	ND	Thrombocytopenia
15	6	56	Bleeding, infection, fatigue	Pancytopenia
16	15	36	Fatigue, dizziness	Pancytopenia
17	10	30	Bleeding, fatigue, dizziness	Leukopenia/thrombocytopenia
18	9	36	Bleeding, fatigue, dizziness	Pancytopenia
19	15	24	ND	ND
20	13	13	Bleeding, dizziness	Leukopenia/thrombocytopenia
21	14	3	ND	Leukopenia/thrombocytopenia
22	18	9	Infection	Leukocytosis
23	16	48	ND	Leukopenia/thrombocytopenia

^a All subjects were originally diagnosed with benzene poisoning according to Chinese occupational health criteria (i.e. a total WBC count $<4000 (\times 10^6/l)$ or $4000-4500 (\times 10^6/l)$ and a platelet count $<80,000 (\times 10^6/l)$, employment in a factory with documented benzene exposure for at least 6 months and exclusion of other causes for abnormal blood counts).

^b Duration of chronic exposure to benzene prior to initial complaint.

^c Time between cessation of benzene exposure and diagnosis of benzene-induced dysplasia in our laboratory.

^d Signs, symptoms and laboratory findings consistent with hematologic injury documented at the time of exposure. ND indicates information that was not available.

Laboratories, Abbott Park, IL), clinical chemistry for liver enzymes (LDH, ALT and AST enzymes) (COBAS, Integra 400 plus, Roche Diagnostics, Shanghai, China) and serum analysis for nutritional factors. Vitamin B12 and folate were measured by chemical luminescence (Beckman Coulter Dxi800), and total iron binding capacity was measured using a Beckman Coulter LX20. BM aspirates and core biopsies were obtained by Jamshidi needle extraction from posterior iliac crest. Aspirates were stained with fluorochrome-conjugated antibodies for flow cytometric analysis of BM cellular subsets. Antibody panels included: anti-CD45, CD4, CD8, CD3 (Beckman Coulter, Hialeah, FL; Immunotech, Miami FL). Multiparameter analysis was performed on stained BM cells using a dual laser flow cytometer (FC-500, Beckman Coulter) equipped with compensation software (Software CXP, Beckman Coulter).

2.3. Bone marrow morphology

BM smears were prepared and evaluated using Wright-Giemsa stained preparations and special stains. Core biopsy sections were evaluated using sections stained with Hematoxylin-Eosin, Gomori trichrome, and immunoperoxidase-immunohistochemistry. Morphology was independently evaluated by two of us (R.D.I., J.R.). Dyserythropoiesis was scored on the basis of abnormal nuclear morphology,

including internuclear bridging, abnormal budding, multiple nuclei and abnormal mitotic figures or megaloblastoid features. Myeloid or granulocytic dysplasia was defined by nuclear hypolobulation, (i.e. pseudo-Pelger Huet cells, hypersegmentation, abnormal mitotic forms) either hypo- or hypergranulation of the cytoplasm as well as the presence of large irregular granules. Megakaryocyte dysplasia was defined by non-, or hyper-lobulated nuclei, multiple individual nuclei or the presence of prematurely segmented or “shedding” cytoplasm. Eosinophilic dysplasia was defined by the presence of megaloblastoid features and abnormal cytoplasmic basophilic and eosinophilic hypergranulation. Microscopic analysis was performed using an Olympus BX51 bright field microscope (Olympus Optical, Ltd., Tokyo, Japan) equipped with a Sony EXwave HAD color video camera (Sony Ltd., Tokyo, Japan). Images were processed using software custom designed for the purpose (Vision Image Technology, Shanghai, China), and photomicrographs were cropped and edited using Adobe Photoshop (San Jose, CA). Cases of benzene-induced dysplasia were compared to MDS subtypes diagnosed according to the WHO classification system

2.4. Cytogenetic analysis

Fluorescence in situ hybridization (FISH) and cytogenetic analyses were performed on unstimulated BM cells

following 24–72 h of culture. Chromosomes were prepared and G-banding after trypsin was performed according to standard techniques. If possible, 29 metaphases were analyzed. Interphase or metaphase FISH analyses were performed on the short-term cultured cells or metaphases prepared from the BM or PB samples. All probes used in the FISH studies were purchased from Vysis (Downers Grove, IL). Sample preparations and hybridizations were performed according to the protocols provided by the manufacturer. Slides were viewed using an Olympus fluorescence microscope (Olympus Optical, Ltd., Tokyo, Japan) equipped with the appropriate filters and the PowerGene Macprobe image analysis system (Applied Imaging International Ltd., Newcastle, UK). Whenever possible, 1000–2000 nuclei were analyzed for each probe and scored by two readers. Signal patterns for each probe were compared against a reference range established from analysis of 100 samples from individuals with no evidence of clonal disease or previous benzene exposure.

2.5. Analysis of *FLT3* mutations

FLT3 mutations are often encountered genetic abnormalities in AML, frequently involving an internal tandem duplication (ITD) or activation loop mutations in the tyrosine kinase domain (TKD) of the *FLT3* gene [18,19]. *FLT3* mutations were determined by PCR analysis and sequencing using DNA isolated from BM cells. Genomic DNA was isolated from blood and BM samples using A Qiagen QIAmp DNA mini Kit (Chatsworth, CA) according to the manufacturer's directions. Exons 14 and 15 and the intervening sequence intron of the *FLT3* gene were amplified by PCR to detect ITD. The PCR products were run on both 2% agarose gel and 5% polyacrylamide gel. Exon 20 of the *FLT3* gene was also amplified by PCR to detect TKD using primers as reported by Yamamoto et al. [20]. These PCR products were subjected to digestion by EcoRV and analyzed on a 3.5% agarose gel. Finally, PCR products were isolated from the gels using the DNA Recovery Kit (Biologic Technology Co., Ltd., Shanghai, China) and directly sequenced on an ABI 377 DNA Sequencer (Applied Biosystems, Foster City, CA).

2.6. T cell receptor (TCR) rearrangement analysis

Detection of clonal and oligoclonal expansion of T cell populations was determined by analysis of rearrangements of TCR beta (TCR β), TCR gamma (TCR γ) and TCR delta (TCR δ) genes by multiplex PCR using BIOMED-2 kits (InVivoScribe Technologies, San Diego, CA) according to the manufacturer's protocol. For the TCR β gene, the kit comprised of three individual master mix reactions, the TCR γ kit utilized two master mixes and TCR δ kit utilized a single PCR master mix. Amplification of TCR β , γ and δ genes was performed in a thermocycler and the PCR samples were loaded onto a 6% non-denaturing polyacrylamide TBE gel, stained with ethidium bromide, visualized by UV illumination and documented by digital photography. Clonal rearrangements

were determined according to published guidelines with exclusion of nonspecific bands [21].

3. Results

Patients diagnosed with benzene-induced dysplasia exhibited a distinct set of characteristic features that both overlap with and can be distinguished from standard classifications of MDS. At the time of diagnosis in our laboratory, PB findings in these cases included pancytopenia ($n=1$), and cytopenias, singly or in combination ($n=16$). The most consistent abnormal finding was lymphocytopenia ($n=14$). Six subjects presented with normal or marginally normal blood counts (Table 2). All patients exhibited significant BM pathology including evidence of multilineage dysplasia which was characterized by macrocytic megaloblastic changes in granulocytic, eosinophilic as well as erythroid lineages and at all stages of development. Stromal degeneration was also present in 12/23 cases. Most cases of benzene-induced dysplasia were hypocellular (17/23) with residual hematopoietic cells unevenly distributed throughout the BM. Dyserythropoiesis was commonly found and often severe (Figs. 1 and 2). Several features distinguished benzene-induced dysplasia from other previously defined subtypes of MDS including therapy related (t)MDS [16,22,23]. Prominent among these were the presence of abnormal BM eosinophilic precursor cells (22/23 cases). These cells are reminiscent of those found in AML with the 16(p13;q22) chromosome abnormality [16] (Fig. 3). Hemophagocytosis, which is commonly associated with a poor prognosis in BM failure, was a particularly frequent and striking observation (16/23 cases) (Fig. 4). Maturing myeloid cells and granulocytes also typically exhibited megaloblastic alterations and abnormal cytoplasmic morphology (18/23 cases) (Fig. 5). Finally, for a significant subset of cases there was a lack of concordance between the severity of pathology observed in the BM and the relatively mild or moderate abnormalities encountered in the PB (6/23 cases). This suggests that monitoring of the peripheral blood CBC may not accurately reflect the progression of hematopoietic disease in patients previously exposed to benzene.

3.1. Clonal cytogenetic abnormalities in benzene-induced dysplasia

Reoccurring clonal genetic abnormalities are frequently encountered in MDS, and have been suggested to play an early or predisposing role in the development of the disease. Therefore, we analyzed BM cells from each subject for evidence of clonal hematopoietic lesions. In contrast to the overall frequency of cytogenetic abnormalities observed for MDS in our laboratory (26%; $n=100$), cytogenetic analyses revealed no clonal abnormalities in any benzene poisoning case in this series. The most frequent cytogenetic abnormalities encountered in tMDS/tAML are -5 , -7 , $\text{del}(5q)-$, and $\text{del}(7q)-$ which are found in greater than 70% of reported

Table 2
Characteristics of PB and BM in benzene-induced dysplasia

Case	ANC (10 ⁶ /l)	ALC (10 ⁶ /l)	LGL (%)	PLT (10 ⁹ /l)	Hgb (g/dl)	Bone marrow							
						Cellularity	CD4/CD8 Ratio	Stro	Dysplasia				HP
									Gran	Ery	Meg	Eo	
1	1240	730	27	93.7	11.5	Norm	0.24	N	+	ND	ND	+	+++
2	1920	1620	15	122	11.9	Hypo	1.62	N	ND	+	++	++	+++
3	1250	1390	28	176	13	Hypo	0.92	N	+++	+++	0	+	++
4	1520	980	20	200	13.5	Norm	0.76	N	+++	++	++	++	+++
5	930	1530	24	61.8	15.9	Hypo	2.42	N	++	+++	0	+++	ND
6	2980	190	25	77.8	13.9	Norm	0.60	SA	0	+++	0	+++	++
7	1760	340	32	124	8.3	Hyper	0.64	N	+++	+++	+++	+++	+++
8	1590	2220	40	146	13	Hypo	0.59	SA	ND	+	0	++	+
9	3390	1740	41	203	13.3	Hypo	0.71	SA	+++	+++	+++	+	+++
10	1650	1440	46	168	12.9	Hypo	0.45	FN	ND	+	+	++	+
11	1510	1160	30	122	12.7	Hypo	0.43	SA	+	+	0	ND	ND
12	3140	823	42	92.7	11	Hypo*	0.42	QNS	+++	0	0	+++	ND
13	2020	2300	41	133	11.8	Hypo*	0.97	QNS	0	0	0	+++	ND
14	2380	1600	28	174	15.2	Hypo	0.69	SA	+	+	0	+++	ND
15	2080	1710	30	65.9	12	Hypo	0.83	SA	+++	+	0	+++	ND
16	2270	1780	32	137	13.8	Hypo	0.71	N	+++	+++	0	+	+
17	2370	1350	28	71.1	11.8	Hypo	0.37	SA	+++	+	0	++	ND
18	2950	710	18	113	12.8	Hypo	0.91	SA	+++	+	0	+++	+
19	2240	870	18	33.5	11.4	Hypo	0.20	SA	+++	+++	0	+++	+
20	1400	600	32	84.1	12.9	Hypo	0.59	SA	+++	+++	0	++	+++
21	2090	810	22	99.8	11.9	Hypo	1.39	SA	+++	+	0	++	+
22	4000	2850	33	275	14.7	Hyper*	0.88	0	+++	+	0	++	+
23	1520	990	ND	147	13.2	Norm	0.50	SA	+	+	0	+	+

ANC, absolute neutrophil count; ALC, absolute lymphocyte count; LGL, large granular lymphocytes (%ALC); PLT, platelet count; Hgb, hemoglobin; bone marrow cellularity was estimated from the core biopsy or the aspirate* (e.g. hypo-hypoplastic [$<40\%$ cellularity], norm-normal [$40\text{--}60\%$ cellularity] and hyper-hyperplastic [$>60\%$ cellularity]; BM lymphocyte CD4/CD8 ratios as determined by flow cytometry; Stro, stroma; SA, focal serous atrophy; FN, fibrinoid necrosis, 0, stromal cells were absent or too rare to evaluate; dysplasia was estimated for granulocytic (Gran), erythroid (Ery), megakaryocytic (Meg) and eosinophilic (Eo) lineages and scored based on the percentage of lineage-specific cells involved, ND [none detected], + [$10\text{--}50\%$], ++ [$50\text{--}70\%$], or +++ [$>70\%$]]. 0, cells of individual lineage were absent or too rare to evaluate for dysplastic changes. HP, hematophagocytosis, was scored as not detected (ND) present (+), moderate (++) or severe (+++). Reference ranges: ANC ($2000\text{--}7000 \times 10^6/l$); ALC ($1600\text{--}6000 \times 10^6/l$); LGL ($5\text{--}15\%$); PLT ($100\text{--}300 \times 10^9/l$); Hgb ($12\text{--}16\text{ g/dl}$); CD4/CD8 ($0.72\text{--}2.56$) [55].

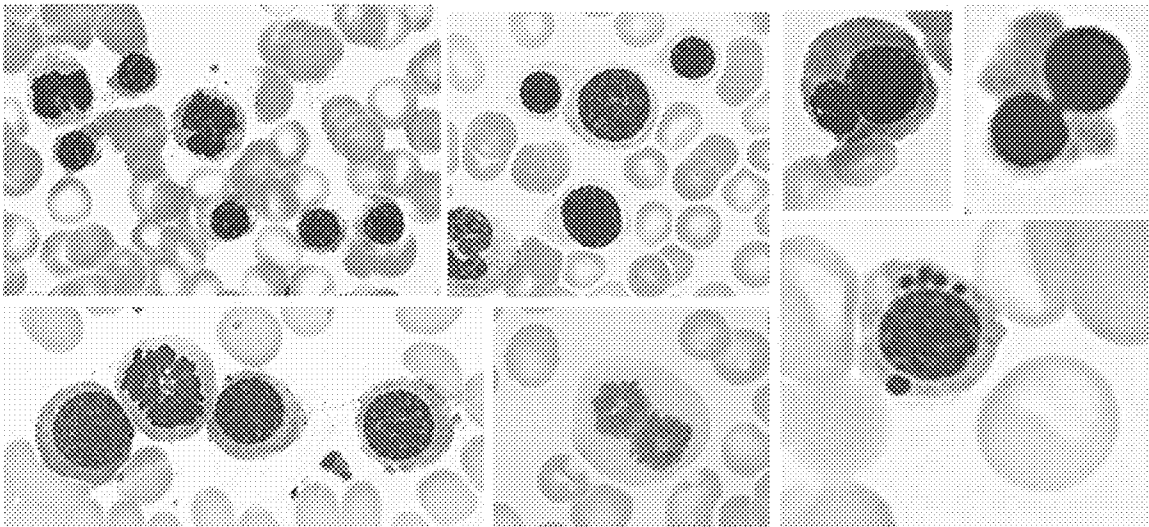


Fig. 1. Erythroid dysplasia and dyserythropoiesis in benzene-induced dysplasia. Abnormal erythroid cells exhibit megaloblastic abnormalities and abnormal nuclear morphology including nuclear bridging. BM aspirate slides stained with Wright-Giemsa (original magnification $1000\times$).

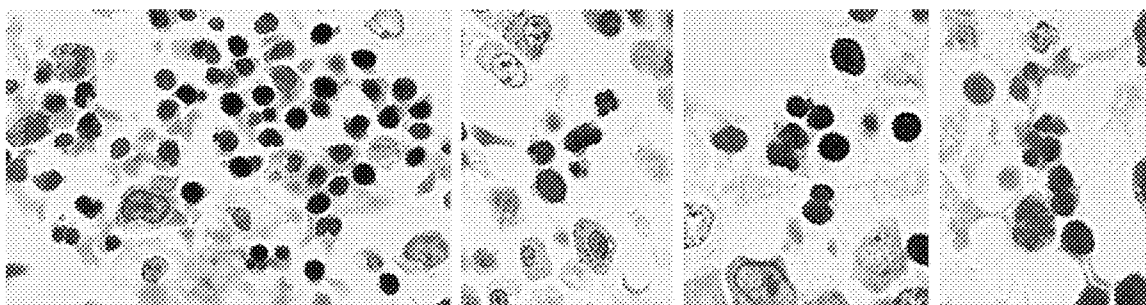


Fig. 2. Prominent dyserythropoiesis in a core biopsy from a representative patient with benzene-induced dysplasia. The most frequent dyserythropoietic changes in H&E stained sections are bizarre budding of nuclei in erythroid precursor cells. Core biopsy section stained with Hematoxylin-Eosin (original magnification 1000 $\times$).

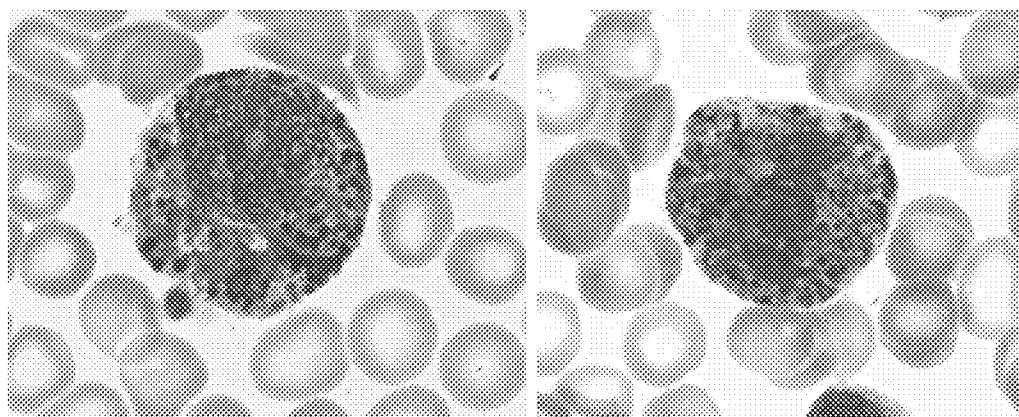


Fig. 3. Abnormal eosinophilic precursor cells in benzene-induced dysplasia. Abnormal eosinophils exhibit megaloblastic nuclear abnormalities, nuclear hypersegmentation and atypical giant basophilic and eosinophilic cytoplasmic granulation. BM aspirate slides stained with Wright-Giemsa (original magnification 1000 $\times$).

cases [24,25], and some studies have suggested a similar pattern might exist for AML developing after chronic benzene exposure [10,26–28]. We also performed additional analyses for -7 , $5q-$, $11q23$ and $+8$ structural abnormalities using FISH and observed no signals above background (data not shown). *FLT3* mutations are the most frequently encountered genetic abnormalities in AML, commonly involving ITD or activation loop mutations in the TKD of the *FLT3* gene [18,19,29]. However, no *FLT3* mutations were observed in this series. These findings suggest that acquisition of cytogenetic or molecular abnormalities in benzene-induced dysplasia may be relatively late events in the neoplastic progression of the disease.

3.2. Benzene-induced dysplasia may involve an autoimmune process

The frequency and severity of lymphocytopenia, hemophagocytosis and eosinophilic dysplasia in benzene-induced dysplasia led us to examine additional immune cell parameters. Patients with benzene-induced dysplasia exhibited relative increases in LGL (mean = 29.6%, $n=22$) in PB and decreases in the ratio of CD4 $^{+}$ /CD8 $^{+}$ lymphocytes in the BM (0.77 ± 0.48 , $n=23$) (Table 2). These observations coincided

with demonstration of clonal and oligoclonal proliferations in BM T lymphocytes (14/23 cases), including clonal rearrangements in V β TCR gene segments ($n=4$), V δ TCR gene segments ($n=6$) and both V β and V δ TCR segments ($n=4$).

4. Discussion

The role of autoimmune mechanisms in the development of MDS remains largely unexplored, although, evidence is accumulating to implicate immunologic abnormalities in the pathogenesis of the disease. Frequent findings in MDS include lymphocytopenia, inverted CD4/CD8 T cell ratios, increases in cytotoxic CD8 $^{+}$ T cells (CTL) and serum levels of inflammatory cytokines such as tumor necrosis factor α (TNF- α), and interferon γ (INF- γ) [2], abnormal expression of HLA-DR [30] and evidence of TCR gene rearrangements [31–34]. Positive clinical responses to immunosuppressive therapy with anti-thymocyte globulin (ATG) or cyclosporin A also have been reported in some patients with MDS [3,33,35], together with treatment-related decreases in both CD8 $^{+}$ T cell clones and T-LGL [32,36,37]. The role of environmental exposure in the evolution of MDS is unknown, although it has been hypothesized that the pathogenesis of MDS may involve

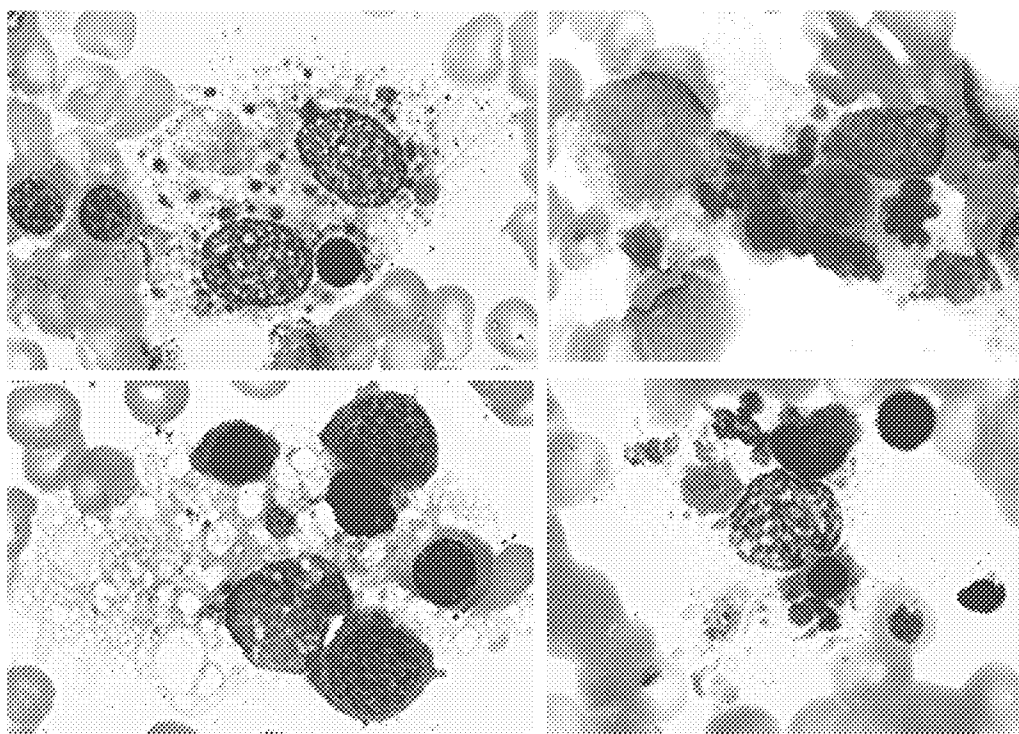


Fig. 4. Hematophagocytosis in benzene-induced dysplasia. Activated histiocytic cells within the BM exhibit prominent phagocytosis of degenerating erythroid and granulocytic cells which is indicative of an immuno-reactive inflammatory process. The histiocytes themselves do not appear atypical and generally exhibited a low nuclear cytoplasmic ratio with small nuclei containing condensed chromatin. BM aspirate slides stained with Wright-Giemsa (original magnification 1000 $\times$).

damage to hematopoietic progenitor cells exposed to intrinsic or environmental toxic agents that might lead to immunologic suppression of cell growth and maturation [2,38]. Transient anemia, cytopenias and dysplasia frequently occur in BM toxicity during or immediately following exposure to toxic agents. This usually is not associated with persistent disease and therefore, is not generally considered to be MDS [39–41]. However, our findings show that prolonged chronic exposure to high concentrations of benzene results in the development of a distinct form of dysplasia that differs from commonly defined subtypes of MDS and that can persist for years after cessation of benzene exposure.

Previous proposals to explain benzene carcinogenesis, including those from our laboratory, have presumed a role for

genetic injury in the origin of benzene-induced persistent toxicity and the development of AML [28,42–44]. Alternatively, our current results suggest the possibility that an autoimmune process may precede the acquisition of frank structural cytogenetic abnormalities and may be a predisposing event in the development of persistent BM disease following benzene exposure. Histological manifestations of benzene-induced dysplasia include multilineage dysplasia including severe dyserythropoiesis, stromal degeneration, alterations in BM T lymphocyte subsets, abnormal eosinophilic precursors and hematophagocytosis. Hematophagocytosis is associated with severe viral infection or inflammatory response and activation of immune cells [45]. Benzene-induced dysplasia is also accompanied by clonal and polyclonal proliferation of T

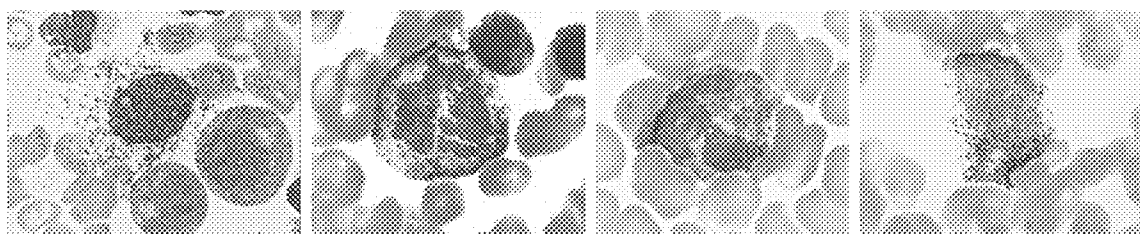


Fig. 5. Dysplastic changes in granulocytes in benzene-induced dysplasia. The BM and PB in the case series typically contain maturing myeloid cells with megaloblastic, hypo-segmented (pseudo Pelger-Huett) or hypersegmented nuclei. In some instances abnormal mitotic figures are present in granulocytes with mature cytoplasm. Cytoplasmic abnormalities include protruding pseudopodia which often trails cell bodies and abnormal cytoplasmic granulation in which large granules were unevenly distributed in clusters or margined directly beneath the plasma membrane. BM aspirate slides stained with Wright-Giemsa (original magnification 1000 $\times$).

lymphocytes in the BM which is indicative of an active immune process and has been described in a variety of immune-related conditions involving suppression of hematopoiesis including MDS [4,46,47]. The function of $\gamma\delta$ T cell subsets is largely unknown, although increases in $\gamma\delta$ T cells also have been observed in patients with BM failure, have been shown to modulate eosinophilic inflammation in other tissues and are known to be activated by TNF- α [35,37,48,49]. In this study, *TCR δ* expansions were accompanied by evidence of corresponding expansion of *TCR γ* gene rearrangements. However, confirmation of $\gamma\delta$ T cell subsets by heteroduplex analysis is required.

These observations indicate that previous chronic exposure to benzene is associated with the development of BM dysplasia, and suggest that a reactive inflammatory process may be involved in the suppression of hematopoiesis in persistent BM failure following chronic benzene exposure. These findings further suggest the possibility that markers of immune activation or inflammation may prove useful in monitoring the development or progression of benzene-induced dysplastic disease. Nevertheless, the role of altered immune regulation in the pathogenesis of benzene-induced dysplasia, as well as the identity of any putative antigens remain a mystery. The mechanisms of benzene-induced hematopoietic cell injury are not completely understood. However, a subpopulation of CD34⁺ BM cells that are responsive to granulocyte-macrophage colony-stimulating factor (GM-CSF) have been implicated as targets. Studies in our laboratory have shown that the benzene metabolite, hydroquinone, enhances cytokine-dependent clonal proliferation of a subpopulation of GM-CSF-responsive human CD34⁺ BM cells which appears to be mediated via the extracellular signal-regulated kinase/activation protein-1 signaling pathway (ERK/AP-1) [50–53]. Independently, hydroquinone also synergizes with TNF- α to produce apoptosis in human CD34⁺ hematopoietic progenitor cells (HPC) via a mechanism that involves the inhibition of NF- κ B [54].

In recent years occupational exposure to benzene in China has been significantly reduced with the current Chinese occupational exposure limit being 1.9 ppm as a time weighted average (TWA) with a short-term exposure limit (STEL) of 3.2 ppm. Despite these changes, exposures to high concentrations of benzene continue to occur, and subjects diagnosed with persistent BM dysplasia in this report represent only a small fraction of the individuals exposed to high concentrations of benzene in the facilities studied. Previous reports have suggested that genetic polymorphisms in metabolizing and detoxification enzymes may play a role in conferring susceptibility to benzene toxicity. However, preliminary results in our laboratory do not suggest a prominent role for these genetic variants in the development of benzene-induced BM dysplasia. Evaluation of the influence of polymorphisms in other genes, such as TNF- α , on susceptibility to benzene-induced BM dysplasia are ongoing in our laboratory. Continued characterization and follow-up of these subjects with benzene-induced dysplasia may provide insights into early

events associated with the pathogenesis, clonal selection and progression of persistent BM disease, including MDS and its potential progression to AML.

Acknowledgments

This work was funded by a grant from the Benzene Health Research Consortium and was conducted in cooperation with the Shanghai Hematology and Pathology Societies. We would like to thank the patients and the physicians who participated in our study. The participating hospitals included Huashan Hospital, Xinhua Hospital, Long March Hospital, Huang Pu Central Distract Hospital, Renji Hospital, Ruijin Hospital, Huadong Hospital, Jin An Central Hospital, No. 1 People's Hospital, No. 5 People's Hospital, No. 6 People's Hospital, No. 9 People's Hospital, Yang Pu Central Hospital, Zha Bei Central Hospital, Shu Guang Hospital, Chang Ning Central Hospital, Tong Ji Hospital, Shong Jin Central Hospital, Zhong Shan Hospital, Railway Hospital, Rong Hua Hospital, Changhai Hospital, Occupational Disease Hospital, Jiading Central Hospital, 455 Hospital, Shidong Hospital, No. 1 Baoshan Hospital, and Putuo Central Hospital. The authors gratefully acknowledge Dr. Philippa Marrack for helpful discussion. We would also like to extend appreciation to Allan Holsomback, and Mingde Ouyang for database management and Ann Loudon, Junfang Xie and Jiamin Liu for manuscript and clerical assistance. None of the authors are employees of or have financial interests in any facility studied in this report. T.W.A and Y.Z. are under subcontract to R.D.I. at UCHSC for technical expertise in industrial hygiene.

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From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, October 20, 2005 2:28 PM (GMT)
To: Guilan Li <guilanli@263.net.cn>
Cc: Jmricewas@aol.com; Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>
Subject: SRP/ERP Conference Call: Fri 21 Oct, start time: 10:00 pm

By copy to Shan ?May I ask a big favor? Would you please call Guilan Li, in case I may have mis-communicated these directions? Thank you!

Dear Guilan Li ?o:p>

Please join the SRP/ERP discussion tomorrow (Friday, October 21), at 10:00 PM local China time, by calling the United States: (770) 765-9147, and then entering conference code: 202-682-8319#

Day/Date: Friday, October 21

Start Time: 10:00pm China

Telephone number: 770-765-9147

Access code: 202-682-8319#

Best Regards - Bruce.

From: Guilan Li [mailto:guilanli@263.net.cn]
Sent: Wednesday, October 19, 2005 8:57 PM
To: Bruce Jarnot; benzene-srp@listserve.api.org; benzene-erp@listserve.api.org
Subject: Re: .. Conf Call: Fri 21 Oct, 7:00 AM.available for me
Importance: High

Bruce Jarnot, 您好!

It can be reached at 7 Am for Guilan Li at 86-10-83157363 (H).

Thanks

Li Guilan

===== 2005-10-19 04:43:47 您在来信中写道: =====

Shanghai Health Study ERP/SRP members -

SRP and ERP Panels will meet by conference call on Friday, 21 October ?local start times listed below ?with Jerry Rice, for pre-annual meeting update (see Agenda, below). Thank you for your feedback on availability for this call; schedules were heavily conflicted, however, and unfortunately no date worked well for everyone;

Date:

Friday, October 21st

Start time:

7:00 AM PDT Pacific Daylight Time
10:00 AM EDT Eastern Daylight Time
4:00 PM CEST Central European Summer Time
10:00 PM Shanghai China Time

Telephone number:

770-765-9147 (or US toll-free: 866-443-0059)

Access code:

202-682-8319#

Agenda:

1. Mid-year progress reports (previously distributed; also available from SHS web site):

-- Dr. Wong (Case Control report);
-- Dr. Irons (Disease Progression & Molecular Epidemiology report);
-- Dr. Fu (Exposure Assessment report);

2. Jerry Rice visited Fudan University briefly during September, by invitation, chiefly to see the future home that is being prepared for the Joint Clinical and Molecular Laboratory after consortium funding ends in December 2006. He will report on his visit, and on the current status of the standing proposal to the Consortium that all members of the Panels conduct a site visit to Shanghai;

3. Consortium request that the Panels review 損rogress to date?in light of original approved protocols;

4. Draft program for Nov. 1-3 Annual Research meeting (file attached).

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

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致
礼！

Guilan Li
guilanli@263.net.cn
2005-10-20

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, October 5, 2005 5:49 PM (GMT)
To: benzconsort-tc@listserve.api.org; Jmricewas@aol.com
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC-TC... *REMINDER* Conf Call: Fri 07 Oct, 3:30pm EDT

BHRC Technical Committee (TC) -

REMINDER

We have a TC Conference Call scheduled on Friday, October 7th at 3:30pm Eastern Daylight Time...

AGENDA

- Discuss Shanghai / Fudan site visit with Dr. Jerry Rice
- Review 3 mid-year Progress Reports
- Manuscript Review – revised proposal (see below)

CONFERENCE CALL

Date: Fri, 07 Oct
Time: 3:30 Eastern (2:30pm Central, 12:30pm Pacific)
Dial in: 1-770-765-9147
PIN: 2026828319#

NEW AGENDA ITEM – M'SCRIPT REVIEW

Michael Bird recommends that the TC consider alternate timing for sponsor review of SHS publications, suggesting that Shanghai Health Study (SHS) Investigators submit finished manuscripts to study sponsors **after acceptance for publication**, rather than "after scientific review and two weeks prior to submission for publication" as currently stated in the DP and ME protocols (excerpted below). Benefits include:

- 1) Scientific independence of the study may be further enhanced by isolating sponsors from any opportunity to preview manuscripts before they are accepted for publication;
- 2) Additional isolation of study sponsors may further limit potential disclosure of unpublished information, should manuscript review suggest the need for TSCA 8(e) health effect reporting.

3.2 Deliverables

A Publications

The principal product of this study shall be the generation of reports to be published in the peer-reviewed scientific literature. Manuscripts and abstracts prepared for this purpose will be submitted to the Scientific Review Panel for constructive advice and suggestions prior to submission for publication. US regulatory concerns about publishing industry-sponsored studies most often focus on the independence of study investigators. Finished manuscripts will be furnished to Study Sponsors after scientific review and two weeks prior to submission for publication. In any event, the final decision to edit or submit a manuscript for publication will reside exclusively with the Principal Investigator.

Best Regards - Bruce.

From: Matt Todd <ToddM@api.org>
Sent: Friday, September 30, 2005 6:39 PM (GMT)
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC Sept. 12 Conference Call Minutes
Attach: 2005-09-12_bhrc_oversight_minutes_draft.doc

BHRC Committee Members:

Please review the attached draft minutes from the September 12th conference call and send comments to me by COB October 14th.

Regards,
Matt

Matthew Todd
American Petroleum Institute
1220 L Street NW
Washington DC 20005
www.api.org

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Tuesday, November 8, 2005 11:05 PM (GMT)
To: Richard Irons (E-mail) <richard.iron@uchsc.edu>
Cc: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston (E-mail) <Mike.d.Johnston@ConocoPhillips.com>; Cagen, Stuart Z SCC-DCS/261 <sc724012@shell.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Colletti, Sarah J SCC-DCS/14 <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>
Subject: Shanghai Health Study Annual Meeting - Thanks

Richard,
On behalf of the Benzene Health Research Consortium, I want to extend our thanks for your participation in the SHS Annual Meeting and symposium. We appreciated your presentations and the opportunity to engage with you. Please extend our best wishes to your staff. We look forward to hearing about the continuing progress of the study.

Regards,

Patsy

Patsy Clegg
Product Steward, HSSE
Shell Chemical LP
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Tel: +1 713 241 2521 **Fax:** 3325
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Business Success through HSSE Excellence

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Tuesday, November 8, 2005 11:04 PM (GMT)
To: Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Matthew Todd (E-mail) <toddm@api.org>; Howard Feldman (E-mail) <feldmanh@api.org>; Lorraine Twerdok <twerdokl@api.org>
Cc: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-DCS/261 <sc724012@shell.com>; Colletti, Sarah J SCC-DCS/14 <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>
Subject: Shanghai Health Study Annual Meeting - Thanks

Dear API Staffers;

On behalf of the BHRC, I wish to extend our appreciation for your support in organizing the 3rd annual meeting of the SHS. Thanks for all your hard work.

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 **Fax:** 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>

Business Success through HSSE Excellence

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Tuesday, November 8, 2005 11:04 PM (GMT)
To: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; 'stephen.m.bowes@exxonmobil.com'
Cc: Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Donald M. Burnett PhD (E-mail) <burnetdm@bp.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-DCS/261 <sc724012@shell.com>; Colletti, Sarah J SCC-DCS/14 <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Michael Johnston (E-mail) <Mike.d.Johnston@ConocoPhillips.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>
Subject: Shanghai Health Study - Thank You XOM for Hosting

On behalf of the BHRC, I wish to extend our thanks and appreciation to ExxonMobil for hosting the Shanghai Health Study annual meeting. The facility and food were excellent. I know that many at XOM contributed and we want you to know that all the efforts help to contribute to a successful meeting.

Lynn, please extend our thanks to Mona.

Regards,

Patsy

Patsy Clegg
Product Steward, HSSE
Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916
Tel: +1 713 241 2521 **Fax:** 3325
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Internet: <http://www.shell.com/chemicals>
Business Success through HSSE Excellence

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, July 6, 2005 12:51 PM (GMT)
To: benzconsort-tc@listserve.api.org; Jerry Rice (E-mail) <Jmricewas@aol.com>
Subject: BHRC-TC... Conf Call w/ Dr. Rice - Thur 07 Jul, 3:00pm EDT
Attach: Letter to PIs & Panels re Nov 4 Public Meeting.doc

BHRC Technical Committee (TC) -

Seems we left last Thursday's OC call with some confusion regarding the new date / time for the Tech Committee conference call with Dr. Rice... so with a nod of assent from our Chair, we will convene a TC conference call tomorrow afternoon with Jerry Rice, to discuss the November 4th SHS Symposium at the Georgetown University Conference Center in Washington DC.

Please review the attached draft letter before the call; this updated version includes proposed revisions from Lynn Russo, intended to further clarify roles & responsibilities of industry sponsors / API / PIs.

AGENDA

- revised draft letter to speakers (attached file)
- agenda discussion
- presentations
- roles & responsibilities

CONFERENCE CALL

Date: Thursday, July 7th

Time: 3:00pm Eastern (2:00pm Central, 12:00pm Pacific)

Dial in: 1-770-765-9147

PIN: 2026828319#

Thank you! Bruce.

DRAFT 30 June 2005

**SHANGHAI
HEALTH
STUDY**

Jerry M. Rice, PhD
Chair, Scientific Review and
(2005) Ethics Review Panels
3213 Coquelin Terrace
Chevy Chase, Maryland 20815
Tel: +1-301-986-0659
Fax: +1-301-986-5438
E-mail: jmricewas@aol.com

[date]

**Public Symposium to describe the Shanghai Health Study
Georgetown University, Washington, DC
4 November 2005**

To: Senior Investigators, Shanghai Health Study
Members, Ethics Review Panel
Members, Scientific Review Panel

Dear Colleagues,

As you know, we have all been very interested in ensuring those potentially interested in the Shanghai Health Study (SHS) learn about its scope, structure and objectives before the research program is completed and final results are published. Your presence in the Washington area for the 2005 Annual Meeting provides an opportunity to convene a forum here to which non-SHS researchers and scientific staff of various U.S. Government agencies will be invited. The study sponsors have asked me to organize such a symposium.

Facilities suitable for the Symposium are available in the Leavey Conference Center at Georgetown University on Friday, November 4, the day after the Annual Meeting in Fairfax, Virginia. The Symposium would begin in the morning with a continental breakfast for all participants and conclude in the early afternoon. The principal purpose of this first letter is to advise you of these plans and to request that you plan to extend your visit to the Washington area one day beyond the conclusion of the Annual Research Meeting in order to attend and, where appropriate, participate actively in the Symposium.

The Symposium Program is now under development, and successive drafts of the agenda will be circulated to all of you for comment and suggestions. However, I will be inviting the senior Chinese and American SHS investigators to make the major presentations and asking that some members of the ERP and SRP participate by chairing sessions and making introductory remarks.

I look forward to your participation in what I anticipate will be a lively and interesting meeting.

With best regards,

Cc: [senior SHS administrative staff; Consortium Committees chairs]

SHELL-MCCLURG-052958

From: Matt Todd <ToddM@api.org> on behalf of shanghaihealthstudy <info@shanghaihealthstudy.org>
Sent: Wednesday, June 15, 2005 8:41 PM (GMT)
To: Tsai, Shan P SHLOIL-SHS <shan.tsai@shell.com>
Cc: Matt Todd <ToddM@api.org>
Subject: 2005 SHS Annual Meeting Invitation & Registration
Attach: 2005_Annual_Meeting_Invitation_BHRC_Tsai.pdf;
2005_SHS_Annual_Meeting_Registration.doc

Shan,

Please see the attached invitation and registration form to attend the 2005 SHS Annual Meeting. Please fill out this form and return to me via email or fax. Feel free to contact me with any questions you may have.

Best Regards,
Matt Todd

Matthew Todd
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street NW
Washington, DC 20005
p: (202)682-8319
f: (202)682-8031
www.api.org

SHANGHAI HEALTH STUDY

ANNUAL MEETING 1 - 3 NOVEMBER 2005

RESERVATION / REGISTRATION REQUEST

Title: _____

First Name: _____

Last Name: _____

Name for Badge: _____

Company or Affiliation: _____

Address: _____

Phone: _____ Fax: _____

Email: _____

ACCOMMODATIONS:

____ (I / We) plan to stay at the Ritz-Carlton in Tyson's Corner, Virginia.

Important: Participants are responsible for contacting the hotel directly to reserve a room. Please inform the hotel that you are with the Shanghai Health Study.

Hotel Information:

Phone: (703) 506-4300

Website: Ritz Carlton Tyson's Corner Reservations

I will arrive on: _____ Depart on: _____

ADDITIONAL GUESTS:

First and Last Name(s): _____

SPECIAL EVENTS:

(Yes / No) (I / We) will attend the reception and dinner at Maggiano's on Tuesday evening, Nov. 1st):
(# of adults ____ # of children ____)

(Yes / No) (I / We) will attend the dinner at Peking Gourmet Inn on Wednesday evening, Nov. 2nd:
(# of adults ____ # of children ____)

I (have / do not have) special needs. Please let us know how we can assist.

Please email completed registration form to todd@api.org or fax to Matt Todd at 202-682-8031

SHANGHAI HEALTH STUDY

Patsy Clegg
Oversight Committee Chair

1220 L Street, NW
Washington, DC 20005-4070
Tel: 202-682-8000
Fax: 202-682-8207
www.api.org

June 15, 2005

Shan Tsai
Shell Oil Company
POB 4365
Houston, TX

Dear Shan Tsai,

On behalf of the Benzene Health Research Consortium, I cordially request your participation in the 2005 Annual Shanghai Health Study Meeting. The meeting is organized to bring together all of the essential individuals that make this study successful which includes the principal investigators, independent review panel members, funding company representatives, and study administrators. Therefore, as a Technical Committee member, your presence is critical to the meeting's success.

The annual meeting will take place in Fairfax, Virginia on November 1st to 3rd, 2005. A hotel room has been reserved for you at the Ritz Carlton in Tyson's Corner, Virginia (1700 Tysons Boulevard, McLean, Virginia, 22102). The hotel is located approximately ten minutes from the nearby Exxon Mobil Corporation's facility (3225 Gallows Road, Fairfax, VA 22037) where all the annual meetings will take place.

Matt Todd, of the American Petroleum Institute, will follow up with you via e-mail to coordinate your arrival to attend this event. If you have any questions or need additional information, please contact Matt at toddm@api.org or call 1-202-682-8319. Thank you for your important contribution to the Shanghai Health Study and for your attendance at the third annual meeting.

Best regards,



Patsy Clegg
Oversight Committee Chair
Shell Chemical LP

From: Bruce Jarnot <jarnotb@api.org>
Sent: Thursday, March 4, 2004 5:24 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Matt Todd <ToddM@api.org>
Subject: BHRC-TC... DP & ME (Dr Irons') Dec 2003 Progress Report
Attach: DP ME Progress + Expense Rpt 12-03.doc; DP ME Progress Expense Rpt 12-03.pdf

Benzene Health Research Consortium (BHRC) Technical Committee (TC) -

Attached is Richard Iron's progress and expense report from the Disease Progression (DP) and Molecular Epidemiology (ME) portions of the Shanghai Health Study, presenting activities from the second-half, July - December, of 2003. The report is attached in both Microsoft Word (doc) and Adobe Acrobat (pdf) formats.

An abbreviated copy of this report, lacking only the front-end UCHSC expense information, was distributed to both the SRP & ERP expert panels.

By copy to Matt Todd, would you please add this report to the SHS website for Consortium Committee access... thanks!

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

PROGRESS REPORT
December 2003

**I. ANALYSIS OF DISEASE PROGRESSION FOR APLASTIC ANEMIA,
MYELOYDYSPLASTIC SYNDROME, ACUTE MYELOGENOUS LEUKEMIA
AND BENZENE POISONING IN SHANGHAI, CHINA**

**II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS IN
SHANGHAI, CHINA**

Richard D. Irons

A MULTICENTER INTERNATIONAL STUDY

Molecular Toxicology and Environmental Health Sciences Program
Dept. of Pharmaceutical Sciences, School of Pharmacy
Department of Pathology, School of Medicine
University of Colorado Health Sciences Center, Denver, CO.

—

School of Public Health, Hua Shan Hospital, Cancer Hospital,
Fudan University Medical Center, Shanghai, China

Overall Status of Budget

Comparison of actual to budget projections cited in this report were derived from the updated budget projections provided to API in September 2002 (Appendix A). JCML initiated clinical laboratory functions in 3rd quarter, with the case referral rate increasing progressively for a total of 225 during the last 5 months of 2003. Consequently, we are undergoing a transition in the budgetary tracking process and are continually evaluating resource allocation based on study contingencies.

During the second half of 2003 a total of \$1,077,479 was expensed compared to a projected budget of \$2,039,466. This resulted in \$961,987 in funds budgeted but not expensed during this period (Table 1). These figures are subject to modification pending an update of subcontract agreements that reflect post SRP budgetary expenditures as well as laboratory and field contingencies that we are currently addressing and that are discussed in the Progress Section.

Table 1. Budget Summary (Reporting Period)

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Category	Budgeted	Expenditures	Variance
Personnel	\$293,007	\$230,328	\$62,679
Operating Expenses	\$259,003	\$162,834	\$96,169
Subcontracts	\$988,733	\$565,870	\$422,863
Travel	\$4,127	\$0	\$4,127
Equipment	\$350,000	\$17,000	\$333,000
Indirect	\$144,596	\$101,447	\$43,149
TOTALS	\$2,039,466	\$1,077,479	\$961,987

The budgeted amounts are the sum of each category from Jun-03 through Dec-03.

Table 2. Budget Summary (Entire Project)

Totals from 9/01-12/03

Category	Budgeted	Expenditures	Variance
Personnel	\$1,369,623	\$1,255,819	\$113,804
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PERSONNEL

Savings in personnel are temporary and reflect some reshuffling of staff activities. The administrative costs of the project continue to increase in order to keep pace with administrative, accounting and regulatory requirements. In addition, we periodically have to make late phase changes in the database as well as provide continuing daily maintenance of the computer network, both at UCHSC and in Shanghai. Also, because of Chinese import restrictions, we are routinely required to negotiate and administer contracts and requisition of much of the supplies and reagents for JCML from UCHSC and then ship them to China. We are using this strategy approximately twice as much as we originally planned due to inefficiencies in Chinese purchasing/import practices. To date this has resulted in some cost shifting but no demonstrable budgetary excursions as reflected in the summary tables.

JCML OPERATING EXPENSE/CASE-SPECIFIC COSTS

Operating expenses are beginning to escalate to keep pace with JCML laboratory activities and case accrual. We are monitoring these activities with a view toward evaluating their impact on the overall budget. We have made some headway in developing a mechanism to track subject-specific diagnostic and case accrual costs and have made a tentative comparison between our original budgetary projections and JCML operating expenses and subject costs for the 4th quarter of 2003, which is the first quarter we have experienced full laboratory clinical operation. Our original 4th quarter estimated subject costs were \$268,618 versus actuals of \$262,700. In contrast, our 4th quarter estimated personnel and maintenance costs for Fudan were \$81,363 versus actuals of \$138,384. The latter includes charges for minor equipment as well as reorganization of the CC, DP and ME exposure assessment teams discussed below.

SUBCONTRACTS

We are currently extending the agreement with ExxonMobil Biomedical. All others have been renewed through 2004. We are anticipating a significant redistribution of workscope among Chinese subcontractors that will be reflected in the 2004 budget.

EQUIPMENT

Equipment funds were originally budgeted for December 2003 in order to deal with contingencies we anticipated developing after laboratory start up. These expenses were postponed due to the delay in startup. However, with late breaking changes described in the Progress Section we anticipate that the majority of these funds will be expensed in 2004 as originally planned.

Appendix A.

China Project Budget Projections provided API in September 2002.

	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Totals
Personnel												
Budgeted	\$172,140	\$224,883	\$348,277	\$331,316	\$293,007	\$282,480	\$297,450	\$293,713	\$310,768	\$298,684	\$244,179	\$3,096,897
Operating Expenses												
Budgeted	\$13,131	\$94,401	\$284,061	\$198,373	\$259,003	\$228,529	\$268,289	\$252,851	\$301,653	\$277,143	\$151,160	\$2,328,595
Subcontracts												
Budgeted	\$123,629	\$688,452	\$1,106,578	\$549,014	\$988,733	\$449,506	\$934,456	\$453,377	\$860,043	\$415,102	\$202,694	\$6,771,584
Travel												
Budgeted	\$0	\$8,429	\$15,518	\$11,340	\$4,127	\$3,418	\$4,245	\$0	\$1,852	\$1,945	\$0	\$50,873
Equipment												
Budgeted	\$291,568	\$253,578	\$665,067	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560,213
Indirect												
Budgeted	\$47,922	\$111,454	\$168,442	\$140,668	\$144,596	\$133,751	\$148,196	\$142,107	\$159,711	\$150,221	\$102,788	\$1,449,855
TOTALS												
Budgeted	\$648,390	\$1,381,197	\$2,587,943	\$1,230,711	\$2,039,465	\$1,097,683	\$1,652,637	\$1,142,048	\$1,634,027	\$1,143,094	\$700,822	\$15,258,017

PROGRESS REPORT

JCML Laboratory Clinical Activities

JCML began routine full service clinical operations around the beginning of August 2003. These activities include: routine hematology, bone marrow aspirate analysis, bone marrow and lymph node histopathology, clinical chemistry-liver enzymes, serology, flow cytometric analysis of blood, bone marrow and lymph node preparations, cytogenetics, FISH and molecular genetics. As of December 31st, after the first 5 months of operations, approximately 190 cases had been referred to JCML for diagnosis as part of the clinical operation. (The case contact rate has continued to increase with over 270 cases having been seen by the end of 6 months.) An external pathology review was conducted in October 2003. As of October 31, 106 cases have successfully undergone secondary pathology review. Preliminary estimates suggest approximately a 50% concordance between initial hospital case diagnosis (if any) and the JCML diagnosis, and in excess of a 90% concordance between the JCML diagnosis and secondary pathology review. The latter is an acceptable standard of concordance between US laboratories.

Clinical Service Statistics

An important measure of clinical laboratory service performance is the time from sample collection to the availability of test results (i.e. turn-around times (TAT)). The TAT for routine hematology in support of the 23 referring hospitals is normally under 2 hours with no excursions in routine clinical cases beyond 4 hours as of 12/31/03. Routine analyses of bone marrow aspirates average 3-7 days. For acute cases, preliminary aspirate analyses are available within 1-3 days. Flow cytometric analysis of bone marrow or lymph node preparations are completed within 1-4 days. The TAT for cytogenetics analyses averages 6-10 days with 70-80% being completed within 7 days. FISH analyses are 90% completed within less than 7 days. For acute cases, cytogenetics are completed within 5 days and FISH analyses within 2-3 days. The AML abnormal frequency rate is 57.14% for cytogenetics and 60% combined for cytogenetics and FISH. For the lymphoma cases, the abnormal cytogenetics rate is close to 80%. These statistics exceed the performance of most US clinical laboratories. The TAT for bone marrow or lymph node histology is 5-7 days. At present, the TAT for bone marrow or lymph node histology is 5-7 days and case-specific availability of control slides is spotty. This is not an acceptable standard of performance, and efforts are underway to correct the situation.

DNA and RNA are routinely isolated from samples received the same day, with all samples processed within 24 hours. Random RNA samples are subjected to electrophoresis, with visual confirmation of the 18S and 28S fractions demonstrating quality RNA. Additional quality control for DNA samples is provided by the amplification of the FLT-3 gene, performed on all samples from a given week on the first day of the following week. At present, routine molecular analyses performed in the laboratory include analysis of FLT-3 internal tandem duplication by PCR and FLT-3

amino acid substitution at D835 using RFLP, BCR/ABL confirmation by rtPCR, and TCR beta or gamma chain gene rearrangements by PCR and hetero/homoduplex analysis. Additional study mandated molecular analyses (e.g. HHV8, NQ01) are not time sensitive and will be processed as time allows.

Initially, MNC from all blood and bone marrow samples coming into JCML were preserved in two aliquots each using 3-4 ml of starting material. This volume of starting material is sub optimal. However, randomly selected samples demonstrate greater than 90% viability upon thawing. Initial EBV viral lots harvested from cells obtained in Shanghai have failed to transform both patient samples and test samples. Therefore, EBV supernatant was prepared in Colorado and shipped to Shanghai. This material has been used to successfully immortalize test cultures. Efforts are underway to increase the transformation efficiency of the culturing process and increase the starting blood sample volume. Patient cultures are now in the process of being immortalized using MNC that have been cryopreserved for subsequent immortalization. Sample thawing viability for December was determined to be 99.4%.

Case Control (CC) /Disease Progression (DP) Case Accrual

By December 31st approximately 190 cases were referred to JCML for diagnosis as part of the clinical operation, and, as of October 31, 106 cases have successfully undergone secondary pathology review. The case contact rate has not reached a steady state but continues to increase with over 270 cases accrued by the end of 6 months. Diagnoses qualifying for inclusion in the CC or DP studies represented 83% of the total case contacts with 17% of cases being diagnosed as non-qualifying or excluded conditions. Individual disease diagnoses included: AML 42, NHL 66, AA 17, and MDS 26. Again, these numbers should be interpreted with caution because JCML has not yet reached a steady state with respect to rate of clinical case accrual. Whether this reflects a progressively increasing case accrual or fluctuating admissions is not understood at this time.

Exposure Assessment

A variety of problems associated with procedure de-bugging, coordination and implementation led to an initial lag in exposure assessment operations relative to JCML case accrual. Early on, these issues were magnified by the high case accrual rate. However, we have re-organized the exposure assessment teams, which have undergone additional training and are now operational. By mid-January over 460 subjects had been entered into the exposure assessment program. The first stage assignment (exposed, unexposed, uncertain) produced a rapid initial sorting. From that stage, 12 subjects were classified as "exposed" for benzene, and are undergoing a more thorough quantitative assessment. The "uncertain" category included 67 subjects for which further information is needed (e.g. review of IPHS database work site inspections). Many of these uncertain ratings are expected to be transferred into the "benzene exposed" category. An additional 35 "other exposures" (i.e. other workplace hazards of concern besides benzene) have

been identified and classified and another 270 subjects were classified as having no exposure or “unexposed”.

Independently, the Exposure Assessment (EA) team has compiled the Chinese literature for information on benzene exposure. District IPHS written records (not in the central database) and specific factory records are also being located. A Fudan team member has also initiated quality assurance overviews for the IPHS database searching process.

Control Selection for CC/DP

We have periodically reviewed the demographic characteristics and diagnoses for controls in order to ensure that procedures outlined in the protocol are being implemented correctly in the field. These periodic audits have shown that the matching criteria are being followed (*i.e.* controls are being successfully matched according to age and gender). However, we have determined that, on occasion, the protocol is not uniformly applied in all hospitals. Specifically, the selection of a control subject with the closest time of admission to that of a study subject is not always adhered to. Therefore, we met with clinical coordinators and reemphasized the control selection procedure with regard to time of admission/diagnosis. Some hospitals do not have a central admissions log, making it impossible to ensure that the control with the closest time of diagnosis is identified. In lieu of this, we are currently reviewing the procedures in every hospital separately, to assess whether there is any systematic bias in selecting controls.

Molecular Epidemiology (ME) Study

Phase 1 activities. The longitudinal exposure analysis of workers is progressing well. We have been successful in identifying several factories from which benzene workers were examined by hospitals over the past several years, and have correlated these with benzene monitoring data in the IPHS database. Professor Ni has identified a subset of factories that historically may have experienced high concentrations of benzene exposure. These are being investigated on a factory-by-factory basis. To date, we have identified a small number of facilities that have both good monitoring data and good medical records. A review and abstraction of medical records for workers in these facilities is underway. In addition, we also have located the medical records for 194 individual cases of benzene poisoning that presented at local hospitals over approximately the past 5 years. Analysis of this data set has begun, and medical record retrieval and abstraction is underway for all of these activities.

Phase 2a and 2b activities. We have recruited some workers to Phase 2a as part of a screening survey and an intensive two-week exposure analysis of a high exposure rubber products factory. Additional factory identification and recruitment activities are underway. Factory participation for Phase 2b has proven to be more difficult than initially envisioned. We originally anticipated recruiting subjects from adjacent or even distant provinces. Accordingly we are now simultaneously exploring suitable facilities,

both in Shanghai and outside Shanghai. In addition, although originally we planned to rely heavily on IPHS staff to introduce the project to Factory Management we are currently evaluating several sites outside Shanghai, based on initial contact by Professor Ni, President of the Chinese Academy of Occupational Medicine.

Benzene and Metabolite Analyses

At UCHSC we set out to develop a minimal step method for the extraction and quantitation of the benzene metabolites from blood and bone marrow: phenol (PH), catechol (CAT), hydroquinone (HQ) and trans,trans-muconic acid (MA). The rationale for this approach was to design the simplest procedures possible for extraction and analysis of these compounds that facilitate implementation in Shanghai, utilizing existing instrumentation (GC/MS). Our reasoning proved to be prescient. The final method was based on liquid phase extraction with ascorbic acid, acetonitrile and toluene. Deuterated derivatives for each metabolite were purchased or synthesized and employed as internal standards. The limit of detection for PH, CAT and HQ in blood samples was in the nanogram range. There is no commercial source for deuterated trans,trans-muconic acid-[1,2,5,6-¹³C]. Therefore synthesis was achieved by refluxing a solution of triphenylphosphine and ethyl[1,2-¹³C₂]bromoacetate in a mixture of acetonitrile and dichloromethane (ml) that was washed, dehydrated over magnesium sulfate and dissolved in dimethylformamide (DMF) to which glyoxal trimeric dehydrate was added to give the muconic acid diethyl ester. This was then dissolved in THF and lithium hydroxide in water. The solvents were evaporated under reduced pressure and the residue was suspended in a mixture of toluene and hydrochloric acid (pH 2.0). Publication of the method and analysis of background levels of benzene metabolites in the blood and bone marrow of unexposed volunteers awaits measurements that are still forthcoming from SMCDP and that have been frustrated by events at SMCDP discussed below.

Following on the recommendation of the SRP at the annual meeting in August, we investigated the possibility of measuring sPMA in urine of ME Phase 2b subjects. A direct, linear relationship exists between the internal dose of benzene and the rate of excretion of sPMA. Urinary sPMA is therefore an useful biomarker of exposure to benzene. The measurement can be easily performed using a small volume of urine, collected at an appropriate time relative to potential exposure. The strategy we have adopted for analysis of urinary sPMA is an enzyme-linked immunoabsorbant assay (ELISA). Therefore, we have negotiated a site license to employ ELISA assay owned by AB Biomonitoring, Ltd, Cardiff, UK. This methodology will be implemented following approval of the addition of urinary collection to our Phase 2b clinical protocol.

*****Recent Development as/of February 19, 2004*****

Despite two years time, the SMCDC has failed to successfully adapt these analytical methods for analysis of blood and bone marrow, and, for that matter, has not provided entirely satisfactory results for the measurement of benzene in air or any results for

exhaled breath analysis. The stated reasons are many, including serious illness in senior technical personnel resulting in a chronic lack of leadership, instrumentation problems that remain unresolved, and the inability or lack of resolve to commit adequate personnel and time to the project. We recently completed a detailed analysis of CDC analytical capability that included inspection and review of methods and procedures by Professor Zheng Xixing of Fudan University and David Chang of ExxonMobil. We have concluded that CDC has provided less than desired performance for analytical support for benzene or benzene metabolites. Among the issues that remain unresolved are: 1) in all cases, standard curves remain inadequate and are extrapolated from high values; 2) split sample analysis reveals an unacceptable and consistently low bias in contrast to paired samples analyzed by an AIHA certified laboratory; 3) despite several deadlines and adequate guidance they have not developed a satisfactory method of analysis for benzene in exhaled breath or benzene metabolites in blood and bone marrow. These issues have been the subject of frequent discussion with SMCDC staff and management as they have unfolded over the last year. Therefore, after protracted negotiations and little sign of success, we have terminated our agreement with SMCDC to conduct analyses as part of the project. We are collaborating with Fudan University to transfer all analytical activities to JCML with a minimum of delay. Because this is a very recent development we have not had an opportunity to evaluate every impact that this contingency will have on the project.

Quality Assessment Issues

Elements of QA/QC have been referred to throughout this report as they specifically refer to other areas, such as Exposure Assessment, Control Selection, JCML clinical laboratory operations and benzene metabolism. In order to improve overall coordination, professor Liang Youxin has been assigned the task of supervising QA/QC for exposure assessment, and the data entry process has been streamlined. Gail Joregenson from Exxonmobil visited JCML in early 2004 to consult with and evaluate the overall process and to coordinate late phase database changes which will be reported in the next progress report.

Conclusions

During the last 6 months we have successfully begun JCML clinical and research operations and are routinely diagnosing blood and lymphoid diseases for the 23 participating hospitals in Shanghai. Operating a combined clinical and research laboratory of this magnitude in the local Shanghai environment creates a number of unique challenges. In most areas of clinical operation, based on objective criteria, we meet or exceed the standards of many of our US counterparts. We have successfully undergone our first external pathology diagnostic review, which was a milestone. We are preparing for the second review which will be conducted in April 2004. In the research arena all processes are up to speed except immortalization of cell lines. For EBV immortalization, the problems have been identified and largely resolved as of February, 2004. In some clinical areas we need to provide additional support, training for and coordination with our clinicians and laboratory colleagues in Shanghai in order to

improve local standards of practice to meet CAP operational criteria. These relatively small details will continue to be addressed, but for the moment we are on track and functional. I believe we are on the way to becoming both a US and Chinese referral laboratory. The caseload number and variety of diseases encountered is remarkable. We are accruing an acceptable or greater than predicted number of study cases based on our initial projections, and the rate continues to grow.

Control selection for CC/DP has required additional training and orientation of clinical coordinators and the recognition that the 23 participating hospitals have markedly different capabilities and standards when it comes to tracking patient admissions. We are developing individualized approaches to deal with these issues and standardize as much as possible the control selection process. Exposure assessment under the leadership of the Fudan team got off to a predictably slower start than JCML. Progress on EA improved after we reorganized the exposure assessment operation and conducted an intensive training initiative to streamline the process. This effort has been a collaborative one, requiring the expertise and attention of all the major US collaborators on this project as well as our colleagues at Fudan University. The EA operation is improving with a renewed understanding of the need for ongoing training and continued guidance by US personnel. Although we have had very good experiences interacting with and recruiting factory workers, we have experienced some challenges in encouraging factory management participation in the ME study. We have taken a multifaceted approach to dealing with this process including: attempting to fine tune the approach of IPHS to initiating factory involvement, exploring political solutions, actively pursuing leads outside of town.

It has come as somewhat of a surprise that our biggest challenge has turned out to be obtaining high quality analytical support. However, in the absence of any demonstrable improvement in SMCDGP analytical capabilities over the past year, the need for a change in tactics has become imminent. Our immediate focus is on achieving a rapid and efficient transition to bring the analytical capabilities necessary for the project on line at JCML. To this end we are experiencing active cooperation and support from Fudan University. The goal is to have this implemented before the next 6 month reporting period. Analytical support for benzene air monitoring should be implemented faster than that.

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A MULTICENTER INTERNATIONAL STUDY

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PERSONNEL

Savings in personnel are temporary and reflect some reshuffling of staff activities. The administrative costs of the project continue to increase in order to keep pace with administrative, accounting and regulatory requirements. In addition, we periodically have to make late phase changes in the database as well as provide continuing daily maintenance of the computer network, both at UCHSC and in Shanghai. Also, because of Chinese import restrictions, we are routinely required to negotiate and administer contracts and requisition of much of the supplies and reagents for JCML from UCHSC and then ship them to China. We are using this strategy approximately twice as much as we originally planned due to inefficiencies in Chinese purchasing/import practices. To date this has resulted in some cost shifting but no demonstrable budgetary excursions as reflected in the summary tables.

JCML OPERATING EXPENSE/CASE-SPECIFIC COSTS

Operating expenses are beginning to escalate to keep pace with JCML laboratory activities and case accrual. We are monitoring these activities with a view toward evaluating their impact on the overall budget. We have made some headway in developing a mechanism to track subject-specific diagnostic and case accrual costs and have made a tentative comparison between our original budgetary projections and JCML operating expenses and subject costs for the 4th quarter of 2003, which is the first quarter we have experienced full laboratory clinical operation. Our original 4th quarter estimated subject costs were \$268,618 versus actuals of \$262,700. In contrast, our 4th quarter estimated personnel and maintenance costs for Fudan were \$81,363 versus actuals of \$138,384. The latter includes charges for minor equipment as well as reorganization of the CC, DP and ME exposure assessment teams discussed below.

SUBCONTRACTS

We are currently extending the agreement with ExxonMobil Biomedical. All others have been renewed through 2004. We are anticipating a significant redistribution of workscope among Chinese subcontractors that will be reflected in the 2004 budget.

EQUIPMENT

Equipment funds were originally budgeted for December 2003 in order to deal with contingencies we anticipated developing after laboratory start up. These expenses were postponed due to the delay in startup. However, with late breaking changes described in the Progress Section we anticipate that the majority of these funds will be expensed in 2004 as originally planned.

Appendix A.

China Project Budget Projections provided API in September 2002.

	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Totals
Personnel												
Budgeted	\$172,140	\$224,883	\$348,277	\$331,316	\$293,007	\$282,480	\$297,450	\$293,713	\$310,768	\$298,684	\$244,179	\$3,096,897
Operating Expenses												
Budgeted	\$13,131	\$94,401	\$284,061	\$198,373	\$259,003	\$228,529	\$268,289	\$252,851	\$301,653	\$277,143	\$151,160	\$2,328,595
Subcontracts												
Budgeted	\$123,629	\$688,452	\$1,106,578	\$549,014	\$988,733	\$449,506	\$934,456	\$453,377	\$860,043	\$415,102	\$202,694	\$6,771,584
Travel												
Budgeted	\$0	\$8,429	\$15,518	\$11,340	\$4,127	\$3,418	\$4,245	\$0	\$1,852	\$1,945	\$0	\$50,873
Equipment												
Budgeted	\$291,568	\$253,578	\$665,067	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560,213
Indirect												
Budgeted	\$47,922	\$111,454	\$168,442	\$140,668	\$144,596	\$133,751	\$148,196	\$142,107	\$159,711	\$150,221	\$102,788	\$1,449,855
TOTALS												
Budgeted	\$648,390	\$1,381,197	\$2,587,943	\$1,230,711	\$2,039,465	\$1,097,683	\$1,652,637	\$1,142,048	\$1,634,027	\$1,143,094	\$700,822	\$15,258,017

PROGRESS REPORT

JCML Laboratory Clinical Activities

JCML began routine full service clinical operations around the beginning of August 2003. These activities include: routine hematology, bone marrow aspirate analysis, bone marrow and lymph node histopathology, clinical chemistry-liver enzymes, serology, flow cytometric analysis of blood, bone marrow and lymph node preparations, cytogenetics, FISH and molecular genetics. As of December 31st, after the first 5 months of operations, approximately 190 cases had been referred to JCML for diagnosis as part of the clinical operation. (The case contact rate has continued to increase with over 270 cases having been seen by the end of 6 months.) An external pathology review was conducted in October 2003. As of October 31, 106 cases have successfully undergone secondary pathology review. Preliminary estimates suggest approximately a 50% concordance between initial hospital case diagnosis (if any) and the JCML diagnosis, and in excess of a 90% concordance between the JCML diagnosis and secondary pathology review. The latter is an acceptable standard of concordance between US laboratories.

Clinical Service Statistics

An important measure of clinical laboratory service performance is the time from sample collection to the availability of test results (*i.e.* turn-around times (TAT)). The TAT for routine hematology in support of the 23 referring hospitals is normally under 2 hours with no excursions in routine clinical cases beyond 4 hours as of 12/31/03. Routine analyses of bone marrow aspirates average 3-7 days. For acute cases, preliminary aspirate analyses are available within 1-3 days. Flow cytometric analysis of bone marrow or lymph node preparations are completed within 1-4 days. The TAT for cytogenetics analyses averages 6-10 days with 70-80% being completed within 7 days. FISH analyses are 90% completed within less than 7 days. For acute cases, cytogenetics are completed within 5 days and FISH analyses within 2-3 days. The AML abnormal frequency rate is 57.14% for cytogenetics and 60% combined for cytogenetics and FISH. For the lymphoma cases, the abnormal cytogenetics rate is close to 80%. These statistics exceed the performance of most US clinical laboratories. The TAT for bone marrow or lymph node histology is 5-7 days. At present, the TAT for bone marrow or lymph node histology is 5-7 days and case-specific availability of control slides is spotty. This is not an acceptable standard of performance, and efforts are underway to correct the situation.

DNA and RNA are routinely isolated from samples received the same day, with all samples processed within 24 hours. Random RNA samples are subjected to electrophoresis, with visual confirmation of the 18S and 28S fractions demonstrating quality RNA. Additional quality control for DNA samples is provided by the amplification of the FLT-3 gene, performed on all samples from a given week on the first day of the following week. At present, routine molecular analyses performed in the laboratory include analysis of FLT-3 internal tandem duplication by PCR and FLT-3

amino acid substitution at D835 using RFLP, BCR/ABL confirmation by rtPCR, and TCR beta or gamma chain gene rearrangements by PCR and hetero/homoduplex analysis. Additional study mandated molecular analyses (e.g. HHV8, NQ01) are not time sensitive and will be processed as time allows.

Initially, MNC from all blood and bone marrow samples coming into JCML were preserved in two aliquots each using 3-4 ml of starting material. This volume of starting material is sub optimal. However, randomly selected samples demonstrate greater than 90% viability upon thawing. Initial EBV viral lots harvested from cells obtained in Shanghai have failed to transform both patient samples and test samples. Therefore, EBV supernatant was prepared in Colorado and shipped to Shanghai. This material has been used to successfully immortalize test cultures. Efforts are underway to increase the transformation efficiency of the culturing process and increase the starting blood sample volume. Patient cultures are now in the process of being immortalized using MNC that have been cryopreserved for subsequent immortalization. Sample thawing viability for December was determined to be 99.4%.

Case Control (CC) /Disease Progression (DP) Case Accrual

By December 31st approximately 190 cases were referred to JCML for diagnosis as part of the clinical operation, and, as of October 31, 106 cases have successfully undergone secondary pathology review. The case contact rate has not reached a steady state but continues to increase with over 270 cases accrued by the end of 6 months. Diagnoses qualifying for inclusion in the CC or DP studies represented 83% of the total case contacts with 17% of cases being diagnosed as non-qualifying or excluded conditions. Individual disease diagnoses included: AML 42, NHL 66, AA 17, and MDS 26. Again, these numbers should be interpreted with caution because JCML has not yet reached a steady state with respect to rate of clinical case accrual. Whether this reflects a progressively increasing case accrual or fluctuating admissions is not understood at this time.

Exposure Assessment

A variety of problems associated with procedure de-bugging, coordination and implementation led to an initial lag in exposure assessment operations relative to JCML case accrual. Early on, these issues were magnified by the high case accrual rate. However, we have re-organized the exposure assessment teams, which have undergone additional training and are now operational. By mid-January over 460 subjects had been entered into the exposure assessment program. The first stage assignment (exposed, unexposed, uncertain) produced a rapid initial sorting. From that stage, 12 subjects were classified as "exposed" for benzene, and are undergoing a more thorough quantitative assessment. The "uncertain" category included 67 subjects for which further information is needed (e.g. review of IPHS database work site inspections). Many of these uncertain ratings are expected to be transferred into the "benzene exposed" category. An additional 35 "other exposures" (i.e. other workplace hazards of concern besides benzene) have

been identified and classified and another 270 subjects were classified as having no exposure or “unexposed”.

Independently, the Exposure Assessment (EA) team has compiled the Chinese literature for information on benzene exposure. District IPHS written records (not in the central database) and specific factory records are also being located. A Fudan team member has also initiated quality assurance overviews for the IPHS database searching process.

Control Selection for CC/DP

We have periodically reviewed the demographic characteristics and diagnoses for controls in order to ensure that procedures outlined in the protocol are being implemented correctly in the field. These periodic audits have shown that the matching criteria are being followed (*i.e.* controls are being successfully matched according to age and gender). However, we have determined that, on occasion, the protocol is not uniformly applied in all hospitals. Specifically, the selection of a control subject with the closest time of admission to that of a study subject is not always adhered to. Therefore, we met with clinical coordinators and reemphasized the control selection procedure with regard to time of admission/diagnosis. Some hospitals do not have a central admissions log, making it impossible to ensure that the control with the closest time of diagnosis is identified. In lieu of this, we are currently reviewing the procedures in every hospital separately, to assess whether there is any systematic bias in selecting controls.

Molecular Epidemiology (ME) Study

Phase 1 activities. The longitudinal exposure analysis of workers is progressing well. We have been successful in identifying several factories from which benzene workers were examined by hospitals over the past several years, and have correlated these with benzene monitoring data in the IPHS database. Professor Ni has identified a subset of factories that historically may have experienced high concentrations of benzene exposure. These are being investigated on a factory-by-factory basis. To date, we have identified a small number of facilities that have both good monitoring data and good medical records. A review and abstraction of medical records for workers in these facilities is underway. In addition, we also have located the medical records for 194 individual cases of benzene poisoning that presented at local hospitals over approximately the past 5 years. Analysis of this data set has begun, and medical record retrieval and abstraction is underway for all of these activities.

Phase 2a and 2b activities. We have recruited some workers to Phase 2a as part of a screening survey and an intensive two-week exposure analysis of a high exposure rubber products factory. Additional factory identification and recruitment activities are underway. Factory participation for Phase 2b has proven to be more difficult than initially envisioned. We originally anticipated recruiting subjects from adjacent or even distant provinces. Accordingly we are now simultaneously exploring suitable facilities,

both in Shanghai and outside Shanghai. In addition, although originally we planned to rely heavily on IPHS staff to introduce the project to Factory Management we are currently evaluating several sites outside Shanghai, based on initial contact by Professor Ni, President of the Chinese Academy of Occupational Medicine.

Benzene and Metabolite Analyses

At UCHSC we set out to develop a minimal step method for the extraction and quantitation of the benzene metabolites from blood and bone marrow: phenol (PH), catechol (CAT), hydroquinone (HQ) and trans,trans-muconic acid (MA). The rationale for this approach was to design the simplest procedures possible for extraction and analysis of these compounds that facilitate implementation in Shanghai, utilizing existing instrumentation (GC/MS). Our reasoning proved to be prescient. The final method was based on liquid phase extraction with ascorbic acid, acetonitrile and toluene. Deuterated derivatives for each metabolite were purchased or synthesized and employed as internal standards. The limit of detection for PH, CAT and HQ in blood samples was in the nanogram range. There is no commercial source for deuterated trans,trans-muconic acid-[1,2,5,6-¹³C]. Therefore synthesis was achieved by refluxing a solution of triphenylphosphine and ethyl[1,2-¹³C₂]bromoacetate in a mixture of acetonitrile and dichloromethane (ml) that was washed, dehydrated over magnesium sulfate and dissolved in dimethylformamide (DMF) to which glyoxal trimeric dehydrate was added to give the muconic acid diethyl ester. This was then dissolved in THF and lithium hydroxide in water. The solvents were evaporated under reduced pressure and the residue was suspended in a mixture of toluene and hydrochloric acid (pH 2.0). Publication of the method and analysis of background levels of benzene metabolites in the blood and bone marrow of unexposed volunteers awaits measurements that are still forthcoming from SMCDP and that have been frustrated by events at SMCDP discussed below.

Following on the recommendation of the SRP at the annual meeting in August, we investigated the possibility of measuring sPMA in urine of ME Phase 2b subjects. A direct, linear relationship exists between the internal dose of benzene and the rate of excretion of sPMA. Urinary sPMA is therefore an useful biomarker of exposure to benzene. The measurement can be easily performed using a small volume of urine, collected at an appropriate time relative to potential exposure. The strategy we have adopted for analysis of urinary sPMA is an enzyme-linked immunoabsorbant assay (ELISA). Therefore, we have negotiated a site license to employ ELISA assay owned by AB Biomonitoring, Ltd, Cardiff, UK. This methodology will be implemented following approval of the addition of urinary collection to our Phase 2b clinical protocol.

*****Recent Development as/of February 19, 2004*****

Despite two years time, the SMCDC has failed to successfully adapt these analytical methods for analysis of blood and bone marrow, and, for that matter, has not provided entirely satisfactory results for the measurement of benzene in air or any results for

exhaled breath analysis. The stated reasons are many, including serious illness in senior technical personnel resulting in a chronic lack of leadership, instrumentation problems that remain unresolved, and the inability or lack of resolve to commit adequate personnel and time to the project. We recently completed a detailed analysis of CDC analytical capability that included inspection and review of methods and procedures by Professor Zheng Xixing of Fudan University and David Chang of ExxonMobil. We have concluded that CDC has provided less than desired performance for analytical support for benzene or benzene metabolites. Among the issues that remain unresolved are: 1) in all cases, standard curves remain inadequate and are extrapolated from high values; 2) split sample analysis reveals an unacceptable and consistently low bias in contrast to paired samples analyzed by an AIHA certified laboratory; 3) despite several deadlines and adequate guidance they have not developed a satisfactory method of analysis for benzene in exhaled breath or benzene metabolites in blood and bone marrow. These issues have been the subject of frequent discussion with SMCDC staff and management as they have unfolded over the last year. Therefore, after protracted negotiations and little sign of success, we have terminated our agreement with SMCDC to conduct analyses as part of the project. We are collaborating with Fudan University to transfer all analytical activities to JCML with a minimum of delay. Because this is a very recent development we have not had an opportunity to evaluate every impact that this contingency will have on the project.

Quality Assessment Issues

Elements of QA/QC have been referred to throughout this report as they specifically refer to other areas, such as Exposure Assessment, Control Selection, JCML clinical laboratory operations and benzene metabolism. In order to improve overall coordination, professor Liang Youxin has been assigned the task of supervising QA/QC for exposure assessment, and the data entry process has been streamlined. Gail Joregenson from Exxonmobil visited JCML in early 2004 to consult with and evaluate the overall process and to coordinate late phase database changes which will be reported in the next progress report.

Conclusions

During the last 6 months we have successfully begun JCML clinical and research operations and are routinely diagnosing blood and lymphoid diseases for the 23 participating hospitals in Shanghai. Operating a combined clinical and research laboratory of this magnitude in the local Shanghai environment creates a number of unique challenges. In most areas of clinical operation, based on objective criteria, we meet or exceed the standards of many of our US counterparts. We have successfully undergone our first external pathology diagnostic review, which was a milestone. We are preparing for the second review which will be conducted in April 2004. In the research arena all processes are up to speed except immortalization of cell lines. For EBV immortalization, the problems have been identified and largely resolved as of February, 2004. In some clinical areas we need to provide additional support, training for and coordination with our clinicians and laboratory colleagues in Shanghai in order to

improve local standards of practice to meet CAP operational criteria. These relatively small details will continue to be addressed, but for the moment we are on track and functional. I believe we are on the way to becoming both a US and Chinese referral laboratory. The caseload number and variety of diseases encountered is remarkable. We are accruing an acceptable or greater than predicted number of study cases based on our initial projections, and the rate continues to grow.

Control selection for CC/DP has required additional training and orientation of clinical coordinators and the recognition that the 23 participating hospitals have markedly different capabilities and standards when it comes to tracking patient admissions. We are developing individualized approaches to deal with these issues and standardize as much as possible the control selection process. Exposure assessment under the leadership of the Fudan team got off to a predictably slower start than JCML. Progress on EA improved after we reorganized the exposure assessment operation and conducted an intensive training initiative to streamline the process. This effort has been a collaborative one, requiring the expertise and attention of all the major US collaborators on this project as well as our colleagues at Fudan University. The EA operation is improving with a renewed understanding of the need for ongoing training and continued guidance by US personnel. Although we have had very good experiences interacting with and recruiting factory workers, we have experienced some challenges in encouraging factory management participation in the ME study. We have taken a multifaceted approach to dealing with this process including: attempting to fine tune the approach of IPHS to initiating factory involvement, exploring political solutions, actively pursuing leads outside of town.

It has come as somewhat of a surprise that our biggest challenge has turned out to be obtaining high quality analytical support. However, in the absence of any demonstrable improvement in SMCDGP analytical capabilities over the past year, the need for a change in tactics has become imminent. Our immediate focus is on achieving a rapid and efficient transition to bring the analytical capabilities necessary for the project on line at JCML. To this end we are experiencing active cooperation and support from Fudan University. The goal is to have this implemented before the next 6 month reporting period. Analytical support for benzene air monitoring should be implemented faster than that.

From: Bruce Jarnot <jarnotb@api.org>
Sent: Friday, February 27, 2004 8:29 PM (GMT)
To: benzconsort-oc@listserve.api.org
Cc: benzconsort-cc@listserve.api.org; benzconsort-tc@listserve.api.org
Subject: BHRC-OC... Outreach Organizations

To: BHRC Oversight Committee (-OC), with copy to Communications Committee (-CC)

From: BHRC Technical Committee (-TC)

Subject: **Outreach Organizations**

The BHRC-TC has compiled a list of regulatory, research and non-governmental organizations for Consortium Outreach communication regarding the Shanghai Health Studies. Renewed attention to Outreach generated a variety of feedback from (and cross-talk among) Consortium members regarding possible direct and indirect approaches, and as a result, several options have been proposed for consideration:

Options for Direct Approach:

- host a one-day overview session at API, during Spring of 2004
- host a one-day overview session at Asilomar, directly preceding the annual meeting
- invite interested organization members to attend the annual Asilomar conference
- site visits to organizations by Consortium member(s), using adaptable presentation

Options for Indirect Approach:

- provide guidance to (updated) content posted on UCHSC web site
- by technical presentations (e.g., Oct 2004 Munich Benzene Symposium), abstracts and publications

REGULATORY / STANDARD SETTING ORGANIZATIONS

- **US EPA - DC** (Bill Farland, Peter Preuss, Bob Sonowane, Michael Brown)
- **IARC** (Vincent Cogliano)
- **EU Environment DG**
- **EU Labor DG**
- **Cal EPA**
- **German MAK**
- **Health Canada** (Betty Meeks)
- **OSHA**
- **ACGIH** (Jim Price)
- **Australia** (info@nohsc.gov.au or info@nicnas.gov.au)

RESEARCH ORGANIZATIONS

- **NCI** (Martha Linet)
- **UK MRC** (Michael Brown)
- **US EPA - RTP** (George Woodall, Larry Cupitt)
- **NIEHS** (Mike Shelby)
- **NIOSH - Cincinnati**

NON-GOVERNMENTAL (NGO) ORGANIZATIONS

- **Leukemia & Lymphoma Society**
- **American Cancer Society**

For the BHRC-TC, with best regards - Bruce.

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From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Monday, November 14, 2005 8:49 PM (GMT)
To: Jerry Rice (E-mail) <Jmricewas@aol.com>
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Subject: Shanghai Health Study Annual Meeting - Thanks!

Jerry and Distinguished SRP Members;

On behalf of the Benzene Health Research Consortium, I wish to express our thanks for your participation in the 3rd annual meeting of the Shanghai Health Study and the symposium on Friday. Your knowledge, expertise, and input are highly valued.

We look forward to working with you to bring this study to a successful conclusion.

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

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Business Success through HSSE Excellence

From: brian.e.doll@exxonmobil.com
Sent: Thursday, October 27, 2005 8:55 PM (GMT)
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Subject: Fw: Benzene Health Research Consortium - Meeting Tuesday, Nov 1, 3 PM
Attach: 2005_SHS_Annual_Meeting_Information.doc

As discussed below, a meeting has been scheduled for Tuesday, November 1, 3:00-5:00 PM, at the ExxonMobil Building at 3225 Gallows Road, Fairfax, Virginia, in Room C-17. The directions to the Building were communicated as part of the Annual Meeting materials sent out by Matt this afternoon and attached below for easy reference. Please let Lynn Russo know if you will be attending so we can arrange building passes with our Security folks. Please park in one of the Visitor Parking lots and enter the building by the "Big Red O" sculpture (you can't miss it). Proceed to the main lobby on the second floor and obtain a badge at the reception desk. You will need to be escorted to the meeting room, so Lynn or I will likely meet you in the lobby if you are on time. If you are running late, Mona Kowalczyk can escort you (extension 1018, or cell phone 1-703-282-5650). Room C-17 is the same room in which the plenary sessions will be held on November 2 and 3.

The following are proposed agenda items for this meeting:

- Welcome – Patsy
- Antitrust – Lorraine
- Review Agenda and final logistics for the Annual Meeting
- Prepare for November 3 meeting with PI's
- Finalize Agenda
- Review Time Line exercise (including next Annual Meeting and possible Symposium)
- AOB

If you have any problems getting into the building, feel free to call me on my cell phone below.

Regards,

Brian Doll

Cell Phone: 1-703-944-8568

Office Phone: 1-703-846-2515

(See attached file: 2005_SHS_Annual_Meeting_Information.doc)

----- Forwarded by Brian E Doll/Fairfax/Mobil-Notes on 10/27/05 02:58 PM

Lynn B

Russo/Fairfax/

ExxonMobil To

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10/27/05 10:52 cc

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Wong \(\E-mail\)"

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Subject

Re: Benzene Health Research

Consortium - Meeting Tuesday, Nov 1,

3 PM(Document link: Brian E Doll)

Would folks please let me know if you plan to attend this short pre-meeting
so we can have building passes available for you. Thanks.

Lynn

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M SCC-DCS/22"
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cc

Subject

Benzene Health Research Consortium -
Meeting Tuesday, Nov 1, 3 PM
BHRC Members;

Brian Doll and I talked this afternoon and decided that the consortium
would be well served by meeting together prior to the start of the annual
meeting. There are a number of things to discuss, for example:

- * final logistics of the annual meeting
- * our meeting with the PIs

* the possibility of another annual meeting 4Q06/1Q05

* initiating planning for a benzene symposium

Brian will develop a draft agenda and send it out along with the details of getting to XOM. We will end by 5 in order to give ourselves time to get back to the hotel for dinner.

I will be traveling Friday, Oct 28 - Mon, Oct 31, so available only sporadically. I will check voice mail at work and log-in to check email when I get to the hotel Monday night.

Travel safely and see you Tuesday afternoon.

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 Fax: 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>

Business Success through HSSE Excellence

From: brian.e.doll@exxonmobil.com
Sent: Friday, September 16, 2005 8:51 PM (GMT)
To: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Cc: benzconsort-cc@listserve.api.org; benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; Matt Todd <ToddM@api.org>
Subject: RE: SHS: Study Summary Revised
Attach: Summary for symposium BEDoll.doc

Patsy, et. al.,

I have made a few changes for your consideration that builds on Jennifer's draft.

The following changes are consistent with the "Committee Roles and Responsibilities" document on the SHS website:

- Consistently capitalized "Principal Investigators "
- Added "Review" to "Ethics Panel" to make it "Ethics Review Panel"
- Added "independent" to the descriptions of the people on both the SRP and ERP

The following were more worksmithing/changes in style and are open to debate:

- I do not particularly like calling this a "study" in the first paragraph and then saying it is "actually 3 studies" in the second paragraph. In our "Main Messages" document on the website, we refer to this as a "project" when talk about the whole thing, and to 3 studies when talking about the parts. I adopted this convention for the paper.
- I think the word "benzene" should be in the first paragraph unless someone can think of a good reason why it should not be.
- In the last paragraph, would it be more accurate to say it is the "results of the studies" rather than the "study" that we want to become a part of the body of scientific research on benzene?

Have a good weekend.

Regards,

Brian

(See attached file: Summary for symposium BEDoll.doc)

"Clegg, Patsy

M SCC-CHSE-PC"

<patsy.clegg@s To

hell.com> "Matt Todd" <ToddM@api.org> ,

<benzconsort-oc@listserve.api.org> ,

<benzconsort-tc@listserve.api.org> ,

09/16/05 01:23 <benzconsort-cc@listserve.api.org>

PM cc

Subject

RE: SHS: Study Summary Revised

Good rewrite. My spell-check identified that well-managed should not be hyphenated.

Patsy

-----Original Message-----

From: Matt Todd [mailto:ToddM@api.org]

Sent: Thursday, September 15, 2005 10:59 AM

To: benzconsort-oc@listserve.api.org;

benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org

Subject: RE: SHS: Study Summary Revised

BHRC Committee Member:

Due to significant comments and changes to the SHS Summary document, please review the attached, revised version instead of the document that was circulated on 9/13. The deadline for review and comment remains October 7th.

Regards,

Matt

From: Matt Todd

Sent: Tuesday, September 13, 2005 12:09 PM

To: BHRC Oversight Committee (benzconsort-oc@listserve.api.org); BHRC Technical Committee (benzconsort-tc@listserve.api.org); BHRC Communications Committee (benzconsort-cc@listserve.api.org)

Subject: SHS: Study Summary

BHRC Committee Member:

Please review the attached SHS Study Summary and provide comments back to me by COB October 7th. This document will be distributed to the SHS Symposium attendees to provide an overview of the study.

Regards,

Matt

Matthew Todd

American Petroleum Institute

1220 L Street NW

Washington DC 2005

www.api.org

Shanghai Health Study

Descriptive Overview

In December 2003, a gathering in Shanghai, China marked the opening of the Joint Sino-U.S. Clinical and Molecular Laboratory. This opening marked the formal beginning of the Shanghai Health Study, ~~an unusual~~ a cooperative research project involving leading researchers from the U.S. and China, facilities at Fudan University, a network of Shanghai hospitals, with U.S. oil and chemical company support. The research project has been underway since then to further the understanding of the human health effects of benzene, with data collection scheduled for completion late next year (2006).

Purpose: The project is a series of studies designed to advance the medical and scientific understanding of the relationship between benzene exposure and the risk of certain hematopoietic diseases (certain blood and lymph related disorders). The sponsor companies consider the project an important ~~element~~ factor in their product stewardship programs.

A unique set of circumstances in Shanghai enabled investigators to launch this meaningful benzene research. These include a long history of working with occupational exposures and qualified, experienced investigators familiar with the local scientific, medical and regulatory establishments. The studies should contribute to the scientific literature regarding a number of issues that have long complicated benzene health risk assessment.

The Studies: The program involves three inter-related studies:

- Case-Control Study - A hospital-based case control study investigating the potential relationship between exposures to benzene, other diverse variables and both Non-Hodgkins Lymphoma (NHL) and Acute Myelogenous Leukemia (AML).
- Disease Progression Study - A hospital and clinic-based investigation of the potential relationship between non-cancer diseases of the bone marrow and AML to determine if effects on bone marrow progress through non-cancer stages to an ultimate leukemia. This study is also attempting to define the shape of the dose response for possible “precursor” diseases. This study could result in characterization of unique identifiers of benzene-induced AML.
- Molecular Epidemiology Study – An investigation of whether there is a quantitative relationship between benzene exposure and potential early biological indicators of both exposure and effect in a focused population of workers.

The combined studies apply new technologies to advance the medical and scientific knowledge of benzene-induced disease. The investigators are leading experts in their fields. The three Principal Investigators are Dr. Fu Hua of Fudan University, Dr. Richard Irons of the University of Colorado Health Sciences Center, and Dr. Otto Wong of Applied Health Sciences (an independent U.S. research firm).

Benefits: Beyond advancing knowledge of benzene toxicology, these studies will further assist the contributing companies in their continuing efforts to ~~achieve the~~ provide highest quality product stewardship goals and continuous ~~development~~ improvement of their risk management programs. In addition, the studies may contribute to analyses conducted when governments debate future regulatory standards.

Challenges: The studies have met several technical and ethical challenges.

- **Technical – Scientific Review Panel** In order to stand up to rigorous scientific standards, studies must pass scientific scrutiny, be well-managed, and incorporate the best technology. State-of-the-art research is absolutely necessary to make real progress in developing a sound risk assessment. To that end, a Scientific Review Panel was assembled, made up of independent leading experts from a number of fields relevant to these studies. They reviewed, commented on, and after revisions, endorsed the research protocols. Additionally, the protocols also met the rigorous requirements of three separate Use of Human Subjects Committees (Institutional Review Board or IRB), two in the US and one in China. The Scientific Review Panel has also met with the Principal Investigators to hear about progress and provide their perspectives on issues that arise. They will remain available to the investigators throughout the research program.
- **Ethical – Ethics Review Panel** To address ethical issues posed by the project, the protocols have undergone a thorough analysis to ensure that they meet international standards for research involving humans (guidelines established by the Council for International Organizations of Medical Sciences or CIOMS). An Ethics Review Panel is part of the oversight for the project. It consists of independent bioethicists from the U.S., China and Europe. This panel also consults with the Principal Investigators during the course of the research.

Collaboration: A key to the program's success is local partnerships. Collaborators on these studies include researchers from the Medical School at Fudan University, the Institute for Public Health Supervision, and the Shanghai Municipal Centers for Disease Control and Prevention (the latter two are responsible for occupational exposure monitoring and enforcement in Shanghai).

Equally critical is the Joint Sino-U.S. Clinical and Molecular Laboratory which was developed for this research project. This state-of-the-art clinical and molecular laboratory operates on the Fudan Medical University campus. It supports the research studies as well as providing diagnostic services for over 30 major hospitals in the Shanghai region. The facility will remain at Fudan once the project is completed. This sustainable technology transfer is an important aspect of the project design.

Conclusion: The project sponsors (listed below) are committed to seeing that the Shanghai Health Study is conducted in an open manner, and with the assurance of the investigators' research independence in conducting the studies, analyzing the data, and publishing their conclusions. The sponsors' goal is for the results of the studies to become an important part of the body of scientific research on benzene.

**BP
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With Additional Funding from Marathon

From: Galvin, Jennifer B <Jennifer.B.Galvin@conocophillips.com>
Sent: Friday, September 16, 2005 2:19 PM (GMT)
To: Johnston, Michael D. <MIKE.D.Johnston@conocophillips.com>; Matt Todd <ToddM@api.org>; benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: RE: SHS: Study Summary Revised
Attach: SHS_summary.doc

I have made further corrections in addition to Mike's changes. My changes, also, are minor. My changes are in blue. The "Technical" paragraph is highlighted in blue, so it looks as though I changed the whole paragraph, but I didn't. It inadvertently got shifted down a line, hence the color.

Thanks,
Jennifer Galvin
918-661-3865
918-662-1139 (fax)
918-519-6302 (cell)

-----Original Message-----

From: Johnston, Michael D.
Sent: Thursday, September 15, 2005 4:13 PM
To: Matt Todd; benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: RE: SHS: Study Summary Revised

I made a few minor changes for consideration.

-----Original Message-----

From: Matt Todd [mailto:ToddM@api.org]
Sent: Thursday, September 15, 2005 10:59 AM
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: RE: SHS: Study Summary Revised

BHRC Committee Member:

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Regards,

Matt

From: Matt Todd
Sent: Tuesday, September 13, 2005 12:09 PM
To: BHRC Oversight Committee (benzconsort-oc@listserve.api.org); BHRC Technical Committee (benzconsort-tc@listserve.api.org); BHRC Communications Committee (benzconsort-cc@listserve.api.org)
Subject: SHS: Study Summary

BHRC Committee Member:

Please review the attached SHS Study Summary and provide comments back to me by COB October 7th. This document will be distributed to the SHS Symposium attendees to provide an overview of the study.

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Matt

Matthew Todd
American Petroleum Institute
1220 L Street NW
Washington DC 2005
www.api.org

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Descriptive Overview

In December 2003, a gathering in Shanghai, China marked the opening of the Joint Sino-U.S. Clinical and Molecular Laboratory. This opening marked the formal beginning of the Shanghai Health Study, ~~an unusual~~ a cooperative research partnership involving leading researchers from the U.S. and China, facilities at Fudan University, a network of Shanghai hospitals, with U.S. oil and chemical company support. The study has been underway since then, with data collection scheduled for completion late next year (2006).

Purpose: The study is actually a series of studies designed to advance the medical and scientific understanding of the relationship between benzene exposure and the risk of certain hematopoietic diseases (certain blood and lymph related disorders). The sponsor companies consider the study an important ~~element~~ factor in their product stewardship programs.

A unique set of circumstances in Shanghai enabled investigators to launch this meaningful benzene research. These include a long history of working with occupational exposures and qualified, experienced investigators familiar with the local scientific, medical and regulatory establishments. The studies should contribute to the scientific literature regarding a number of issues that have long complicated benzene health risk assessment.

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The combined studies apply new technologies to advance the medical and scientific knowledge of benzene-induced disease. The investigators are leading experts in their fields. The three Principal Investigators are Dr. Fu Hua of Fudan University, Dr. Richard Irons of the University of Colorado Health Sciences Center, and Dr. Otto Wong of Applied Health Sciences (an independent U.S. research firm).

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**BP
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Shell Chemical**

With Additional Funding from Marathon

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, August 3, 2005 8:16 PM (GMT)
To: benzconsort-tc@listserve.api.org; Jerry Rice (E-mail) <Jmricewas@aol.com>
Cc: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>; benzconsort-cc@listserve.api.org
Subject: BHRC-TC... Conf Call w/ Dr. Rice - Symposium - Mon 08 Aug, 3pm EDT
Attach: Prelim Invitees 03Aug2005.doc; Symposium Pgm Rev01 28Jul2005.doc

BHRC Technical Committee (TC) -

We have scheduled a TC Conf Call with Dr. Jerry Rice on Monday (Aug 8th) at 3:00pm Eastern...

AGENDA

Nov 4th SHS Symposium
-- draft agenda (see attached)
-- invitations / list of invitees (see attached)
-- list action items / timeline
-- other items?

CONFERENCE CALL

Date: Mon, 08 August

Time: 3:00pm Eastern (2:00pm Central, 12:00pm Pacific)

Phone: 1-770-765-9147

PIN: 2026828319#

Thank you! Bruce.

SYMPOSIUM

The Shanghai Health Study: Health Consequences of Exposure to Benzene

Leavey Conference Center
Georgetown University, Washington, DC
4 November 2005

8:00 – 8:30 Registration and continental breakfast

Session 1

Chair: P. Lombardo, University of Virginia (ERP)

8:30 – 9:00 Welcome and Introduction
(GU representative; Consortium representative)

9:00 – 9:30 Benzene: What's known and what isn't
R. Albertini, Univ of Vermont (SRP)

9:30 – 10:00 The Shanghai Health Study: Fudan University and
Participating Shanghai Hospitals
Hua Fu, Fudan University, Shanghai, China (Co-PI)

10:00 – 10:30 Ethical considerations in the Shanghai Health Study
E. Clayton, Vanderbilt University (ERP)

10:30 – 10:45 Coffee

Session 2

(Chair: TBD, from SRP)

10:45 – 11:15 Myelodysplasia and myeloid leukemias: Etiology and gaps in
knowledge
R. Larson, University of Chicago (SRP)

11:15 – 11:30 The Diagnostic Laboratory
R. Irons, University of Colorado (Co-PI)

11:30 – noon The Disease Progression Study: Early findings
R. Irons, University of Colorado (Co-PI)

12:00 – 12:30 The Molecular Epidemiology Study
TBD

12:30 – 1:30 Lunch

Session 3

(Chair, TBD, from SRP)

- | | |
|-------------|---|
| 1:30 – 2:00 | Lymphoid neoplasms and the WHO classification: Etiology and gaps in knowledge
J. Rice, Georgetown University (SRP) |
| 2:00 – 2:30 | The challenge of exposure assessment
T. Armstrong, ExxonMobil Corporation (Co-PI) |
| 2:30 – 3:00 | The Hospital-based Case-Control Study
O. Wong, Applied Health Sciences, Inc. (Co-PI) |
| 3:00 – 3:15 | Tea |

Session 4

Chair, H. Greim (SRP)

- | | |
|-------------|---|
| 3:15 – 3:45 | Milestones and future plans
R. Schnatter, ExxonMobil Corporation (Co-PI) |
| 3:45 – 4:00 | General Discussion |
| 4:00 – 4:15 | Summary and closure, followed by informal discussions |

SHS Symposium, 4 November 2004 Preliminary list of Invitees (72)

1. Names from Consortium Sponsors (9)

Chinese Embassy

Zhou Wenzhong, Ambassador

Li Jun Lan, Deputy Chief of Mission

Jin Xiaoming, Minister-Counsellors, Science and Technology

State

Jame Donovan, Director, Office of Chinese and Mongolian Affairs

Michael Finegan, Energy, Environment and Labor/Space/Public Health,
Office of Chinese and Mongolian Affairs

Energy

Robert S. Price, Director, Office of European and Asian Affairs

US-China Business Council

John Frisbie, President

Center for Strategic and International Studies (CSIS)

Dr. Bates Gill, Freeman Chair for China Studies

Robert W. Haines

Manager, International Government Relations

Exxon Mobil Corporation

2000 K Street, N.W., Suite 710

Washington, DC 20006

(202) 862-0245

(202) 253-3144 - cell

(202) 862-0269 - fax

Email: robert.w.haines@exxonmobil.com

2. SRP and ERP Members and API/Consortium observers (16)

SRP Members

jmricewas@aol.com

guilanli@263.net.cn

checko@u.washington.edu

helmut.greim@lrz.tum.de

herbst@pitt.edu

john.cherrie@iomhq.org.uk

minden@uhnres.utoronto.ca

ralbert315@aol.com

rlarson@medicine.bsd.uchicago.edu

herrick@hohp.harvard.edu

ERP -- ERP Members

ellen.w.clayton@vanderbilt.edu

idanpaanj@who.int

pal8g@virginia.edu

xzllzx@citiz.net

SRP & ERP: TC Observers / API Staff

jennifer.b.galvin@conocophillips.com

stuart.cagen@shell.com

twerdokl@api.org

jarnotb@api.org

3. Pls (6)

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4800 Baseline Road
#E104-253
Boulder, CO 80303
richard.iron@uchsc.edu

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ottowong@aol.com

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hfu@shmu.edu.cn

Liang You-xin
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Fudan University School of Public Health
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P.R. China
yxliang@shmu.edu.cn

Robert Schnatter
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a.r.schnatter@exxonmobil.com

Thomas Armstrong
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POB 971
Annandale, NJ 08801-0971
thomas.w.armstrong@exxonmobil.com

4. BHC Oversight Committee (6)

Chair - Patsy M. Clegg
Shell Chemical
Product Stewardship, HSE
PO Box 4320
Houston, TX 77210

Vice-Chair Brian Doll
ExxonMobil Corp.
3225 Gallows Road
Fairfax, VA 22037

Members:

Donald M. Burnett, PhD
BP p.1.c.
BP, Product Stewardship & Toxicology
150 West Warrenville Road MC5A
Naperville, IL 60563

Michael D. Johnston
ConocoPhillips
600 North Dairy Ashford Road
Houston, TX 77079

Zachary A. Wong
Manager, Toxicology & Hlth Risk Assess
Chevron Corporation Energy Technology Company
100 Chevron Way
PO Box 1627
Richmond, CA 94802-0627

Alternate

Stephen Bowes
ExxonMobil
3225 Gallows Rd.
Room 8B0428
Fairfax, VA 22037-0001

5. BHC Communications Committee (1)

Lynn Russo
ExxonMobil Corporation
Communications 3225 Gallows Road
Committee Representative Room 7D0232
Fairfax, VA 22037-0001

6. BHC Technical Committee (6)

Chair, Jennifer B. Galvin, PhD, ConocoPhillips
12 A1 Phillips Building
411 S Keeler
Bartlesville, OK 74004

Vice-Chair, Stuart Cagen, PhD
Staff Toxicology Advisor
Shell Chemical Co
One Shell Plaza
910 Louisiana, 18th Floor
Houston, TX 77002

Anita Balaraman
Chevron Corporation Energy
Technology Company
100 Chevron Way
PO Box 1627
Richmond, CA 94802-0627

Michael G. Bird
ExxonMobil
1545 Route 22 East
Annandale, NJ 08801-0971

Stephen Bowes
ExxonMobil
3225 Gallows Rd.
Room 880428
Fairfax, VA 22037-0001

Donald M. Burnett, PhD,
BP p.l.c.
BP, Product Stewardship & Toxicology
150 West Warrenville Road MC5A
Naperville, IL 60563

7. Munich Symposium Selected Attendees (highlighted) (not incl. NCI) (11)

Bond	James	toxcon@earthlink.net	Chemico-Biological Interactions
Goldstein	Bernard	bdgold@pitt.edu	University of Pittsburgh
Henderson	Rogene	rhenders@lrri.org	Lovelace Institute
Kipen	Howard	University of Medicine and Dentistry of New Jersey	
Levy	Leonard	ls1@le.ac.uk	University of Leicester
Osheroff	Neil	Vanderbilt University	
Rappaport	Stephen	smr@unc.edu	University of North Carolina
Ross	David	University of Colorado	
Smith	Martyn	UC Berkeley	
Snyder	Robert	Rutgers, The State University of New Jersey	
Trush	Michael	mtrush@jhsp.h.edu	Johns Hopkins University

8. NCI [from PubMed lit. search and Munich Symposium list] (7)

Rothman	Nathaniel	National Cancer Institute
Hayes	Richard B.	hayesr@mail.nih.gov National Cancer Institute
Lan	Qing	qingl@mail.nih.gov NCI
Dosemeci	M	
Travis	Lois	
Linnet	Martha	
Blair	Aaron	

9. EPA (Washington and North Carolina) (3)

Sonawane	Robert	Environmental Protection Agency
Farland	William	EPA, DC
Preston	Julian	EPA, NHEERL, NC

10. Tox Forum contacts (7)

Eileen Abt
National Research Council/NAS
500 Fifth Street, NW
Washington, DC 20001
eabt@nas.edu

Richard A. Canady
OSTP, Executive Office of the President
1650 Pennsylvania Avenue, NW
Washington, DC 20502
rcanady@ostp.eop.gov

Elaine Faustman
University of Washington
PO Box 354695
Seattle, WA 98105-6099
faustman@u.washington.edu

Carol J.M. Henry
American Chemistry Council
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Arlington, VA 22209
Carol_henry@americanchemistry.com

Michael P. Holsapple
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mholsapple@ilsi.org

Steve Olin
ILSI
One Thomas Circle, NW, 9th Floor
Washington, DC 20005-5802
solin@ilsi.org

David Longfellow
Toxicology Forum
5102 Marlyn Drive
Bethesda, MD 20816-1938
otterspace@verizon.net

11. Georgetown University (?)

From: Matt Todd <ToddM@api.org>
Sent: Friday, July 29, 2005 6:32 PM (GMT)
To: Tsai, Shan P SHLOIL-SHS <shan.tsai@shell.com>
Subject: 2005 SHS Annual Meeting
Attach: 2005_SHS_Annual_Meeting_Registration.doc

Hi Shan,

I have not received your registration form (attached) to attend the Shanghai Health Study Annual Meeting. I believe you intend on attending the meetings but were possibly waiting for the Benzene Symposium date to be set. Now that it's set for November 4th, will you complete the attached registration form and return it to me via email. A block of rooms was reserved for the meeting dates by ExxonMobil, but attendees must contact the hotel directly to arrange for their stay. The phone number for the Ritz in Tyson's Corner is 703-506-4300.

Thanks,
Matt

Matthew Todd
Regulatory Analysis and Scientific Affairs
American Petroleum Institute
1220 L Street NW
Washington, DC 20005
p: (202)682-8319
f: (202)682-8031
www.api.org

From: Robin Tillery <tilleryr@api.org>
Sent: Friday, September 30, 2005 7:10 PM (GMT)
To: Tsai, Shan P SHLOIL-SHS <shan.tsai@shell.com>
Subject: Symposium Invitation: Health Consequences of Exposure to Benzene
Attach: Symposium Program.pdf

***Shanghai Health Study –
Health Consequences of Exposure to Benzene***

Georgetown University, Washington DC, November 4, 2005

Dear Shan,

You are invited to attend a one-day symposium on research sponsored by the Sino-American Shanghai Health Study, a petroleum industry-sponsored multi-year biomedical research project coordinated by the American Petroleum Institute. The program will be of interest to biomedical researchers with an interest in occupational cancer risks, in benzene metabolism and toxicology, and more generally in biomedical research cooperation between universities in the United States and the Peoples' Republic of China. A preliminary program for the Symposium is attached.

Toxicity of benzene to bone marrow has been recognized for many years, and benzene is a known human occupational carcinogen. Despite its toxicity, and despite increasingly strict regulatory limits on its use in many countries, benzene continues to be widely used as a cheap and effective solvent. Human exposures to benzene at various levels thus continue to occur.

The Shanghai Health Study is designed to investigate several aspects of benzene toxicity, including its possible causal relationship to malignancies other than acute myeloid leukemia. The Study is being conducted by Chinese and American scientists in cooperation with Fudan University, Shanghai, China, and 29 participating hospitals within that city. It receives oversight from two external review panels of academic scientists and biomedical ethicists.

The Symposium will be held at the Leavey Conference Center, Georgetown University, Washington, DC, on November 4, 2005, from 8:30 a.m. until approximately 3:30 p.m. Continental breakfast, beginning at 8:00 a.m., and lunch will be provided to all registrants. Hotel rooms are available at a reduced rate in the Leavey Center Marriott Hotel, gucc@georgetown.edu. Attendance is by invitation. There is no registration fee.

The organizers hope you will be able to accept this invitation, and I look forward to welcoming you to the Symposium. Please RSVP by reply to this e-mail, along with any questions you may have regarding this event.

Sincerely,



Jerry M. Rice
Symposium Chair

SHANGHAI HEALTH STUDY

SYMPOSIUM:

Health Consequences of Exposure to Benzene

Leavey Conference Center, Georgetown University, Washington DC
November 4, 2005

8:00 – 8:30 AM Registration and Continental Breakfast

8:30 – 9:00 AM Welcome and Introduction
Jerry Rice, Georgetown University

SESSION 1

Chair: Ellen Clayton, Vanderbilt University

9:00 – 9:30 AM Benzene: What's Known and What Isn't about Health Effects
Richard Albertini, University of Vermont

9:30 – 10:00 AM The Shanghai Health Study: Fudan University and Participating Shanghai Hospitals
Fu Hua, Fudan University, Shanghai

10:00 – 10:30 AM Ethical Considerations: Obtaining Informed Consent
Juhana Idänpään-Heikkilä, Council for International Organizations of Medical Sciences

10:30 – 10:45 AM Coffee

SESSION 2

Chair: Helmut Greim, Technical University of Munich

10:45 – 11:15 AM Lymphoid Neoplasms and the WHO Classification: Etiology and Gaps in Knowledge
Jerry Rice, Georgetown University

11:15 – 11:30 AM The Diagnostic Laboratory at Fudan University
Richard Irons, University of Colorado & Fudan University

11:30 – 12:00 PM The Challenge of Exposure Assessment
Tom Armstrong, ExxonMobil Biomedical Sciences

12:00 – 12:30 PM The Hospital Based Case-Control Study
Otto Wong, Applied Health Sciences

12:30 – 1:30 PM Lunch

SESSION 3

Chair: John Cherrie, Council for International Organizations of Medical Sciences

1:30 – 2:00 PM What We Think We Know About the Etiology of Myelodysplasia and Myeloid Leukemia
Richard Larson, University of Chicago

2:00 – 2:30 PM The Disease Progression Study: Early Findings
Richard Irons, University of Colorado & Fudan University

2:30 – 3:00 PM The Molecular Epidemiology Study
A. Robert Schnatter, ExxonMobil Biomedical Sciences

3:00 – 3:10 PM Summary and Closure
Jerry Rice, Georgetown University

3:10 – 3:30 PM Tea

From: Bruce Jarnot <jarnotb@api.org>
Sent: Friday, September 30, 2005 1:27 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC-TC... Dr. Rice's Fudan University trip report
Attach: Trip Report.pdf

BHRC Technical Committee –

Jerry Rice returned recently from his site visit to Fudan University, with an overall positive first-hand impression of Shanghai Health Study activity, status and facilities. Details of his visit are summarized in the attached trip report (2-page pdf file).

A copy of Dr. Rice's report and the original invitation letter will be posted to the SHS web site.

I'll coordinate the upcoming Technical Committee conference call with Jerry's schedule, providing an opportunity to answer questions and allowing him to expand on details while memories are still fresh.

Best Regards - Bruce.

From: Jmricewas@aol.com [mailto:Jmricewas@aol.com]
Sent: Thursday, September 29, 2005 1:19 PM
To: Bruce Jarnot
Subject: Trip report

Bruce,

I attach a brief trip report on my visit to Shanghai earlier this month, together with a copy of the invitation that prompted this visit.

Jerry

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Tuesday, November 29, 2005 6:05 PM (GMT)
To: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-DCS/261 <sc724012@shell.com>; Colletti, Sarah J SCC-DCS/14 <sarah.colletti@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; John Wagner (E-mail) <wagner@api.org>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>
Subject: SHS presentation to API HES - GC - PLEASE REVIEW AND COMMENT
Attach: HESGC Presentation - Nov 2005.ZIP

Team;

We have been invited to do an update of the SHS to the API HES GC meeting in Houston tomorrow. We just did a presentation in June, so I have elected to focus on the annual meeting and symposium.

If you would please give this a quick review. I will be leaving Shell about 11 in the morning to drive to ConocoPhillips, so I can make some last minute changes.

Thanks!

Patsy Clegg

Product Steward

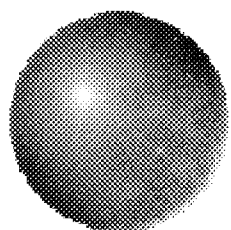
Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 Fax: 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>



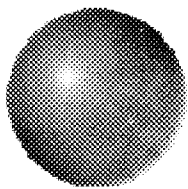
The Shanghai Health Study

Patsy Clegg

Chair, Oversight Committee

Shell Chemicals LP

November 30, 2005



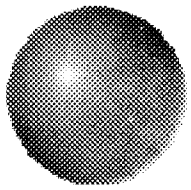
Shanghai Health Study Update

❖ 3rd Annual Meeting – November 2-3, 2005

❖ Presentations by:

❖ Jerry Rice, Chair Scientific Review Panel

- History of Shanghai Health Study
- Ethical Issues
- Objectives of 3 studies
 - Case Control: Determine risk of developing AML or NHL among workers exposed to benzene
 - Disease Progression: Characterize benzene dose response from benzene poisoning to potential AA, MDS, AML
 - Molecular Epidemiology: Identify biomarkers



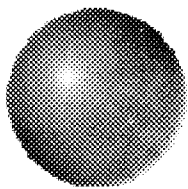
Shanghai Health Study Update

● 3rd Annual Meeting – November 2-3, 2005

● Presentations by:

■ Richard Irons, Principal Investigator, U of Colorado

- JCML – Sino-US Joint Clinical and Molecular Laboratory
 - Supports 3 studies with diagnostics
 - 30 Shanghai hospitals referring cases
 - Tissue Bank
 - 15 different analyses
 - Through Oct 05, have done 1716 diagnoses (50% over prediction)
 - Nutritional Anemias are an example of a confounder



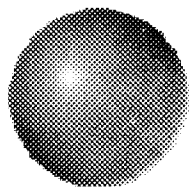
Shanghai Health Study Update

• 3rd Annual Meeting – November 2-3, 2005

• Presentations by:

• You-xin Liang, Fudan University

- Literature review of benzene exposure in the shoe making industry in China
- 10% of SHS cases work in shoe industry
- Average benzene exposure 2002-2005 is 70 mg/m³



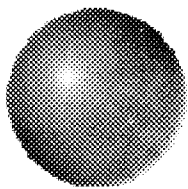
Shanghai Health Study Update

◆ 3rd Annual Meeting – November 2-3, 2005

◆ Presentations by:

■ Otto Wong, Principal Investigator, Applied Health Sciences

- Investigating 2 diseases: AML & Lymphoid neoplasms (not NHL)
- Use hospital cases only – high participation rate (<0.7% refused)
- Interview – compensated approximately \$30 US
- 4000 interviews; 259 benzene exposed subjects



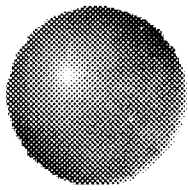
Shanghai Health Study Update

• 3rd Annual Meeting – November 2-3, 2005

• Presentations by:

• Rob Schnatter – EMBSI – Molecular Epi Study

- Phase 1: Retrospective analysis of blood parameters versus historic benzene exposures
- Phase 2: Cross-sectional analysis of blood counts taken during clinical exams versus current benzene exposures



Shanghai Health Study Update

• 3rd Annual Meeting – November 2-3, 2005

• Presentations by:

• Tom Armstrong – EMBSI – Exposure Assessment

- Tiered Design

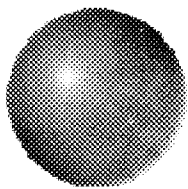
Ever exposed / Never Exposed

Qualitative Ranges

Semi-quantitative Ranges

Qualitative & Pattern of Exposure

- Sector analysis



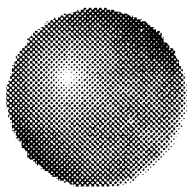
Shanghai Health Study Update

◆ 3rd Annual Meeting – November 2-3, 2005

◆ Presentations by:

■ Richard Irons – Disease Progression Study

- 2 Findings of particular interest
 - 63/303 (20%) AA, MDS, Leukemia cases confirmed nutritional anemias
 - Prevalence of MDS Subtypes – paper published
- Applying WHO definitions
- NHL subtypes
- Chronic exposure to benzene results in a unique form of dysphasia – BID – paper published

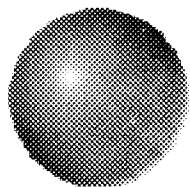


Shanghai Health Study Update

● 3rd Annual Meeting – November 2-3, 2005

● Highlights

- WHO classification of tumors applied
- Nutritional anemias identified
- Benzene Induced Myelodysplastic Syndrome
 - TSCA 8(3) filed
- JCML transferred to Fudan University School of Medicine
- Richard Irons is a Professor at Fudan

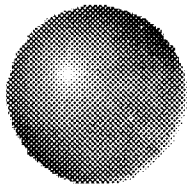


Shanghai Health Study Update

Health Consequences of Exposure to Benzene
Symposium at Georgetown University
Sponsored by Jerry Rice

Purpose: Share with government and researchers

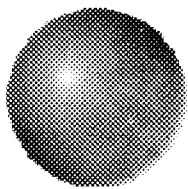
Attendees included EPA, OSHA, NCI, military, HEI



Shanghai Health Study Update

Path Forward

- ⊗ 2006 Complete data collection
- ⊗ 2007 Data analysis and publication
- ⊗ 2008 Celebration

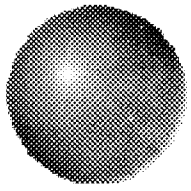


Benzene Health Research Consortium

Sponsoring Companies

- BP
- Chevron
- ConocoPhillips
- ExxonMobil
- Shell Chemical LP

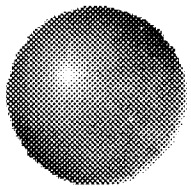
- Marathon/Ashland providing additional support



Shanghai Health Study

Costs

❖	Budget	\$ 26M
❖	Funding	\$ 26M



Shanghai Health Study

Summary

- ◆ Progress on 3 studies
 - Case accrual exceeding predictions
 - WHO classification being used
 - Publications
- ◆ JCML Sustainability
 - Moved to Fudan U. School of Medicine
 - Dr. Irons made a professor at Fudan U. School of Medicine
- ◆ Scientific and Ethics Review Panels involved & committed
- ◆ On budget

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Wednesday, October 26, 2005 10:06 PM (GMT)
To: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Cagen, Stuart Z SCC-DCS/261 <stuart.cagen@shell.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Russell White (E-mail) <russellwhite@chevrontexaco.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Colletti, Sarah J SCC-DCS/14 <sarah.colletti@shell.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>
Subject: Benzene Health Research Consortium - Meeting Tuesday, Nov 1, 3 PM

BHRC Members;

Brian Doll and I talked this afternoon and decided that the consortium would be well served by meeting together prior to the start of the annual meeting. There are a number of things to discuss, for example:

- final logistics of the annual meeting
- our meeting with the PIs
- the possibility of another annual meeting 4Q06/1Q05
- initiating planning for a benzene symposium

Brian will develop a draft agenda and send it out along with the details of getting to XOM. We will end by 5 in order to give ourselves time to get back to the hotel for dinner.

I will be traveling Friday, Oct 28 - Mon, Oct 31, so available only sporadically. I will check voice mail at work and log-in to check email when I get to the hotel Monday night.

Travel safely and see you Tuesday afternoon.

Regards,

Patsy

Patsy Clegg

Product Steward, HSSE

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 2521 Fax: 3325

Email: patsy.clegg@shell.com

Internet: <http://www.shell.com/chemicals>

Business Success through HSSE Excellence

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Tuesday, May 6, 2003 8:28 PM (GMT)
To: Cagen, Stuart Z SCC <stuart.cagen@Shell.Com>; Samuel, Tarita B SCC <tarita.samuel@Shell.Com>
Cc: BenzConsort-TC@listserve.api.org
Subject: RE: Benzene cost tracking
Attach: UC cashflow.xls

OOPs forgot to attach this one. It is the UC grant spreadsheet. The Technical Committee may wish to edit and add milestones.

pp

-----Original Message-----

From: Paula Podhasky
Sent: Tuesday, May 06, 2003 4:08 PM
To: Cagen, Stuart Z SCC; Samuel, Tarita B SCC
Cc: BenzConsort-TC@listserve.api.org; BenzConsort-CC@listserve.api.org
Subject: RE: Benzene cost tracking

Stu and Tarita,

Here is some of the material requested.

The Technical Committee is responsible for the research related contracts and therefore will need to identify milestones and associated costs for those contracts. Included under the research umbrella are: ERP, SRP, Fudan, UC Grant, Irons, AHS. Bruce Jarrot is the contact with UC (Mary McConnell). The Communications committee oversees the APCO contract and therefore should provide that information. I do not manage any BHRC contracts but, I do track income, administration costs and other operating expenses and can provide more detail as required.

By copy of this email I would like the Technical and Communications Committees to identify milestones and if available the associated cost/payments.

Thank you,
Paula Podhasky

-----Original Message-----

From: Cagen, Stuart Z SCC [mailto:stuart.cagen@shell.com]
Sent: Tuesday, May 06, 2003 3:13 PM
To: Paula Podhasky; Samuel, Tarita B SCC
Subject: Benzene cost tracking

Paula:

Tarita Samuel (of Shell Chemical LP) has agreed to look through some of the Shanghai Benzene financials to help the consortium get an improved sense of study costs and projections.

I am away on vacation this week, but I spoke with her briefly today about our current situation. What I think we need:

1) tracking study costs, including costs peripheral to the study such as investigator expenses and travel, as well as costs peripheral to the investigators, communications budgets (contractors), and main study administration via API. All of this is captured in a total study budget of almost \$ 23 million..

2) this tracking should be in association with study performance milestones, including projected costs and

milestones until work is in public literature

3) early warning in possible overspending.

I would guess this is going to be an iterative process, with the help of the technical committee for the milestones part. Paula: you or Bruce or Lorraine should still be the direct contacts with the University of Colorado and Applied Health Sciences but Tarita could help frame the questions.

Paula: I have not yet seen your note with the spreadsheets for me to forward to Tarita, so please send her a copy when you sent them to me so she is not waiting for me to forward these.

Now that I have connected the two of you, please feel free to contact each other directly.

Thanks

Stuart

Stuart Cagen

Shell Chemical LP
One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 **Fax:** +1 713 241 3325 **Other Tel:** +1 832 646 3987

Email: stuart.cagen@shell.com

Internet: <http://www.shell.com/chemicals>

University of Colorado Grant: Cash Flow

	A	B	C	D	E
1					
2					
3			<i>Actual</i>		
4					
5		Dec-01	Jun-02	Dec-02	
6					
7					
8	Cumulative Payment Total	1,200,000	4,099,505	7,515,759	
9					
10					
11					
12	Payments	1,200,000	2,899,505	3,416,254	
13					
14	Personnel				
15	Budgeted	\$172,140	\$224,883	\$348,277	
16	Operating Expenses				
17	Budgeted	\$13,131	\$94,401	\$284,061	
18	Subcontracts				
19	Budgeted	\$123,629	\$688,452	\$1,106,578	
20	Travel				
21	Budgeted	\$0	\$8,429	\$15,518	
22	Equipment				
23	Budgeted	\$291,568	\$253,578	\$665,067	
24	Indirect				
25	Budgeted	\$47,922	\$111,454	\$168,442	
26	TOTALS				
27	Budgeted	\$648,390	\$1,381,197	\$2,587,943	
28					
29	Balance	551,610	2,069,918	2,898,230	
30					
31	Notes:	1	Payments are made in August		
32		2	Real budget values were used when available.		
33		3	Travel is included for trainees; part of this budget.		
34		4	The large fluctuations in the subcontracts is due to EMBSI invoicing UC for the total amount due at the beginning of their fiscal year		
35		5	The increased "subcontracts" amount for Dec-02 is for 2001-2002 funds due to EMBSI subcontract		
36		6	The Grant ends Dec-06.		

University of Colorado Grant: Cash Flow

	F	G	H	I	J	K	L	M	N
1									
2		<i>Projected</i>							
3									
4									
5	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Totals
6									
7									
8		10,096,509		12,677,259		15,258,009			
9									
10									
11									
12		2,580,750		2,580,750		2,580,750			
13									
14									
15	\$331,316	\$293,007	\$282,480	\$297,450	\$293,713	\$310,768	\$298,684	\$244,179	\$3,096,897
16									
17	\$198,373	\$259,003	\$228,529	\$268,289	\$252,851	\$301,653	\$277,143	\$151,160	\$2,328,595
18									
19	\$549,014	\$988,733	\$449,506	\$934,456	\$453,377	\$860,043	\$415,102	\$202,694	\$6,771,584
20									
21	\$11,340	\$4,127	\$3,418	\$4,245	\$0	\$1,852	\$1,945	\$0	\$50,873
22									
23	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560,213
24									
25	\$140,668	\$144,596	\$133,751	\$148,196	\$142,107	\$159,711	\$150,221	\$102,788	\$1,449,855
26									
27	\$1,230,711	\$2,039,465	\$1,097,683	\$1,652,637	\$1,142,048	\$1,634,027	\$1,143,094	\$700,822	\$15,258,017
28									
29	1,667,518	2,208,803	1,111,120	2,039,233	897,185	1,843,908	700,814	-8	
30									
31								Contract	\$ 13,665,017
32								SRP	\$ 1,593,000
33								total	\$ 15,258,017
34									
35									\$15,258,017
36									

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Tuesday, May 6, 2003 8:08 PM (GMT)
To: Cagen, Stuart Z SCC <stuart.cagen@Shell.Com>; Samuel, Tarita B SCC <tarita.samuel@Shell.Com>
Cc: BenzConsort-TC@listserve.api.org; BenzConsort-CC@listserve.api.org
Subject: RE: Benzene cost tracking
Attach: benzene.msg; AHS Total Budget Estimates (1-30-02).xls

Stu and Tarita,

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Sent: Tuesday, May 06, 2003 3:13 PM

To: Paula Podhasky; Samuel, Tarita B SCC

Subject: Benzene cost tracking

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Paula: I have not yet seen your note with the spreadsheets for me to forward to Tarita, so please send her a copy when you sent them to me so she is not waiting for me to forward these.

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Thanks

Stuart

Stuart Cagen

Shell Chemical LP

One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916

Tel: +1 713 241 1407 **Fax:** +1 713 241 3325 **Other Tel:** +1 832 646 3987

Email: stuart.cagen@shell.com

Internet: <http://www.shell.com/chemicals>

Table 1. AML and NHL Case-control Study
Summary of Activities by Year
Applied Health Sciences, Inc.

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

Table 2. AML and NHL Case-control Study
Budget Estimates (in 2001 \$) for Applied Health Sciences, Inc.

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

Table 3. AML and NHL Case-control Study
Budget Estimates with a 5% Annual Adjustment
Applied Health Sciences, Inc.

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

Table 4. AML and NHL Case-control study
Additional Budget Estimate for Exposure Assessment
Applied Health Sciences, Inc.

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

Table 4. AML and NHL Case-control study
Additional Budget Estimate for Exposure Assessment
Applied Health Sciences, Inc.

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

Table 5. AML and NHL Case-control Study
Total Budget Estimate by Year
Applied Health Sciences, Inc.

	A	B	C	D
1		Original budget	Additional budget for	Total
2	Year	(Table 3)	Exposure assessment (Table 4)	
3				
4	2001	\$84,025	\$0	\$84,025
5				
6	2002	\$342,484	\$93,030	\$435,514
7				
8	2003	\$318,512	\$113,999	\$432,511
9				
10	2004	\$308,391	\$84,970	\$393,361
11				
12	2005	\$352,649	\$89,218	\$441,867
13				
14	2006	\$389,489	\$60,496	\$449,985
15				
16	2007	\$45,831	\$0	\$45,831
17				
18				
19	Total	\$1,841,382	\$441,713	\$2,283,095

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Tuesday, May 6, 2003 6:21 PM (GMT)
To: Paula Podhasky <Podhaskyp@api.org>
Subject: benzene
Attach: 7FB20A00.PDF

<<7FB20A00.PDF>>

PROGRESS REPORT
JUNE 2002

**I. ANALYSIS OF DISEASE PROGRESSION FOR APLASTIC ANEMIA,
MYELO-DYSPLASTIC SYNDROME, ACUTE MYELOGENOUS LEUKEMIA
AND BENZENE POISONING IN SHANGHAI, CHINA**

**II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS IN
SHANGHAI, CHINA**

A MULTICENTER INTERNATIONAL STUDY

**Molecular Toxicology and Environmental Health Sciences Program
Dept. of Pharmaceutical Sciences, School of Pharmacy
Department of Pathology, School of Medicine
University of Colorado Health Sciences Center, Denver, CO.**

—

**School of Public Health, Hua Shan Hospital, Cancer Hospital,
Fudan University Medical Center, Shanghai, China**

I Introduction

A Executive summary

1. Overall Status of the Budget

NOTE: this is the Semiannual Report of Progress as it Relates to the Budget set forth in our contract and is separate and distinct from the University of Colorado Health Sciences Report of Expenditures and Financial Statement, the Quarterly Report on Field Expenses and the Supplemental Summary Requested by API and the Technical Committee, each of which will be forwarded separately. Unless otherwise stated, actual budget numbers are "as of" May 30, 2002.

The overall status of the budget for this fiscal year is as follows: As of May 30, 2002 we have received \$4,099,505 against a current approved budget of \$4,870,330 exclusive of field expenses. We have expended \$1,566,248 as of May 30. At the end of this fiscal year (August 31, 2002) we estimate total expenditures, both encumbered and projected, to be \$3,061,859. This will leave a balance of \$1,808,471 that includes \$1,041,238 in sequestered funds originally earmarked for subject and clinical costs in Year 1.

We have been able to maintain an overall positive cash flow in the face of the budgetary shortfall described above that is due to several factors: salary and supply savings achieved as a result of delays in project funding and start-up, exercise of extended budgetary authority and cost shifting in multiple categories, successes in the negotiation of equipment and reagent contracts, and deferral of the payment of incremental increases in EMBSI expenses as part of the revised budget. Because of the delay in project funding, many of the hires and non-capital equipment and reagent purchases scheduled for Fiscal Year 1 (FY1) are being expensed in the last half of the fiscal year. As a result, most of the expenditures estimated for the second half of FY1 are actually encumbered at this time. The progress and budgetary status of each project component will be discussed in subsequent chapters.

B FY2 Costs and Cash flow

1. Projected

Based on the original contract, we will receive \$3,416,254 in FY2 against a currently approved budget of \$3,284,446. We estimate actual expenses for FY2 to be \$4,009,037. The projected differences here are primarily the result of expenses deferred from FY1 as a result of the delay in funding, and include charges against training, equipment, database and personnel. By the end of FY2 we estimate the cumulative deficit will be \$592,783. In terms of cash flow (not balances) this is more than offset by the subject-related costs sequestered in FY1. It should be noted that the actual subject-related expenses encountered in FY2 and beyond will depend on the number of cases recruited to the studies: the more cases recruited, the less the balance we will

have on hand. Whether in fact we are able to maintain a positive cash flow in FY2 will depend on subject recruitment. However, it is also obvious that funds originally budgeted to cover subject-related costs that are expensed to cover cash shortfalls will necessarily have to be replaced, probably in early FY3.

C Budgetary and contractual issues

1. UCHSC contract

At present we have committed to equipment and supply purchases and payment schedules to Chinese entities that reflect the budget approved by the Consortium in December 01/January 02. This is being achieved by modifications that reflect realized salary savings and cost shifting at the expense of personnel and operating budgets as discussed in this document. To date, API has not provided UCHSC with any letter of intent or contract addenda to reflect the modified budget changes. In the absence of this, UCHSC will consider the project in default the moment we encounter a negative cash balance. Therefore, under our current contractual arrangements we will not be able to bridge any negative cash balance even for a short period of time. Alternatively, if we are provided a contract modified to reflect the current budget, short term bridging is possible. It is impossible to accurately estimate the timing of these impacts in the absence of being able to predict actual subject accrual rates, but our best estimates suggest a crisis is possible in the latter half of FY2/first half of FY3. Independently, even given a positive cash balance during FY2 we will not be able to modify our payments to EMBSI to reflect their increased costs without a contract addendum.

-
still true -
yes

2. Fudan API contract

It appears that API does not yet have a contract with Fudan University to support Case Control Study operation. As a consequence, Fudan has been charging all Project-related expenses, including Case Control Study expenses, against the UCHSC account. To date the impact has been minimal (i.e. we estimate approximately \$14,000 of expenses that should be borne by the Case Control Study will be charged against UCHSC during FY1). In order to facilitate project development and for humanitarian reasons we will continue to support personnel assigned to the Case Control Study. However, this issue is becoming an ongoing management problem with almost daily requests to authorize expenditures that relate to Case Control Study activities. The additional costs for the management of this activity have not yet been built into our budget, and we estimate that these will escalate significantly in FY2. It is our understanding that this practice will continue unless or until API has finalized a contract and funded an account at Fudan University or decides to expense these funds through UCHSC.

II Equipment

From: Matt Todd <ToddM@api.org>
Sent: Thursday, February 9, 2006 7:06 PM (GMT)
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC: SHS Messages
Attach: 2006-02-09_shs_new_messages.pdf

BHRC Committee Members:

Please see Lynn Russo's note below concerning the attached document and her replacement.

Matt

"Attached is a redraft of the key messages on the Shanghai Health Study. It is meant to help respond to "aggressive" inquiries, that is those where the inquirer knows something about the study but is challenging its "integrity". This is similar to the media inquiry API handled last year. Would you send this to the full distribution list. If there is time at the next meeting we can discuss it. It should also get to Susan Hahn.

Also, my replacement will be Trisha Perkins. She is very well qualified for this role, having a strong communications background as well as having worked for a research company. She will be at the next meeting. Would you please add her to the distribution lists and provide access to the website? Thanks.

Lynn"

Matthew Todd
American Petroleum Institute
1220 L Street NW
Washington DC 20005
202.682.8319
www.api.org

SHANGHAI HEALTH STUDY:
An independent, scientifically rigorous study

- **The independent investigators conducting the study have full control over the study**, including design, research, and all interpretations and conclusions that may be drawn from the data when the study is completed.
 - The study is a project of Fudan University Medical Center, the University of Colorado Health Sciences Center and Applied Health Sciences, an independent U.S. research firm.
 - Other key participants in China include the Shanghai Municipal Center for Disease Prevention and Control and the Shanghai Institute for Public Health and Supervision.
- **The studies are designed to withstand rigorous scientific peer review.** The study protocols, including data management processes, have met the rigorous requirements of three separate Independent Review Boards; the research program also has the approval of an independent ethical review.
 - Study protocols, including data management processes, were addressed with the assistance of a Scientific Review Panel and an Ethics Review Panel. Both panels remain available to the investigators throughout the research program.
 - The independent Scientific Review Panel, composed of international experts in relevant scientific disciplines, endorsed the research protocols following several reviews and revisions.
 - The independent Ethics Review Panel thoroughly reviewed the study protocols (e.g. informed consent, data management) to ensure they met international standards for human research. The panel consists of bioethicists from the U.S. China and Europe.
- **The independent researchers have been presenting information on the study to a variety of scientific audiences.** This is consistent with ensuring the investigators' research independence in conducting the study, analyzing the data, and publishing their conclusions.
- **The goal of the study is to contribute to, and advance, the accepted body of scientific research and knowledge of benzene-induced disease.**
 - The project's purpose is to gain a more refined understanding of the relationship between benzene exposure and associated cancer risks.
 - The data from a wide range of benzene exposures in Shanghai provides a rare opportunity to conduct meaningful research on the health effects of human exposure to benzene.
- **The study is funded by a number of oil and chemical companies as part of their ongoing, individual product stewardship and safety and health programs.**
 - Beyond advancing knowledge of benzene toxicology, these studies will further assist the contributing companies in their continuing efforts to provide high-quality product stewardship and continuous improvement of their risk management programs.
 - The funding companies are BP, Chevron, ConocoPhillips, ExxonMobil, and Shell Chemical with additional support from Marathon.

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, February 13, 2006 6:13 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org; benzconsort-cc@listserve.api.org; Robin Tillery <tilleryr@api.org>
Subject: BHRC-TC... SHS CC & DP/ME Year-End 2005 Progress Reports
Attach: CC_Progress_Report_02-2006.pdf; DP_ME_Progress_Report_02-2006.pdf

BHRC Technical Committee (-TC) -

Attached are year-end 2005 progress reports received from Drs. Wong (CC Study) and Irons (DP & ME Studies); we've not received a year-end report, however, from Dr. Fu / Fudan University (Exposure Assessment), though reasonable coverage of this topic may appear in Dr. Irons' report.

Best Regards - Bruce.

PROGRESS REPORT

January 2006

- I. ANALYSIS OF DISEASE PROGRESSION FOR APLASTIC ANEMIA, MYELOYDYSPLASTIC SYNDROME, ACUTE MYELOGENOUS LEUKEMIA AND BENZENE POISONING IN SHANGHAI, CHINA
- II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS IN SHANGHAI, CHINA
- III. EXPOSURE ASSESSMENT

A MULTICENTER INTERNATIONAL STUDY

Molecular Toxicology and Environmental Health Sciences Program
Dept. of Pharmaceutical Sciences, School of Pharmacy
Department of Pathology, School of Medicine
University of Colorado at Denver & Health Sciences Center, Denver, CO

—

School of Public Health, Huashan Hospital, Cancer Hospital,
Fudan University Medical Center, Shanghai, China

EXECUTIVE SUMMARY

A. Overall Status of Budget

Attached is an official summary of the overall budget for the year ending December 31, 2005.

In April 2005, the consortium agreed to a revised budget (Appendix A). Based on this new budget, the overall status of the budget for the second half of the 2005 calendar year is as follows: We spent \$1,341,540 compared to a projected budget of \$1,883,130, resulting in savings of \$541,590 in funds during this period (Table 1). This savings is partly due to cost shifting of contracts from the Fudan budget to the UCHSC budget, and partly due to expenses deferred to the 2006 calendar year.

Table 1. Budget Summary (Reporting Period)

	Budgeted ¹	Expenditures	Variance
Personnel	\$236,350	\$243,816	(\$7,466)
Operating Expenses	\$254,380	\$227,940	\$26,440
Subcontracts	\$1,264,180	\$747,991	\$516,189
Travel	\$500	\$0	\$500
Equipment	\$0	\$0	\$0
Indirect	\$127,720	\$121,793	\$5,927
TOTALS	\$1,883,130	\$1,341,540	\$541,590

¹The budgeted amounts are the sum of each category from Jul-05 through Dec-05.

Table 2. Budget Summary (Entire Project)

	Budgeted ²	Expenditures	Variance
Personnel	\$2,163,606	\$2,179,252	(\$15,646)
Operating Expenses	\$1,726,386	\$1,557,404	\$168,982
Subcontracts	\$7,198,588	\$6,621,611	\$576,977
Travel	\$9,993	\$9,098	\$895
Equipment	\$1,383,490	\$1,383,490	\$0
Indirect	\$1,043,587	\$1,002,342	\$41,245
TOTALS	\$13,525,649	\$12,753,197	\$772,452

²The budgeted amounts are the sum of each category from Dec-01 through Dec-05.

Subcontract Summary (Entire Project)

Subcontracts	Expenditures (Dec 01 – Dec 05)
Fudan University	\$4,150,117
IPHS	\$167,577
SMCDC	\$153,004
EMBSI	\$1,873,555
Children's Hospital Cincinnati	\$277,358

B. Budget Analysis

Our projected costs for the remainder of the project are outlined in Table 3.

Table 3. Projected Budget (Remainder of Project)

	Jan1 – Jun 30 Year 2006	Jul 1 – Dec 31 Year 2007 ** Year 2006	
Personnel	\$236,350	\$245,804	\$203,265
Operating Expenses	\$235,580	\$160,780	\$150,000
Subcontracts	\$1,454,051	\$1,229,168	\$609,595
Travel	\$500	\$500	\$0
Equipment	\$0	\$0	\$0
Indirect	\$122,832	\$105,845	\$52,849
TOTALS	\$2,049,913	\$1,742,097	\$1,015,709

**Post-study costs budgeted only through 6/07.

Appendix A

	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Post-Study thru Jun-07	Total thru Post-Study
Personnel													
Apr '05 Budget	\$ 172,140	\$ 224,883	\$ 317,665	\$ 314,703	\$ 230,328	\$ 211,016	\$ 229,260	\$ 227,260	\$ 236,350	\$ 236,350	\$ 245,804	\$ 203,265	\$ 2,849,025
Actual	\$ 172,140	\$ 224,883	\$ 317,665	\$ 314,703	\$ 230,328	\$ 211,016	\$ 229,260	\$ 235,437	\$ 243,816				\$ 2,179,248
Operating Expenses													\$ -
Apr '05 Budget	\$ 13,131	\$ 94,401	\$ 193,990	\$ 158,850	\$ 162,834	\$ 364,542	\$ 237,258	\$ 247,000	\$ 254,380	\$ 235,580	\$ 160,780	\$ 150,000	\$ 2,272,746
Actual	\$ 13,131	\$ 94,401	\$ 193,990	\$ 158,850	\$ 162,834	\$ 364,542	\$ 237,258	\$ 104,457	\$ 227,940				\$ 1,557,403
Subcontracts													\$ -
Apr '05 Budget	\$ 123,629	\$ 688,452	\$ 213,291	\$ 845,860	\$ 565,870	\$ 1,128,507	\$ 948,696	\$ 1,420,103	\$ 1,264,180	\$ 1,454,051	\$ 1,229,168	\$ 609,595	\$ 10,491,402
Actual	\$ 123,629	\$ 688,452	\$ 213,291	\$ 845,860	\$ 565,870	\$ 1,128,507	\$ 948,696	\$ 1,359,315	\$ 747,991				\$ 6,621,611
Travel													\$ -
Apr '05 Budget	\$ -	\$ 8,429	\$ 218	\$ 346	\$ -	\$ -	\$ -	\$ 500	\$ 500	\$ 500	\$ 500		\$ 10,993
Actual	\$ -	\$ 8,429	\$ 218	\$ 346	\$ 105	\$ -	\$ -	\$ -	\$ -				\$ 9,098
Equipment													\$ -
Apr '05 Budget	\$ 291,568	\$ 253,578	\$ 354,496	\$ 274,508	\$ 17,000	\$ 192,340	\$ -						\$ 1,383,490
Actual	\$ 291,568	\$ 253,578	\$ 354,496	\$ 274,508	\$ 17,000	\$ 192,340	\$ -	\$ -	\$ -				\$ 1,383,490
Indirect													\$ -
Apr '05 Budget	\$ 47,922	\$ 111,454	\$ 139,587	\$ 122,902	\$ 101,447	\$ 148,709	\$ 120,408	\$ 123,438	\$ 127,720	\$ 122,832	\$ 105,845	\$ 52,849	\$ 1,325,112
Actual	\$ 47,922	\$ 111,454	\$ 139,587	\$ 122,902	\$ 101,447	\$ 148,709	\$ 120,408	\$ 88,121	\$ 121,793				\$ 1,002,343
TOTALS													\$ -
Apr '05 Budget	\$ 648,390	\$ 1,381,197	\$ 1,219,247	\$ 1,717,169	\$ 1,077,479	\$ 2,045,114	\$ 1,535,622	\$ 2,018,301	\$ 1,883,130	\$ 2,049,313	\$ 1,742,097	\$ 1,015,709	\$ 18,332,769
Actual	\$ 648,390	\$ 1,381,197	\$ 1,219,247	\$ 1,717,169	\$ 1,077,584	\$ 2,045,114	\$ 1,535,622	\$ 1,787,330	\$ 1,341,540	\$ -	\$ -		\$ 12,753,193

Original Budget \$ 14,508,000
Revised Budget \$ 18,332,953

Increase \$ 3,824,953

I. JCML OPERATIONS

A. Progress

This progress report is abbreviated because of the detailed discussion of progress given at the annual meeting in November. Case accrual for 2005 numbered 1085 subjects, bringing the total study case accrual to 1816 cases. In addition, over the course of the project to date JCML has diagnosed approximately 40 *pro bono* cases for individuals, mostly children, who do not qualify for inclusion in our studies. Analysis of study data and manuscript generation continues.

II. MOLECULAR EPIDEMIOLOGY OF BENZENE-EXPOSED WORKERS

A. Molecular Epidemiology Phase 1

The goal of the molecular epidemiology (phase 1) study is to: (a) study retrospective benzene exposure levels vs. blood counts present in worker exam records (2000), and (b) identify candidate factories for the Phase II study. Progress to date has been made in abstracting hematology counts from physical examination data for over 1500 cases from 19 facilities, and exposure assessment has been completed for 17 of these factories. Phase 1 is scheduled for completion in 2006.

B. Molecular Epidemiology Phase 2

The goal of the ME study is to recruit 1000 workers at different levels of benzene exposure to ME Phase 2a studies. At present 233 individuals from 3 factories have been recruited and exposure assessment has been completed for all 3 factories. Participation and recruitment of workers and facilities has been hampered by cultural based western-oriented recruitment and informed-consenting strategies that have posed difficulties. These were outlined in detail in the previous progress report. Proposed changes recently endorsed by the Ethics Review Panel are currently under IRB review. If approved, these should facilitate ongoing worker recruitment. ME Phase 2b studies have been discontinued, in part because of problems in recruitment similar to Phase 2a and in part because of our success in recruiting these workers to the DP study. This approach has resulted in characterization of a new form of MDS associated with benzene exposure which was published in 2005.

III. EXPOSURE ASSESSMENT

The challenges and issues confronting the exposure assessment (EA) team were outlined and discussed in great detail at the annual meeting. Preliminary exposure assessments continue to keep pace with the accelerated recruitment of cases to CC and DP studies. Primary goals for the short term are to purchase additional and replacement equipment necessary for factory inspections, to recruit additional qualified personnel to the EA team and to continue to engage IPHS staff in database validation and the

integration of database, factory site evaluation and sector information that will be necessary for final EA matrix construction that will take place in the last half of 2006.

III. EMERGING CHALLENGES

We are encountering difficulties in the continued retention of employees currently working on the project, as well as recruitment of additional staff to supplement efforts such as exposure assessment. In the past 6 months 3 EA team members, 2 members of the JCML laboratory staff, and 1 UCHSC staff member have all resigned. In addition, several highly trained laboratory personnel at JCML as well as several high level UCHSC staff and faculty members are currently exploring alternative employment options. Several of these individuals have expertise and study experience that places them on the critical path for completion of the project. If this attrition continues, the scheduled completion of the study and data analysis will be jeopardized.

The explanation for this is readily apparent to those who are familiar with the academic research environment, namely, that salary support for academic research positions is directly linked to funded research projects. At present, there are no closely related projects that utilize the skills of staff dedicated to this project that are in place. Any support or information that consortium members can provide in a timely manner on research opportunities available within the industry or related organizations would be helpful to alleviate this problem.

Progress Report
AML and NHL Case-control Study
Activities through December 2005

Prepared by:
Otto Wong, Sc.D.
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USA

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January 23, 2006

◆◆◆◆◆◆◆◆

Patient Enrollment

- The number of participating hospitals has increased to 31 (from 29 in 2004). The majority of participating hospitals are municipal hospitals (17), followed closely by district hospitals (12). The remaining two are occupational hospitals.
- As of November 2005, approximately 4000 patients have been interviewed. These patients included both cases and controls in the case-control study of AML and NHL as well as subjects in the disease progression study. Among the cumulative number of 4000 patients, approximately 3890 questionnaires were entered and verified.
- In terms of the case-control study of AML and NHL, the case enrollment rates for both AML and NHL patients during the last 6 months appeared to be quite encouraging. According to the numbers provided by the JCML (Dr. Richard Irons), the cumulative numbers of AML and NHL patients are as follows (as of November 2005):
 - 353 acute myeloid leukemia patients
 - 380 lymphoid cancer (WHO) patients
 - 251 "NHL" patients (part of lymphoid cancer above)

- If the current rates of patient enrollment can be maintained through 2006, we will likely end up with the following number of cases by the end of the year (end of data collection):
 - 500-600 acute myeloid leukemia case
 - 500-600 lymphoid cancer (WHO definition) cases
 - 350-400 "NHL" cases (part of lymphoid cancer above)
- In general, compared to previous years, case identification by the Clinical Coordinators at participating hospitals has been relatively timely and consistent. This is particularly true for AML patients. By comparison, the enrollment of NHL patients still fluctuates from time to time. Most of the NHL patients come from the Shanghai Tumor Hospital. In 2005 the team at Fudan made periodic reminders to the Clinical Coordinators at the Shanghai Tumor Hospital for timely submission of NHL patients. These periodic reminders seem to be working well.

Selection of Controls

- The selection of controls for both AML and NHL patients seemed to be working properly. In 2005, there were only a few minor isolated problems.
- At a couple of small hospitals with limited number of patients, finding appropriate controls in the right age range, especially when the cases were either very young or very old, could be difficult. There was some confusion as to whether the age matching requirement was ± 5 or ± 10 years. This point was subsequently clarified: ± 5 years should be attempted first and, if none available, ± 10 years will be accepted.
- The participation rate among eligible cases or controls has been extremely high. As of November 2005, only 6 cases or controls refused to participate in the study.
- We have been able to select two controls for every case.
- We continue to monitor the distribution of controls by diagnostic category to ensure that there will be no over-representation of any diagnostic category, which in turn may be associated with certain socio-economic class, occupation or lifestyle. The table below shows the distribution of controls by major diagnostic category, which seems to be in agreement with that of the general population of patients in Shanghai.

Diagnostic category	Percent
Cancers	13.91%
Nutritional & metabolic diseases	7.49%
Neurological system diseases	9.75%
Circulatory system diseases	12.60%
Respiratory system diseases	9.75%
Digestive system diseases	14.86%
Urinary system diseases	10.58%
Musculoskeletal diseases	11.30%
Blood & hematopoietic diseases	0
Mental diseases	0

Please note that, as specified in the protocol, patients with “blood & hematopoietic diseases” or “mental diseases” are not eligible.

Exposure Assessment

- Based on preliminary exposure assessment, a total of 259 patients were either definitely or potentially exposed to benzene, representing an overall benzene exposure rate of 7%. The exposure frequency (7%) is slightly lower than that used for power calculation (10%) in the study design.
- The distribution of benzene-exposed patients by major industry is as follows:

Industry	Percent
Painting	32%
Machine maintenance	20%
Rubber	14%
Home remodeling	13%
Shoe making	12%
Printing	9%

- Based on preliminary exposure assessment, some benzene exposure data of study subjects (cases and controls) are presented in the table below:

Earliest exposure	1936
Occupations/industries with highest exposure	rubber plank manufacture, brush & spray painting
Highest maximum exposure	515.7 ppm *
Highest minimum exposure	12.1 ppm *
Highest typical exposure	161.9 ppm *
Longest exposure	40 years

* preliminary estimates

- In addition to the patients identified to have been exposed to benzene, approximately 2800 patients were identified to have been exposed to other substances in a variety of industries. The largest category is farming with potential exposure to agricultural chemicals. Other frequently encountered chemicals are toluene and xylene.
- We continue to encounter difficulties in accessing the Shanghai Municipal IPHS's historical exposure database. Future arrangements with the Shanghai Municipal IPHS are under negotiation (handled by Dr. Richard Irons).
- As discussed in our last progress report dated July 24, 2005, several problems in interpreting the data in the Shanghai Municipal IPHS's database were identified; such as large number of zero values in the database and incomplete reporting by the district IPHS to the Shanghai Municipal IPHS. These issues are being addressed by the exposure assessment team under Tom Armstrong's direction.
- Plans have been underway to develop exposure profiles for 8 to 10 key industries using data from the 5 or 6 most industrialized districts of Shanghai. For example, the exposure assessment team has been working in close collaboration with the Yang Pu District IPHS and has been given access to the exposure records maintained at the local IPHS.
- The exposure assessment team continues to develop exposure data/estimates using the "sector analysis" approach. The analysis for two commonly encountered industries (shoe and rubber) has been completed.

- Exposure data from other sources are being collected, including published literature. According to Professor Liang, who heads the literature review task, preliminary exposure data for the following occupations/industries have been completed: shoemakers, painters, paint manufacturers, printers, dyers, and rubber workers. These literature data will supplement the Shanghai Municipal IPHS database and district IPHS data in the development of job-exposure matrix (JEM).

QA/QC

- At the beginning of 2005, a full-time person, Zhu Shoumin, was assigned to QA/QC, who reported to Zhou Yimei. He was responsible for QA/QC of questionnaire data, control selection, data entry and initial exposure assessment. The decision of one person dedicated to QA/QC turned out to be a good one. Zhu Shoumin prepared routine monthly QA/QC reports, which were shared by all senior investigators. Recently, however, these monthly reports were interrupted because of personnel changes. A new person, Pei Xiaodan, has replaced Zhu Shoumin. I have been reassured by Zhou Yimei that monthly reports will be resumed shortly.
- A recent QA/QC of questionnaires taken between December 2004 and August 2005 indicated that 92.1% of primary questionnaires sampled for review were "qualified" (i.e., no problems were found) and 98.2% of secondary questionnaires were "qualified." We have discussed with Chen Xiaobao, who is in charge of interviews, ways to further improve the quality of primary questionnaires.
- The overall data entry error from December 2004 to August 2005 was 2.6%, which is acceptable.
- In December 2005 I conducted an *ad hoc* QA of 15 matched set of questionnaires (45 questionnaires in total) taken in late November. I identified only 1 minor mistake in these questionnaires (with literally thousands of items/entries).

Project Management

- Communication with the Fudan team in Shanghai remains a high priority item. In addition to email and telephone calls, I made 6 trips to Shanghai in 2005.

- An estimated timeline for the completion of the case-control study is as follows. Based on a discussion with the team in Shanghai, Tom Armstrong and Zhou Yimei, the current projection is that case enrollment will be completed by December 2006. Final diagnoses, control selection, interviews and data entry will most likely be completed by the end of the first quarter of 2007. Exposure assessment of newly enrolled patients (cases and controls) will be conducted in the first and second quarters of 2007. Assuming that both diagnostic and exposure data for all patients will be finalized and available by June 2007, we will be performing epidemiologic analyses of the final data in the third quarter of 2007.

To facilitate data transfer/linkage and to develop plans for statistical analyses, however, we will need relatively large and representative samples of exposure estimates and diagnoses of study subjects by mid-2006 (see table below). These samples will allow us to develop plans for data transfer/linkage and to test-run analysis programs. Discussions are now underway to obtain these samples on a timely basis.

Time	Activities
July 2006	Samples of exposure estimates (from the Exposure Assessment Team) and diagnoses of study subjects (from JCML) provided to AHS.
3Q & 4Q 2006	Case-control study data management and plans for statistical analyses (based on samples provided).
December 2006	End of case enrollment.
1Q & 2Q 2007	Selection of controls. Interviews, final diagnosis and exposure assessment of last group of patients.
June 2007	Final diagnosis and exposure assessment of all patients completed.
2Q & 3Q 2007	Final data editing/auditing. Analysis and report preparation.

From: Clegg, Patsy M SCC-CHSE-PC <patsy.clegg@shell.com>
Sent: Friday, January 7, 2005 2:39 PM (GMT)
To: Beatty, Pat (E-mail) <PatrickBeatty@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Christopher Roythorne (E-mail) <chris.roythorne@uk.bp.com>; Donald M. Burnett PhD (E-mail) <burnetdm@bp.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SCC-CF-SS <sc724012@shell.com>; Colletti, Sarah J SCC-CSEA <sarah.colletti@shell.com>; Iannarone, Lauren-old B SCC-CSEA <Lauren.Iannarone-old@shell.com>; Jay Stuller (E-mail) <sjay@chevron.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; Valerie Crissey (E-mail) <vcrissey@chevrontexaco.com>; Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Michael Johnston (E-mail) <Mike.d.Johnston@ConocoPhillips.com>; Twerdok, Lorraine (E-mail) <twerdokl@api.org>
Subject: SHS Annual Meeting - Conversation with Dr Fu Hua

Team,
Shan Tsai and I talked with Dr. Fu Hua today regarding the change of venue for the 2005 SHS Annual Meeting. He was quite amenable to the change. We asked if he would personally notify the other Chinese investigators, let us know when that had been done, and then we would send a letter officially notifying participants.

Regards,

Patsy

Patsy Clegg
Product Steward
Shell Chemical LP
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Tel: +1 713 241 2521 **Fax:** 3325
Email: patsy.clegg@shell.com
Internet: <http://www.shell.com/chemicals>

From: Matt Todd <ToddM@api.org>
Sent: Wednesday, February 1, 2006 7:15 PM (GMT)
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: Shanghai Health Study Update: February 1, 2006

Shanghai Health Study Update

Announcements:

- Lynn Russo has announced her upcoming retirement from ExxonMobil. On behalf of the Consortium and API, we congratulate you on your retirement, thank you for your efforts and support of the study, and wish you much enjoyment playing golf. Lynn and her replacement plan to attend the February 21st meeting at API.
- In other staffing news, Camille Priselac has taken a new job with Chevron and Leif Sollid will replace her on the BHRC Communications Committee.
- A BHRC meeting is scheduled for February 21st. The meeting will take place in Washington DC at API (room 1117).
- The next BHRC Committee Chair call has been scheduled for March 6th at 2PM EST.
- The Technical Committee plans to schedule a conference call prior to the February 21st meeting to review the 4th Q05 budget.
- If you have any announcements that you would like to be posted, please send an email to Matt Todd.

Matthew Todd
American Petroleum Institute
1220 L Street NW
Washington DC 20005
202.682.8319
www.api.org

From: Tsai, Shan SP SHLOIL-SPS
Sent: Wednesday, September 12, 2001 12:51 PM (GMT)
To: Clegg, Patsy M SCC-CHSE-PC <pmclegg@Shell.Com>; Cagen, Stuart Z SCC <szcagen@Shell.Com>
Subject: RE: Issues regarding 2nd epi position and the hematopathologist posit ion on the SRP.

Patsy/Stu,

Dr. Delzell is my choice. I would like to know who sent, although inadvertently, the e_mail to her.

Shan

-----Original Message-----

From: Clegg, Patsy M SCC-CHSE-PC
Sent: Tuesday, September 11, 2001 6:29 AM
To: Tsai, Shan SP SHLOIL-SPS; Cagen, Stuart Z SCC
Subject: FW: Issues regarding 2nd epi position and the hematopathologist posit ion on the SRP.
Importance: High

Gentlemen,

If possible, please give me your preference by the end of the day. If the 2 of you could talk and agree a response, I will respond to Pat.

Thanks,

Patsy

-----Original Message-----

From: Beatty, Patrick (PWBE) [mailto:PWBE@chevron.com]
Sent: Monday, September 10, 2001 5:39 PM
To: 'BenzConsort-OC@listserve.api.org';
'BenzConsort-TC@listserve.api.org'
Cc: 'twerdokl@api.org'; 'woodallg@api.org'
Subject: Issues regarding 2nd epi position and the hematopathologist posit ion on the SRP.
Importance: High

Oversight Committee,

Epidemiology review of protocol and 2nd Epidemiologist

Dr. Linet (NCI) has declined our invitation to serve on the SRP. She indicated that her workload is such that she cannot take on any additional responsibilities. This leaves us with only one epidemiologist at this time, Dr. Mueller from Harvard.

The situation is complicated by the fact that Dr. Elizabeth Delzell has informed us that she no longer plans to review and comment on the protocol. She was inadvertently sent an e-mail implying that Dr. Linet had been picked for the SRP and that she, Dr. Delzell, for a variety of reasons would not be asked to serve on the SRP. Shortly thereafter, Dr. Delzell responded that she would no longer participate in the protocol review. I infer from the wording of her e-mail, that she was upset by the note indicating that she would not be asked to be on the SRP. Since Dr. Mueller will be out of the country on 9/27, as it stands now there will be no epidemiologist participating in the protocol review meeting.

This leaves us with a number of options.

1.) Try to find another epidemiologist who can serve on the SRP and hope that person can prepare comments on the protocols within two weeks. If not,

(and I suspect this will be the case) comments at a later date if not too extensive could be incorporated into the protocols without necessitating resubmittal to the IRB process.

2.) Contact Dr. Delzell and attempt to change her mind about the protocol review. This will still involve explaining why we would use her for this but not as a full SRP member. Unfortunately, the e-mail to her did not spell out the concerns about perceptions of conflict of interest due to her funding history by the petrochemical industry. This would still require eventually finding a second epidemiologist for the SRP. If anyone knows Dr. Delzell personally or has an epidemiologist in their company who does it might help to have them help with this effort.

3.) Revisit Dr. Delzell's history and reconsider her as a full SRP member in the hopes that she would consent and finish the protocol review. If she were to still decline, we are back to No. 1.

My preference is to do 2. Even if she is adamant about no further participation, I think that we should fully explain why she was not invited to join the SRP.

I am asking the Oversight Committee to respond ASAP, because we need a ruling on this before we can take option number 2..

I also want the Technical Committee to schedule a Conference call to discuss and propose candidates for the 2nd epidemiologist. I have been given a number of possibilities.

Hematopathologist

Four of the five companies have agreed with holding off on a search for a hematopathologist for the SRP. ExxonMobil was the one company that did not respond. Instead it will be left to the SRP to decide if they need that expertise. If so it would be one of the two additional positions that the Oversight Committee has agreed to fund at the discretion of the SRP.

Thanks

Patrick Beatty

Patrick W. Beatty Ph.D., D.A.B.T.

(510) 242-7037 Office; (510) 242-7022 FAX

Staff Toxicologist

Petroleum Team

Toxicology and Health Risk Assessment

CRTC RIC 100 Bldg. 24-1125

E-mail: pwbe@chevron.com

From: Matt Todd <ToddM@api.org>
Sent: Tuesday, February 14, 2006 4:23 PM (GMT)
To: benzconsort-oc@listserve.api.org; benzconsort-tc@listserve.api.org; benzconsort-cc@listserve.api.org
Subject: BHRC: Feb 21 Meeting - Draft Agenda
Attach: 2006-02-21_bhrc_meeting_agenda_draft.doc

BHRC Committee Members:

Attached is the draft agenda for the upcoming 2.21.2006 meeting. Please note the "SHS Timeline" PDF is embedded within the document. Please contact me with any questions you may have.

Dinner Information for Monday, February 20th:

Where: Primi Piatti (private room)
Time: 6:30 PM EST
Location: 2013 I Street NW, Washington DC (Eye Street, as in the letter I)
Website: <http://www.primipiatti.com/>

Dinner Attendee List:

Lynn Russo
Patsy Clegg
Jennifer Galvin
Stephen Bowes
Shan Tsai
Michael Johnston
Zach Wong
Matt Todd
Russ White
Mark Fitzsimmons
John Wagner
Stuart Cagen

Please contact me if you want to attend the dinner, but are not on the list...or vice versa.

Regards,

Matt

Matthew Todd
American Petroleum Institute
1220 L Street NW
Washington DC 20005
202.682.8319
www.api.org

Benzene Health Research Consortium Meeting
February 21, 2006

American Petroleum Institute
1220 L Street NW, Washington, DC
Conf. Room 1117
Agenda

Conference call information:

Dial-in number: 866.443.0059

Code: 2026828319#

Time	Agenda Item	Time Allotted	Lead
7:45 AM	Continental Breakfast		API
8:00	Welcome and Introductions		P. Clegg
8:10	Anti-Trust		J. Wagner
8:15	Establish Quorum Note Taker Agenda Review		P. Clegg
8:25	Successful closure of study planning • Where are we and how did we get here? • Key Issues • What does closure look like? • Develop plan using issues and time line (attached below), including key events: ○ 06 Meeting ○ 07 Meeting ○ "Closing" Ceremony ○ Benzene Symposium	15 minutes 20 minutes 20 minutes	P. Clegg
10:00	Break		
10:15	Successful closure of study planning, cont'd		P. Clegg
Noon	Lunch		API
12:30	Successful closure of study planning, cont'd Topics as time permits • Technical Committee Update • 05 Financial Review • U of Colorado Financial Review update		J. Galvin S. Cagen
1:30 PM	Study Closure Plan discussion with Jerry Rice		P. Clegg
3:45	Review action items; schedule next meeting/call		P. Clegg
4:00	Adjourn		



Timeline.pdf

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Friday, February 24, 2006 12:01 PM (GMT)
To: Jerry Rice (E-mail) <Jmricewas@aol.com>
Cc: Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Anita Balaraman (E-mail) <anita.balaraman@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SHLOIL-SHOIL-SHS <sc724012@shell.com>; Colletti, Sarah J SCC-DCS/14 <sc192550@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; John Wagner (E-mail) <wagner@api.org>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>
Subject: Thank You from the Shanghai Health Study Sponsors

Jerry,
Thank you very much for meeting with the sponsors of the Shanghai Health Study this week. Your contributions to the planning for bringing the study to successful closure are valued. We look forward to continuing to work with you and your team.

Regards,

Patsy

Patsy Clegg
Product Steward
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Internet: <http://www.shell.com/chemicals>

From: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>
Sent: Friday, February 24, 2006 12:01 PM (GMT)
To: Matthew Todd (E-mail) <toddm@api.org>; whiter@api.org; Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Burnett, Don (E-mail) <burnetdm@bp.com>; Michael Johnston <Mike.d.Johnston@ConocoPhillips.com>; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>; Anita Balaraman (E-mail) <anita.balaraman@chevrontexaco.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Matthew A Hughes (E-mail) <hughm7@BP.com>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Tsai, Shan P SHLOIL-SHS <st196949@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Cagen, Stuart Z SHLOIL-SHOIL-SHS <sc724012@shell.com>; Colletti, Sarah J SCC-DCS/14 <sc192550@shell.com>; Lynn Russo (E-mail) <lynn.b.russo@exxonmobil.com>; Myron Harrison (E-mail) <myron.c.harrison@exxonmobil.com>; Richard Herold (E-mail) <heroldra@bp.com>; John Wagner (E-mail) <wagner@api.org>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>; Bruce M. Jarnot (E-mail) <jarnotb@api.org>
Subject: Shanghai Health Study Planning Meetings - Thanks!

BHRC Team;

I want to extend a personal thank you for your participation in the Shanghai Health Study planning meeting that we had this week. As we approach the end of the study, the planning that we have initiated is critical to bringing the project to a successful closure. Your contributions are valued. I look forward to continuing to work with you.

Regards,

Patsy

Patsy Clegg
Product Steward
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One Shell Plaza, 910 Louisiana, Houston, TX 77002-4916
Tel: +1 713 241 2521 Fax: 3325
Email: patsy.clegg@shell.com
Internet: <http://www.shell.com/chemicals>

From: lynn.b.russo@exxonmobil.com
Sent: Friday, February 24, 2006 1:23 PM (GMT)
To: Clegg, Patsy M SCC-DCS/22 <patsy.clegg@shell.com>; Brian Doll (E-mail) <brian.e.doll@exxonmobil.com>; Jennifer Galvin (E-mail) <jennifer.b.galvin@conocophillips.com>; Mark Fitzsimmons (E-mail) <mfitzsim@steptoe.com>; Michael Johnston <Mike.d.Johnston@conocophillips.com>; Tsai, Shan P SHLOIL-SHS <Shan.Tsai@shell.com>; Stephen Bowes (E-mail) <stephen.m.bowes@exxonmobil.com>; Matthew Todd (E-mail) <toddm@api.org>; whiter@api.org; Zach Wong (E-mail) <ZachWong@chevrontexaco.com>
Cc: Bruce M. Jarnot (E-mail) <jarnotb@api.org>; Michael Bird (E-mail) <michael.g.bird@exxonmobil.com>; Cagen, Stuart Z SHLOIL-SHOIL-SHS <stuart.cagen@shell.com>; burnetdm@bp.com
Subject: Thanks for dinner.

Thank you all for dinner, your thoughtful gift, the card (turns out the pen wasn't so bad but the writing is a challenge to interpret) and all your best wishes. I really enjoyed this project including all the rough spots and challenges--all the wonderful people made it work.

Lynn

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, March 22, 2006 6:11 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: OttoWong@aol.com; benzconsort-oc@listserve.api.org
Subject: Regrets... BHRC-TC/PI Call *Cancelled* with Otto Wong - Thurs 3/23

Benzene Health Research Consortium - Technical Committee (BHRC-TC)

With regrets... tomorrow's scheduled "PI Call" with Dr. Wong has been **cancelled** due to significant BHRC-TC member unavailability for this periodic update.

Best Regards - Bruce.

From: Bruce Jarnot
Sent: Friday, March 17, 2006 11:40 AM
To: 'benzconsort-tc@listserve.api.org'
Cc: 'OttoWong@aol.com'; 'benzconsort-oc@listserve.api.org'
Subject: BHRC-TC... PI Call w/ Otto Wong - Thurs 3/23, 11am EST
Importance: High

Benzene Health Research Consortium - Technical Committee (BHRC-TC)

Dr. Wong kindly offered to restart our 2006 PI Conference Call schedule, by meeting with the Technical Committee next week. **Note the alternate PIN code vs. previous BHRC-TC calls:**

Date: Thursday, March 23rd

Time: 11:00am EST (10:00am Central, 8:00am Pacific)

Phone: 770-765-9147 (toll free: 866-443-0059)

PIN Code: 202-682-8473# (Bruce's phone number)

Please reply if you cannot join next week's call.

Best Regards - Bruce.

From: OttoWong@aol.com [mailto:OttoWong@aol.com]
Sent: Friday, March 17, 2006 11:09 AM
To: Bruce Jarnot
Subject: Call with sponsors

Dear Bruce:

When we talked last week, we thought it would be a good idea to resume my periodic conference calls with members of the technical and oversight committees. We tentatively set our next call at 8 AM (Pacific time) on March 23. I have not heard from you since. Is the call still on? Please advise.

Regards,

Otto

Otto Wong, Sc.D., F.A.C.E.

Fellow, American College of Epidemiology

Chief Epidemiologist, Applied Health Sciences, San Mateo, California, USA

Adjunct Professor of Epidemiology, Tulane University, New Orleans, USA

Adjunct Professor of Community Medicine, Chinese University of Hong Kong

Honorary Professor of Community Medicine, University of Hong Kong

Visiting Professor of Occupational Epidemiology, Fudan University, Shanghai

Associate Editor, *Annals of Epidemiology*

Associate Editor, *Occupational and Environmental Medicine*

Editorial Board, *Regulatory Toxicology and Pharmacology*

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Email: OttoWong@aol.com

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, November 10, 2003 7:35 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: Matt Todd <ToddM@api.org>
Subject: Shanghai TC... draft minutes from 11/07/03 conf call
Attach: Minutes BHRC-TC 07 Nov 2003.doc

Benzene Health Research Consortium - Technical Committee (BHRC-TC)

Attached are draft minutes from the BHRC-TC Conference Call on Nov 07, 2003.

By copy to Matt, please post to the SHS website/Tech Committee page... thanks!

Best Regards - Bruce.

Bruce M. Jarnot, Ph.D., DABT
American Petroleum Institute
Regulatory and Scientific Affairs
1220 L Street, NW (Suite 900)
Washington, DC 20005-4070
phone: (202) 682-8473 fax: -8031
email: jarnotb@api.org

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

November 7, 2003

Conference Call

Participants

- | | |
|-----------------------------------|---------------------------|
| 1. Patrick Beatty (ChevronTexaco) | 5. Stuart Cagen (Shell) |
| 2. Michael Bird (ExxonMobil) | 6. Mark Fitzsimmons (S&J) |
| 3. Steve Bowes (ExxonMobil) | 7. Bruce Jarnot (API) |
| 4. Bill Broddle (ConocoPhillips) | |

General Items

- Antitrust review and roll-call were completed
- *Note from Richard: 100 case referrals from hospitals to date, including some unusual hematopoietic diseases*

3Q03 Financials

- Kudos to API on quarterly package, especially retrospective financials
- **Action** - Bruce: to prepare a "crib sheet", briefly explaining:
 - Basis of budget parse on each contract
 - Basis of budget extrapolation 2005 → 2007

Endorsement of SRP Recommendations & Contingency Fund

- **Action** Patrick/Stuart: to carry BHRC -TC recommendation to -OC meeting:
 - Add sufficient urinary SPMA analyses to allow read-across to previous ME studies
 - Add HIV testing of Controls in CC study
 - Reduce scale of ME study to 1000 cases
 - To achieve necessary cost savings, while maintaining scientific integrity
 - Recommendation subject to SRP approval

Benzene Health Research Consortium

Draft Technical Committee Meeting Minutes

- \$150K needed (Dr. Irons' revised estimate) to fund the added testing:
 - \$100K for HIV in CC; needs new "informed consent" form
 - includes assay cost, increased compensation, lab overhead
 - \$50K for urinary SPMA in ME (800 determinations)
 - pre-/post-shift testing in 300 individuals, plus validation
- With a concomitant cost reduction in ME study
 - Target: 1000 workers (still seen as a "world class" study)
 - Estimated to achieve \$750K-\$1MM savings
- Target \$500K set-aside for contingency fund
- **Action - Bruce:** check with Richard (before Monday PM) to see what he needs for T&E budget – new proposal, or adjusted timing of original estimate (Done... \$1.41MM; info emailed to BHRC-TC & -OC 11/10/03)

Next Meeting

- No meeting or conference call scheduled at this time

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, November 10, 2003 5:22 PM (GMT)
To: benzconsort-tc@listserve.api.org
Cc: benzconsort-oc@listserve.api.org
Subject: BHRC-TC Contracting... Important update info from Richard Irons

BHRC Technical Committee -

Information from Dr. Richard Irons, subsequent to the BHRC-TC Conference Call discussion this past Friday (Nov 07)...

UCHSC Grant

1) Budget "caps" for UCHSC subcontracts were set based on the original pre-SRP program budget, and some of these have nearly run out. Even though UCHSC has ~\$2MM in the bank, these subcontracts cannot be easily modified without formal documentation of the new approved UCHSC budget.

2) **Action:** UCHSC needs a formal letter from API, stating the revised/increased total UCHSC budget and anticipated payment schedule.

UCHSC Interest

1) UCHSC will refund interest earned on Dr. Irons on-deposit grant funds, if the Consortium writes to state that it is standard policy to collect all interest on deposited funds.

2) UCHSC may balk at this, however, because of the non-standard reduced indirect/overhead charges that were negotiated on this grant.

T&E Budget

1) Dr. Irons' current budget (Oct 27 2003) for T&E, extended 1.5years through 2Q07, totals \$1.41MM

2) Richard claims that this T&E budget was revised from \$1.23MM (Jan 2001) to \$1.59MM (Dec 2001), during the overall program adjustment to incorporate SRP research add-ons. (I have not found this documentation)

3) Thus the new \$1.41MM budget represents either a 12% savings (over \$1.59MM), or a 11% increase (over \$1.23MM)

T&E Contract

1) Richard will accept either a "travel advance" contract, as current, or a "per-diem advance" contract at NIH's Shanghai rate (~\$100/person/day). He cannot afford to personally advance travel expenses for 8-12 UCHSC scientists, and states that the current contract saves the Consortium considerable money vs. the per-diem approach.

2) Richard is submitting a copy of his monthly "daily ledger" to API for review. API accounting feels this may provide needed documentation to allow continued "travel advance" contracting for Irons T&E expenses. I personally believe this to be true, and "keep it the same" to be the best course of action for the Consortium with regard to the T&E contract.

Best Regards - Bruce.

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email: jarnotb@api.org

From: Bruce Jarnot <jarnotb@api.org>
Sent: Wednesday, October 8, 2003 7:42 PM (GMT)
To: benzene-srp@listserve.api.org; benzconsort-tc@listserve.api.org
Subject: "Leukemia risk from low level benzene exposure" article in Epidemiology (Sep 2003)
Attach: Glass-Epidemiology-2003 pg1.pdf

Shanghai Health Study Technical Committee, Science Review Panel & API Benzene Task Force...

Courtesy of Lorraine Twerdok, attached is the first page (copyright deference) of an article by Deborah Glass et al. on "Leukemia risk from low level benzene exposure" (Epidemiology, Sep 2003; 14:569-577) which reports on a nested case-control study of lympho-hematopoietic cancers within the the Australian petroleum industry cohort of benzene-exposed workers.

Best Regards - Bruce.

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email: jarnotb@api.org

From: Paula Podhasky <Podhaskyp@api.org>
Sent: Thursday, September 4, 2003 2:20 PM (GMT)
To: BenzConsort-OC@listserve.api.org; BenzConsort-CC@listserve.api.org; BenzConsort-TC@listserve.api.org
Subject: BHRC Recruitment Committee Minutes
Attach: 8 27 2003 Recruitment minutes.doc

Attached for review are draft minutes from the Recruitment Committee Meeting at Asilomar.

Paula P.

BHRC Recruitment Committee Meeting Minutes August 27, 2003

Participants:

Don Burnett, BP	Paula Podhasky, API
Patsy Clegg, Shell	Matt Todd, API
Brian Doll, Exxon Mobil	Lorraine Twerdok, API
Mike Johnson, Conoco Phillips	John Wagner, API
Shan Tsai, Shell	
Lynn Russo, Exxon Mobil	
Bill Broddle, Conoco Phillips	

AGENDA

1. Review Previous Recruitment Efforts
2. < Full Share Enticements (e.g. patronage for philanthropic organizations)
3. Other Items

Review Previous Recruitment Efforts

- Participants were asked to review recruitment tier sheets on the SHS website and consider which companies to approach with less than full share membership option <http://www.shanghaihealthstudy.org/>
- Investigate Chinese sponsorship
- Define sponsorship expectations and privileges for NGOs and government agencies.

< Full Share Enticements

- Expectations:
 - 200K minimum
 - Sponsor sign contract
- Privileges: Need to clearly establish privileges of the less than full share sponsor. Options available include
 - Level of participation (i.e. observer only at meetings, participant at meetings, voting privileges.)
 - Identified as sponsor on publications, posters and meeting presentations
 - Website access
 - Study updates
 - Meeting attendance: committee and annual
 - Financial reports

See Table below

Action Item: Check with your legal department on whether company wants to be acknowledged as a sponsor in SHS papers and presentations. (all representatives)
(John Wagner)

Action Item: Contact PIs to confirm how sponsors would be acknowledged in publications. (Shan Tsai and Bill Broddle)

Proposed privileges by sponsorship level

Privileges	\$200,000	\$500,000
Oversight Committee	X	Observer
Technical Committee	√	Participant
Budget Committee	X	Observer
Communications Committee	Observer	Participant
SRP/ERP	X	X
Study Updates	√	√
Website access	To general part, but not committees	To general part, but not committees
Financial Reports	√	√
Identified as sponsor on publications, posters and meeting presentations	TBD	TBD
Annual Meeting	Observer	Observer

Action Item: Schedule Recruitment Committee meeting for September/October 2003 in Chicago. (Patsy/ Paula)

From: Bruce Jarnot <jarnotb@api.org>
Sent: Monday, June 9, 2003 4:46 PM (GMT)
To: benzconsort-tc@listserve.api.org; Cagen, Stuart Z SCC <szcagen@Shell.Com>
Subject: FYI...BHRC-OC briefing addendum sent to exec committee
Attach: Attach E-China Benzene Paper 6-19-03 mtg.doc

FYI....

-----Original Message-----

From: Bruce Jarnot
Sent: Monday, June 09, 2003 8:56 AM
To: 'benzconsort-oc@listserve.api.org'
Cc: Matt Todd; Paula Podhasky
Subject: Please Read...BHRC-OC briefing addendum sent to exec committee
Importance: High

Benzene Health Research Consortium Oversight Committee -

PLEASE READ the attached final version of the Executive Briefing Addendum, as Red has significantly changed the focus and content of the document...

Most significantly, it does not pose a request to API for funding or underwriting.

Even though the question is not explicitly stated, it has been posed at earlier meetings and should surface.

Regards - Bruce.

-----Original Message-----

From: Bruce Jarnot
Sent: Monday, June 09, 2003 8:26 AM
To: 'benzconsort-oc@listserve.api.org'
Cc: Matt Todd; Paula Podhasky
Subject: BHRC-OC... briefing addendum sent to exec committee

Benzene Health Research Consortium Oversight Committee -

The attached briefing addendum was sent to API's Executive Committee on Friday, June 6th...

Best Regards - Bruce.

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**For Discussion
Action By Subscribing Companies**

**API Executive Committee
June 19, 2003**

China Benzene/Shanghai Heath Study

Issue: Absent significant slippage in the project timetable; the participating companies should determine and communicate their decision, if they plan not to go forward with the project, before the group convenes at its Annual Meeting in California at the end of August.

Background: At its March 18, 2003 meeting, the Executive Committee discussed funding and management of the Shanghai Health Study. The March Executive Committee briefing paper is at Attachment E-1 for reference. At that time, questions were raised about the Benzene Health Research Consortium project's scope and the importance of assuring that the Consortium is adequately managing costs.

Discussion:

Project/Scope. Member company participation and funding of this study was conditional on developing the highest-quality science with full consideration of ethical issues involved in a study of exposed human subjects. To that end, the Consortium formed the independent Scientific Review Panel (SRP) and Ethics Review Panel (ERP) of distinguished scientific experts from a variety of fields to guide the study (membership lists attached). Improvements were recommended by the panels, reviewed by company scientific experts, and approved by the consortium members' Oversight Committee. These improvements increased cost beyond the original estimate of \$19.8MM to \$22.8MM but did not alter the scope of the project. These changes were incorporated at the outset of the project and included:

- Increased number of control subjects in the epidemiology portion of the study; and
- Consistency of exposure assessment methods between all segments of the study.

Accordingly, the only increases in budget were to enhance the quality of study results.

The SRP and ERP annually review the study with the Principal Investigators, and may propose changes. The consortium members Oversight Committee must, however, review and approve any recommended changes with a budgetary impact. Any changes the Consortium might find that could be recommended to maintain the scientific or ethical integrity of the study would be given strong consideration by the Oversight Committee of the participating companies.

Consortium Management of Funds. API, as contract administrator, manages the study on a day-to-day basis as part of API's self-supporting operations; the Consortium Technical Committee oversees financial tracking relative to project milestones. Both study progress and spending have slowed due to unforeseen events, such as restrictions imposed following 9/11, which delayed entry of Chinese scientists into the US for training at the University of Colorado. Most recently, SARS has delayed the enrollment of cases. At this time, however, the study is on the \$22.8 MM budget track and spending to date is consistent with work effort and work progress. The Oversight Committee and API staff continue to closely monitor spending to insure the study continues within its budget. Given the SARS impacts, some slippage in the near term timetable may occur.

Near Term Activities. An annual meeting of the project participants, including the Chinese officials involved, is scheduled for the end of August in California. If the companies in the consortium conclude they are to end the project, they may wish to communicate such before the August conference convenes.

The current level of funding would be sufficient to do the epidemiological (epi) study portion of the overall project, but the Chinese may well lose interest, since they are very committed to the other two projects. The epi study alone would not yield the desired benefits of the overall project for the companies.

An update will be provided on efforts to gain additional participation/funding from companies that will benefit from the study results. Recently, feedback has been received that both Dow and Sunoco have declined to participate.

Recommendation: If the participating companies elect to continue the project, direct API and the participants to communicate at every opportunity the importance and necessity of minimizing costs, while continuing to search for additional funding. If the study is not to be fully funded, API will await word from the participating companies as to their

preferences for action. If intent is to terminate, it may be best to communicate such to the Chinese officials and the members of the SRP and ERP prior to the California annual meeting of the project.

Shanghai Health Study – Independent Expert Review Panels

I. ERP – Ethics Review Panel

Dr. Baruch Brody (Chair)
Baylor College of Medicine

Dr. Juhana Idanpaan-Heikkila
World Health Organization

Dr. Zong-Liang Xu
Fudan University

II. SRP – Scientific Review Panel

Dr. Richard Albertini
Genetic Toxicology
University of Vermont

Dr. Harvey Checkoway
Epidemiology
University of Washington

Dr. John Cherrie
Industrial Hygiene
Aberdeen University

Dr. Helmut Greim
General Toxicology
University of Munich

Dr. Robert Herrick
Industrial Hygiene
Harvard University

Dr. Li Guilan
Genetic Toxicology
Chinese Academy of
Preventive Medicine

Dr. Richard Larson
Hematology
University of Chicago

Dr. Mark Minden
Hematology
University of Toronto

Dr. Nancy Mueller
Epidemiology
Harvard University

Dr. Jerry Rice (Chair)
General Toxicology
Retired Chair, IARC

Dr. Howard Rockette
Statistics
University of Pittsburgh

China Benzene Study Update

Issue: The Benzene Health Research Consortium is seeking guidance on options to address a shortfall in funding the industry-sponsored Shanghai Health Study (SHS). A five-year project designed to investigate the potential health effects of benzene, the study sponsors have secured \$16.5 of the \$22.8 million required to carry it to completion. Although preparations for the research have begun, this \$6.3 million funding gap will need to be closed through commitments in the near term, or the project will be terminated prematurely in 2004.

Background: Continued concern about the potential health effects of benzene is reflected by two recent studies that suggest a link between benzene exposure and certain cancers not previously associated with the chemical. The Consortium is sponsoring a five-year study in Shanghai, China, which could significantly decrease the uncertainty surrounding the issue. A joint investigation primarily managed by the University of Colorado and Fudan University, the SHS includes protocols developed with the assistance of a 12-member international scientific review panel and Chinese, European and American bio-ethics specialists. It also has strong support and active participation from Chinese universities, hospitals and regulatory agencies. The United States EPA has expressed interest in participation.

The quality of Shanghai's occupational benzene exposure records offers an unprecedented opportunity, and perhaps the last of its kind, to conduct this type of study on the relationship between benzene exposure and the risk of certain blood diseases. The SHS will enhance industry's product stewardship, while providing the scientific, regulatory and business communities with better information on benzene.

Project Status: Three inter-related studies are underway: (1) a Case-Control Epidemiology study; (2) a Disease Progression Study; and (3) a Molecular Epidemiology Study. Laboratory construction, technical training and exposure assessments are nearing completion and individual case acceptance will begin in spring, 2003. Legal and public affairs expertise has been retained to facilitate Consortium activities.

Funding Status: Current funding for the program is projected to run out during the first quarter of 2004. Five companies (BP, ChevronTexaco, ConocoPhillips, ExxonMobil and Shell Chemical Company) have contributed \$16.5 million. While the study was initiated with a modest shortfall, subsequent protocol enhancements recommended by independent scientific and ethics review panels led to the final budget of \$22.8 million.

The Consortium has made presentations to ACC, ARPEL, CONCAWE, IPIECA, and NPRA; held focused discussions with Dow Chemical Company, Marathon Ashland, and Sunoco, and approached AGIP-ENI, ARPEL, BASF, Citgo, Dupont, Lyondell-Equistar, Petronas, Statoil, and TotalFinaElf. To date, none of these entities has agreed to join the Consortium and contribute funds, although CEO-level calls will soon be made to Dow, Sunoco and TotalFinaElf.

Implications: The Consortium Technical Committee studied the impacts of a funding shortfall and determined that, at best, only one of the three studies could be completed with current funds. The reality, however, is that an unclosed gap would result in loss of Chinese collaboration, in which case none of the studies would likely be completed. Aside from lost opportunity, this situation could have external relations and legal ramifications.

Since the study will be of benefit to the entire industry, the Consortium is requesting that API leadership consider whether API can provide support to eliminate the current shortfall. In that regard, should API underwrite the remaining shortfall while recruitment efforts continue, with the expectation of being repaid any subsequent shortfall, in full or in part, by the Consortium?

While the Executive Committee can defer action on this issue until its June meeting, a funding decision will need to be made at that time, or efforts should likely get underway to wind down the project.