

Chaotic, but In Control???

**Managing a Flurry of Data Processing and Analysis
Activities for the Total Coliform Rule Six-Year Review**

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Motivation

- “The amount of external QA/QC should be a function of the project risk and the process maturity of an organization. As organizations mature, management and staff will implement the proper QA and QC approaches as a matter of habit.”

Our Work

- Total Coliform Rule is under review.
 - Federal advisor committee (FAC) meets every month or two.
 - Technical workgroup (TWG) conf calls every week
- Modeling TC and E. coli occurrence based on huge dataset.
- Use model to predict the impact of TCR changes on:
 - Sampling and analysis burden
 - Numbers of triggered actions / violations

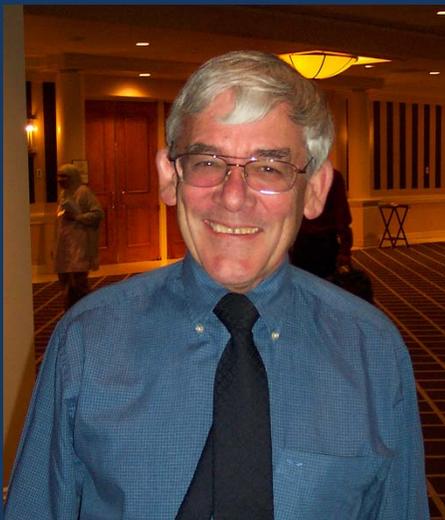
Our Problem

- We often seem to be scrambling frantically to produce statistics and predictions for conference calls and face-to-face meetings.
- Can we defend our numbers?
- Can our numbers be reproduced?
- Can we be confident that we haven't blundered?
- Does our QAM have any means of monitoring, checking, reviewing our work?

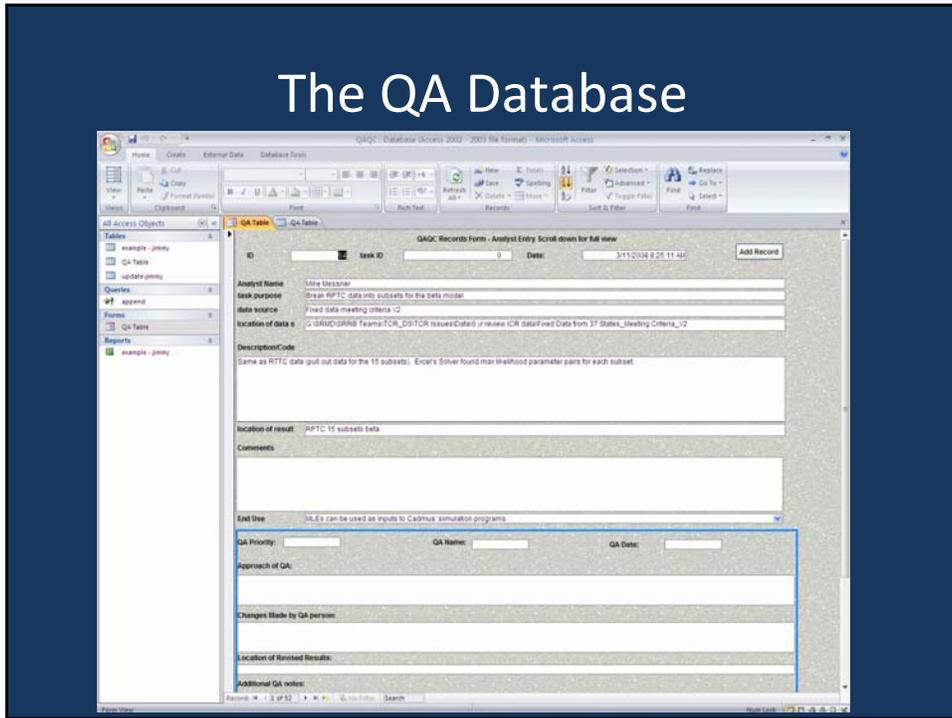
Goals

- Provide a reliable record of queries, data cleaning, models, and analyses performed
- Minimize time needed to document work
- Establish a repeatable logical path of analyses which could be repeated at a later time
- Provide the framework for straightforward QC of all work performed
- ...but first, is there something in place that we could just borrow/steal?

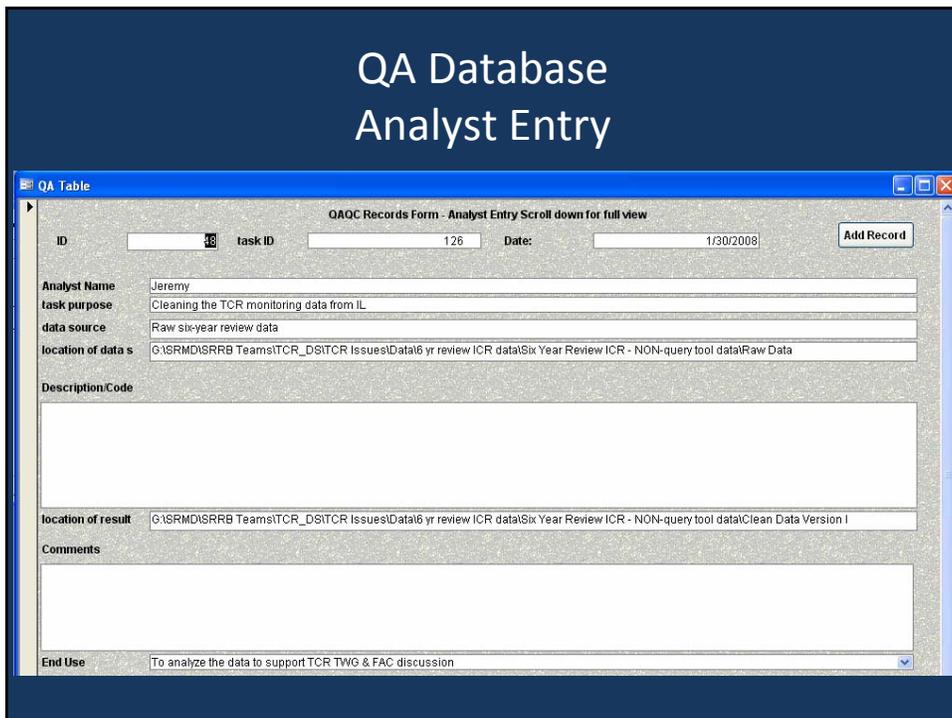
Who ya gonna call???



The QA Database



QA Database Analyst Entry



QA Database QA Reviewer Entry

QA Priority: QA Name: QA Date:

Approach of QA:
Check each of fields and their entries against those for the 28 states using SDWIS/Query Tool

Changes Made by QA person:
Two records with missing System Info (System Type, Source Water, & Population) were deleted.

Location of Revised Results:
G:\SRMDSRBB Teams\TCR_DS\TCR Issues\data\6 yr review ICR data\Six Year Review ICR - NON-query tool\data\Clean Data Version III

Additional QA notes:
NA

Observations from QA:
One system with two records are missing System Info (System Type, Source Water, & Population).

Analyst note:

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QA Database - Datasheet View

ID	task ID	Date	Analyst Name	data source	location of data source	location of result	results	End Use	analyst note	QA Priority	QA Name	QA Date
4			Mike Messner	Excel workbook C:\Documents and Settings\...	Same folder as above		input for WebD...					
7			Jimmy Bauer	NA	NA	NA	NA					
8			Mike Messner	NE_LT_4101.xls	C:\Documents and Settings\...	File = MLE vncd.r	alternative to B...					
10	008 5 04 08 PM	1/7/2008	Jimmy Chen	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/7/2
11	008 7 42 28 AM	1/7/2008	Mike Messner	Excel spreadsheet Folder TCR\CR Data\Analysis	TCR folder	TCR folder	The worksheets			High	Jimmy Chen	1/7/2
12	008 8 19 02 AM	1/7/2008	Mike Messner	Excel workbook folder TCR\CR Data\Analysis	TCR\CR Data	TCR\CR Data	Data input for V...			High	Jimmy Chen	1/7/2
13	008 10 30 09 AM	1/7/2008	Mike Messner	TCR folder	TCR\CR Data\Analysis	Summary stats and	Look for differ...			High	Jimmy Chen	1/7/2
14	008 12 12 11 PM	1/7/2008	Jimmy Bauer	FL TCR compul	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	Conference call					
15	008 11 24 47 AM	1/7/2008	Mike Messner	Excel file Data I	In state folders named "LT_C	Cells saved as "	Check against t...					
17	008 11 22 56 AM	1/7/2008	Mike Messner	same as for log	individual state folders in TCR							
18	008 100	1/7/2008	Cadmus	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/7/2
19	008 101	1/7/2008	Cadmus	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/7/2
20	008 102	1/7/2008	Cadmus	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/7/2
21	008 103	1/6/2008	Cadmus	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/6/2
22	008 104	1/6/2008	Jeremy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/6/2
23	008 105	1/10/2008	Jeremy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/6/2
24	008 106	1/10/2008	Jeremy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/10
25	008 107	1/10/2008	Jeremy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/10
26	008 108	1/10/2008	Jeremy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/10
28	008 0 30 14 23 PM	1/7/2008	pyrene									
29	008 0 30 2 15 42 PM	1/7/2008	Mike Messner	NY LT 4101 Me	NY LT 4101 Meeting 50% Cr	folder TCR\CR Data	Jeff will use this			High	Jimmy Chen	1/7/2
30	008 0 30 2 24 25 PM	1/7/2008	Mike Messner	Excel workbook folder	TCR\CR Data\Analysis	same folder. Item:	Jeff Rosen may			High	Jimmy Chen	1/7/2
31	008 0 30 1 41 09 PM	1/7/2008	Mike Messner	Alaska (AK), as	TCR\CR Data\Analysis	summary stats and	Learn whether q			Low	Jimmy Chen	1/7/2
33	008 0 30 1 50 49 PM	1/7/2008	Mike Messner	Excel workbook TCR\CR Data\Analysis	A_FL etc in same f		Model selection			Low	Jimmy Chen	1/7/2
34	008 0 30 8 21 27 AM	1/7/2008	Mike Messner	Access file "Dat	TCR\CR Data\Analysis		FI modeling etc			Medium	Jimmy Chen	1/7/2
35	008 0 30 8 58 10 AM	1/7/2008	Mike Messner	Workbook "Dat	TCR\CR Data\Analysis	as Text in MSWord	combine with FI			Moderate	Jimmy Chen	1/7/2
36	008 0 30 11 08 05 AM	1/7/2008	Mike Messner	Workbook "Dat	TCR\CR Data\Analysis	Excel workbook "A	Combined data			Medium	Jimmy Chen	1/7/2
37	008 0 30 12 39 39 PM	1/7/2008	Mike Messner	four states' TCR	Analysis by State	FI beta four states	Learning to find			Low	Jimmy Chen	1/7/2
38	008 0 30 2 34 59 PM	1/7/2008	Mike Messner	Workbook "Dat	TCR Analysis by State	Workbook "WY FI"	combine with FI			Moderate	Jimmy Chen	1/7/2
39	008 0 30 2 39 10 PM	1/7/2008	Mike Messner	MSAccess file	Mike's folder TCR\CR Data	Shared drive folder	Share with Jeff			High	Jimmy Chen	1/7/2
40	008 0 30 9 15 21 AM	1/7/2008	Mike Messner	28-state databa	Leaf worksheet in Excel worksh	"FI Data" on S	Produce a singl			Medium	Jimmy Chen	1/7/2
46	008 0 30 10 48 10 AM	1/7/2008	Mike Messner	Excel workbook C:\Documents and Settings\...	Excel workbook W		modeling condit			moderate	Jimmy Chen	1/7/2
47	008 0 30 8 43 15 AM	1/30/2008	Ai Ananagh	ma for 2005 dat	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	for data modern			high	Jimmy Chen	1/30
48	008 0 30 9 15 21 AM	1/30/2008	Jimmy	Raw six-year re	G:\SRMDSRBB Teams\TCR	G:\SRMDSRBB TE	To analyze the i			High	Jimmy Chen	1/30
49	008 0 30 8 36 40 AM	1/30/2008	Mike Messner	Excel file NY LT	TCR\CR Data\Analysis	same folder. MLE	help Jeff get sta			Medium	Jimmy Chen	1/30
50	008 0 30 9 49 36 AM	1/30/2008	Mike Messner	simulated data i	folder TCR\CR Data\Analysis	folder TCR\CR Data	Send to Rosen. Mike also used			Moderate	Jimmy Chen	1/30
	008 0 30 11 21 20 AM											

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Basics

- Select add record and input your information
- Only fill applicable fields
- Your information is saved automatically
- No need to fill out QC information (Anything inside the bluebox)
- You may go back and edit entries – do not edit other peoples entries however
- New features will be added as necessary

Our Experience

- Biggest problem is discipline. The analyst needs to make time to complete the form.
- Less than half of the analyses that should generate completed forms actually do.
- The completed forms have been helpful:
 - QAManager learns what analyses are critical and has some good suggestions for her review.
 - Analysts have used the forms to recall what was done & are able to reproduce the major work products.

Improving the System

- Ease of use
 - Shortcut/Link on desktop
 - Favorites in Explorer
 - Set aside documentation time each day
 - QAM “make the rounds”
- Reward regular use & improvement
- QA review/audit key information provided to Technical Workgroup & Federal Advisory Committee (look for completed QA form)

Interested in Trying The Database?

- Contact Mike Messner or Susan Shaw:
 - Messner.Michael@epa.gov
 - Shaw.Susan@epa.gov
- We’ll be happy to send you a blank database.