



**Savannah River**

Nuclear Solutions, LLC

A Fluor Daniel Partnership<sup>SM</sup>

# SRNS Central Counting Facility Past – Present - Future

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**Joey Smiley**

**Health Physics Technology**

**Savannah River Site**

**May 7, 2010**

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# SRS – Location



# Facts about SRS

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- **Covers 310 square miles of U.S. Government property**
- **Employs more than 6,000 workers**
- **Uses 125 miles of electrical transmission lines, 63 miles of rail track and 129 miles of paved roads**
- **In the past 15 years, the National Nuclear Security Administration has invested more than \$1 billion in SRS Defense Programs modernization and technology**
- **SRS has been selected for the Enriched Uranium Disposition Project**
- **In 2006, the Department of Energy designated the Savannah River National Laboratory as the Corporate Laboratory for the Office of Environmental Management, acknowledging the lab as a key technological leader for Environmental Management and its programs around the country.**

# SRS Footprint Reduction Initiative





# The Facility – 735-2B

**800-1000  
Portable  
Radiological  
Monitoring  
Instruments  
Calibrated Each  
Month**



# Background

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- **CCF – Central Counting Facility**
- **Conceptualized in 1993**
- **First CCF was Located in 772-1F Laboratory (1996) 4 Tennelecs**
- **CCF was terminated 1997 due to lack of site funding**
- **Reestablished at SRNL 1998**
  - Overall Data management and Quality Control was poor
- **Currently located at 735-2B Health Physics Instrument Calibration Facility (January 2001)**
- **Bar-coded system established at SRS in 2002 (Oak Ridge)**



# Centralized Counting Facility

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- **Staffing**

- 3 health physics inspectors
- 1 clerical
- 2 technical
- 1 supervisor

- **Equipment**

- 11 gas-flow proportional counting systems
- 4 computer systems mapped to 1 central server (WINSAN1)

# Types of RASr

- **Four specific categories of retrospective air monitoring equipment are used at SRS.**
  - Retrospective Air Sampler (RASr) - Low-volume air sampler utilizing a filter paper.
  - Impactor Grab Sampler (Impactor) - High-volume air sampler utilizing an annular kinetic impactor with planchet.
  - Portable Tritium Bubbler (Bubbler) - Low-volume air sampler for tritium, utilizing water or ethylene glycol as the collection medium.
  - Personal Air Sampler (PAS) – A low-volume air sampler utilizing a filter paper. Unlike other RASr's at SRS, the PAS, by definition, is representative of the air the worker breathes.

# Retrospective Air Sampling Equipment

## PAS Pumps



**RASr**



**Universal Model  
44XR PAS Pump**



**SKC Leland  
Legacy Pump**



**AirChek  
52 PAS Pump**

# CAM Equipment



# Filter Media Types



**47mm GF  
Barcoded Filter  
Card -RASr**



**1.5 inch  
diameter metal  
Impactor  
Planchet**



**Whatman P45  
Filter Card  
GF/A - iCAM**



**37mm Glass  
Fiber 0.3  
micron - PAS**



**47mm PTFE  
filter paper -  
LVCAM**

# Canberra Series 5 – Currently 8 Units in CCF

- **Gas Flow Proportional**
- **Uses barcode filter papers – limited to samples less than about 2”**
- **Short Carts/100 Sample Rails**
- **Oki Microline 320 Turbo Printer**
- **Service Contract with Canberra for Calibrations and Repairs**
  - 24 Series 5E
  - 4 Series 5E APC
  - 3 Series 3 (LB5500)



# CMCRME Database – Brian Arnold

88 Tennessee Background and Source Check Log - CMC010019

Select Tennessee:  
 CMC010019 Organization: HP Building: 735-20 [1] Exit

Cal Date: 10/28/2009 Cal Due: 10/31/2010  
 Assigned to: 735-20 [3] HP

ALPHA QC Source: HY871 BETA QC Source: HX575  
 QC Mean Value: 17,384 QC Mean Value: 24,061  
 QC 2 Sigma Range: 17,209 to 17,560 QC 2 Sigma Range: 23,838 to 24,285  
 QC 3 Sigma Range: 17,121 to 17,648 QC 3 Sigma Range: 23,726 to 24,397  
 Bkgd Mean Value: 0.10 Bkgd Mean Value: 0.70  
 Bkgd 2 Sigma Range: -0.53 to 0.73 Bkgd 2 Sigma Range: -0.99 to 2.55

Input Source QC Check Information  
 QC Date / Time: 5 / 2 / 2010 2:19:22 PM  
 ID: 66

Save QC Check Close / Validate this QC Log Back to Main Screen

Date	Alpha Bkg	Alpha Q1	Alpha Q2	Alpha Q3	Beta Bkg	Beta Q1	Beta Q2	Beta Q3	UserID	Comments	ID	PF
2010-04-29 08:52	0	17282	17318	17455	1.2	23912	23989	24024	w5151		10433	True
2010-04-28 09:12	0	17283	17351	17212	1.29	24129	23996	23985	w7600		10415	True
2010-04-27 07:34	0	17377	17311	17318	1.2	24241	23922	24047	w7600		10392	True
2010-04-26 08:49	0.6	17436	17383	17389	1	23841	23932	24006	w5151		10374	True
2010-04-22 06:48	0	17287	17410	17953	0.89	23843	24068	24105	E7933		10324	True
2010-04-21 07:34	0	17405	17162	17369	0.8	23884	23878	23983	w7600		10307	True
2010-04-20 07:06	0	17328	17230	17253	0.3	24208	24187	24066	w7600		10294	True
2010-04-19 09:26	0	17436	17343	17293	0.5	24081	24123	24119	w7600		10272	True
2010-04-15 07:41	0	17230	17147	17160	1.1	24061	24141	24060	w7600		10217	True
2010-04-14 09:38	0.1	17171	17195	17263	1	24107	23985	24083	w7600		10201	True
2010-04-13 09:06	0.2	17200	17142	17224	0.8	23987	23945	24141	w7600		10181	True
2010-04-12 12:24	0.1	17371	17373	17266	0.6	23960	23971	23735	w5151		10164	True
2010-04-08 08:04	0.1	17545	17180	17377	1	24160	24143	23935	w7600		10111	True
2010-04-07 07:59	0	17354	17231	17266	0.8	23948	24020	24124	w7600		10089	True
2010-04-06 09:12	0.2	17285	17367	17373	1.6	24067	24212	24137	w7600		10068	True
2010-04-05 09:01	0	17273	17331	17294	0.7	23967	24083	24073	w7600		10050	True
2010-03-31 06:48	0.1	17295	17318	17352	0.89	23725	24004	23992	w7600		9984	True
2010-03-30 09:17	0	17318	17328	17311	0.4	24126	24119	24074	w7600		9974	True
2010-03-29 08:24	0.1	17445	17563	17341	1.4	24094	24112	23954	w7600		9951	True
2010-03-25 07:32	0	17434	17444	17519	1.2	24050	24107	24017	w5151		9893	True
2010-03-24 08:20	0	17265	17272	17239	0.6	23903	24135	24060	w5151		9875	True
2010-03-23 08:26	0	17331	17382	17352	0.6	24021	24176	23944	w5151		9858	True
2010-03-22 09:41	0	17263	17438	17305	0.89	24025	23864	23980	w7600		9842	True
2010-03-19 05:50	0.1	17503	17375	17315	0.6	24068	24074	24122	w7600		9806	True
2010-03-18 09:14	0	17385	17314	17316	0.5	24050	24066	24129	w7600		9794	True
2010-03-17 08:50	0	17299	17456	17325	0.89	24147	23850	24194	w7600		9774	True
2010-03-16 08:34	0	17492	17409	17568	1	23983	24015	24142	w7600		9754	True
2010-03-15 08:44	0.2	17419	17334	17593	0.6	23890	24134	23989	E7933		9731	True
2010-03-12 05:33	0.3	17373	17392	17406	1	23863	24093	23998	w7600		9680	True
2010-03-11 07:45	0.1	17404	17410	17239	0.7	24037	24176	24105	w7600		9672	True
2010-03-10 08:51	0.1	17466	17335	17272	0.6	23916	24003	24093	w7600		9660	True
2010-03-09 09:47	0	17361	17456	17368	0.8	24267	23872	24143	w7600		9643	True
2010-03-08 08:15	0.1	17243	17417	17255	0.89	23907	23968	24128	E7933		9616	True
2010-03-05 05:45	0.2	17447	17402	17532	1.4	24114	23863	24083	w7600		9600	True
2010-03-04 10:00	0	17565	17399	17460	0.7	24076	24100	23906	w7600		9586	True
2010-03-03 07:58	0	17425	17484	17414	0.8	23969	23967	23888	w7600		9564	True
2010-03-02 08:28	0.1	17317	17419	17588	0.8	24080	23820	24114	w7600		9550	True
2010-03-01 09:21	0.1	17467	17352	17499	0.7	23736	23814	23884	w5151		9532	True
2010-02-26 06:27	0.3	17402	17383	17392	1.1	23944	23832	23834	w7600		9489	True
2010-02-25 06:21	0	17349	17412	17377	0.6	23889	24248	24042	w7600		9464	True
2010-02-24 09:15	0	17468	17461	17219	0.8	23932	23870	23872	w7600		9453	True
2010-02-23 08:42	0.1	17318	17254	17483	0.7	23958	24148	24040	w7600		9429	True
2010-02-22 08:02	0.1	17500	17512	17452	1.4	24138	24288	23946	E7933		9407	True

5/2/2010 2:21 PM CMC010019 69562-2, CCF Unit 1

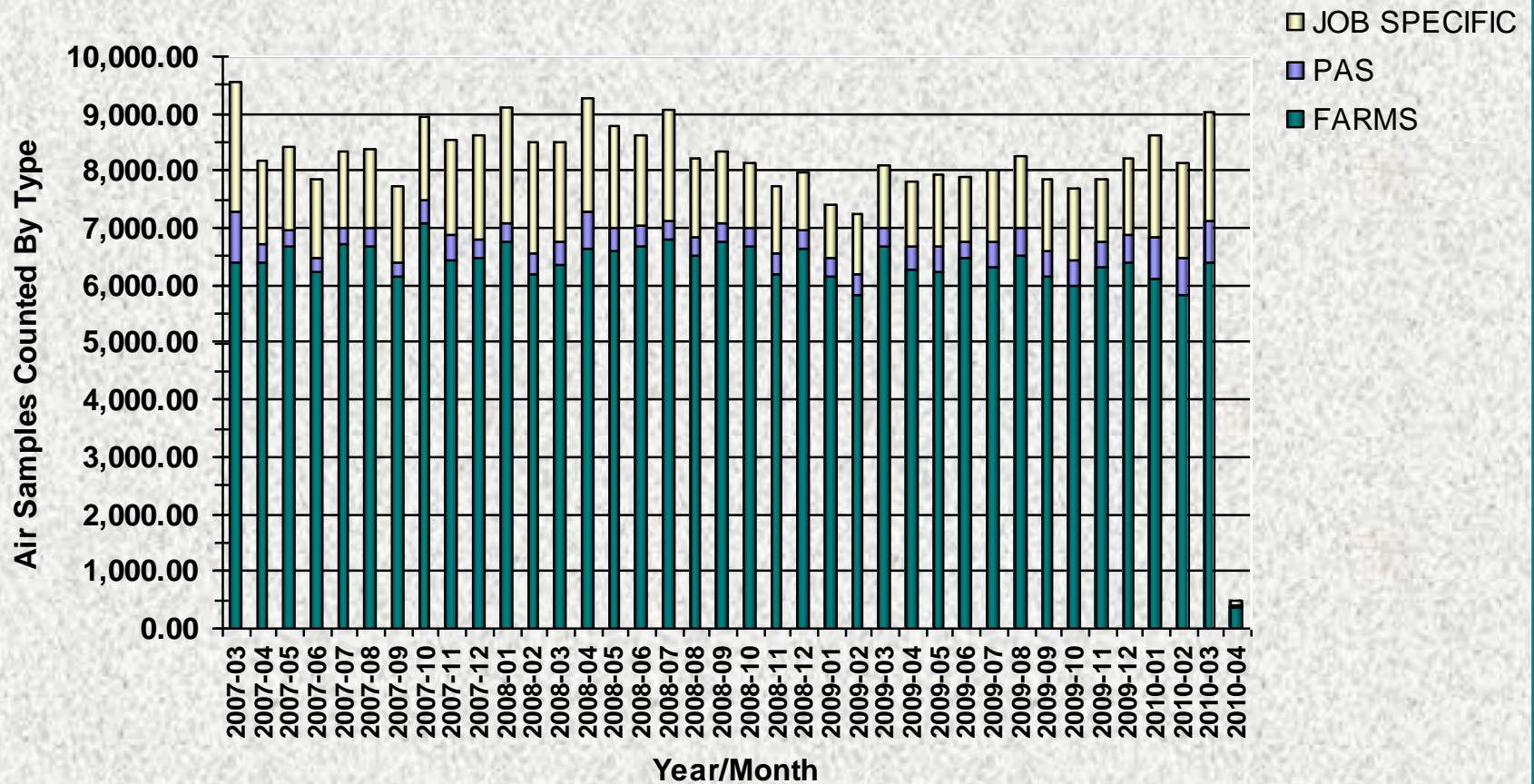


# SRS Routine Air Sample Data

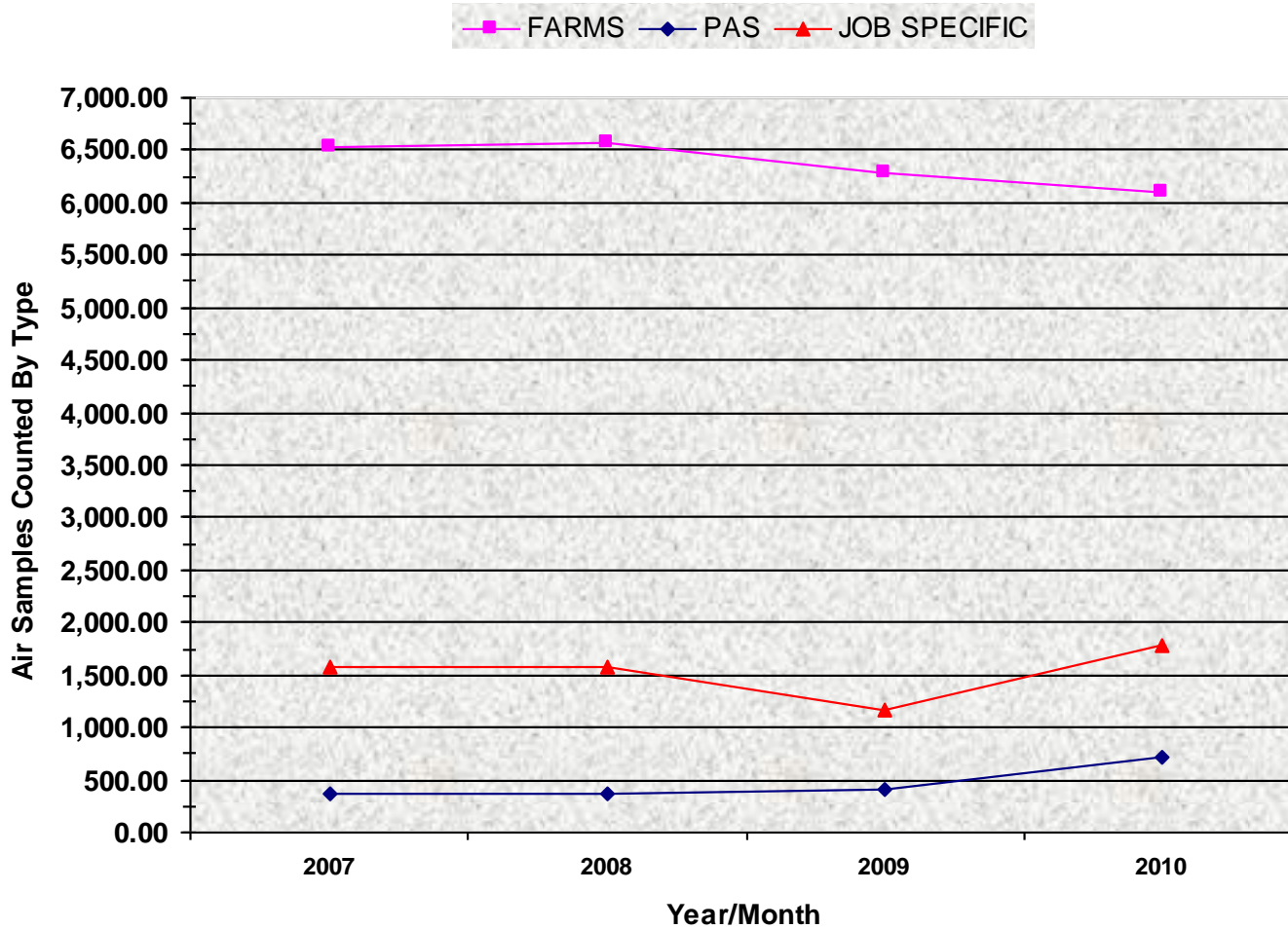
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- **829 individual active FARMS locations, in 19 facilities**
- **728 filter paper samples, 101 CAM samples**
- **Sample change frequencies varies from daily to weekly**
- **2% and 100% DAC Alarm Level Routine Samples**
- **2, 10 and 100% DAC Alarm Level Job Specific Samples**

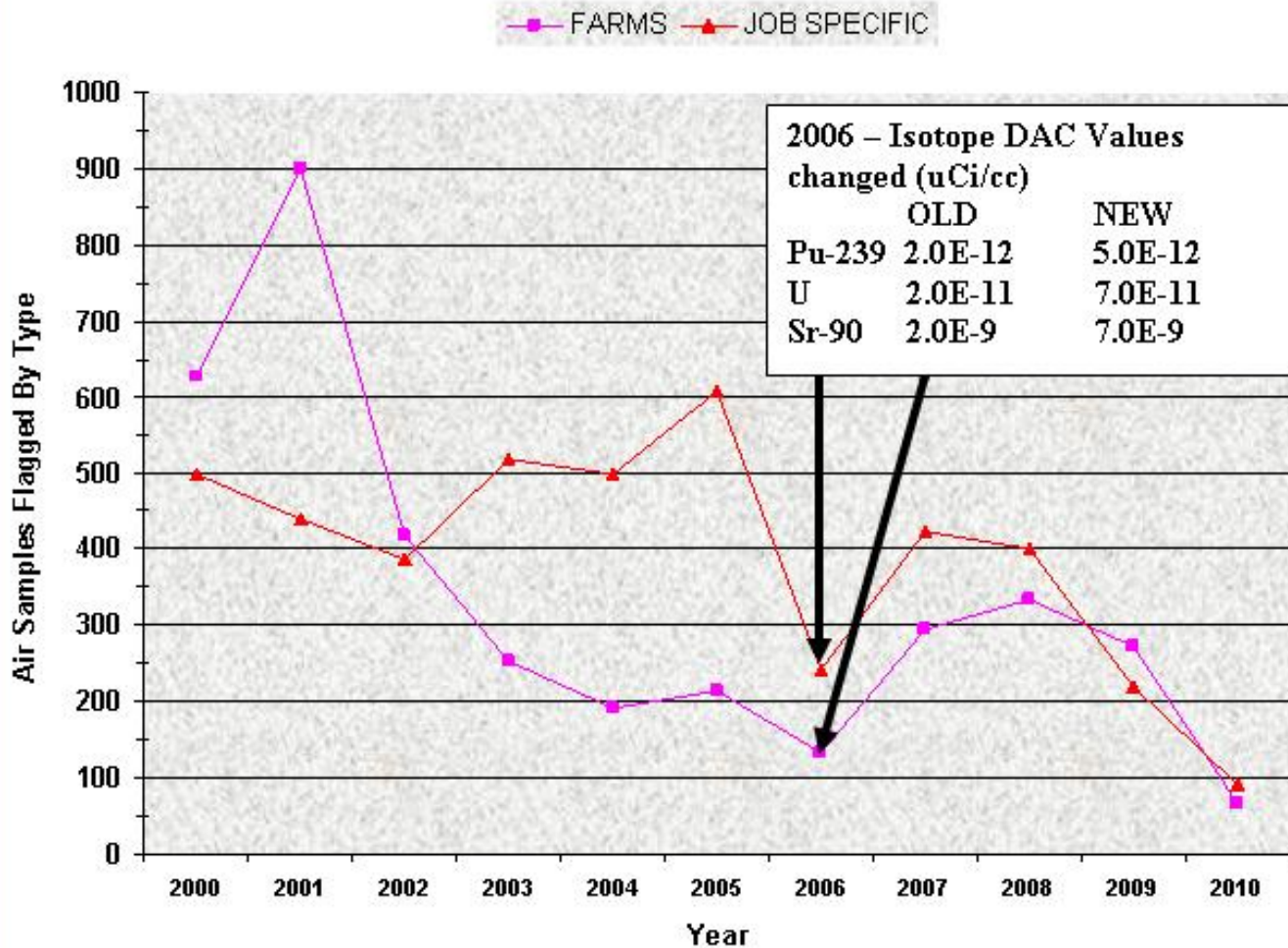
# CCF COUNTS BY TYPE



# CCF AVERAGE MONTHLY COUNTS BY TYPE



# Flagged Air Sample By Year





# VSDS

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- **Survey Type**
  - Map
  - Itemized
- **Air Sample Type**
  - Motor Air Pump
  - Impactor
  - Constant Air Monitor
  - RAS Head – fixed in place to facility (SRNL)
- **Databases**
  - CANY, DDSG, DWPF, LABS, NUCM, SRNL
  - SWIN, TKFM, TRIT
- **Survey Number**
  - Ex. CANY-M-20100413-2

# VSDS -

**Air Sample Details**

Air Sample Details | Run Times | Initial/Final Probe

General

Air Sample Type: MAP

Motor Pump Serial #: RME FM 190

Sample Media: 2" Barcode

Respirator Type: None

Flow Rate

Start Flow Rate: 5

End Flow Rate: 5

Flow Units: ft3/min

Average Flow Rate: 5

Sample Volume

Manual Entry

Total Volume: 2550

Units: ft3

Close

Web browser screenshot showing a data table with columns: Service Number, Year, Sample, Facility, Location, CCRS, Radionuclide, Waste, Lead Service, Resonance.

Service Number	Year	Sample	Facility	Location	CCRS	Radionuclide	Waste	Lead Service	Resonance
...	...	...	...	...	...	...	...	...	...

**Air Sample Details**

Air Sample Details | Run Times | Initial/Final Probe

#	Start	End
1	04/06/2010 20:00	04/07/2010 04:30

Add

Edit

Delete

Total Run Time: 8 hours 30 mins

Close

**Air Sample Details**

Air Sample Details | Run Times | Initial/Final Probe

Reading Type	Value	Units	Date/Time
Initial Alpha	2000	DPM	
Final Alpha	2000	DPM	
Initial Beta/Gamma	6000	DPM	
Final Beta/Gamma	6000	DPM	

Close

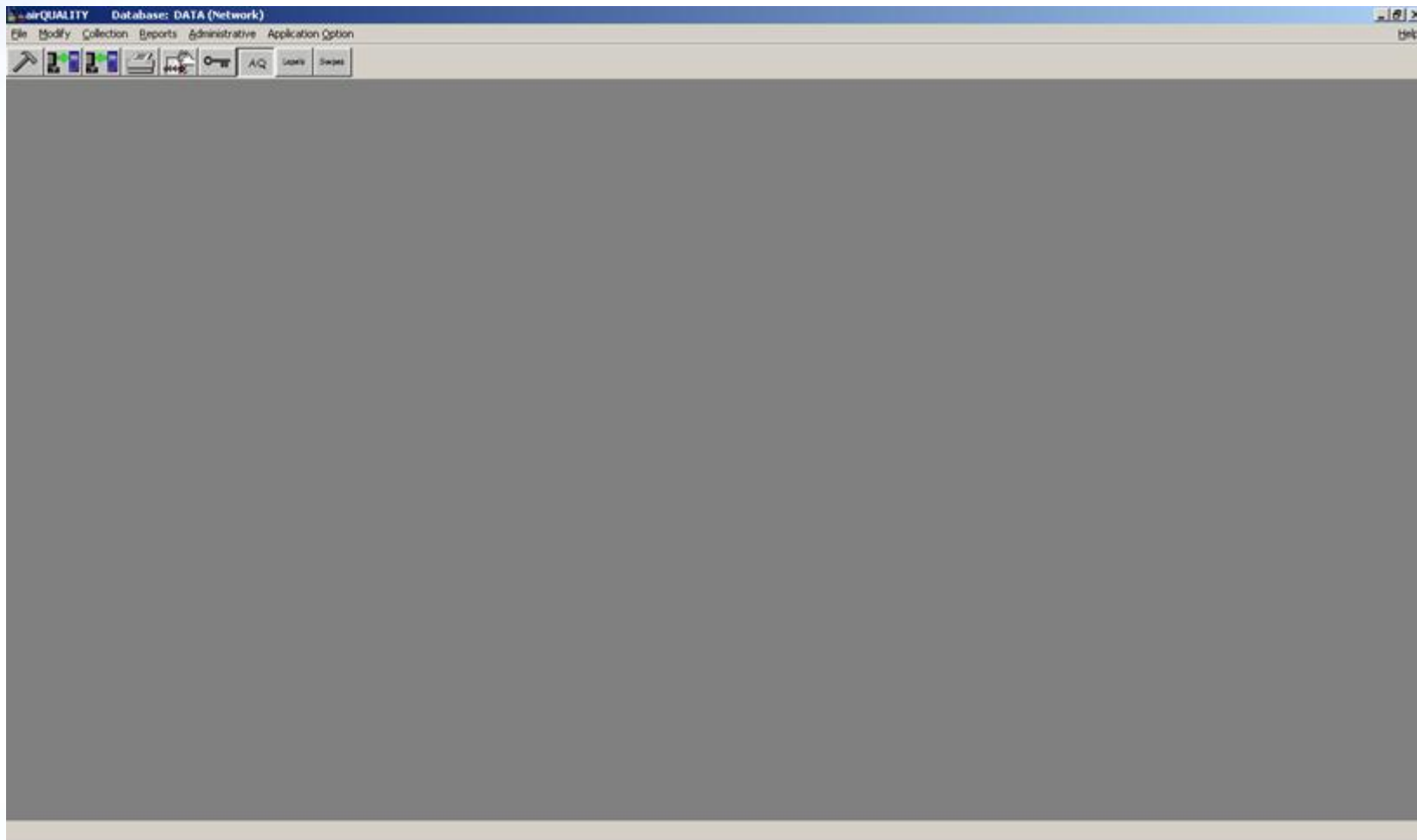


# SMS AirQuality Software

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- **Proprietary Software – Canberra**
- **Stores FARMS Sample Locations**
- **Data stored on SRS Intra-net (CCF On-line Database)**

# AirQuality





# Air Quality Data Management

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- **We started with a local host server that was maintained locally in 735-2B for the SMS AirQuality Database**
- **We now have a site server (WINSAN1) which is more powerful (Report Time 10x Faster) and backed up nightly.**





# ESARF

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- **ESARF – Electronic Sample Analysis Request Form**
- **Developed to replace paper Air Sample and Portable Impactor Sample Analysis Request Forms**
- **Several Pieces of Information Captured from VSDS (no reproduction of data previously entered)**
- **Unique Sample # Automatically Generated From VSDS – CCF ID**
- **No More Handwriting Legibility Issues**
- **Auto Flagging (RED HIGHLIGHTS) to indicate further counts are needed – Site Screening Levels**
- **24/120 Hr DAC and DAC Hr Automatically Calculated**
- **Cp Calculation Automatic**

# ESARF - Example

SARF Form - Windows Internet Explorer provided by SRS

http://shprod.srs.gov/servelet/srs.ITD\_HP\_Support.SARF.SARFServelet04

File Edit View Favorites Tools Help

Convert Select

SARF Form

Page Tools

SurveyType: MAP AirSampleType: Motor Air Pump Database: CANY Location: H221000 HCA SurveyNumber: CANY-M-20100411-1

Find Save Print Quit

Survey Number	Map	Sample	Facility	Location	CCFID	BarCode	Media	Lead Surveyor	Reviewed by
CANY-M-20100411-1	1	1	HCA	H221000 HCA	H221J100411-1-1-1	0008927390	2" Barcode	BENNETT, JONATHAN	BRANTLEY, TODD FARRELL

Pos: Warm Shop Note: Source Sample

StartDT	StartTM	StopDT	StopTM	RunTM(Hrs)	StartCFM	StopCFM	Vol (Ft <sup>3</sup> )	Geometry	Based on Location
04/11/2010	07:00:13	04/11/2010	15:30:13	8.5	5.0	5.0	2650.0	MAP	Pu239 Sr90

PROBE Values (max 1200)

InitialProbeDPM	FinalProbeDPM	User ID	InstrumentID	6HrProbe Date/Time	6HrProbeDPM
a: 2000 dpm	a: 10000 dpm	L4466	a: CMC006326	a: 04/11/2010 21:00	a: 7000 dpm
b: 6000 dpm	b: 20000 dpm		b: CMC004142	b: 04/11/2010 21:00	b: 8000 dpm

6-HR Count	User ID	Scaler	Count Date/Time	CountTime	Count Results(DPM)	DAC	DAC-hr
		a: [ ]	a: [ ] [ ] [ ] [ ]	a: 2.0	a: [ ] dpm		
		b: [ ]	b: [ ] [ ] [ ] [ ]	b: 2.0	b: [ ] dpm		
24-HR Count	A5720	a: CMC006794	a: 04/12/2010 15:30	a: 2.0	a: 4000 dpm CP 2.72e3	a: 4.24	a: 3.61e1
		b: CMC004199	b: 04/12/2010 15:30	b: 2.0	b: 3500 dpm	b: 3.89e-3	b: 3.32e-2
120-HR Count	A5203	a: CMC006741	a: 04/16/2010 15:15	a: 2.0	a: 4000 dpm	a: 6.23	a: 5.31e1
		b: CMC004214	b: 04/16/2010 15:15	b: 2.0	b: 3000 dpm	b: 3.34e-3	b: 2.85e-2

Comments

Desired Action Level:  0.02 DAC  0.10 DAC  1.00 DAC

Status:  Sent to CCF  Manual Entry Only

Status Selected and Saved by (User ID): L4466

Record number 1 of 2 records.

Supervisor (Print): \_\_\_\_\_ (Signature): \_\_\_\_\_ Date: \_\_\_\_\_



# CCF Tracking

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- **Used to receive and inventory batches of samples (Job Specific and PAS)**
  - Assigns a unique CCF Tracking ID
- **Identifies when samples are to analyzed (after 120 decay)**
- **Has multiple reporting capabilities**
- **Tracking loads data locally from Series 5 and performs DAC and DAC-hr calculations for PAS.**
- **Used to upload FARMS and Job Specific data to CCF On-Line webpage**

# CCF TRACKING

99307

## Receiving

2-Inch Filters

Facility: 211-14H

Source: FARMS

Analysis Type: Filter Paper

Stop Date: 3/6/2010

Receive Date: 3/15/2010

Count Due Date: 3/11/2010

# Samples: 31

Receiving Initials: TNG

## Tracking

Storage Location: B16

Tracking Initials: TNG

## Counting

Count Date: 3/15/2010

Print Reports

Utils

Find Tracking No 409 Records

Show Records:

- All
- FARMS
- Jobs
- No PAS
- PAS
- 2-In
- 3-In

Rev 2010.04.01

This program is a controlled resource.  
No unauthorized changes shall be made.  
Maintainer: A M Deming, ITS



Exit

# CCF On-Line Database

The screenshot shows a web browser window titled "Central Counting Facility Tracker Tracker - Windows Internet Explorer provided by SRS". The address bar shows the URL "http://shrine01.srs.gov/servlet/srs.hps.ccf.tracker". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The page content is as follows:

**Radiological Protection Department  
Health Physics Services  
Central Counting Facility Tracker**

**CCF On-Line Database**  
(FARMS Sample Results are from Jan 1, 2000 to Present)  
Select the item you want to view

**Sample Results by Facility and Stop Date:**  
(Sample Results beginning 6/2000)

Sample Type:  Facility:  Stop Date:

**Routine Historical FARMS Results by Sampling Location**  
Area:

**Sample Locations By Area (Hardcode)**  
Area:

**FARMS Results By Facility (TARS)**

**Sample Results by Tracking Number:**

**Job Specific Results by Facility**

This page was dynamically generated and does not contain Sensitive Unclassified Information.

The Windows taskbar at the bottom shows the Start button, several application icons, and the taskbar itself with open windows: "H:\", "CCF\_PAST\_PRESENT\_F...", "CCF Past, Present, Futu...", "Mail - Inbox - IBM Lotus ...", and "Central Counting Faci...". The system tray on the right shows "Local intranet", "100%", "1:27 PM", and "Sunday".

# FARMS Data – Date Range Overview

Central Counting Facility Tracker Tracker - Windows Internet Explorer provided by SRS

http://shine01.srs.gov/servlet/srs.hps.cf.tracker

File Edit View Favorites Tools Help

Central Counting Facility Tracker Tracker

Page Tools

**Radiological Protection Department  
Health Physics Services  
Central Counting Facility Tracker**

TARS Report for Facility: H221 For Samples Pulled From  
05/01/2009 Through 05/28/2009  
(Summary at the Bottom of the Table)

Click the Location No to see the list of the samples in the selected date range.

Location No	Location ID	DAC Lec	Alpha DAC Avg	Alpha DAC >2%	Alpha DAC >10%	Alpha DAC >1	Alpha DAC Max	Alpha DAC Hrs	Beta DAC Avg	Beta DAC >2%	Beta DAC >10%	Beta DAC >1	Beta DAC Max	Beta DAC Hrs	Total DAC Hrs	First Filter Start Date	Last Filter Stop Date	No Filt	Filt Size
H221A001	HQVC Sec 4	2%	0.002	1			0.026	1.592	0.000				0.000	0.004	1.896	04/29/2009 09:39	06/27/2009 08:11	16	2
H221A002	OE Cold Feed Prep	2%	0.000				0.001	0.092	0.000				0.000	0.002	0.095	04/29/2009 07:48	06/27/2009 06:35	16	2
H221A006	WCSA Sec 8	2%	0.000				0.002	0.221	0.000				0.000	0.002	0.223	04/29/2009 08:02	06/27/2009 09:11	18	2
H221A008	WDMV West	2%	0.000				0.001	0.094	0.000				0.000	0.003	0.097	04/29/2009 08:12	06/27/2009 06:04	18	2
H221A010	RR Airlock	2%	0.000				0.002	0.281	0.000				0.000	0.002	0.283	04/29/2009 08:00	06/27/2009 08:42	18	2
H221A011	WQVC Sec 4	2%	0.000				0.002	0.090	0.000				0.000	0.002	0.092	04/29/2009 08:29	06/27/2009 08:22	16	2
H221A012	2nd Lvl Sec 3	2%	0.000				0.001	0.040	0.000				0.000	0.002	0.042	04/29/2009 08:35	06/27/2009 07:29	16	2
H221A013	HDMV West	2%	0.001				0.005	0.820	0.000				0.000	0.003	0.823	04/29/2009 08:26	06/27/2009 06:09	18	2
H221A015	New W/C Cab	2%	0.000				0.002	0.193	0.000				0.000	0.002	0.195	04/29/2009 08:19	06/27/2009 08:04	18	2
H221A016	2nd Lvl Sec 15	2%	0.000				0.002	0.216	0.000				0.000	0.002	0.218	04/29/2009 08:41	06/27/2009 07:36	18	2
H221A018	W/C Truckwall	2%	-0.000				0.001	-0.034	0.000				0.000	0.001	-0.033	04/29/2009 08:32	06/27/2009 08:24	16	2
H221A020	2nd Lvl Sec 3	2%	0.000				0.002	0.050	0.000				0.000	0.002	0.051	04/28/2009 08:37	06/27/2009 07:31	16	2
H221A021	HQVC Sec 14	2%	0.000				0.002	0.115	0.000				0.000	0.002	0.117	04/29/2009 09:33	06/27/2009 06:14	16	2
H221A022	WQVC Sec 14	2%	-0.000				0.001	0.009	0.000				0.000	0.001	0.011	04/29/2009 09:30	06/27/2009 08:19	18	2
H221A023	Sec 5 WCSA	2%	0.001				0.007	0.825	0.000				0.000	0.001	0.826	04/29/2009 07:43	06/27/2009 08:23	18	2
H221A024	WSA Sec. 12/13	2%	0.001				0.006	0.313	0.000				0.000	0.001	0.315	04/29/2009 07:55	06/27/2009 09:06	16	2
H221A025	HSA Sec. 12/13	2%	0.000				0.002	0.295	0.000				0.000	0.002	0.297	04/29/2009 07:40	06/27/2009 09:19	16	2
H221A034	Instr Room	2%	0.000				0.001	0.050	0.000				0.000	0.002	0.051	04/29/2009 11:51	06/27/2009 06:31	16	2
H221A036	WCSA Section 9	2%	0.001				0.002	0.449	0.000				0.000	0.003	0.452	04/29/2009 08:00	06/27/2009 09:06	16	2

Done

Start

Local intranet 100%

1:32 PM Sunday

# FARMS Data – Date Range – Single Location

Central Counting Facility Tracker Tracker - Windows Internet Explorer provided by SRS

http://shrine01.srs.gov/servlet/srs.hps.ccf.tracker

File Edit View Favorites Tools Help

Convert Select

Central Counting Facility Tracker Tracker

Page Tools

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**Radiological Protection Department  
Health Physics Services  
Central Counting Facility Tracker**

---

For Samples Pulled From  
05/01/2009 Through 05/28/2009  
Filter Applied : Un-Filtered

Listings in Red are positive. Listings in Bright Blue are field counted.  
(Click the sample's Tracking No to view the CCF data sheet for that sample)

---

**Sample Analysis Results for Location: H221A001 - HGVC Sec 4**

Track No Filter No	DAC	Alpha Activity	Alpha DAC	Alpha DAChrs	Beta Activity	Beta DAC	Beta DAChrs	StartDate	StopDate	CountDate	FilterSize	(Field Count)
000666780	2.00%	4.56E-15	0.001	0.044	4.36E-14	0.000	0.000	05/25/2009 08:12	05/27/2009 08:11	06/05/2009 11:08	2	No
0007141382	2.00%	-5.39E-16	-0.000	-0.003	-3.63E-16	-0.000	-0.000	05/24/2009 08:38	05/25/2009 08:12	06/01/2009 12:35	2	No
0007141390	2.00%	-7.06E-16	-0.000	-0.007	-2.22E-15	-0.000	-0.000	05/22/2009 08:21	05/24/2009 08:38	05/30/2009 21:43	2	No
0007141381	2.00%	3.97E-15	0.001	0.037	4.69E-14	0.000	0.000	05/20/2009 09:16	05/22/2009 08:21	05/30/2009 21:06	2	No
0007141396	2.00%	1.32E-14	0.003	0.128	2.46E-14	0.000	0.000	05/18/2009 09:22	05/20/2009 09:16	05/30/2009 21:04	2	No
0007141412	2.00%	-1.34E-15	-0.000	-0.007	4.19E-15	0.000	0.000	05/17/2009 08:13	05/18/2009 09:22	05/23/2009 15:33	2	No
0007141437	2.00%	-3.02E-16	-0.000	-0.003	6.26E-14	0.000	0.000	05/15/2009 05:03	05/17/2009 08:13	05/23/2009 11:52	2	No
0007141439	2.00%	-9.08E-16	-0.000	-0.008	2.01E-14	0.000	0.000	05/13/2009 09:19	05/15/2009 05:03	05/24/2009 12:01	2	No
0007141476	2.00%	6.7E-15	0.002	0.063	9.62E-14	0.000	0.001	05/11/2009 09:20	05/13/2009 09:19	05/19/2009 17:32	2	No
0006668912	2.00%	-9.47E-16	-0.000	-0.005	5.55E-14	0.000	0.000	05/10/2009 09:06	05/11/2009 09:20	05/17/2009 11:26	2	No
0006668913	2.00%	-4.82E-16	-0.000	-0.005	3.26E-14	0.000	0.000	05/08/2009 09:49	05/10/2009 09:06	05/17/2009 13:32	2	No
0006668959	2.00%	-6.58E-16	-0.000	-0.006	3.92E-14	0.000	0.000	05/06/2009 08:42	05/08/2009 09:49	05/13/2009 16:38	2	No
0006668966	2.00%	1.28E-13	0.006	1.221	1.79E-14	0.000	0.000	05/04/2009 08:35	05/06/2009 08:42	05/12/2009 18:12	2	No
0006668965	2.00%	1.51E-14	0.003	0.075	5.93E-14	0.000	0.000	05/03/2009 07:40	05/04/2009 08:35	05/10/2009 23:09	2	No
0006668851	2.00%	-4.26E-15	0.001	0.043	2.51E-14	0.000	0.000	05/01/2009 05:16	05/03/2009 07:40	05/09/2009 12:56	2	No
0006668848	2.00%	-7.73E-16	-0.000	-0.007	4.13E-14	0.000	0.000	04/29/2009 09:29	05/01/2009 05:16	05/06/2009 15:31	2	No

There were 16 records found for Location H221A001 during the specified time frame.

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# Job Specific Data – Date Range Overview

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Radiological Protection Department  
Health Physics Services  
Central Counting Facility Tracker

Job Specific Report for Facility: H221  
For Samples Pulled From  
05/19/2009 Through 05/22/2009  
Filter Applied : Un-Filtered

Location ID	Track ID	Sample LOC	DAC LOC	Alpha DAC	Alpha DAC Hrs	Beta DAC	Beta DAC Hrs	Total DAC Hrs	Start Date	Stop Date	Count Date	Field Counted
H221090821-22-1-3	96376	BOUNDARY SAMPLE	10.00%	0.003	0.003	0.000	0.000	0.003	06/21/2009 20:28	06/21/2009 21:40	06/21/2009 13:56	No
H221090821-22-1-2	96372	CELL COVER AIR LOCK	10.00%	0.001	0.001	0.000	0.000	0.001	06/21/2009 21:00	06/21/2009 21:25	06/30/2009 07:05	No
H221090821-22-1-4	96371	SECTION 5 CELL COVERS	100.00%	34.000	17.000	0.006	0.003	17.003	06/21/2009 20:30	06/21/2009 21:00	06/30/2009 11:06	No
H221090821-12-1-4	96370	HOMA	100.00%	0.251	1.620	0.000	0.003	1.623	06/21/2009 06:30	06/21/2009 15:30	06/31/2009 09:25	No
H221090821-4-2-3	96372	CLEARANCE	10.00%	0.001	0.001	0.000	0.000	0.001	06/21/2009 14:15	06/21/2009 14:47	06/30/2009 06:30	No
H221090821-4-2-1	96385	HGVC SECTION 12	100.00%	-0.002	-0.012	0.000	0.000	-0.012	06/21/2009 06:15	06/21/2009 14:15	06/31/2009 09:38	No
H221090820-22-1-2	96385	HGVC SECTION 12	100.00%	-0.010	-0.012	0.000	0.000	-0.012	06/21/2009 02:00	06/21/2009 03:15	06/31/2009 09:31	No
H221090820-26-1-4	96385	HCSA	100.00%	0.007	0.035	0.000	0.000	0.035	06/20/2009 21:45	06/21/2009 02:30	06/31/2009 09:38	No
H221090820-26-1-2	96385	HCSA @ VESTIBULE	100.00%	0.007	0.035	0.000	0.000	0.035	06/20/2009 21:45	06/21/2009 02:30	06/31/2009 09:33	No
H221090820-23-1-2	96369	CELL COVER AIR LOCK	10.00%	0.007	0.003	0.000	0.000	0.003	06/20/2009 22:30	06/20/2009 22:55	06/01/2009 10:43	No
H221090820-23-1-4	96370	SECTION 5 CELL COVERS	100.00%	37.390	21.970	-0.013	0.019	22.969	06/20/2009 21:00	06/20/2009 22:25	06/28/2009 22:00	Yes
H221090820-24-3-5	96370	HCMV	100.00%	0.165	0.055	0.001	0.000	0.055	06/20/2009 20:00	06/20/2009 20:20	06/31/2009 09:09	No
H221090820-12-1-2	96370	HGVC SECTION 12	100.00%	0.003	0.024	0.001	0.004	0.028	06/20/2009 06:30	06/20/2009 16:30	06/31/2009 09:11	No
H221090820-11-1-3	96369	HCMV	10.00%	0.003	0.002	0.000	0.000	0.002	06/20/2009 12:50	06/20/2009 13:28	06/01/2009 11:13	No
H221090820-11-1-1	96370	SOURCE SAMPLE	100.00%	2.230	6.700	0.000	0.006	6.706	06/20/2009 09:50	06/20/2009 12:50	06/31/2009 09:18	No
H221090820-11-1-2	96370	HCMV	100.00%	-0.018	-0.015	0.000	0.000	-0.015	06/20/2009 12:00	06/20/2009 12:50	06/31/2009 09:15	No

Done

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# Job Specific Data – Tracking #

Central Counting Facility Tracker - Windows Internet Explorer provided by SRS

http://shrine01.srs.gov/servlet/srs.hps.ccf.tracker

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Central Counting Facility Tracker

### HPT - CCF Job Specific Analysis - MULTI JOB SPECIFIC

Tracking No. 92989

Application: CCF-HPT-WSRC, Rev 6  
 Report Date: 2008-06-25 16:38  
 Tennac: No Limit  
 Calibration: 2008-05-08 14:33  
 Analysis Data File: FIL7C1.xld

A/B Voltage: 1432.5  
 Conf Level: 0.95  
 Self Abs: (a) 0.8 0.8 (b)  
 Col Eff: (a) 1.0 1.0 (b)  
 User ID:

DAC Action Levels

	100%	10%	2%
1 Action Level	5.00E-12	5.00E-13	1.00E-13
2 Action Level	7.00E-09	7.00E-10	1.40E-10

1 (Cal Data)  
 Eff Log: Pile:3, PMA:EFF  
 Efficiency: 13.34%  
 Conv Factor: 1.00  
 A-B Y-Talk: 6.36%

2 (Cal Data)  
 Eff Log: Pile:3, PMA:EFF  
 Efficiency: 13.80%  
 Conv Factor: 1.96  
 B-A Y-Talk: 0.9%

Sample Information			Alpha Analysis				Beta Analysis				Sample Parameter Data										
Samp No.	DAC Loc	Location	Activity uCi/cc	Flags	HDC uCi/cc	DAC	DAC Hrs	Activity uCi/cc	Flags	HDC uCi/cc	DAC	DAC Hrs	Alpha (cpm)	Beta (cpm)	Alpha Bkg	Beta Bkg	Avg (cfm)	Cnt (min)	Start (Date/Time)	Stop (Date/Time)	Count (Date/Time)
F211060527-20-4-1	10%	BOUNDARY SAMPLE	3.48E-15			0.000	-0.002	3.48E-13			0.000	0.000	0.400	6.530	0.43	2.31	3.000	15	2008-05-27 08:00	2008-05-27 12:00	2008-06-06 13:27
F707080527-15-1-1	10%	BOUNDARY SAMPLE	7.54E-14			0.015	0.015	7.5E-13			0.000	0.000	0.733	5.530	0.43	2.31	4.000	15	2008-05-27 14:00	2008-05-27 15:00	2008-06-06 13:43
F772080528-2-1-4	10%	D-S.AREA CA	2.22E-14			0.004	0.020	2.19E-13			0.000	0.000	0.933	7.330	0.43	2.31	5.000	15	2008-05-29 08:30	2008-05-29 13:00	2008-06-06 13:58
F772080530-1-1-4	10%	D-S.AREA CA	1.72E-14			0.003	0.012	1.96E-13			0.000	0.000	0.733	5.600	0.43	2.31	5.000	15	2008-05-30 08:00	2008-05-30 11:30	2008-06-06 14:13
F772080530-2-2-3	10%	L345 EXT FROM L344	4.56E-14			0.009	0.019	3.04E-13			0.000	0.000	0.867	9.270	0.43	2.31	4.900	15	2008-05-30 10:15	2008-05-30 12:02	2008-06-06 14:28
H221080527-12-3-1	10%	NONE PROVIDED	4.87E-15			0.001	0.023	5.92E-14			0.000	0.000	1.000	9.330	0.43	2.31	5.000	15	2008-05-26 09:00	2008-05-27 08:15	2008-06-06 14:59
H221080528-3-3-1	10%	2ND LEVEL SEC. 2	6.85E-16			0.000	0.004	3.78E-14			0.000	0.000	0.533	8.070	0.43	2.31	5.000	15	2008-05-27 08:15	2008-05-28 14:15	2008-06-06 14:44
H221080529-11-3-1	10%	2ND LVL SEC 2	3.5E-15			0.001	0.012	3.44E-14			0.000	0.000	0.733	5.330	0.43	2.31	5.000	15	2008-05-28 14:15	2008-05-29 07:30	2008-06-06 15:45
H221080529-2-3-1	10%	2ND LEVEL SECTION 7	3.04E-14			0.006	0.015	6.35E-13			0.000	0.000	0.800	10.100	0.43	2.31	5.000	15	2008-05-28 22:30	2008-05-29 00:55	2008-06-06 16:00
H221080530-4-2-1	10%	2ND LVL SEC. 2	-8.01E-16			0.000	-0.004	2.63E-14			0.000	0.000	0.333	9.930	0.43	2.31	5.000	15	2008-05-29 07:30	2008-05-30 07:30	2008-06-06 16:30
H221080530-6-1-3	10%	AIRLOCK	-9.63E-14			-0.019	-0.014	5.46E-13			0.000	0.000	0.067	4.400	0.43	2.31	5.000	15	2008-05-30 10:30	2008-05-30 11:15	2008-06-06 16:15
H221080531-4-1-1	10%	RAILROAD AIRLOCK	1.69E-12	#		0.338	0.282	6.69E-12			0.001	0.001	7.830	31.000	0.44	2.17	5.000	15	2008-05-31 10:30	2008-05-31 11:30	2008-06-06 16:43
H221080531-4-1-2	10%	RAILROAD TUNNEL	1.59E-11	#		3.180	3.180	1.33E-11			0.002	0.002	81.000	70.000	0.44	2.17	5.000	15	2008-05-31 10:30	2008-05-31 11:30	2008-06-06 16:58
HHBL080530-9-1-1	10%	TROLLEY MAINT. @ WELDING WORK AREA	3.28E-13			0.066	0.077	1.38E-12			0.000	0.000	1.200	9.600	0.43	2.31	2.000	15	2008-05-30 10:50	2008-05-30 12:00	2008-06-06 15:24
HHBL080530-9-1-2	10%	TROLLEY MAINT.	6.64E-11	#		-0.111	-0.145	2.71E-11			0.000	0.000	7.000	7.470	0.44	2.17	7.000	15	2008-05-30 10:40	2008-05-30 12:00	2008-06-06 17:11

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# Advances in Air Sampling and Data Integrity

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- **Improve accountability of individual air samples**
- **Reduction of transposition errors**
- **Save time by virtually eliminating the need to transcribe data**
- **Save time during sample changeout**
- **Quick access to air sample data**

# IT Support

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- **Integration Issues – Various Systems feeding what should be a source**
- **“Stovepiping Effect” - retrieval of information from unconnected databases**
- **“Wholistic” view. How could we bring all this data together and keep the program running**
- **“Rules” had to be implemented and enforced**
- **What makes a sample “Unique” - 10 Digit Barcode**
- **Data was moved from multiple database formats into Microsoft SQL Server**
- **.net Framework and Java Servlets used to report to the customer**

# Hurdles Along the Way

- IT Support can be slow and not clearly understand the “needs” of the customer
- Understaffed program
- Field personnel fearful of change
- Ever-changing windows platforms



# Improvements on the Horizon

- **In the process of implementing a paperless system for Job Specific air sampling.**
  - Data entered in the field via pulling survey data from VSDS and manual entry of other required data in the field
    - Eliminate the paper copy of the Electronic Sample Analysis Request Form
  - Samples in Labeled Envelopes are scanned in using unique barcode
  - Analyze Job Specific Samples on Canberra Series 5 – Import Count Data and Calibration Data as a .xml file - Data exported to CCF On-Line Database
  - Once implemented, will retire our older analysis equipment (Tennelec LB5100/5500) (Completion Date 6-30-2010)
  - Will expand to 11 Series 5 counting systems (possibly upgrade to Canberra XLB and use Eclipse Software)
  - 8 units will be used for FARMS/PAS and 3 units for Job Specific

# Alpha and Gamma Spectroscopy Capabilities



# CCF Team





# Contact Information

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