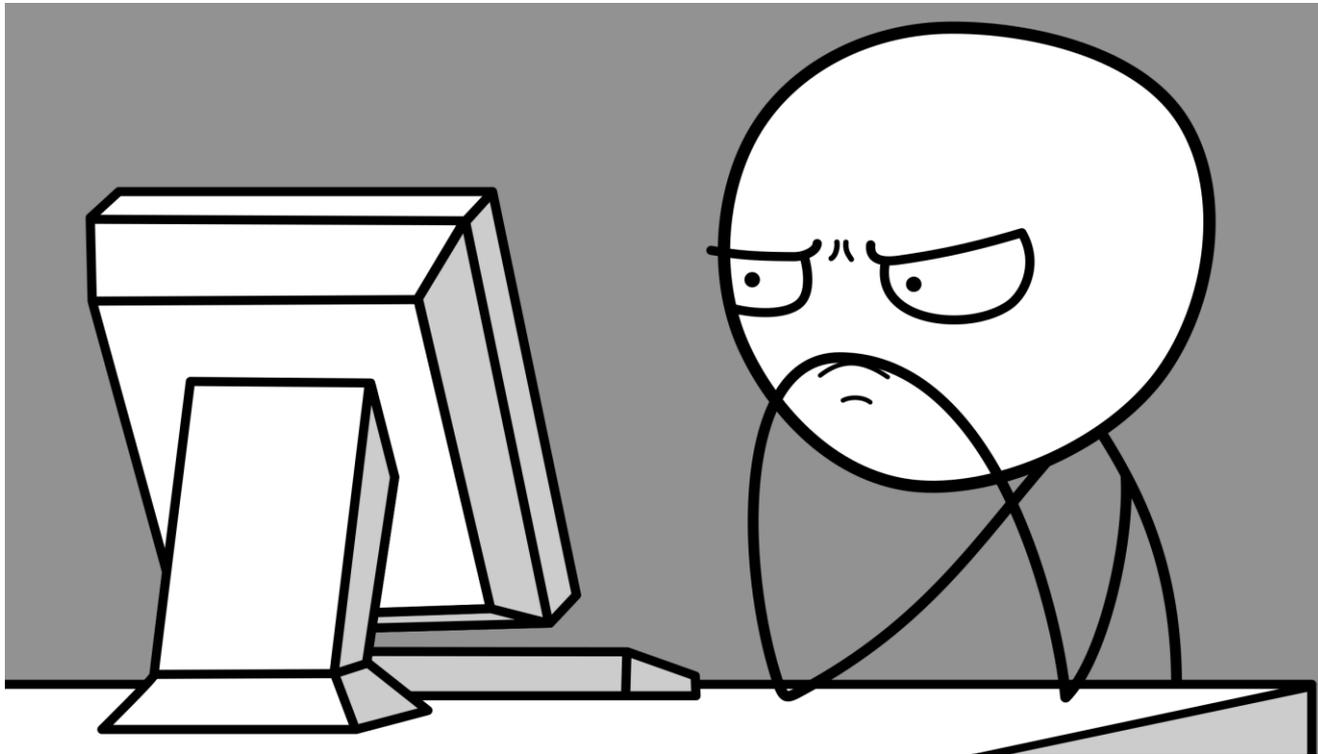




# 12 Month **Rolling** Totals





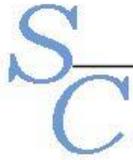
# What is a 12-month **Rolling** Total?

- A period of 12 consecutive months
- Summed on a rolling basis
- With a new 12-month period beginning on the first day of each calendar month.
- Often as an Excel Document



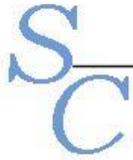
# What is a 12-month **Rolling** Total?

<b>Month</b>	<b>Rolling Total for Dec-12</b>	<b>Rolling Total for Jan-13</b>	<b>Rolling Total for Feb-13</b>	<b>Rolling Total for Mar-13</b>	<b>Rolling Total for April-13</b>
Jan-12	42	42	42	42	42
Feb-12	15	15	15	15	15
Mar-12	48	48	48	48	48
Apr-12	57	57	57	57	57
May-12	12	12	12	12	12
Jun-12	65	65	65	65	65
Jul-12	2	2	2	2	2
Aug-12	58	58	58	58	58
Sep-12	4	4	4	4	4
Oct-12	12	12	12	12	12
Nov-12	45	45	45	45	45
Dec-12	63	63	63	63	63
Jan-13	84	84	84	84	84
Feb-13	5	5	5	5	5
Mar-13	21	21	21	21	21
Apr-13	21	21	21	21	21
May-13	6	6	6	6	6
Jun-13	89	89	89	89	89
Jul-13	75	75	75	75	75



# Rolling Total Vs. Potential to Emit

- **Rolling Total**: based on ACTUAL product use to determine ACTUAL emissions
- **Potential to Emit** (PTE): based on MAXIMUM POTENTIAL product use to determine POTENTIAL emissions



# Rolling Totals show...

- Facility-wide actual emission totals
  - Regulated Air Pollutants (RAPs)
    - Particulate Matter (PM/PM10)
    - Volatile Organic Compounds (VOC)
    - Carbon Monoxide (CO)
    - Nitrogen Oxide (NOx)
    - Sulfur Dioxide (SO2)
  - Individual Hazardous Air Pollutants (HAPs)
  - Total HAPs



# Rolling Totals

Are Commonly Required for...

- Facilities Types
  - Paint and Solvent
  - Shot Peene/Blasting
  - Woodworking
  - Etc...





# Rolling Totals Aids with...

- Facility-wide Recordkeeping
  - Using actual product use to determine actual facility air emissions
- Compliance Demonstration
  - Facility is within permit allowable limits
  - Facility is in compliance





# Environmental Compliance Assistance Program

*Simplifying Compliance*



Some Aggregate Facilities have to show compliance with a PM limit (ton processed)

~~Rolling~~

Site Location	Emission Point	Monthly Tons of Material Processed	Monthly Operating Hours	Pollutant	Emission Factor (lbs./ton)	% Control Efficiency	Monthly Emissions Controlled (tons)	Monthly Emissions Controlled (lbs./hr)
<b>Kemper</b>								
	Cement Silo	5	160	PM	0.27	99.6%	0.00000	0.00003
				PM10	0.12	99.6%	0.00000	0.00002
	Fly Ash Silo	5	160	PM	0.27	99.6%	0.0000	3.375E-05
				PM10	0.12	99.6%	0.0000	0.000015
	Aggregate	5	160	PM	0.11	90.0%	0.0000	0.0003438
				PM10	0.04	90.0%	0.0000	0.000125
	Weigh Hopper	15	160	PM	0.02	90.0%	0.0000	0.0001875
				PM10	0.01	90.0%	0.0000	9.375E-05
	Dry Truck Loadout	26.25	160	PM	0.04	90.0%	0.0001	0.0006563
				PM10	0.02	90.0%	0.0000	0.0003281
		<b>Monthly Totals (tons)</b>	<b>Monthly Totals (lbs/hr)</b>	<b>Monthly Max (lbs/hr)</b>				
	<b>PM</b>	<b>0.00010</b>	<b>0.00126</b>	<b>0.00066</b>				
	<b>PM10</b>	<b>0.00005</b>	<b>0.00058</b>	<b>0.00033</b>				



# Rolling Totals and Compliance Assurance

- Annual Compliance Certification (ACC)
  - Due January 30<sup>th</sup>
- Semi-Annual Monitoring Report (SAMR)
  - Due January 30<sup>th</sup> and July 30<sup>th</sup>
- Air Quality Inspections
  - Upon request



# Show of hands!!

What is your level of Excel expertize?

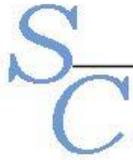
- Expert
- Intermediate
- Beginner
- Excel?





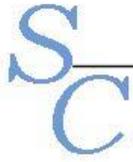
# Rolling Total Components

- Four Spreadsheets in One Excel document
  - Product Usage
  - Monthly Emissions
  - Monthly Summary
  - 12 Month Rolling Totals



# Product Usage Sheet

- Before developing, **review your permit**
  - to determine specific reporting requirements
    - Example: Coating Operations
      - Units
        - often, requested in gallons
      - Sum of certain types of product or emission points
        - total amount of epoxy coatings
        - or total solvent



# Product Usage Sheet

- During Spreadsheet development,
  - it is advisable to have
    - MSDS,
    - Permit,
    - and PTE Calculations
- Spreadsheets will vary
  - permit to permit
  - operation to operation



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total Coatings Blank

	A	B	C	D	E	F	G
1		<b>Product Usage (gallons/month)</b>					
2		<b>**Manually Enter Gallons per product in Monthly Emissions spreadsheet**</b>					
	<b>Month</b>	Product Identification	Product Identification	Product Identification	Product Identification	Product Identification	Product Identification
3							
4	Jan-12						
5	Feb-12						
6	Mar-12						
7	Apr-12						
8	May-12						
9	Jun-12						
10	Jul-12						
11	Aug-12						
12	Sep-12						
13	Oct-12						
14	Nov-12						
15	Dec-12						
16	Jan-13						
17	Feb-13						
18	Mar-13						
19	Apr-13						
20	May-13						
21	Jun-13						

Remember to check air permit for specific reporting requirements

- Units
- Emission Point
- Types of Product

Example Setup:  
Multiple Products



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total\_NG Boiler

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>Natural Gas Use (scf)</b>														
2		2012													
3		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
4	1														
5	2														
6	3														
7	4														
8	5														
9	6														
10	7														
11	8														
12	9														
13	10														
14	11														
15	12														
16	13														
17	14														
18	15														
19	16														
20	17														
21	18														
22	19														
23	20														
24	21														
25	22														
26	23														
27	24														
28	25														
29	26														
30	27														
31	28														
32	29														
33	30														
34	31														
35	TOTAL Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	**Manually Enter Total Monthly scf in <i>Monthly Emissions</i> spreadsheet**														

Instructions | **Product Usage** | Monthly Emissions | Monthly Summary | 12 Mo

Example Setup: One Product



# MONTHLY EMISSION Spreadsheet

- Monthly enter
  - the amount of each product used
    - from Product Usage Sheet
- Calculates
  - actual emissions
  - at the bottom of the screen
  - In a “summary”



# MONTHLY EMISSION

## Spreadsheet: Required Information

- Product Identification
  - Identical to Product Usage
  - Identify Emitted Pollutants
- Pollutant Contents
  - Emission Factors
    - Density
    - Percent-by-weight
- Emission Control(s) Efficiency



# MONTHLY EMISSION

## Spreadsheet Hints

- Create a calculation line for *each* product that is used
- The facility's PTE calculations may provide guidance
- If the information is not provided on the MSDS, contact the manufacturing company



# Environmental Compliance Assistance Program

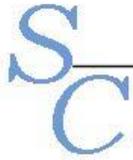
*Simplifying Compliance*



A	B	C	D	E	F	G	H	I	J	K
Emission Point #	Name	Actual Usage Rate gal/month	Actual Operation Hours (hr/mo)	Density (lbs/gal)	Pollutant	% by Weight	Emission Factor (lb/ton)	Actual Emissions Uncontrolled (Tons/month)	% Control Efficiency	Actual Emissions Controlled (Tons/month)
1	EP#01-1	0		9.02					90.00%	
2					PT/PM10	74.99%	=E2*G3	0.00		0.00
3					VOC	25.01%	2.256	0.00		NA
4					Ethylene Glycol	4.00%	0.361	0.00		NA
5					1,6-Hexamethylene Diisocyanate	0.10%	0.009	0.00		NA
6	EP#01-2	0		7.55					0.00%	
7					VOC	100.00%	7.550	0.00		NA
8					Ethylene Glycol	40.00%	3.020	0.00		NA
9	EP#01-2	0								NA
10	EP#01-3	0	0							NA
11										NA
12										NA
13										NA
14										NA
15	EP#01-4	0		8.87					90.00%	
16	PT199									

## Coating and Solvent Facility Example

- Emission Factor calculated using % by Weight and Density (lbs/gal) for each pollutant within each product



# Environmental Compliance Assistance Program

*Simplifying Compliance*



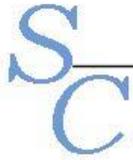
PRODUCT    X ✓ ✕    =C2\*E2\*G3\*0.4/2000

A	B	C	D	E	F	G	H	I	J	K
Emission Point #	Name	Actual Usage Rate gal/month	Actual Operation Hours (hr/mo)	Density (lbs/gal)	Pollutant	% by Weight	Emission Factor (lb/ton)	Actual Emissions Uncontrolled (Tons/month)	% Control Efficiency	Actual Emissions Controlled (Tons/month)
1										
2	EP#01-1	193S	0	9.02					90.00%	
3					PT/PM10	74.99%	6.764	*G3*0.4/2000		0.00
4					VOC	25.01%	2.256	0.00		NA
5					Ethylene Glycol	4.00%	0.361	0.00		NA
6					1,6-Hexamethylene Diisocyanate	0.10%	0.009	0.00		NA
7										
8	EP#01-2	8685S	0	7.55					0.00%	
9					VOC	100.00%	7.550	0.00		NA
10					Ethylene Glycol	40.00%	3.020	0.00		NA
11										
12	EP#01-2	7285S	0							
13										NA
14										
15	EP#01-3	422-05-01 Black	0							
16										0.00
17										NA
18										NA
19										NA
20					Ethylbenzene			0.00		NA
21					Cobalt	0.50%	0.037	0.00		0.00
22										
	EP#01-4	PT199	0	8.87					90.00%	

Instructions    Product Usage    Monthly Emissions    Monthly Summary    12Month Rolling Pollutants    12Month Rolling Operating Limit

## Coating and Solvent Facility Example

- What is the formula for calculating Actual Emissions Uncontrolled (Tons/Month)?



# Environmental Compliance Assistance Program

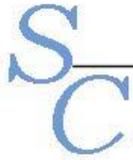
*Simplifying Compliance*



A	B	C	D	E	F	G	H	I	J	K
Emission Point #	Name	Actual Usage Rate gal/month	Actual Operation Hours (hr/mo)	Density (lbs/gal)	Pollutant	% by Weight	Emission Factor (lb/ton)	Actual Emissions Uncontrolled (Tons/month)	% Control Efficiency	Actual Emissions Controlled (Tons/month)
1										
2	EP#01-1	193S	0	9.02					90.00%	
3					PT/PM10	74.99%	6.764	0.00		=I3*(1-J2)
4					VOC	25.01%	2.256	0.00		NA
5					Ethylene Glycol	4.00%	0.361	0.00		NA
6					1,6-Hexamethylene Diisocyanate	0.10%	0.009	0.00		NA
7										
8	EP#01-2	8685S	0	7.55					0.00%	
9					VOC	100.00%	7.550	0.00		NA
10					Ethylene Glycol	40.00%	3.020	0.00		NA
11										
12	EP#01-2	7285S	0							
13										NA
14										
15	EP#01-3	422-05-01 Black	0							
16										0.00
17										NA
18										NA
19										NA
20					Ethylbenzene			0.00		NA
21					Cobalt	0.50%	0.037	0.00		0.00
22										
	EP#01-4	PT199	0	8.87					90.00%	

**Coating and Solvent Facility Example**

- What is the formula for calculating Actual Emissions Controlled (Tons/Month)?



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total\_NG Boiler

	A	B	C	D	E	F	G
		<b>Actual Usage Rate (scf/month)</b>	<b>Pollutant</b>	<b>Emission Factor (lb/scf)</b>	<b>Actual Emissions Uncontrolled (Tons/month)</b>		
1							
2		0					
3			PM10	7.6E-06	0.000		
4			VOC	5.5E-06	0.000		
5			CO	8.4E-05	0.000		
6			NOX	1.0E-04	0.000		
7			SO2	6.0E-07	0.000		
8			Pb	5.0E-10	0.000		
9							
10							
11							
12							

MONTHLY EMISSIONS (TONS)						
	PM10	VOC	CO	NOX	SO2	Pb
14	0.000	0.000	0.000	0.000	0.000	0.000
15						
16						

\*\*\*Place "Monthly Emissions" values (above) into corresponding Month and Year of "Monthly Summary" Spreadsheet\*\*\*



Microsoft Excel - Rolling Total\_Coatings Blank

# MONTHLY EMISSION

## Summary Section

PRODUCT	A	B	C	D	E	F
		Actual Usage Rate (tons/month)	hr/month	Pollutant	Units (lb/ton)	Actual Emissions Uncontrolled (Tons/month)
1						
2	Biomass Boilers (all)	2.0	720.0			
3				PT	4.8	=B\$2/C\$2*E3/2000
4				PM10	4.32	0.000006
5				PM2.5	3.648	5.06667E-06
6				VOC	0.272	3.77778E-07
7				CO	9.6	1.33333E-05
8				NO2	7.84	1.08889E-05
9				SO2	0.4	5.55556E-07
10				Methane	0.0112	1.55556E-08

87



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total Coatings Blank

	A	B	C	D	E	F	G	H	I
61					PM/PM10	0.00%	0.00		0.00
62					VOC	0.00%	0.00		NA
63					HAP	0.00%	0.00		NA
64					HAP	0.00%	0.00		NA
65					HAP	0.00%	0.00		NA
66					HAP	0.00%	0.00		NA
67					HAP	0.00%	0.00		NA
68					HAP	0.00%	0.00		NA
69									
70	Enter EP#	Product Identification	0	0				0.00%	
71					PM/PM10	0.00%	0.00		0.00
72					VOC	0.00%	0.00		NA
73					HAP	0.00%	0.00		NA
74					HAP	0.00%	0.00		NA
75					HAP	0.00%	0.00		NA
76					HAP	0.00%	0.00		NA
77					HAP	0.00%	0.00		NA
78					HAP	0.00%	0.00		NA
79									
80									
81									
82									
83	<b>MONTHLY EMISSIONS (TONS)</b>								
84	<b>PM/PM10</b>	<b>VOC</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP Total</b>
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86									



\*\*\*Place "Monthly Emissions" values (above) into corresponding Month and Year of "Monthly Summary" Spreadsheet\*\*\*



# MONTHLY EMISSION

## Summary Section

### MONTHLY EMISSIONS (TONS)

PM/PM10	VOC	HAP	HAP	HAP	HAP	HAP	HAP	HAP Total
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

- Included each **RAP**, each **individual HAP** and **Total HAPs**
- Make sure each **RAP's** and **individual HAP's** actual emissions for each pollutant from each product is included
- List each **HAP** by name



# MONTHLY EMISSION

## Creating a Summary

	Ethylene Glycol	1,6-Hexamethylene Diisocyanate	Xylene	Toluene	Ethylbenzene	Methanol	Antimony	Arsenic	Beryllium	Cobalt	Chromium	Chromium IV	Lead	Manganese	Nickel	Selenium	HAPs Total
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	=SUM(G96:V96)

### Calculating Total HAPs

- Enter formula into HAP Total Cell

PRODUCT    =SUM(G96:V96)



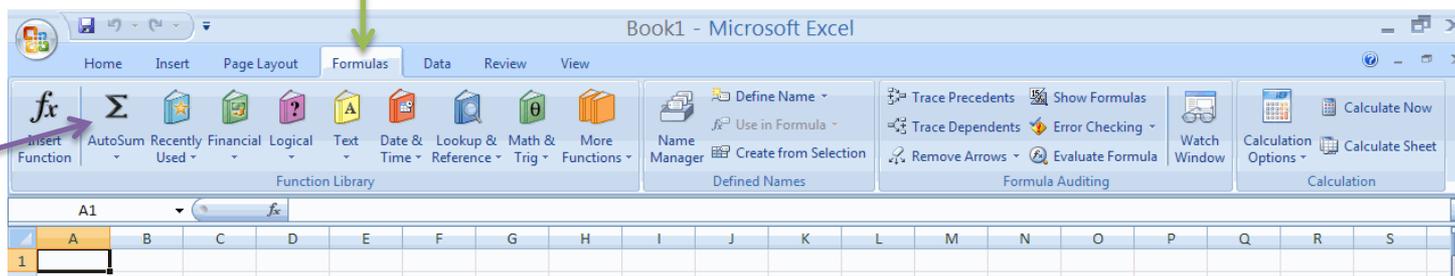
# MONTHLY EMISSION

## Creating a Summary

Step 1

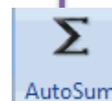
MONTHLY EMISSIONS (TONS)								
PM/PM10	VOC	HAP	HAP	HAP	HAP	HAP	HAP	HAP Total
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Step 2



Step 3

- Step 1. Highlight the sum of each individual HAPs
- Step 2. Open Formulas Tab
- Step 3. Next click "AutoSum"



Step 3



# MONTHLY EMISSION

## Creating a Summary

PRODUCT								
A	B	C	D	E	F	G	H	
	Actual Usage Rate (tons/month)	hr/month	Pollutant	Units (lb/ton)	Actual Emissions Uncontrolled (Tons/month)			
1								
2	Biomass Boilers (all)	2.0	720.0					
3			PT	4.8	6.667E-06			
4			PM10	4.32	0.000006			
5			PM2.5	3.648	5.067E-06			
6			VOC	0.272	3.778E-07			
7			CO	9.6	1.333E-05			
8			NO2	7.84	1.089E-05			
9			SO2	0.4	5.556E-07			
10			Methane	0.0112	1.556E-08			
11								
12								
13	MONTHLY EMISSIONS (TONS)							
14	PT	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	CO	NO2	SO2	Methane
15	=SUMIF(\$D3:\$D10,A3	0.000006	5.067E-06	3.77778E-07	1.33333E-05	1.09E-05	5.556E-07	1.55556E-08
16								

Double check formulas to make sure they are entered properly.



# Monthly Summary Spreadsheet should...

## Lists

- All emitted pollutants
  - HAPs by name
- Dates

## Identifies

- Unit of Measure
  - Tons of pollutant by month basis



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total Coatings Blank

	A	B	C	D	E	F	G	H
1	Monthly Summary (Tons)							
	<b>Month</b>	<b>PM/PM10</b>	<b>VOC</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP</b>	<b>HAP Total</b>
2								
3	Jan-12							
4	Feb-12							
5	Mar-12							
6	Apr-12							
7	May-12							
8	Jun-12							

Microsoft Excel - Rolling Total NG Boiler

	A	B	C	D	E	F	G	H
1	Monthly Summary (tons)							
	<b>Month</b>	<b>PM/PM10</b>	<b>VOC</b>	<b>CO</b>	<b>NOX</b>	<b>SO2</b>	<b>Pb</b>	
2								
3	Jan-12							
4	Feb-12							
5	Mar-12							
6	Apr-12							
7	May-12							

Product Usage | Monthly Emissions | **Monthly Summary** | 12 Month Rolling To



# 12 Month Rolling Totals Spreadsheet

- laid out (almost) exactly the same as the monthly summary
  - with pollutant list
  - and dates,
- **except** that it will have equations embedded in the cells
  - when you have set up all of the equations for each pollutant,
    - the 12 month summary sheet should have values in each cell





# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total\_Coatings Blank

	A	B	C
1	12 Month Rolling Total (Tons)		
2	<b>Month</b>	<b>PM/PM10</b>	<b>VOC</b>
3	Jan 12	= 'Monthly Summary'!B3	= 'Monthly Summary'!C3
4	Feb 12	=SUM('Monthly Summary'!B3:B4)	=SUM('Monthly Summary'!C3:C4)
5	Mar 12	=SUM('Monthly Summary'!B3:B5)	=SUM('Monthly Summary'!C3:C5)
6	April 12	=SUM('Monthly Summary'!B3:B6)	=SUM('Monthly Summary'!C3:C6)
7	May 12	=SUM('Monthly Summary'!B3:B7)	=SUM('Monthly Summary'!C3:C7)
8	June 12	=SUM('Monthly Summary'!B3:B8)	=SUM('Monthly Summary'!C3:C8)
9	July 12	=SUM('Monthly Summary'!B3:B9)	=SUM('Monthly Summary'!C3:C9)
10	Aug 12	=SUM('Monthly Summary'!B3:B10)	=SUM('Monthly Summary'!C3:C10)
11	Sept 12	=SUM('Monthly Summary'!B3:B11)	=SUM('Monthly Summary'!C3:C11)
12	Oct 12	=SUM('Monthly Summary'!B3:B12)	=SUM('Monthly Summary'!C3:C12)
13	Nov 12	=SUM('Monthly Summary'!B3:B13)	=SUM('Monthly Summary'!C3:C13)
14	Dec 12	=SUM('Monthly Summary'!B3:B14)	=SUM('Monthly Summary'!C3:C14)
15	Jan 13	=SUM('Monthly Summary'!B4:B15)	=SUM('Monthly Summary'!C4:C15)
16	Feb 13	=SUM('Monthly Summary'!B5:B16)	=SUM('Monthly Summary'!C5:C16)
17	Mar 13	=SUM('Monthly Summary'!B6:B17)	=SUM('Monthly Summary'!C6:C17)
18	April 13	=SUM('Monthly Summary'!B7:B18)	=SUM('Monthly Summary'!C7:C18)

Monthly Emission | Monthly Summary | 12 Month Rolling Totals





# Environmental Compliance Assistance Program

*Simplifying Compliance*

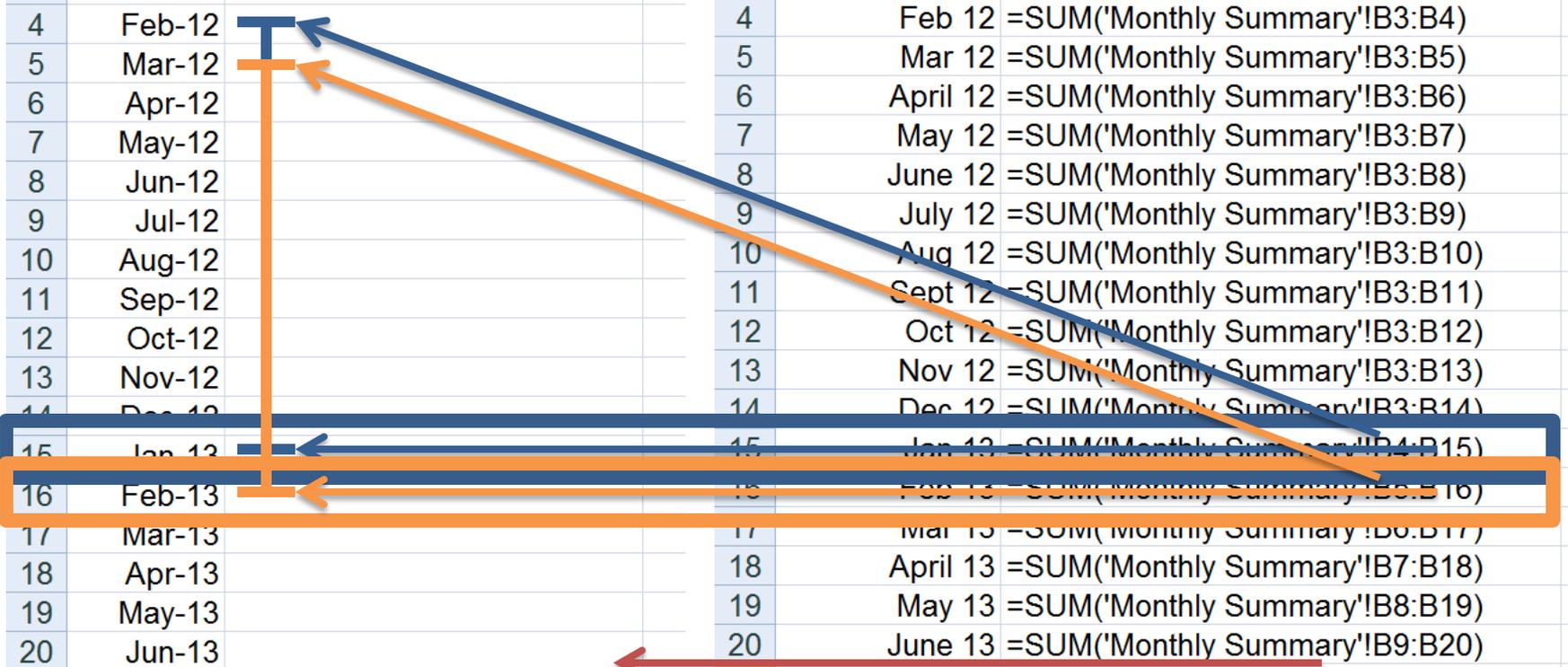


Microsoft Excel - Rolling Total\_Coatings Blank

	A	B
1	Monthly Summary (Tons)	
	<b>Month</b>	<b>PM/PM10</b>
2		
3	Jan-12	
4	Feb-12	
5	Mar-12	
6	Apr-12	
7	May-12	
8	Jun-12	
9	Jul-12	
10	Aug-12	
11	Sep-12	
12	Oct-12	
13	Nov-12	
14	Dec-12	
15	Jan-13	
16	Feb-13	
17	Mar-13	
18	Apr-13	
19	May-13	
20	Jun-13	

Microsoft Excel - Rolling Total\_Coatings Blank

	A	B
1	12 Month Rolling	
	<b>Month</b>	<b>PM/PM10</b>
2		
3	Jan 12	=('Monthly Summary'!B3
4	Feb 12	=SUM('Monthly Summary'!B3:B4)
5	Mar 12	=SUM('Monthly Summary'!B3:B5)
6	April 12	=SUM('Monthly Summary'!B3:B6)
7	May 12	=SUM('Monthly Summary'!B3:B7)
8	June 12	=SUM('Monthly Summary'!B3:B8)
9	July 12	=SUM('Monthly Summary'!B3:B9)
10	Aug 12	=SUM('Monthly Summary'!B3:B10)
11	Sept 12	=SUM('Monthly Summary'!B3:B11)
12	Oct 12	=SUM('Monthly Summary'!B3:B12)
13	Nov 12	=SUM('Monthly Summary'!B3:B13)
14	Dec 12	=SUM('Monthly Summary'!B3:B14)
15	Jan 13	=SUM('Monthly Summary'!B4:B15)
16	Feb 13	=SUM('Monthly Summary'!B5:B16)
17	Mar 13	=SUM('Monthly Summary'!B6:B17)
18	April 13	=SUM('Monthly Summary'!B7:B18)
19	May 13	=SUM('Monthly Summary'!B8:B19)
20	June 13	=SUM('Monthly Summary'!B9:B20)





# Review

## Creating a **Rolling** Total Excel Document

### Question #1

How many spreadsheets should be within the document?



# Review

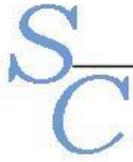
## Creating a **Rolling** Total Excel Document

Question #1

How many spreadsheets should be within the document?

Answer

Four



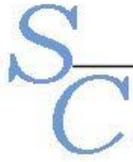
Microsoft Excel - Rolling Total Coatings Blank

# Review

## Creating a **Rolling** Total Excel Document

Question #2

Can you name the four of the spreadsheets?



# Review

## Creating a **Rolling** Total Excel Document

### Question #2

Can you name the four of the spreadsheets?

### Answer

1. Product Usage
2. Monthly Emissions
3. Monthly Summary
4. 12 Month Rolling Totals



Microsoft Excel - Rolling Total Coatings Blank

# Review

## Creating a **Rolling** Total Excel Document

### Question #3

Can you describe the purpose of each spreadsheet?



# Review

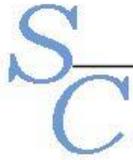
## Creating a **Rolling** Total Excel Document

### Question #3

Can you describe the purpose of each spreadsheet?

### Answer

1. **Product Usage Sheet** = Monthly record of the amount of each product used
2. **Monthly Emissions Sheet** = Calculates monthly actual emissions
3. **Monthly Summary Sheet** = Record of monthly actual emission
4. **The 12 Month Rolling Total Sheet** = Calculates 12 Month Rolling Totals



# Review

## Creating a **Rolling** Total Excel Document

### Question #4

Before starting, what should you read to obtain specific requirements for your rolling totals?



# Review

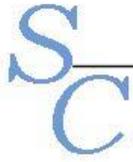
## Creating a **Rolling** Total Excel Document

### Question #4

Before starting, what should you read to obtain specific requirements for your rolling totals?

### Answer

The Permit.  
Oftentimes, specifically Section D.



Microsoft Excel - Rolling Total Coatings Blank

# Review

## Creating a **Rolling** Total Excel Document

### Question #5

How many calculations lines should you have in the “ Monthly Emissions” spreadsheet?



# Review

## Creating a **Rolling** Total Excel Document

### Question #5

How many calculations lines should you have in the “ Monthly Emissions” spreadsheet?

### Answer

A calculation line is required for each product used.



# Review

## Creating a **Rolling** Total Excel Document

### Question #6

Name two resources which will have required information for the setup of your rolling totals excel document?



# Review

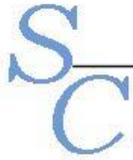
## Creating a **Rolling** Total Excel Document

### Question #6

Name two resources which will have required information for the setup of your rolling totals excel document?

### Answer

1. (M)SDS
2. PTE Calculations



Microsoft Excel - Rolling Total Coatings Blank

After you have successful created a 12 Month Rolling Total Excel Document...

# Copy and Save!!!

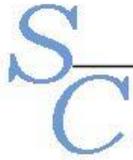


A copy can help you on a “rainy day”



# Maintenance Instructions

1. Enter records in **Product Usage** sheet
2. On the 1st or 30th/31st of each month, enter amount of each product used into corresponding cells under Actual Emissions in **Monthly Emissions** sheet
  - At the bottom of **Monthly Emissions** sheet, the actual monthly emissions will be calculated
3. From the **Monthly Emission** sheet summary, copy the VALUES.
4. Switch to the **Monthly Summary** sheet and select the corresponding cells.
5. Highlight and PASTE VALUES into the blank cells for the appropriate month and year in the **Monthly Summary** sheet.
6. The **12 Month Rolling Total** sheet will automatically calculate the rolling emissions totals



# Maintenance Instructions

## Step 1.

Enter records in **Product Usage** sheet

Microsoft Excel - Rolling Total Calc Example

	A	B	C	D	E	F	G
1		<b>Product Usage (gallons/month)</b>					
2		<b>**Manually Enter Gallons per product in <i>Monthly Emissions</i> spreadsheet**</b>					
3	<b>Month</b>	<b>DARK WALNUT TONER #114</b>	<b>CHARCOAL TONER #1296</b>	<b>CATALYST 6429</b>	<b>CHIARO MATTE (A) RCR 436-4410</b>	<b>TOP COAT HARDNER (B) RCR 876-9068</b>	<b>HIGH TEMP GLUE (6493A)</b>
4	Jan-12	23	17	5.5	12.5	25	3.5
5	Feb-12	26	14	4	7	14	2.2
6	Mar-12	21	12.5	5.25	8	16	1.7
7	Apr-12	22.5	19	5	10	20	2.5
8	May-12	24	16	4.75	11	22	3
9	Jun-12						
10	Jul-12						



# Maintenance Instructions

## Step 2.

On the 1st or 30th/31st of each month, enter amount of each product used into corresponding cells under Actual Usage Rate in **Monthly Emissions** sheet



	A	B	C	D	E	F	G	H	I
	Emission Point #	Name	Actual Usage Rate gal/month	Density (lbs/gal)	Pollutant	% by Weight	Actual Emissions Uncontrolled (Tons/month)	% Control Efficiency	Actual Emissions Controlled (Tons/month)
1									
2	1	Quick Dry	0	7.59				90.00%	
3		F77G13			PM/PM10	30.00%	0.00		0.00
4					VOC	70.00%	0.00		NA
5					Toluene	22.48%	0.00		NA



# Maintenance Instructions

## Step 2 cont.

At the bottom of **Monthly Emissions** sheet, the actual monthly emissions will be calculated

### MONTHLY EMISSIONS (TONS)

	PM/PM10	VOC	Xylene	Toluene	Ethylbenzene	HAP Total
78	0.009	0.281	0.044	0.019	0.028	0.091

### MONTHLY EMISSIONS (TONS)

	PM10	VOC	CO	NOX	SO2	Pb
12	0.036	0.026	0.399	0.475	0.003	0.000



# Maintenance Instructions

## Step 3.

From the **Monthly Emission** sheet, copy the VALUES of the summed emissions from the bottom of the page.

### MONTHLY EMISSIONS (TONS)

PM/PM10	VOC	Xylene	Toluene	Ethylbenzene	HAP Total
0.009	0.281	0.044	0.019	0.028	0.091





# Maintenance Instructions

## Step 4.

Switch to the **Monthly Summary** sheet and select the corresponding month and year.

Monthly Summary (Tons)						
Month	PM/PM10	VOC	Xylene	Toluene	Ethylbenzene	HAP Total
Jan-12						
Feb-12						
Mar-12						
Apr-12						
May-12						





# Maintenance Instructions

## Step 5.

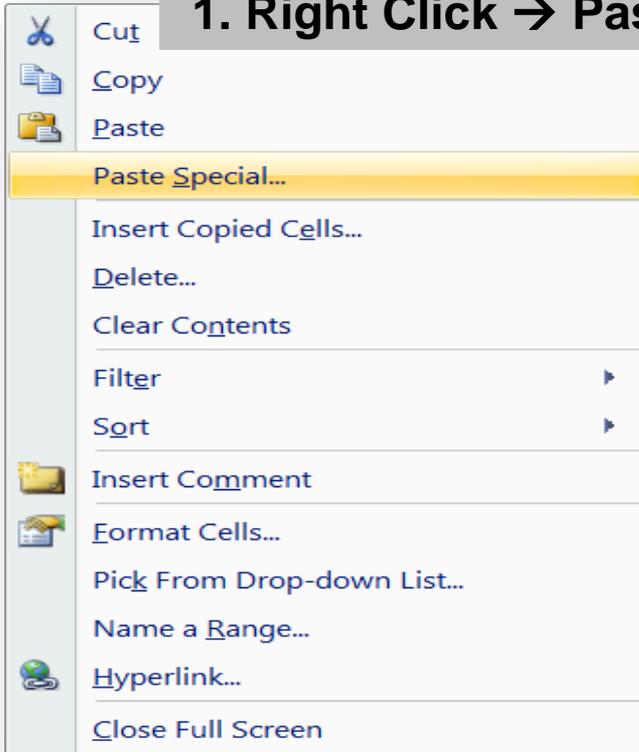
Highlight and \*PASTE VALUES into the blank cells for the appropriate month and year within the **Monthly Summary** Spreadsheet.

\*Simply “pasting” will not transfer values

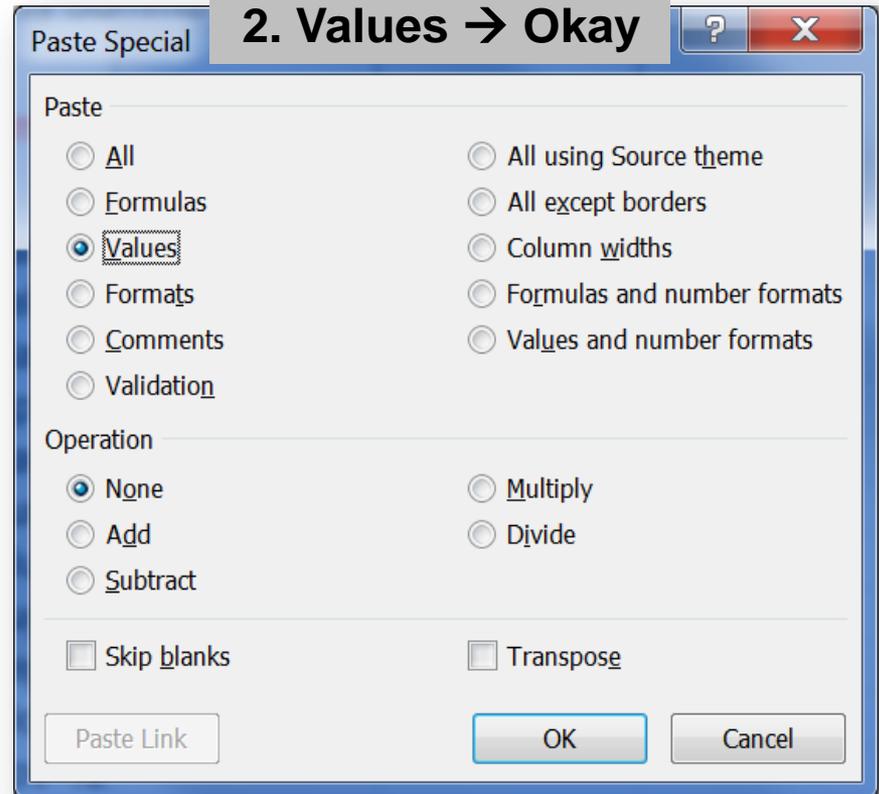
\*Two Ways to Paste Values

**Method #1  
 Paste Special**

**1. Right Click → Paste Special**



**2. Values → Okay**





### 1. Click Clipboard Icon

The screenshot shows the Microsoft Excel ribbon with the 'Clipboard' icon highlighted by a red arrow. The ribbon includes tabs for Home, Insert, Page Layout, Formulas, Data, and Review. The 'Clipboard' icon is located in the 'Home' tab, and a red arrow points to it from the text '1. Click Clipboard Icon'.



### Method #2 Paste Values

### 2. Paste Values

The screenshot shows the 'Paste' dropdown menu in Microsoft Excel. The 'Paste Values' option is highlighted in yellow, and a red arrow points to it from the text '2. Paste Values'. Other options in the menu include Paste, Formulas, No Borders, Transpose, Paste Link, Paste Special..., Paste as Hyperlink, and As Picture.



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total\_Coatings Blank

	A	B	C	D	E	F	G	H
1	Monthly Summary (Tons)							
	Month	PM/PM10	VOC	Xylene	Toluene	Ethylbenzene	HAP Total	
2								
3	Jan-12	0.256	0.899	0.023	0.014	0.088	0.125	
4	Feb-12	0.238	0.916	0.024	0.011	0.073	0.108	
5	Mar-12	0.250	0.963	0.025	0.012	0.077	0.114	
6	Apr-12	0.228	0.876	0.023	0.011	0.070	0.103	
7	May-12	0.237	0.911	0.024	0.011	0.073	0.107	
8	Jun-12							
9	Jul-12							
10	Aug-12							
11	Sep-12							
12	Oct-12							
13	Nov-12							
14	Dec-12							
15	Jan-13							
16	Feb-13							
17	Mar-13							
18	Apr-13							
19	May-13							
20	Jun-13							

If properly pasted, Monthly Summary spreadsheet will look similar to this.



# Maintenance Instructions

## Step 6.

The **12 Month Rolling Total** sheet will automatically calculate the rolling emissions totals



# Environmental Compliance Assistance Program

*Simplifying Compliance*



Microsoft Excel - Rolling Total\_Coatings Blank

	A	B	C	D	E	F	G
1	12 Month Rolling Total (Tons)						
2	Month	PM/PM10	VOC	Xylene	Toluene	Ethylbenzene	HAP Total
3	Jan 12	0.256	0.899	0.023	0.014	0.088	0.125
4	Feb 12	0.494	1.815	0.047	0.025	0.161	0.233
5	Mar 12	0.745	2.778	0.072	0.037	0.238	0.347
6	April 12	0.972	3.654	0.095	0.047	0.308	0.450
7	May 12	1.209	4.565	0.118	0.058	0.381	0.558
8	June 12	1.209	4.565	0.118	0.058	0.381	0.558
9	July 12	1.209	4.565	0.118	0.058	0.381	0.558
10	Aug 12	1.209	4.565	0.118	0.058	0.381	0.558
11	Sept 12	1.209	4.565	0.118	0.058	0.381	0.558
12	Oct 12	1.209	4.565	0.118	0.058	0.381	0.558
13	Nov 12	1.209	4.565	0.118	0.058	0.381	0.558
14	Dec 12	1.209	4.565	0.118	0.058	0.381	0.558
15	Jan 13	0.953	3.666	0.095	0.044	0.293	0.433
16	Feb 13	0.715	2.750	0.072	0.033	0.220	0.325
17	Mar 13	0.465	1.787	0.046	0.021	0.143	0.211
18	April 13	0.237	0.911	0.024	0.011	0.073	0.107

Pay attention to CURRENT month and year



# Maintenance Instructions

1. Enter records in **Product Usage** sheet
2. On the 1st or 30th/31st of each month, enter amount of each product used into corresponding cells under Actual Emissions in **Monthly Emissions** sheet
  - At the bottom of **Monthly Emissions** sheet, the actual monthly emissions will be calculated
3. From the **Monthly Emission** sheet summary, copy the VALUES.
4. Switch to the **Monthly Summary** sheet and select the corresponding cells.
5. Highlight and PASTE VALUES into the blank cells for the appropriate month and year in the **Monthly Summary** sheet.
6. The **12 Month Rolling Total** sheet will automatically calculate the rolling emissions totals



# Resources

- **Division of Compliance Assistance**
  - Learning Modules
    - <http://dca.ky.gov/Pages/ResourceDocuments.aspx>
  - Examples Spreadsheets
- **Software**
  - Paint Supplier
  - Internet



# Any Questions

Contact Us:

Division of Compliance Assistance

800-926-8111

[www.dca.ky.gov](http://www.dca.ky.gov)

[envhelp@ky.gov](mailto:envhelp@ky.gov)





# 12 Month **Rolling** Totals

