


BENEFITS OF A DATABASE PROGRAM


Presenter: Jared Hites




CONTENTS:

- ▶ What is data management?
 - ▶ Why is data management important for Pretreatment programs?
 - ▶ What's wrong with Excel?
 - ▶ What are the core benefits of a Database Program?
 - ▶ Demonstration of these benefits via our Synexus program.
 - ▶ Other options available to you.
- 

WHAT IS DATA MANAGEMENT?

- ▶ It really is just managing your data.
 - ▶ But more specifically it means the plans, procedures, and practices that you have put in place to ensure the efficient management of all the data coming into your plant and leaving.
 - ▶ It all comes down to saving you time, money, and giving you peace of mind.
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DATA MANAGEMENT SPECIFICALLY FOR PRETREATMENT PROGRAMS

- ▶ Collecting and storing historical data and communication.
 - ▶ Using this data to justify and collect surcharges.
 - ▶ Creating a record of events for each discharger.
 - ▶ Utilizing all of this information to help your dischargers improve.
 - ▶ All of the above makes a good data management program for pretreatment even more important.
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CAN'T I JUST USE EXCEL?

- ▶ Yes, but there are some disadvantages to it and questions that you can ask yourself to see if it is going to meet your needs.

ProductionTotals2014.xlsx - Excel


Jared Hites

Tell me what you want to do


Share

	Raw water into plant:			Treated water to town:			Plant use and loss
	Plant 1	Plant 2	Total 1 & 2	Plant 1	Plant 2	Total 1 & 2	
1							
2	Date						
3	1	30.22	30.22	60.44	30.23	30.76	60.99
4	2	33.44	33.44	66.87	30.10	32.29	62.39
5	3	30.11	30.11	60.22	32.61	28.74	61.35
6	4	26.00	26.00	52.01	23.99	29.28	53.27
7	5	26.00	26.00	52.01	18.56	32.37	50.94
8	6	27.85	27.85	55.70	25.56	28.03	53.58
9	7	30.05	30.00	60.06	29.21	28.52	57.73
10	8	26.44	26.44	52.88	28.04	25.79	53.83
11	9	27.66	27.66	55.33	22.14	31.03	53.17
12	10	29.33	29.33	58.65	30.51	25.87	56.38
13	11	28.00	28.00	56.01	22.77	33.22	56.00

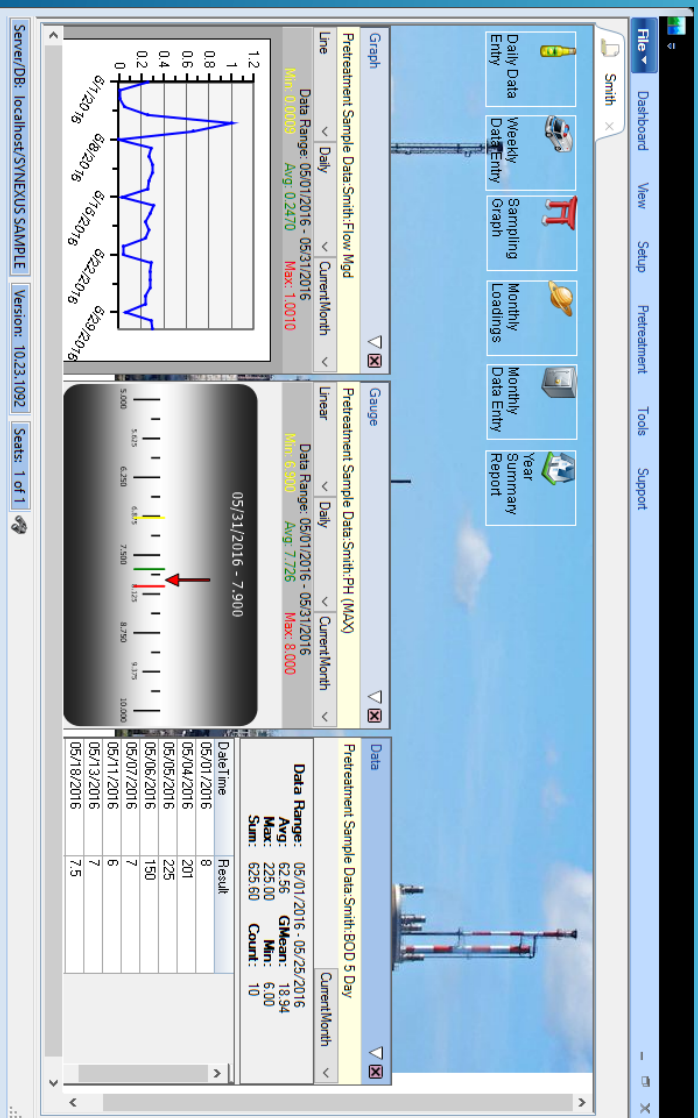
EXCEL CONCERNS AND CONSIDERATIONS

- ▶ How long does it take to pull all of this together?
 - ▶ Are your calculations always correct/accurate/consistent? Are the data qualifiers accurately handled?
 - ▶ How do you back up and restore your data?
 - ▶ Where is the historical data stored and can it be easily accessed?
 - ▶ What happened to a formula or number in a spreadsheet?
 - ▶ How do I compare data from multiple spreadsheets?
- 

MAIN BENEFITS OF A DATABASE PROGRAM

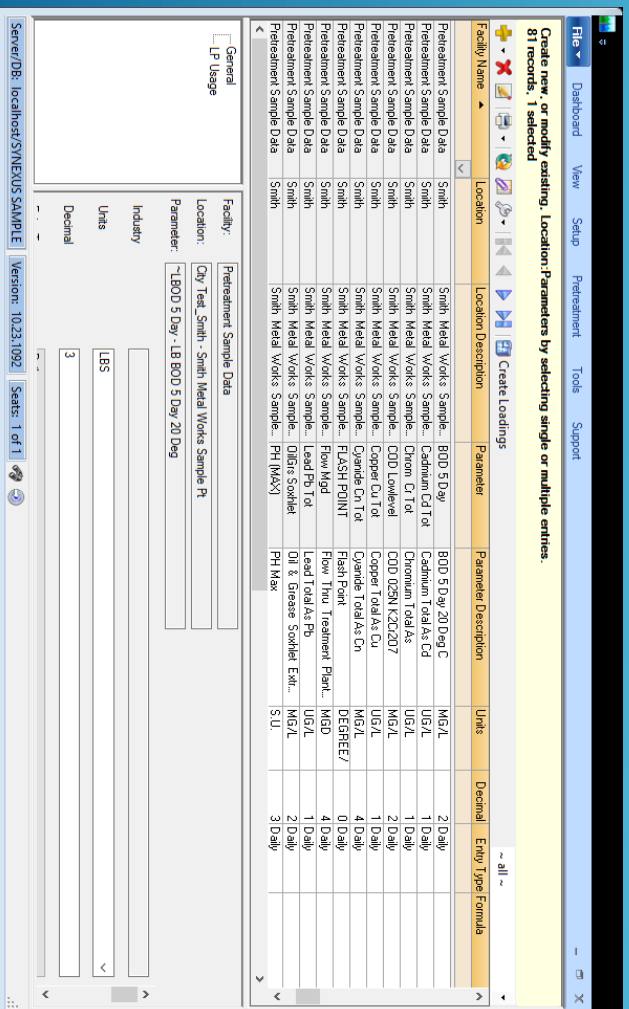
- ▶ Central location for all of your data
 - ▶ Easy access to current and historical information
 - ▶ Bring in data from other sources
- 

DASHBOARD



- Dashboards are capable of containing and displaying data as well as links to other features in a database program.
- A dashboard can provide a snapshot of how industries or the plant is performing.

DATA PARAMETERS



- A data parameter is a point where data is stored, calculated or retrieved.
- These data parameters can be used in reports, graphs, and data views to display the data in many different ways.
- This type of section also allows you to view all places where the data parameter is used for quick reference.

EXAMPLE

- ▶ An example of an Excel sheet with multiple tabs for the months of the year.

ProductionTotals2014.xlsx - Excel

Jared Hites

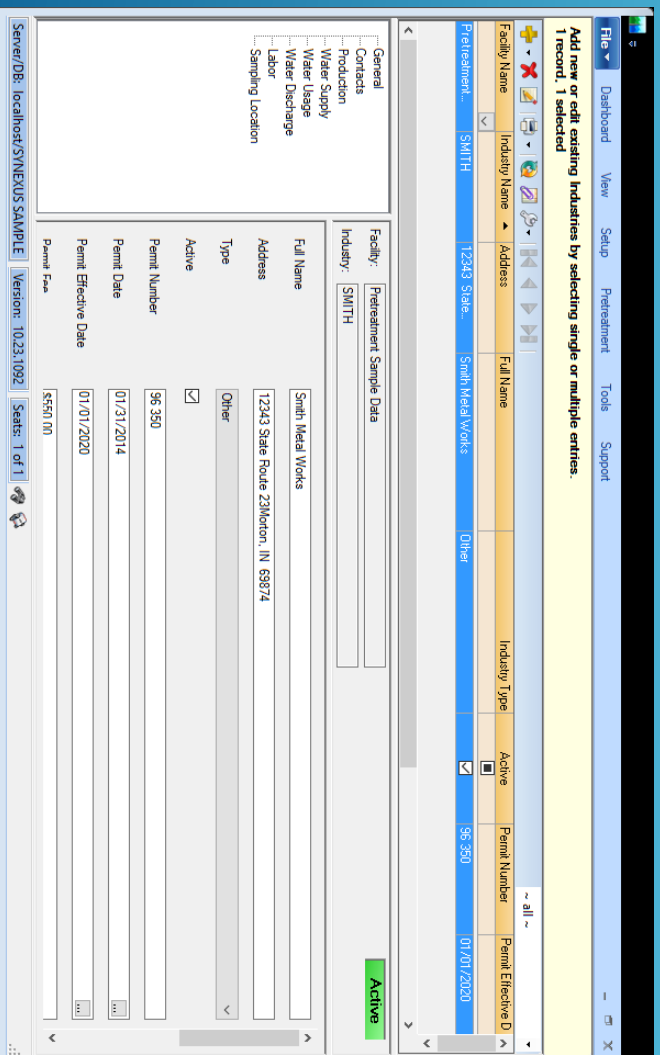
Tell me what you want to do

Share

	Raw water into plant:			Treated water to town:			Plant use and loss
	Plant 1	Plant 2	Total 1 & 2	Plant 1	Plant 2	Total 1 & 2	
1							
2	Date						
3	1	30.22	30.22	60.44	30.23	30.76	60.99
4	2	33.44	33.44	66.87	30.10	32.29	62.39
5	3	30.11	30.11	60.22	32.61	28.74	61.35
6	4	26.00	26.00	52.01	23.99	29.28	53.27
7	5	26.00	26.00	52.01	18.56	32.37	50.94
8	6	27.85	27.85	55.70	25.56	28.03	53.58
9	7	30.05	30.00	60.06	29.21	28.52	57.73
10	8	26.44	26.44	52.88	28.04	25.79	53.83
11	9	27.66	27.66	55.33	22.14	31.03	53.17
12	10	29.33	29.33	58.65	30.51	25.87	56.38
13	11	28.00	28.00	56.01	22.77	33.22	56.00

Ready

INDUSTRY TRACKING



- An industry section stores and tracks all businesses and industries as it relates to an industrial pretreatment plan.
- An industry section may also include contacts, production, water usage and supply, and labor information.
- Industries can be set to active or inactive depending on their current status.

LIMITS

Add new or edit existing Industry Limits by selecting single or multiple entries.
15 records, 1 selected

Effective Date	Facility Name	Location	Parameter	Units	Daily Min	Daily Max	Monthly Limit	Sampling Freq	Sampling Pe
01/01/2016		City Test, Smith	~D-Gaarde Cr Tot	LBS		300	200	None	
01/01/2016			BOD 5 D ay	MG/L		35	35	1 Weekly	
01/01/2016			Cadmium Cr Tot	UG/L		120	510	4 Monthly	
01/01/2016			Copper Cr Tot	UG/L		510	510	1 Weekly	
01/01/2016			Daniels Cr Tot	MG/L		0.15		4 Monthly	
01/01/2016			FLASH POINT	DEGREE..	200			1 Weekly	
01/01/2016			Flow Mgd	MGD		0.5	0.35	1 Daily	
01/01/2016			Lead Pb Tot	UG/L		370	370	1 Weekly	
01/01/2016			Oil/Gs Stock/let	MG/L		1000	800	1 Monthly	
01/01/2016			PH (MAX)	S.U		9		1 Daily	
01/01/2016			Residue TSS	MG/L	6	300	200	1 Weekly	
01/01/2016			Silver Ag Tot	UG/L		390	220	1 Monthly	
01/01/2016			Zinc Zn Tot	UG/L		1800	1800	1 Weekly	

- Limits can be set for data parameters and used for reporting parameters in violation as well as sampling schedule violations.
- SNC (Significant Non-Compliance) is determined based on the established limits as well as daily/monthly violations.

SURCHARGES

Add new or edit existing Industry Surcharges by selecting single or multiple entries.
3 records, 1 selected

Effective Date	Facility Name	Location	Parameter	Units	Base Rate	Limit	Limit Rate	Sum
01/01/2016	Pretreatment...	Smith	~1800 5Day	LBS	0.1	20	0.25 Sum	
01/01/2016	Pretreatment...	Smith	~LResidue TSS	LBS	0.05	500	0.1 Average	
01/01/2016	Pretreatment...	Smith	Flow Mgd	MGD	1000		Average	

- Surcharges can be set up for the calculation of fees and amounts associated with certain data parameters.

EVENT JOURNAL

The screenshot displays the 'Event Journal' application window. At the top, it indicates '3 records, 1 selected'. Below this is a table listing records with columns for Facility Name, Event Date, Full Name, Event Type, Created By, and Assigned To. The selected record is 'Smith Metal Works' on '01/31/2020' with event type 'Inspection & Sampling', created by 'Don Smith', and assigned to 'Joe Jones'. Below the table is an 'Event Detail' section for the selected record, containing fields for Date, Full Name, Event Type, Created By, Assigned To, Response Required, Response Actual, Completion Required, Completion Actual, and Due Date. There are also checkboxes for 'Violation' and a 'Comments' section with a text area.

Facility Name	Event Date	Full Name	Event Type	Created By	Assigned To
Pre-treatment Sample Data	01/29/2020	Smith Metal Works	Inspection & Sampling	Don Smith	Joe Jones
Pre-treatment Sample Data	02/03/2020	Smith Metal Works	Inspection & Sampling	Don Smith	Joe Jones
Pre-treatment Sample Data	02/20/2020	Smith Metal Works	Violation Letter	Don Smith	Joe Jones

Event Detail

Date: 01/31/2020

Full Name: Smith Metal Works

Event Type: Inspection & Sampling

Created By: Don Smith

Assigned To: Joe Jones

Status: Complete

Violation

Comments:
Inspection follow up letter and sampling results

Response Required: 01/13/2020

Response Actual: 01/10/2020

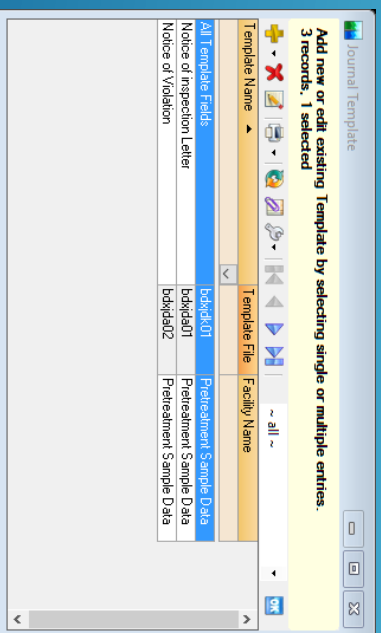
Completion Required: 01/18/2020

Completion Actual: []

Due Date: 01/18/2020

- An event journal section provides the ability to create date based events to document activities with industries and ensures required activities are submitted on time.
- Each event may have multiple activities with their own supporting data.

EVENT TEMPLATES



02/04/2020

Smith Metal Works
12343 State Route 23
Morton, IN 69874

Subject: Inspection & Sampling

Dear Mr. Tony Williams,

The City of AllMax PreTreatment program has Schedule an annual inspection for the Smith Metal Works. This inspection is scheduled for 01/18/2020 at 8:00am.

You are required to confirm this date by 01/13/2020 to be in compliance with your permit.

If you have any question concerning this matter please contact me at your convenience.

Sincerely,

Joe Smith
PreTreatment Coordinator


IMPORT DATA

- ▶ A method to import data from outside sources into the pretreatment database.
 - ▶ LIMS
 - ▶ Scada
 - ▶ Historian
 - ▶ This can be a manual or automated process run on a schedule.
- 

QUICK REVIEW

- ▶ A lot of data in one place makes it easier to
 - ▶ Access historical data
 - ▶ Edit data
 - ▶ Manipulate data
 - ▶ Review data
 - ▶ Distribute data

MAIN BENEFITS OF A DATABASE PROGRAM, CONT'D

- ▶ Decreased data entry
 - ▶ No more copying/pasting.
 - ▶ Limit the number of times data is touched.
 - ▶ Enter it once and utilize in a variety of different ways
 - ▶ Graphs, Reports, Calculations
 - ▶ Increase the validity of data
- 

DATAVIEW



Date	Smith Flow Mgd MGD Daily	Smith Cyanide Cn Tot MG/L Daily	Smith Cadmium Cd Tot UG/L Daily	Smith Chrom Cr Tot UG/L Daily	Smith Copper Cu Tot UG/L Daily	Smith Lead Pb Tot UG/L Daily	Smith Silver Ag Tot UG/L Daily	Z
5/1/2016 - Sunday	0.2566	0.0030	0.3	10	41	164	0.44	66
5/2/2016 - Monday	0.0089							
5/3/2016 - Tuesday	0.0079							
5/4/2016 - Wednesday	0.0494	0.0022	36.0	12	515	140	0.45	68
5/5/2016 - Thursday	0.2566	0.1600	37.0	11	119	250	400.00	64
5/6/2016 - Friday	1.0010	0.0035	0.4	13	42	160	0.35	52
5/7/2016 - Saturday	0.6571	0.0045	0.6	14	45	185	0.56	18
5/8/2016 - Sunday	0.0009							
5/9/2016 - Monday	0.2881							
5/10/2016 - Tuesday	0.2720							
5/11/2016 - Wednesday	0.2997	0.0033	0.2	11	18	80	0.45	46
5/12/2016 - Thursday	0.3027							
5/13/2016 - Friday	0.2691	0.0025	0.2	10	12	25	0.49	64
5/14/2016 - Saturday	0.2599							
5/15/2016 - Sunday	0.0259							
5/16/2016 - Monday	0.3101							
5/17/2016 - Tuesday	0.2801							
5/18/2016 - Wednesday	0.2422	0.0036	0.2	10	21	25	0.44	41
5/19/2016 - Thursday	0.2683							
5/20/2016 - Friday	0.2425	0.0025	0.3	11	22	22	0.65	48

Selection: 1 Cols x 1 Rows Upper Limit: 0.5

DATAVIEW FUNCTIONALITY CONT'D

- ▶ Main advantages over Excel .
 - ▶ Data is saved to a database rather than the Excel sheet.
 - ▶ Easily navigate through dynamic date ranges.
 - ▶ Rearrange columns without affecting other data.

SAMPLING EVENTS

The screenshot displays the Synexis [SYNEXIS SAMPLE] software interface. At the top, a status bar indicates "3 records, 1 selected". Below this, a table lists sampling events with columns for Date, Location, Facility Name, Location Descript, Industry, Sample Type, Sample #, Collection Method, Duration, and Employee. The first event is dated 01/06/2016, located at Smith, with a duration of 24:00 and employee TRA. The second event is dated 01/03/2016, located at Smith, with a duration of 24:00 and employee RDM. The third event is dated 01/01/2016, located at Smith, with a duration of 24:00 and employee RDM.


Date	Location	Facility Name	Location Descript	Industry	Sample Type	Sample #	Collection Method	Duration	Employee
01/06/2016	Smith	Pre-treatment Sample Data	Smith, Metal	SMITH				24:00	TRA
01/03/2016	Phd It	Pre-treatment Sample Data	Part Influent					24:00	RDM
01/01/2016	Phd It	Pre-treatment Sample Data	Part Influent					24:00	RDM

Below the table, a detailed parameter list is shown with columns for Parameter, Units, Parameter Descrip, Decimal, Hourly Type, Multiple Values, Result, Analyst, Method, Bottle #, and Pervo. The list includes parameters such as BOD 5, Cadmium, Chromium, Copper, Cyanide, DEGREASE, Flow, Lead, Oil & Grease, PH MAX, PH MIN, and Residue.

Parameter	Units	Parameter Descrip	Decimal	Hourly Type	Multiple Values	Result	Analyst	Method	Bottle #	Pervo
BOD 5, D _{5w}	MG/L	BOD 5, D _{5w} 20	2	None	...	150.00	...			
Cadmium Cd Tot	UG/L	Cadmium Tot...	1	None	...	0.4	C-8725			
Chrom Cr Tot	UG/L	Chromium Tot...	1	None	...	13.0	C-8725			
COD Lowlevel	MG/L	COD 02SN...	2	None	...	18.85				
Copper Cu Tot	UG/L	Copper Tot As...	1	None	...	42.0	N-1125			
Cyanide Cu Tot	MG/L	Cyanide Tot As...	4	None	...	0.0035	W-5260			
FLASH POINT	DEGREASE	Flash Point	0	None	...	199				
Flow Mgd	MGD	Flow Thru...	1	None	...	1.0010	W-5260			
Lead Pb Tot	UG/L	Lead Total As Pb	1	None	...	160.0				
Oil & Grease	MG/L	Oil & Grease...	2	None	...	1001.00	N-1125			
PH MAX	S.U.	PH Max	3	None	...	6.900				
PH MIN	S.U.	PH Min	3	None	...	5.900				
Residue TSS	MG/L	Residue Tot...	1	None	...	502.0	C-8725			

- A sampling event section can track supporting information about a sampling event.
- This information would be similar to the information that would be on a chain of custody or laboratory bench sheet.

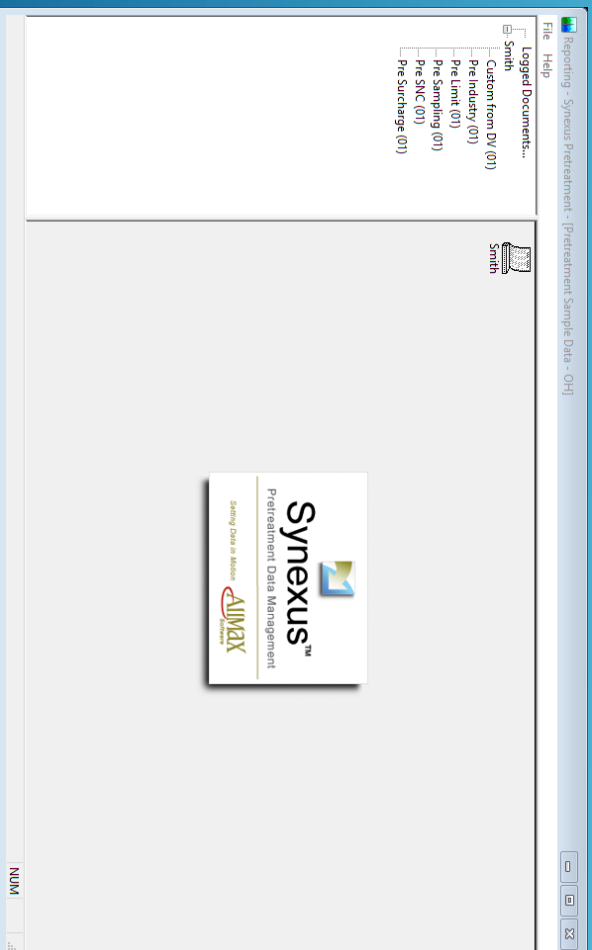
QUICK REVIEW

- ▶ A lot of data in one place makes it easier to
 - ▶ Access historical data
 - ▶ Edit data
 - ▶ Manipulate data
 - ▶ Review data
 - ▶ Distribute data
 - ▶ Enter data in one place
 - ▶ Dataview
 - ▶ Sampling Events
- 

MAIN BENEFITS OF A DATABASE PROGRAM, CONT'D

- ▶ Report generation
 - ▶ Formatted reports
 - ▶ Graphs
 - ▶ Data Sheets
- 

REPORTING SECTION



- A reporting section allows creation of comprehensive reports using stock report templates as well as full custom reports.
- Report examples on the following slides.

SAMPLING REPORT

Pre Sampling (01) Page 1
 ~ Pre-treatment Sample Data ~ May, 2016
 PO Box 40 Print Date: 5/6/2016
 914 S. Main St.
 Kenton, OH 43326

** designates sampling frequency below the limit

SUTPH - Smith Metal Works
 Sample P1
 SUTPH - Smith Metal Works

Industry/Location/Parameter	Required Samples	Total Samples
BOD 5 Day - BOD 5 Day/20 Deg C (M/G/L)	1 weekly effective 1/1/2016	10
Cadmium Cd Tot - Cadmium Total As Cd (U/G/L)	4 monthly effective 1/1/2016	10
Chrom Cr Tot - Chromium Total As (U/G/L)	4 monthly effective 1/1/2016	10
Copper Cu Tot - Copper Total As Cu (U/G/L)	1 weekly effective 1/1/2016	10
Cyanide Cn Tot - Cyanide Total As Cn (M/G/L)	4 monthly effective 1/1/2016	10
FLASH POINT - Flash Point (DEGREE/F)	1 weekly effective 1/1/2016	10
Flow/Med - Flow/Thru Treatment Plant Med (MGD)	1 daily effective 1/1/2016	31
Lead Pb Tot - Lead Total As Pb (U/G/L)	1 weekly effective 1/1/2016	10
Oil&S Soot&I - Oil & Grease Soot&I Exr Rec (M/G/L)	1 monthly effective 1/1/2016	10
PH (MAX) - PH Max (S.U.)	1 daily effective 1/1/2016	31
PH (MIN) - PH Min (S.U.)	1 daily effective 1/1/2016	31
Residue TSS - Residue Total Nonfilterable TSS (M/G/L)	1 weekly effective 1/1/2016	10
Silver Ag Tot - Silver Total As Ag (U/G/L)	1 monthly effective 1/1/2016	10
Zinc Zn Tot - Zinc Total As Zn (U/G/L)	1 weekly effective 1/1/2016	10

Violation Total: 0

SNC REPORT

Pre-SNC (01)
 ~ Pretreatment Sample Data

PO Box 40
 911 S. Main St.
 Kenton, OH 43326

Page 1
 May, 2016 - October, 2016
 Print Date: 5/6/2016

Violation Summaries: # Violations / # Samples (% Violations)

Highlighted summaries = SNC Violation

Smith - Smith Metal Works Sample Pt
 SMITH - Smith Metal Works

Parameter

Date Chronic TRC

BOD 5 Day - BOD 5 Day 20 Deg C

Effective Date: January 2016 — Daily Max Chronic = 300.0, TRC = 420.0 (U/G/L)

(no Violations - May 2016)
 (no Violations - June 2016)
 (no Violations - July 2016)
 (no Violations - August 2016)
 (no Violations - September 2016)
 (no Violations - October 2016)

Daily Summary: 0/80 (0%) 0/80 (0%)

Effective Date: January 2016 — Month Avg Chronic = 200.0, TRC = 280.0 (U/G/L)

(no Violations - May 2016)
 (no Violations - June 2016)
 (no Violations - July 2016)
 (no Violations - August 2016)
 (no Violations - September 2016)
 (no Violations - October 2016)

Monthly Summary: 0/6 (0%) 0/6 (0%)

Cadmium Cd Tot - Cadmium Total As Cd

Effective Date: January 2016 — Daily Max Chronic = 35.0, TRC = 42.0 (U/G/L)

Violation 5/3/2016 2.0
 (no Violations - June 2016)
 (no Violations - July 2016)
 (no Violations - August 2016)

Daily Summary: 6/76 (8%) 0/76 (0%)

Violation 9/3/2016 2.0

Violation 9/3/2016 2.0

Violation 10/3/2016 2.0

Violation 10/3/2016 2.0

Effective Date: January 2016 — Month Avg Chronic = 35.0, TRC = 42.0 (U/G/L)

(no Violations - May 2016)
 (no Violations - June 2016)
 (no Violations - July 2016)
 (no Violations - August 2016)
 (no Violations - September 2016)
 (no Violations - October 2016)

Monthly Summary: 0/6 (0%) 0/6 (0%)

Chrom Cr Tot - Chromium Total As

Effective Date: January 2016 — Daily Max Chronic = 120.0, TRC = 144.0 (U/G/L)

(no Violations - May 2016)
 (no Violations - June 2016)
 (no Violations - July 2016)

LIMIT REPORT

Pre Limit (01)

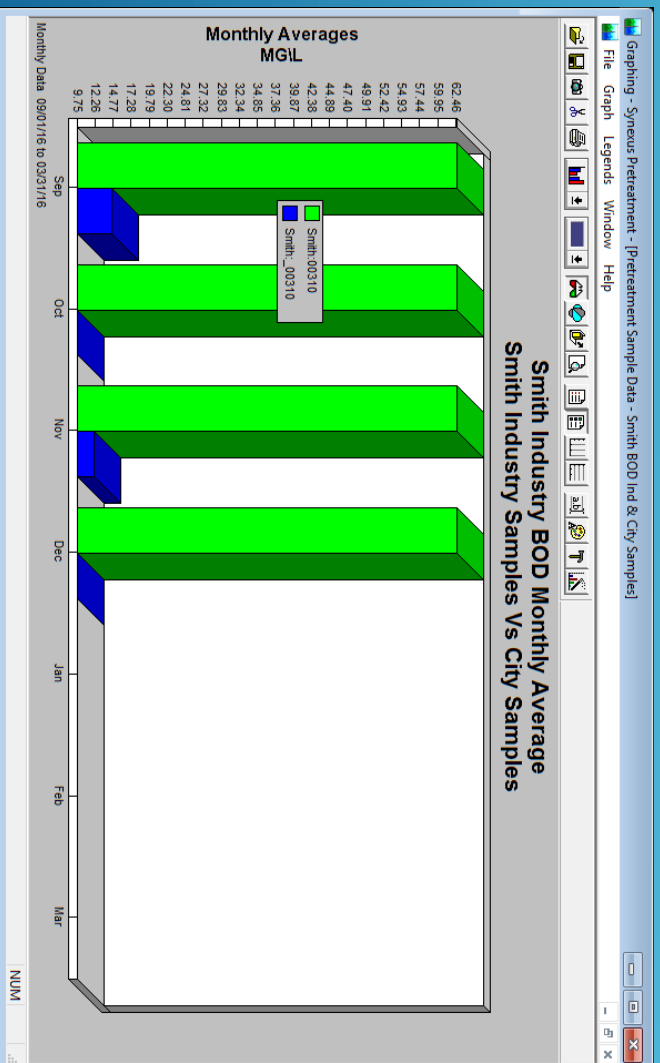
~ Pretreatment Sample Data
 PO Box 40
 911 S. Main St.
 Kenton, OH 43326

Page 1
 May, 2016
 Print Date: 5/6/2016

Smith - Smith Metal Works Sample P1
 SMITH - Smith Metal Works

Parameter	Date	Value
BOD 5 Day - BOD 5 Day 20 Deg C (No Violations) Effective Date: January 2016 - Monthly Maximum of 300 MG/L (No Violations) Effective Date: January 2016 - Monthly Average of 200 MG/L (No Violations)		
Cadmium Cd Tot - Cadmium Total As Cd Effective Date: January 2016 - Daily Maximum of 35 UG/L Violations	5/9/2016	2.0
Violations	5/9/2016	2.0
Effective Date: January 2016 - Monthly Average of 35 UG/L (No Violations)		
Chrom Cr Tot - Chromium Total As Ag Effective Date: January 2016 - Daily Maximum of 120 UG/L (No Violations)		
Copper Cu Tot - Copper Total As Cu Effective Date: January 2016 - Daily Maximum of 510 UG/L Violations	5/9/2016	1.0
Violations		
Effective Date: January 2016 - Monthly Average of 510 UG/L (No Violations)		
Cyanide Cr Tot - Cyanide Total As Cr Effective Date: January 2016 - Daily Maximum of 0.15 MG/L Violations	5/9/2016	1.0000
Violations		
FLASH POINT - Flash Point Effective Date: January 2016 - Daily Minimum of 200 DEGREE F Violations	5/9/2016	4
Violations	5/9/2016	4
Violations	5/9/2016	4
Violations	5/9/2016	4
Floyd - Floyd Treatment Plant Mgd Effective Date: January 2016 - Daily Maximum of 0.5 MGD Violations	5/9/2016	2.0000
Violations	5/9/2016	2.0000
Effective Date: January 2016 - Monthly Average of 0.35 MGD (No Violations)		
Lead Pb Tot - Lead Total As Pb Effective Date: January 2016 - Daily Maximum of 370 UG/L (No Violations) Effective Date: January 2016 - Monthly Average of 370 UG/L (No Violations)		
Oil & Grease Soxhlet Ext Rec Effective Date: January 2016 - Daily Maximum of 1000 MG/L Violations	5/9/2016	1.00
Violations		
Effective Date: January 2016 - Monthly Average of 800 MG/L (No Violations)		

GRAPHING SECTION




- A graphing section produces full-color, 2 and 3-dimensional graphs using any data stored in the data parameters.
- A graphing section produces a variety of graph/chart types with titles, legends, scale, dual Y-axis plotting, displayed values, linear regression, constant lines and bands, limit details, and much more.

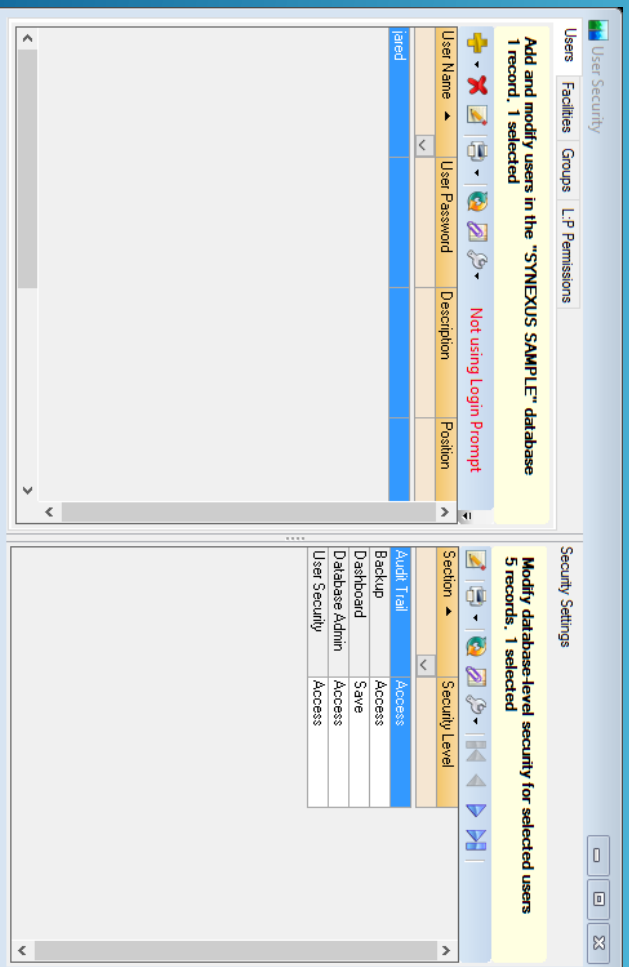
QUICK REVIEW

- ▶ Data in one place
 - ▶ Central location for all data entry
 - ▶ Making the data work for you
- 

MAIN BENEFITS OF A DATABASE PROGRAM, CONT'D

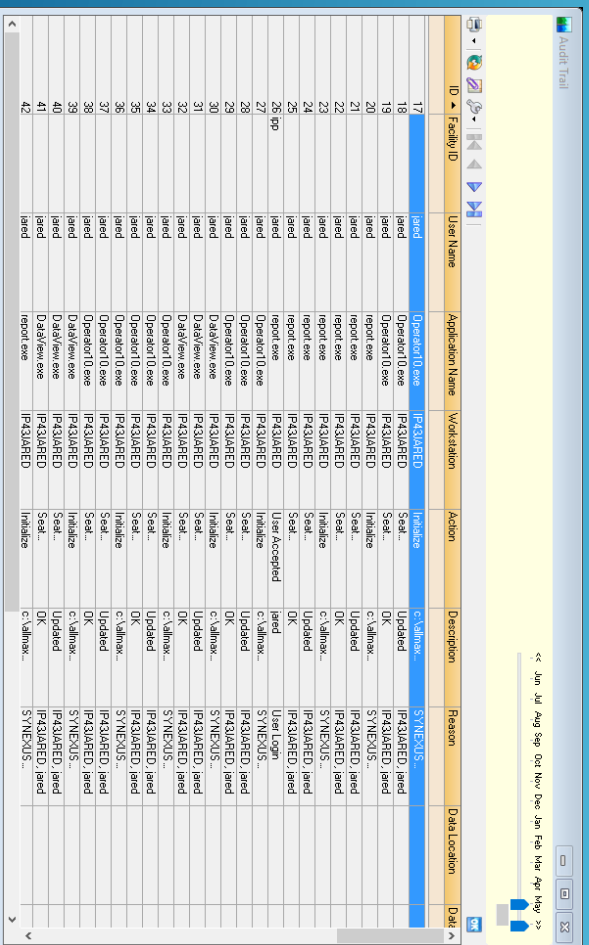
- ▶ Enhanced Security
 - ▶ User security settings
 - ▶ Ensuring data quality/validity
 - ▶ Auditing feature
 - ▶ Know who is entering and manipulating data
 - ▶ Track program usage
 - ▶ Scheduled backups
- 

USER SECURITY



- A security section is important to define users and their roles within the program.
- Users can be granted different levels of access to sections and functions within the program.
- Offer multiple methods of logging into the software.

AUDIT TRAIL




The screenshot shows a window titled "Audit Trail" with a menu bar and a toolbar. Below the toolbar is a calendar navigation bar showing months from Jun to May. The main area contains a table with the following columns: ID, Facility ID, User Name, Application Name, Validation, Action, Description, Reason, Data Location, and Date. The table contains 26 rows of data, with the first row (ID 17) highlighted in blue.

ID	Facility ID	User Name	Application Name	Validation	Action	Description	Reason	Data Location	Date
17		land	Operator10.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
18		land	Operator10.exe	IP43IABED	Seal	Updated	IP43IABED land		
19		land	Operator10.exe	IP43IABED	Seal	OK	IP43IABED land		
20		land	report.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
21		land	report.exe	IP43IABED	Seal	Updated	IP43IABED land		
22		land	report.exe	IP43IABED	Seal	OK	IP43IABED land		
23		land	report.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
24		land	report.exe	IP43IABED	Seal	Updated	IP43IABED land		
25		land	report.exe	IP43IABED	Seal	OK	IP43IABED land		
26	pp	land	report.exe	IP43IABED	User Accepted	land	User Login		
27		land	Operator10.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
28		land	Operator10.exe	IP43IABED	Seal	Updated	IP43IABED land		
29		land	Operator10.exe	IP43IABED	Seal	OK	IP43IABED land		
30		land	Dial9/view.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
31		land	Dial9/view.exe	IP43IABED	Seal	Updated	IP43IABED land		
32		land	Dial9/view.exe	IP43IABED	Seal	OK	IP43IABED land		
33		land	Operator10.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
34		land	Operator10.exe	IP43IABED	Seal	Updated	IP43IABED land		
35		land	Operator10.exe	IP43IABED	Seal	OK	IP43IABED land		
36		land	Operator10.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
37		land	Operator10.exe	IP43IABED	Seal	Updated	IP43IABED land		
38		land	Operator10.exe	IP43IABED	Seal	OK	IP43IABED land		
39		land	Dial9/view.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		
40		land	Dial9/view.exe	IP43IABED	Seal	Updated	IP43IABED land		
41		land	Dial9/view.exe	IP43IABED	Seal	OK	IP43IABED land		
42		land	report.exe	IP43IABED	Initiate	c:\vllinx	SYNEXUS		

- An audit trail is a secure, computer generated, time-stamped audit which independently monitors operator entries and actions that create, update, or delete data.

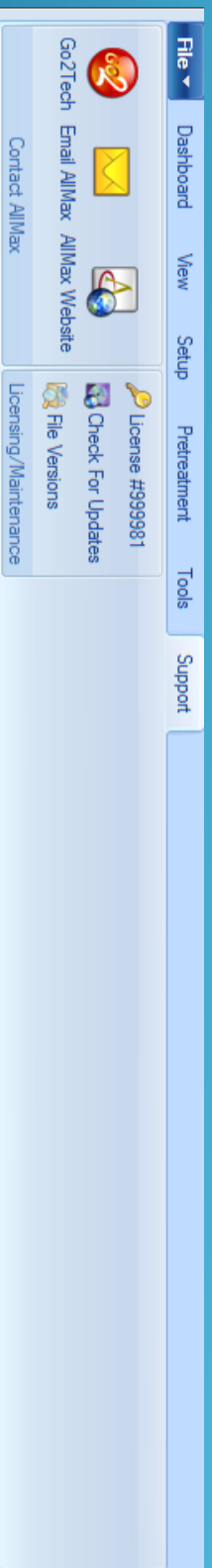
QUICK REVIEW

- ▶ Data in one place
 - ▶ Central location for all data entry
 - ▶ Making the data work for you
 - ▶ Data is protected
- 


MAIN BENEFITS OF A DATABASE PROGRAM, CONT'D

- ▶ More Reliable Support
 - ▶ By internal IT Department
 - ▶ By Software provider's support staff
 - ▶ By other 3rd party support companies
- 

SUPPORT




REVIEW YOUR OPTIONS

- ▶ Take a look at your current system
 - ▶ Is it saving you time/money?
 - ▶ Are you confident in it, giving you peace of mind?
 - ▶ If not...
 - ▶ Could a database program help?
 - ▶ All of your data in one place
 - ▶ Making your data more usable
 - ▶ Making it easier to communicate with your dischargers
 - ▶ A lot of options out there.
- 

OPTIONS FOR DATABASE PROGRAMS

- ▶ Custom database software
 - ▶ Microsoft Access
 - ▶ Microsoft SQL
- ▶ Commercial off the shelf software
 - ▶ Synexus
 - ▶ Linko

QUICK REVIEW

- ▶ Data management
 - ▶ Data in one place
 - ▶ Central location for all data entry
 - ▶ Making the data work for you
 - ▶ Data is protected
 - ▶ Our efforts are supported
- 

QUESTIONS?

