

EIS Bridge Tool & New CERS Elements

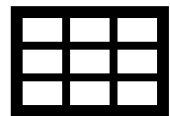
Jonathan Miller

Overview

- ▶ Bridge Tool Basics
 - ▶ Why is it Needed?
 - ▶ How it Works
 - ▶ What it Does (And Doesn't Do)
- ▶ Examples
 - ▶ Need to Create New Items
 - ▶ Using Existing Items
- ▶ Final Notes

Bridge Tool Basics - Why Is It Needed?

- Created in 2008 to Assist Agencies in Converting “Flat File” Formats of Data to Extensible Markup Language (XML)



Source Data Available in
Spreadsheets or Some
“Flat File” Formatted Style

MS Access Application That
Converts the Table-Style
Data to XML Format

All Files Submitted
Through the Exchange
Network Must be in XML.
This is the File That is
Submitted to EIS.

Bridge Tool - New Feature

Main Menu

Point Emissions Inventory System Bridge Tool

Version: August 17, 2020

Import from CERS XML

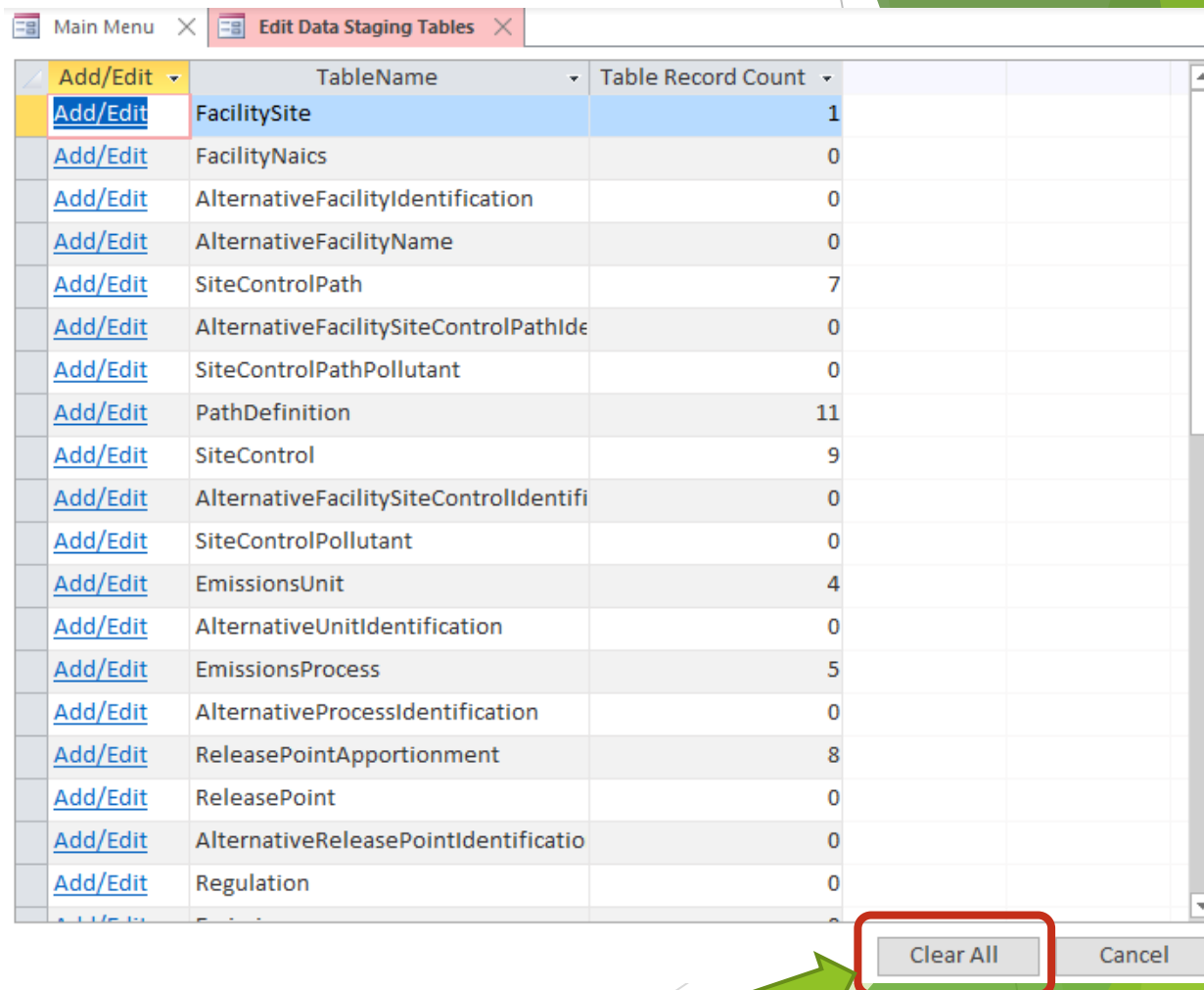
Export to CERS XML

Edit Data Tables

View QA Report

View XML Conversion Report

Import Staging Tables



Add/Edit	TableName	Table Record Count
Add/Edit	FacilitySite	1
Add/Edit	FacilityNaics	0
Add/Edit	AlternativeFacilityIdentification	0
Add/Edit	AlternativeFacilityName	0
Add/Edit	SiteControlPath	7
Add/Edit	AlternativeFacilitySiteControlPathIde	0
Add/Edit	SiteControlPathPollutant	0
Add/Edit	PathDefinition	11
Add/Edit	SiteControl	9
Add/Edit	AlternativeFacilitySiteControlIdentifi	0
Add/Edit	SiteControlPollutant	0
Add/Edit	EmissionsUnit	4
Add/Edit	AlternativeUnitIdentification	0
Add/Edit	EmissionsProcess	5
Add/Edit	AlternativeProcessIdentification	0
Add/Edit	ReleasePointApportionment	8
Add/Edit	ReleasePoint	0
Add/Edit	AlternativeReleasePointIdentificatio	0
Add/Edit	Regulation	0

Clear All Cancel

Removes All Records from All Tables

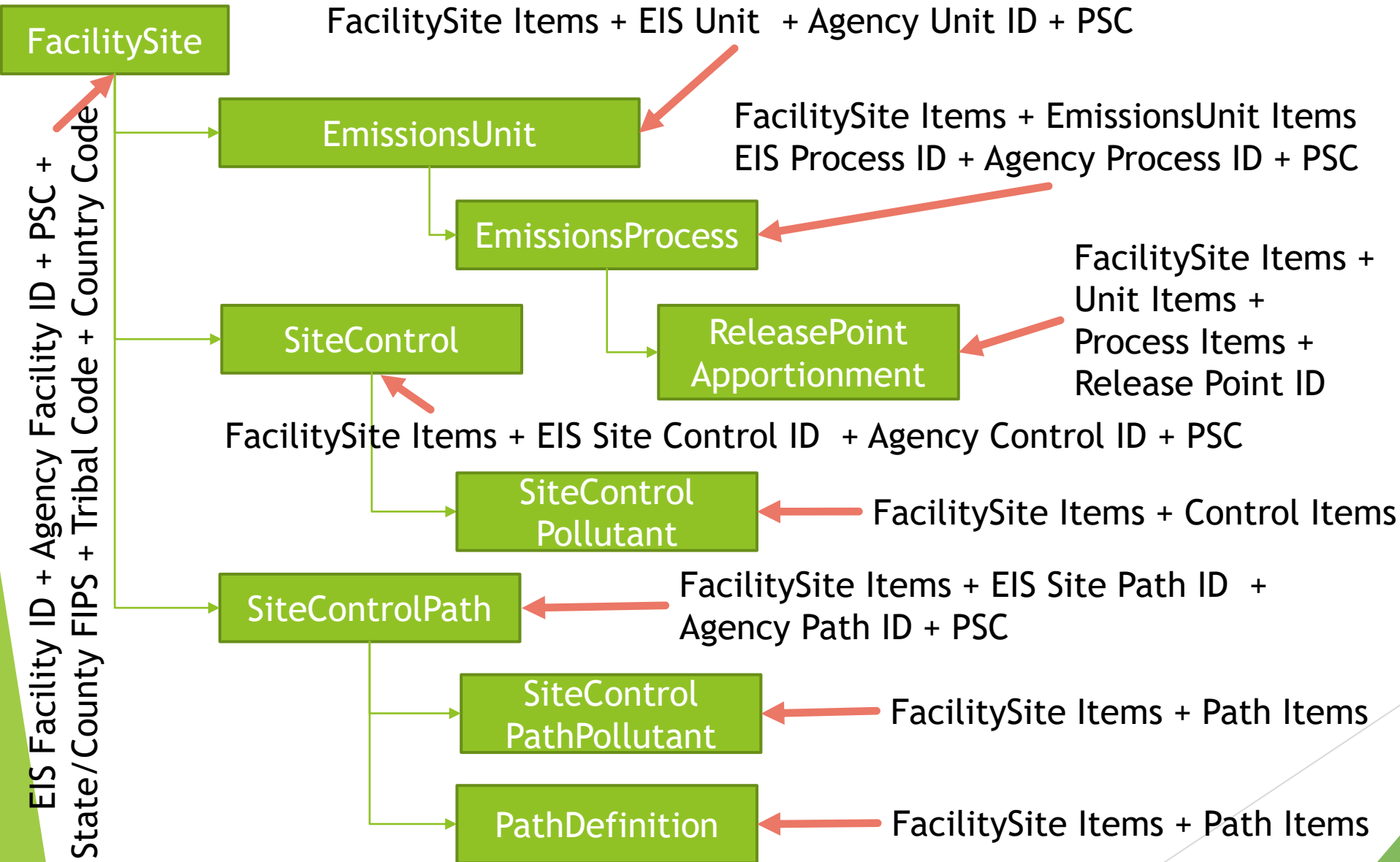
Quick Overview of New Controls

- ▶ Create an Inventory of Control Equipment at a Facility
 - ▶ Provide a Control Type Code
 - ▶ Provide an Identifier
- ▶ Map Out How Emissions Stream Interacts with These Controls. These are Called “Control Paths” in EIS.
 - ▶ Need a Path Name
 - ▶ Need an Identifier
 - ▶ The “Path Definition” table defines how the controls are connected (You may link other Paths as part of this definition as well).
- ▶ Controlled Pollutants May be Defined at the Control (How the Individual Control Device Reduces Emissions) or Path (How the Collection of Devices Control the Emissions)
- ▶ Connect a Control Path to a Release Point Apportionment

Bridge Tool Basics - How it Works

- ▶ There are Different Bridge Tools for the Different Formats of Data
 - ▶ Facility Inventory & Point Emissions
 - ▶ Non-Point / On-Road / Non-Road Data Categories
 - ▶ Daily Event Data
- ▶ Series of Tables are “Linked” Together to Form Relationships
 - ▶ There are Multiple Ways to Define the Relationships
 - ▶ Be Consistent Between the Different Components
- ▶ The Items That are Linked Depends on the Type of Data Involved

Bridge Tool Basics - Controls



Tables	
	AlternativeFacilityIdentification
	AlternativeFacilityName
	AlternativeFacilitySiteControlIdentification
	AlternativeFacilitySiteControlPathIdentification
	AlternativeProcessIdentification
	AlternativeReleasePointIdentification
	AlternativeUnitIdentification
	DeleteReportingPeriod
	DocumentHeader
	Emissions
	EmissionsProcess
	EmissionsUnit
	FacilityNaics
	FacilitySite
	OperatingDetails
	PathDefinition
	Regulation
	ReleasePoint
	ReleasePointApportionment
	ReportingPeriod
	SiteControl
	SiteControlPath
	SiteControlPathPollutant
	SiteControlPollutant
	SupplementalParameter
Forms	
	frmMainMenu

A Bit More About Identifiers

▶ FacilitySite

- ▶ Agency Facility ID + PSC + FIPS County (or Tribal Code)
- ▶ EIS Facility Site ID

▶ EmissionsUnit

- ▶ FacilitySite ID PLUS ONE of the Following
- ▶ Agency Unit ID + PSC
- ▶ EIS Emissions Unit ID

▶ EmissionsProcess

- ▶ EmissionsUnit PLUS ONE of the Following
- ▶ Agency Process ID + PSC
- ▶ EIS Emissions Process ID

▶ SiteControl

- ▶ FacilitySite ID PLUS ONE of the Following
- ▶ Agency Control ID + PSC
- ▶ EIS Control ID

▶ SiteControlPath

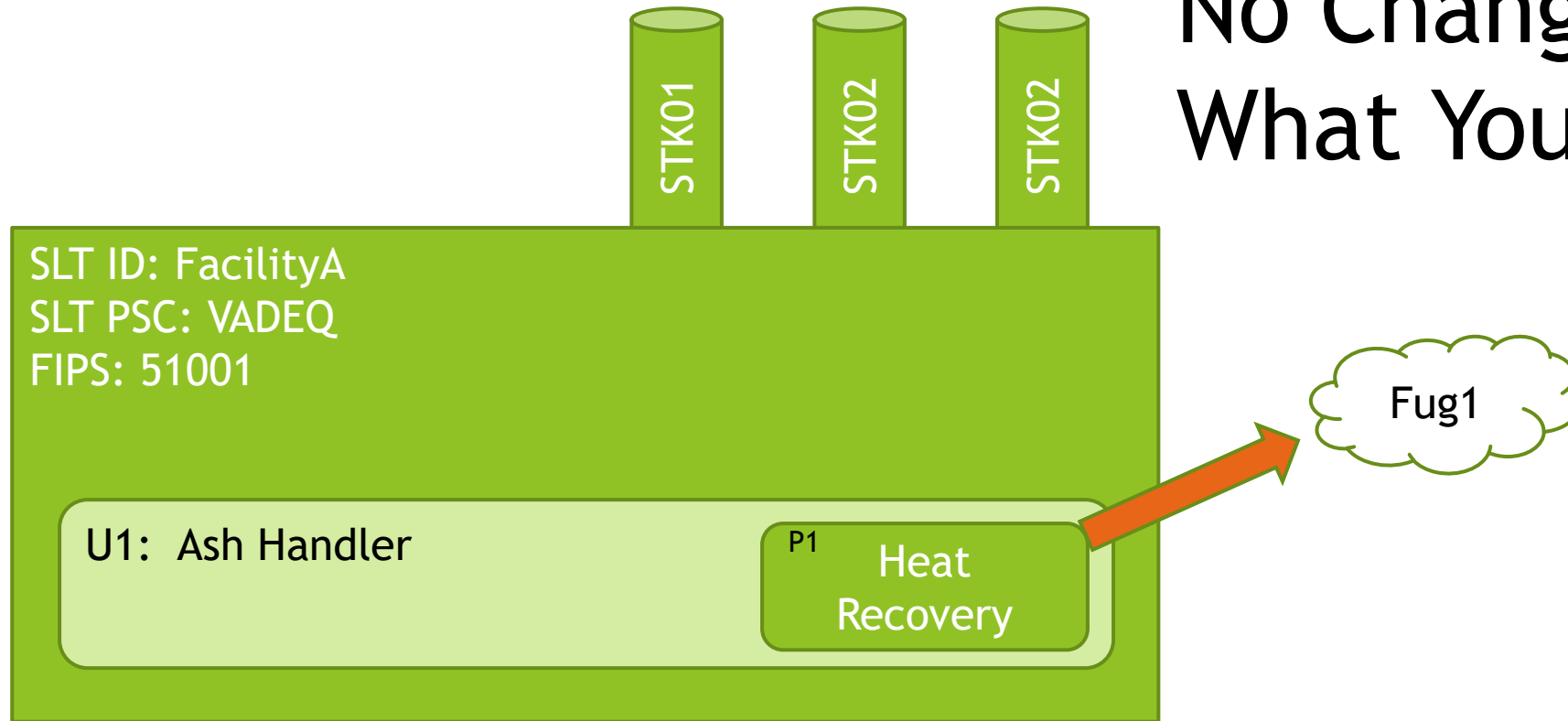
- ▶ FacilitySite ID PLUS ONE of the Following
- ▶ Agency Path ID + PSC
- ▶ EIS Path ID

Examples

- ▶ We will Assume All Facility, Release Point, Unit, and Process Information Already Exists for These Example Records. → That Means we Just Need the Identifiers for Those Items. We will use the Agency Identifier method for these Examples. So there will be empty columns for the Associated EIS Identifier Fields.
- ▶ Need to Set Up Controls, Paths, and Release Point Apportionments
- ▶ All Pollutant Reductions to be Defined at the Path Level. Would Work the Same if the Pollutants were Defined at the Control Level (Just Use the Other Table).

Example 1 - Process is Uncontrolled

No Changes from
What You do Today



Example 1: In the Bridge Tool

FacilitySite Table

Main Menu

Edit Data Staging Tables

FacilitySite

FacilitySiteIdentifier	FacilitySiteProgramSystemCode	StateAndCountyFIPSCode	TribalCode
FacilityA	VADEQ	51001	
*			

EmissionsUnit Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess	
FacilitySiteIdentifier	FacilitySiteProgramSystemCode	StateAndCountyFIPSCode	TribalCode	StateAndCountyFIPSCode	UnitIdentifier	UnitProgram			
FacilityA	VADEQ	51001			U1	VADEQ			

EmissionsProcess Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess	
FacilitySiteIdentifier	FacilitySiteProgramSystemCode	StateAndCountyFIPSCode	TribalCode	StateAndCountyFIPSCode	UnitIdentifier	UnitProgram	EmissionsProcessIdentifier		ProcessProgram
FacilityA	VADEQ	51001			U1	VADEQ	P1	VADEQ	

ReleasePointApportionment Table

Main Menu												Edit Data Staging Tables												FacilitySite												EmissionsUnit												EmissionsProcess												ReleasePointApportionment																																																																																																											
FacilitySiteIdentifier												FacilitySiteProgramSystemCode												StateAndCountyFIPSCode												ReleasePointIdentifier												ReleasePointProgramSystemCode												UnitIdentifier												UnitProgram												EmissionsProcessIdentifier												ProcessProgram												Fugitive												AveragePermit												ReleasePointApportionmentIsUncontrolled																																			
FacilityA												VADEQ												51001												FUG1												VADEQ												U1												VADEQ												P1												VADEQ																																																100												Y											

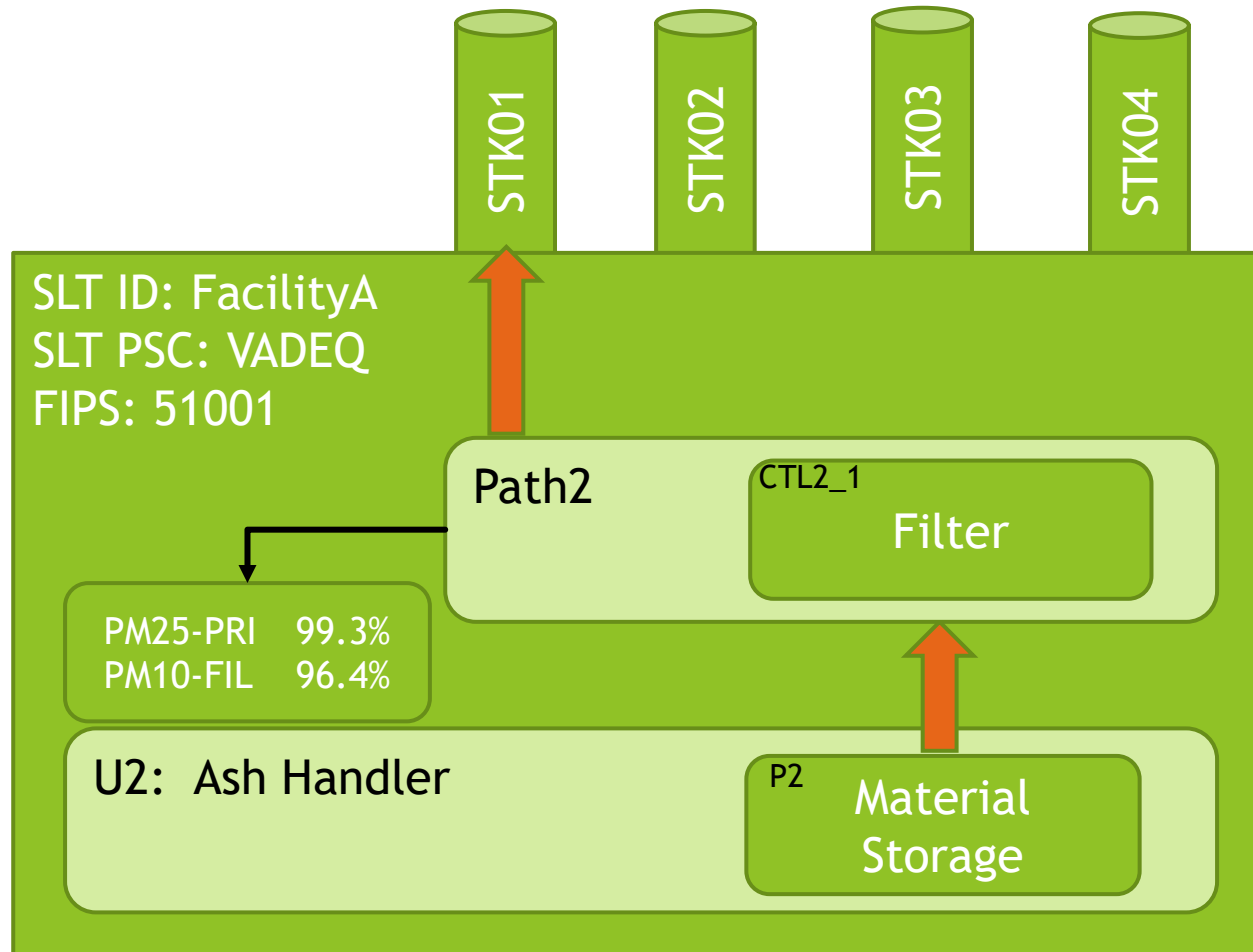
SLT ID: FacilityA
SLT PSC: VADEQ
FIPS: 51001

U1: Ash Handler

P1 Heat Recovery

Fug1

Example 2 - Process is Controlled - Single Stream / 1 Control Device



Example 2 - In the Bridge Tool {Page 1}

FacilitySite Table

Main Menu

Edit Data Staging Tables

FacilitySite

FacilitySiteIdentifier	FacilitySiteProgramSystemCode	StateAndCountyFIPSCode	TribalCode
FacilityA	VADEQ	51001	
*			

EmissionsUnit Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess					
FacilitySiteIdentifi		FacilitySiteP		StateAndCo		TribalCode		StateAndCo		UnitIdentifi		UnitProgram	
FacilityA		VADEQ		51001						U2		VADEQ	

EmissionsProcess Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess		ReleasePointApportionment	
FacilitySiteIdentifier	FacilitySiteProgram	StateAndCounty	TribalCode	StateAndCounty	UnitIdentifier	UnitProgram	EmissionsProcessIdentifier		ProcessProgram		
FacilityA	VADEQ	51001			U2	VADEQ	P2		VADEQ		

SiteControl Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess		ReleasePointApportionment		SiteControl	
FacilitySiteId	FacilitySiteP	StateAndCo		FacilitySiteC	FacilitySiteC				ControlMea	ControlDesc	PercentControlEffect	ControlUpgr	
FacilityA	VADEQ	51001		CTL2_1	VADEQ				127	Fabric Filter			

Example 2 - In the Bridge Tool {Page 2}

SitePath Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess		ReleasePointApportionment		SiteControl		SiteControlPath	
FacilitySiteId	FacilitySiteP	StateAndCo		FacilitySiteC	FacilitySiteC					PathName	PercentPath	PathDescription	IdentifierIsR	PathIsReadC	
FacilityA	VADEQ	51001		Path2	VADEQ					Example Path 2	100	Example 2 Path			

PathDefinition Table

Main Menu	Edit Data Staging Tables	FacilitySite	EmissionsUnit	EmissionsProcess	ReleasePointApportionment	SiteControl	SiteControlPath	PathDefinition	
FacilitySiteId	FacilitySiteP	StateAndCo	FacilitySiteControlPathIdent	FacilitySiteControlPathPr	ControlPathDefinitionControlIdentifier	ControlPath	SequenceNt	AveragePer	
FacilityA	VADEQ	51001	Path2	VADEQ	CTL2_1	VADEQ	1	100	

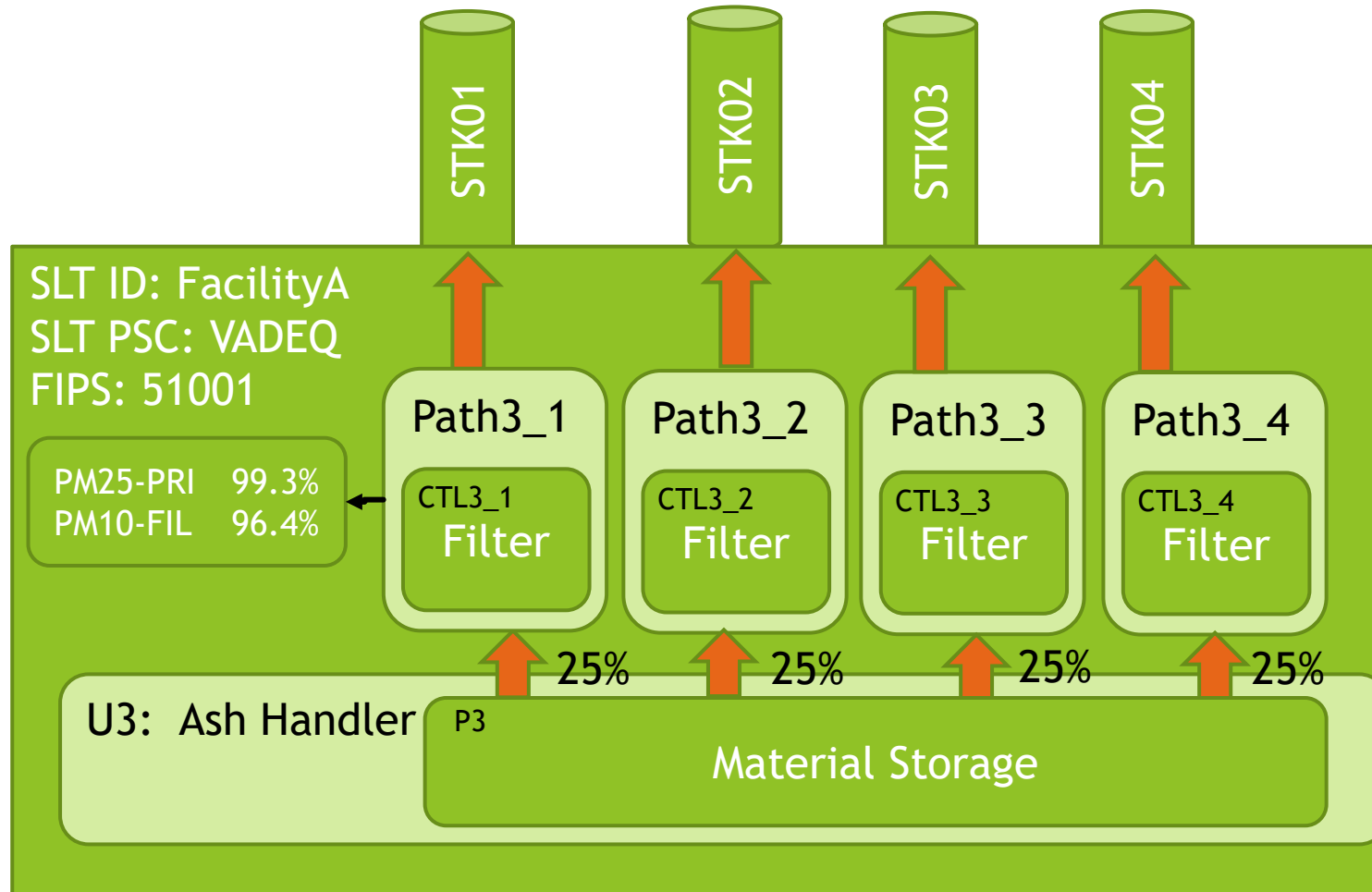
SiteControlPathPollutant Table

Main Menu	Edit Data Staging Tables	FacilitySite	EmissionsUnit	EmissionsProcess	ReleasePointApp	
FacilitySiteId	FacilitySiteP	StateAndCo	FacilitySiteC	FacilitySiteC	PollutantCo	PercentCont
FacilityA	VADEQ	51001	Path2	VADEQ	PM25-PRI	99.3
FacilityA	VADEQ	51001	Path2	VADEQ	PM10-PRI	96.4

ReleasePointApportionment Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess		ReleasePointApportionment		SiteControl		SiteControlPath		PathDefinition			
FacilitySiteId	FacilitySiteP	StateAndCo		ReleasePoin	ReleasePoin	UnitIdentifi	UnitProgram	EmissionsPr	ProcessProg	Release	Rele						AveragePer	Releas	
FacilityA	VADEQ	51001		STK01	VADEQ	U2	VADEQ	P2	VADEQ	Path2	VADEQ						100	N	

Example 3 - Process is Controlled - Multiple Stream / 1 Control Device/Path



Example 3 - In the Bridge Tool {Page 1}

FacilitySite, EmissionsUnit, EmissionsProcess - Same as Before

SiteControl Table

FacilitySiteId	FacilitySiteP	StateAndCo	FacilitySiteC	FacilitySiteC	ControlMea	ControlDesc	Pe
FacilityA	VADEQ	51001	CTL3_1	VADEQ	127	Fabric Filter	
FacilityA	VADEQ	51001	CTL3_2	VADEQ	127	Fabric Filter	
FacilityA	VADEQ	51001	CTL3_3	VADEQ	127	Fabric Filter	
FacilityA	VADEQ	51001	CTL3_4	VADEQ	127	Fabric Filter	

SitePath Table

FacilitySiteId	FacilitySiteP	StateAndCo	FacilitySiteC	FacilitySiteC	PathName	PercentPath	PathDescription	Id
FacilityA	VADEQ	51001	Path3_1	VADEQ	Example Path 3 Stack1	100	Example Path 3 Sta	
FacilityA	VADEQ	51001	Path3_2	VADEQ	Example Path 3 Stack2	100	Example Path 3 Sta	
FacilityA	VADEQ	51001	Path3_3	VADEQ	Example Path 3 Stack3	100	Example Path 3 Sta	
FacilityA	VADEQ	51001	Path3_4	VADEQ	Example Path 3 Stack4	100	Example Path 3 Sta	

Example 3 - In the Bridge Tool {Page 2}

PathDefinition Table

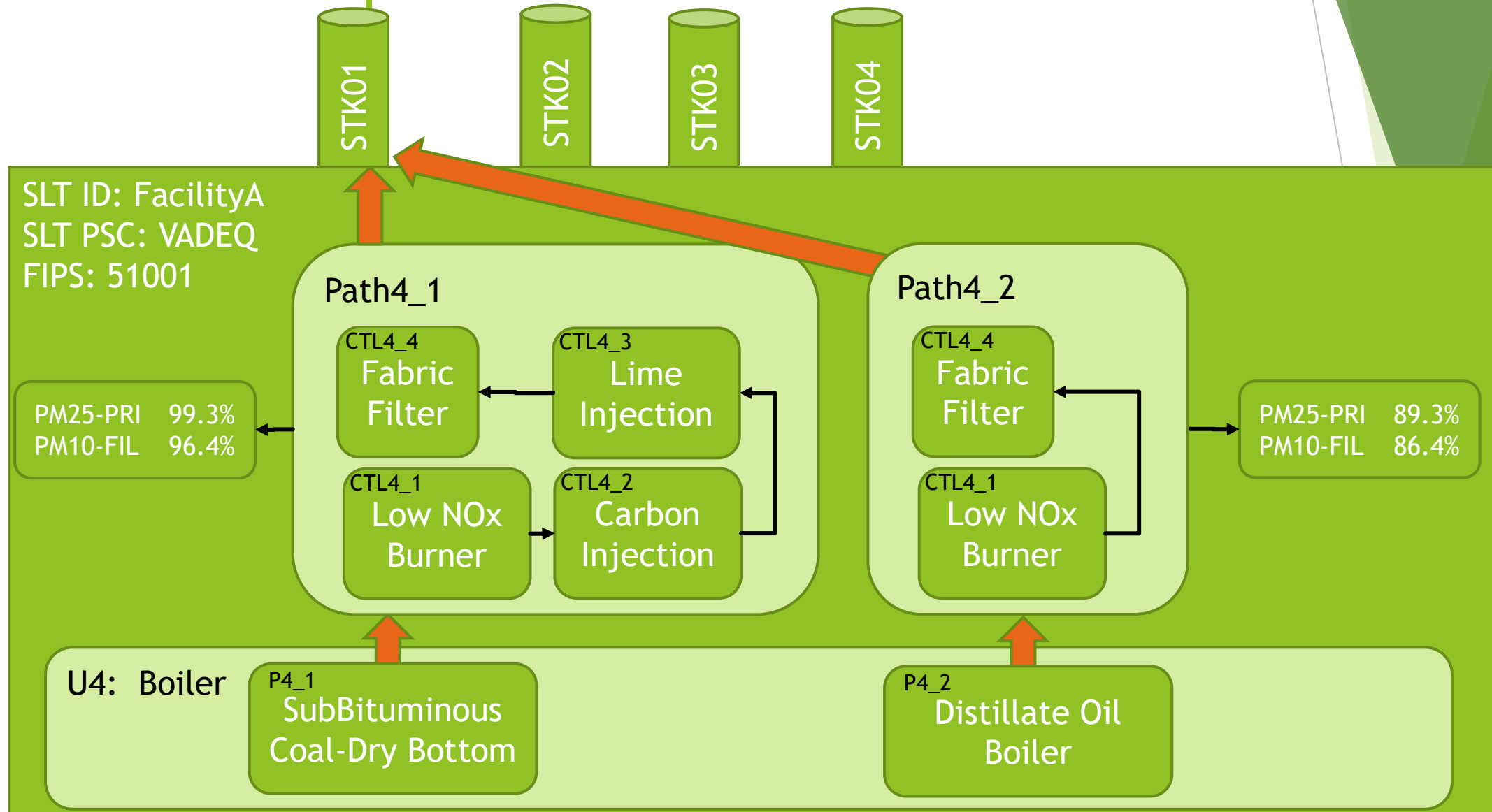
FacilitySiteK	FacilitySiteP	StateAndCor	T	FacilitySiteCor	FacilitySiteCor	ControlPathI	ControlPath							E	SequenceN	AveragePer
FacilityA	VADEQ	51001		Path3_1	VADEQ	CTL3_1	VADEQ								1	100
FacilityA	VADEQ	51001		Path3_2	VADEQ	CTL3_2	VADEQ								1	100
FacilityA	VADEQ	51001		Path3_3	VADEQ	CTL3_3	VADEQ								1	100
FacilityA	VADEQ	51001		Path3_4	VADEQ	CTL3_4	VADEQ								1	100

ReleasePointApportionment Table

FacilitySiteK	FacilitySiteP	StateAndCor		ReleasePoin	ReleasePoin	UnitIdentifi	UnitProgram	EmissionsPr	ProcessProg	Release	Release					AveragePer	
FacilityA	VADEQ	51001		STK01	VADEQ	U3	VADEQ	P3	VADEQ	Path3_1	VADEQ					25	N
FacilityA	VADEQ	51001		STK02	VADEQ	U3	VADEQ	P3	VADEQ	Path3_2	VADEQ					25	N
FacilityA	VADEQ	51001		STK03	VADEQ	U3	VADEQ	P3	VADEQ	Path3_3	VADEQ					25	N
FacilityA	VADEQ	51001		STK04	VADEQ	U3	VADEQ	P3	VADEQ	Path3_4	VADEQ					25	N

Example 4 - Process is Controlled - 1

Stream / Multiple Control Devices



Example 4 - In the Bridge Tool {Page 1}

FacilitySite, EmissionsUnit, EmissionsProcess - Same as Before

SiteControl Table

Main Menu		Edit Data Staging Tables		FacilitySite		EmissionsUnit		EmissionsProcess		ReleasePointApport	
FacilitySiteK	FacilitySiteP	StateAndCo		FacilitySiteC	FacilitySiteC				ControlMea:	ControlDesc	Pe
FacilityA	VADEQ	51001		CTL4_1	VADEQ				205	Low NOx Burne	
FacilityA	VADEQ	51001		CTL4_2	VADEQ				207	Carbon Injectic	
FacilityA	VADEQ	51001		CTL4_3	VADEQ				42	Lime Injectionr	
FacilityA	VADEQ	51001		CTL4_4	VADEQ				127	Fabric Filter Ba	
*											

SitePath Table

Main Menu	Edit Data Staging Tables	FacilitySite	EmissionsUnit	EmissionsProcess	ReleasePointApportionment	SiteControl	
FacilitySiteC	FacilitySiteP	StateAndCo	FacilitySiteC	FacilitySiteC	PathName	PercentPath	PathDescription
FacilityA	VADEQ	51001	Path4_1	VADEQ	Example Path 4_1	100	Example Path 4_1
FacilityA	VADEQ	51001	Path4_2	VADEQ	Example Path 4_2	100	Example Path 4_2

Example 4 - In the Bridge Tool {Page 2}

PathDefinition Table

FacilitySite	FacilitySiteP	StateAndCo	1	FacilitySiteCor	FacilitySiteCor	ControlPath1	ControlPath	(E	SequenceN	AveragePer
FacilityA	VADEQ	51001		Path4_1	VADEQ	CTL4_1	VADEQ					1	100
FacilityA	VADEQ	51001		Path4_1	VADEQ	CTL4_2	VADEQ					2	100
FacilityA	VADEQ	51001		Path4_1	VADEQ	CTL4_3	VADEQ					3	100
FacilityA	VADEQ	51001		Path4_1	VADEQ	CTL4_4	VADEQ					4	100
FacilityA	VADEQ	51001		Path4_2	VADEQ	CTL4_1	VADEQ					1	100
FacilityA	VADEQ	51001		Path4_2	VADEQ	CTL4_4	VADEQ					2	100

ReleasePointApportionment Table

FacilitySite	FacilitySiteP	StateAndCo	ReleasePoin	ReleasePoin	UnitIdentifi	UnitProgram	EmissionsPr	ProcessProg	Release	Rele				AveragePer	Release
FacilityA	VADEQ	51001	STK01	VADEQ	U4	VADEQ	P4_1	VADEQ	Path4_1	VADEQ				100	N
FacilityA	VADEQ	51001	STK01	VADEQ	U4	VADEQ	P4_2	VADEQ	Path4_2	VADEQ				100	N