

▶ **Preventing Garbage In, Garbage Out:  
Streamlining Your System**

White Paper

▶ Enviance



# Preventing Garbage In, Garbage Out: Streamlining Your System

White Paper

The Enviance System solves a variety of data and regulatory challenges for companies. As a sustainable business platform, Enviance provides the means to manage regulatory obligations and help ensure compliance for the regulated community. The System, however, just like any other electronic management information system, is only as good as the data it ultimately provides. Therefore, the quality of information put into the System – and the manner in which it goes in – is critical to success.

This white paper provides specific recommendations for organizations to fully vet their Enviance builds to ensure the best possible data necessary to achieve compliance. This paper is based on a presentation at the Enviance Users Group Meeting in April 2012 by Dan Curry of TRC.

## **Incorrect Knowns**

To paraphrase the former U.S. Secretary of Defense Donald Rumsfeld, *“There are known knowns, known unknowns and unknown unknowns.”* When it comes to data

management, however, a fourth option presents itself: **incorrect knowns**. Once in a system, data and compliance obligations are almost always assumed to be correct. But without the necessary measures taken to ensure accuracy, companies can fall prey to “garbage in, garbage out.”

Enviance System users often fall into two camps of people: computer gurus and compliance fanatics.

- **Computer gurus** – “Whatever you want the system to do, I will find a way to make it happen.”
- **Compliance fanatics** – “I want to understand every aspect of every rule that applies to me, ever did apply to me or ever will apply to me.”

While both types of users have their strengths, they both are responsible for answering the same core problem statement: *How do I ensure that the Enviance build being constructed will represent total compliance?* In addition, the following question is consistently faced: *Was I in compliance yesterday?* If yes, it needs to be proven. If no, details about who, what, where, why and when need to be answered. If maybe, how do you find out?

With 2.1 million opportunities for noncompliance in a Title V permit at a major pulp and paper facility, how do companies manage compliance with pen and paper, or even an Excel spreadsheet?

Environmental systems, such as Enviance, provide an excellent means for companies to manage their regulatory obligations and help ensure compliance with the multitude of obligations facing the regulated community. The quality of information put into the system, and the manner in which it enters the system, are critical to successfully answering the above questions and meeting compliance objectives.

Companies can take advantage of compliance assurance opportunities during their Enviance build by fully vetting the tasks performed to meet the specific obligations of the organization's permits, plans and regulations against those specific requirements. Additionally, it's recommended that the company fully vet the numerics tracked to meet its limits against the specific obligations from which those limits are derived, be it a permit, regulation, required plan, consent agreement, or other.

The implementation of Enviance provides a pathway to ensure ongoing compliance with **known** obligations. The process of constructing an Enviance build offers an opportunity to fully vet those obligations so that you **know** precisely what they are. It's the unknown unknowns and incorrect knowns, however, that elevate the game and raise the bar. Fortunately, these challenges become exposed can be mitigated during the Enviance build process.

### **Compliance Assurance Process and Recommendations**

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#### **Parsing**

During the parsing process, companies should ensure that all compliance tasks and numeric obligations (limits) are identified *based on the source document*. In addition, organizations should ensure they are built into the Enviance System to allow tracking and documentation that validates compliance *based on the source document*.

Source documents include permits, such as Title V, NPDES and Storm Water; regulations, such as MACT, NSPS and RCRA; and regulatory plans, such as SSMP, SPCC and SWPPP. Source documents are what drive your company to perform the compliance tasks. But organizations need to ask: Do we have the right documents in front of us? For example, did your company not know it has a storm water permit? *[Note: This white paper does operate under the assumption that all proper source documents are identified (i.e. Complete and Accurate Applicability Determination).]*

The parsing process systematically identifies and documents all of the actionable requirements and limits from the source documents. It serves to document and assign specific tasks required to maintain compliance, relating to who, what, when, where, how and why. The parsing process is the single most important process for helping companies understand what their obligations are, and enables them to understand things they didn't know before.

Benefits of parsing include:

- The source document is broken down into applicable and actionable compliance requirements
- A comprehensive summary of actionable tasks is developed
- Documentation of applicability review is provided
- Knowledge of the regulation/permit/plan is built

In addition, parsing provides opportunities to:

- Identify compliance issues
- Identify and clarify vague language
- Identify inappropriate obligations
- Validate interpretations of compliance demonstration

It's important for companies to identify *applicable* sections or parts of the source documents. This is generally all of the specific sections of permits and plans, but may just be portions of regulations and permit general provisions.

It is recommended that companies identify the specific regulation/permit/plan being reviewed, including plan revision, regulation date, and permit revision or effective date. The applicable source document then needs to be broken down into individual lines, and

citations need to lead directly back to the line in the source document.

For a line by line analysis, be sure to review, assess and document every section and subsection of an applicable obligation source document for actionable requirements, then develop and assign tasks. It's important to have an independent quality assurance/quality control (QA/QC) review take place.

Tasks are a rigorous part of the parsing process. Companies need to be able to document that each section of the source document has been reviewed, obligations have been identified, and compliance tasks assessed and documented. This is typically appropriate for site-specific permits and applicable regulations.

### **Parsing Plans**

When parsing plans such as SPCC, Storm Water Pollutions Prevention Plans, or start-up, shutdown and malfunction plans, much of the required language in plans does not focus on actionable obligations,. The focus should be on identifying focused actions embedded within much larger and otherwise not actionable language.

For plan parsing, the obligation source document is reviewed, and the segments that have actionable requirements are identified and highlighted. A hard copy of the source document with the actionable item highlighted can be scanned and maintained.

It's important to develop a citation identifier for the description that will direct a user to the specific obligation in the source document.

### Populating the Spreadsheet<sup>1</sup>

Populating the spreadsheet for the regulation, permit or plan requires that each corresponding section, condition, paragraph or clause number be identified for each element of the permit plan or discrete regulation in a separate row. Be sure to insert the exact language from the source document next to it, and ensure that users are able to get back to the source through this citation. In addition, ensure that there is an individual citation number for each citation presented.

After the spreadsheet is populated with the contents of the permit, plan or regulation, a line by line analysis should be performed to determine actionable items.

### Parsing Actionable Determination

When parsing actionable determination, citations can be actionable in a number of ways:

- Continuous – Ongoing obligation, such as a monthly discharge monitoring report (DMR)

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<sup>1</sup> Note: Using a spreadsheet is usually the common approach for parsing out the necessary information, however, there are other options.

- One-time – Submitting notice of initial citation status
- Event – Triggered by something else, such as a release

“Actionable” means that specific action is required *by the facility* to determine compliance. Citations may also require no action, such as definitions, or be not applicable, such as applying only to new sources. Be sure to document these.

One-time actions are used to validate or audit that a continuous requirement is part of another tracking system. Examples of this include:

- Obligation: Maintain records for three years
- Task : Validate records management systems
- Obligation : Maintain pollution control equipment in accordance with manufacturer’s specification
- Task: Verify that appropriate maintenance programs have been set up in the maintenance management system and are being completed

A one-time action may also require a continuous action depending on the situation. For example, the obligation may be to “maintain pollution control equipment in accordance with manufacturer’s specification.” A resulting one-time task may be to “verify that appropriate maintenance programs have been set up in the maintenance department and are being

completed.” A continuous task might be to “verify that the maintenance work orders for the pollution control equipment are being completed and closed out monthly.”

### **Parsing Task Information**

For actionable requirements, be sure to include a concise description of the actionable task under the “Task Name” column, such as “Weekly Hazardous Waste Storage Area Inspection.” The intent is that this column will be used in the subject line of an email notification for continuous requirements.

Under the “Task Description” column, consider providing a description of the task that is required to be completed to maintain compliance for all actionable requirements. The intent is for this description to be included in the body of the notification email for continuous requirements – and keep in mind that it’s possible that the email recipient is not a compliance professional.

Developing the task description provides the greatest potential for “garbage in, garbage out.” To avoid this, use wording that makes sense to the receiver, yet results in an action that represents true compliance. Do not necessarily rely on past practices. Consider whether, taken by itself, completion of the task will result in documented compliance.

When parsing tasks, it’s advisable to include the following properties:

- Determine an Assigner

- Determine an Owner
- Determine Date
- Determine Frequency
- Determine the notification escalation
- Determine supporting documents to attach -- if documents are critical to compliance, be sure they are fully vetted as well, such as ensuring a calibration checklist includes the inspector, date, as found, as left, etc.

### **Validating the Parse Spreadsheet**

Validating the parse spreadsheet necessitates that it’s completed with input from the final user – the facility – so it’s important to obtain buy-in. Validating involves a line-by-line review of the parse, including:

- Ensuring that tasks mean the same thing to the end user as they do to the developer
- Ensuring the end user concurs that the task is the right thing to do to achieve compliance based on the source document obligation

Consideration should be given to consolidating repetitive tasks, streamlining notification schedules and ensuring an efficient work flow. In addition, consideration should be given to ensuring that existing systems, such as Maintenance Management Records and Records Management Systems, are accurate, complete and effective.

When validating the parse spreadsheet, it's important to understand:

- How does the facility implement the tasks?
- What is the current work flow process?
- What tools already exist, such as security inspection rounds, checklists and maintenance management systems, which can be used to meet compliance obligations?
- Are the notification schedules and task 'owners' appropriate?

### Tasking Pitfalls:

#### #1. Multiple obligations on the same task.

Similar obligations from different source documents can, unfortunately, be just different enough to cause non-compliance. Take, for example, "report a deviation within two business days" vs. "report a deviation within 48 hours." Multiple obligations on the same task may be resolved by carefully wording the task, may require two different tasks, or may be driven by two separate events that may or may not occur simultaneously.

#### #2. Not reviewing existing tools.

Too often, companies make the mistake of relying heavily on existing tools, such as spreadsheets, inspection checklists and procedures. But when was the last time these tools were reviewed against the source

document for which they are intended to prove compliance? In addition, without review, tools are at risk of being identified inappropriately as meeting compliance obligations.

#### #3. Not demanding numerics where numerics are identified.

If the obligation requires that a daily check of scrubber pH must be maintained between 6-9, tasking a yes/no does not allow for data validation, data trending or troubleshooting. By requiring the input of a numeric, problems can be identified early.

#### #4. Data validation and instrument calibration.

It's important to not only understand the instrumentation limitations, but know the manufacturer's recommendations for calibration, including frequency, zero, span and failure mode. In addition, tasks should be built in to validate calibration and data.

Additional pitfalls include:

- Numeric – averaging time, frequency and handling invalid data.
- One-off events – start-up, shutdowns, planned outages, unplanned outages, idled facilities, hot idle, cold idle, spills or releases.

Take the opportunity to validate compliance while validating your spreadsheet. To the greatest degree possible, identify the current practices for compliance, build tasks that match those current practices, and then



validate that the current practices do, in fact, meet the obligation.

## **Conclusion**

It is just as unlikely for a company to be able to manage its Title V permit compliance without a management tool as it is for the “right build” to mean a trained monkey can manage compliance. There simply is no substitute for the value and expertise an environmental professional brings to a compliance program. A fully vetted Enviance build does, however, help ease the headache and penalties caused by inaccurate data. Preventing “garbage” from entering the system is one of the single most important areas of value that an environmental professional can contribute during the system build process – and leads to better system experience and improved compliance for the organization overall.

## **About Enviance**

Enviance is the leading provider of Environmental ERP software. With more than a decade of experience providing environmental data management and expertise, Enviance’s proven system is used by the world’s largest corporations and government agencies.

Enviance maintains deep domain expertise in EHS management and technology, and has more than 17,000 users in more than 49 countries, including *American Electric*

*Power, ArcelorMittal, Beam Global Wine & Spirits, Boral Industries, Chevron, Continental Resources, DuPont, Entergy, FujiFilm, Freescale, Georgia-Pacific, Koch Fertilizer, Los Angeles World Airports, Metropolitan Water District of Southern California, Midway Products, NV Energy, Oldcastle Building Products, Pacific Gas & Electric, Patriot Coal, Princeton Plasma Physics Laboratory, Roquette America, Sanofi Pasteur, Southern California Edison, Southern Company, Syngenta, US Dept. of Defense, Valero, and Walmart.*

[Full customer list.](#)

Industry leaders have used Enviance to streamline GHG management since 2006.

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