

A Portfolio Approach to Managing and Submitting Oil & Gas Air Permit Authorizations

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A Portfolio Approach to Managing and Submitting O&G Air Permit Authorizations

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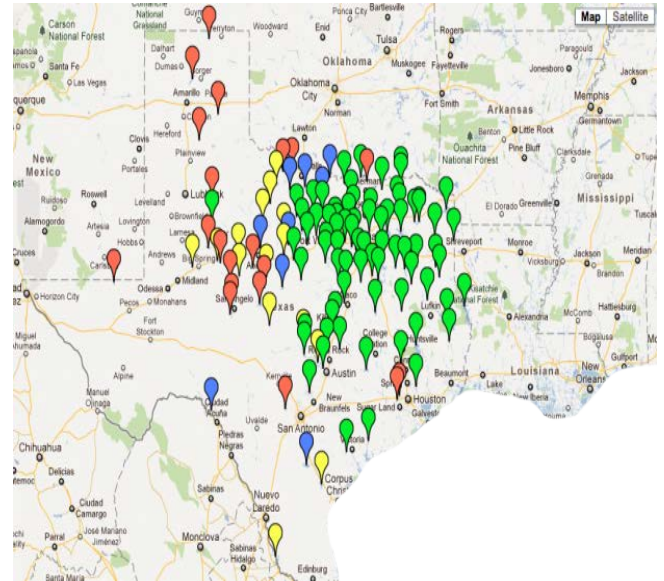
Presentation overview

- What is a portfolio approach?
- Genesis of the PBRobot™ tool
- Conventional vs. portfolio approach
- What constraints exist when permitting?
- Project cost and timeline considerations
- Applications beyond O&G permitting

Problem statement

A client has a large volume of sites that need to be permitted quickly.

Consultant has limited resources due to existing project commitments or schedules.



Possible solutions?

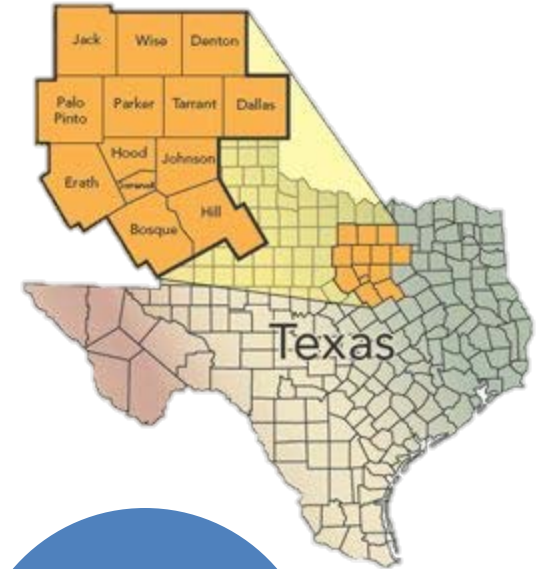
- Use additional staff to process sites in parallel.
- File for extension or delay submitting until all sites are ready.
- Make broad assumptions about inputs for emission calculations.
- Find a way to maximize efficiency (output per hour worked) without sacrificing permit quality.



Bulk permitting can create efficiencies

TCEQ Special Inventory

→ O&G Sites in Barnett Shale



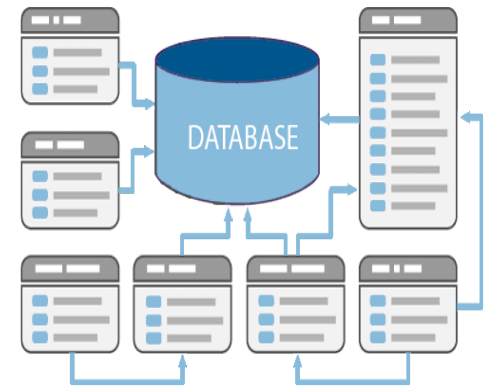
Client Asset
Management Data



TCEQ reporting
format

This sounds like a job for a DATABASE!

- Extra effort on the front end of the project to create the Excel based “database.”
- Other staff members can focus on data entry, calculation methods and QA/QC.
- The final product is a database of inputs required for calculations and Excel Macros that placed each input value into the correct equation.



Conventional vs. portfolio permitting

Common elements:

Quality data, regulatory knowledge, rule applicability assessment, experience working in particular industry sectors, must define the parameters of the tool.

Additional elements required for Portfolio:

Coding experience, database setup, computing power, version control.

PBRobot™ demo

Zephyr Environmental Corporation's



TCEQ EMISSION CALCULATION WORKBOOKS

*Create Individual Site
Inventory Workbook*

*Print Individual Site
Inventory Workbook*

*Create a Range of Site
Inventory Workbooks*

*Print a Range of Site
Inventory Workbooks*

The result

- Draft delivered to the client with several days for review.
- Ability to make changes/updates to individual sites and re-run individual inventories with the push of a button.
- A complete, timely submittal.
- A deliverable that looked consistent in style and format, regardless of the preparer.



Strengths of portfolio approach

- Can process/generate high volume of product.
- Cost saving (for high & low volume projects).
- Allows for same day turnaround on administrative and calculation changes.
- Maintains a record of all inputs used in permit (can be a historical record).
- Enables quick comparison of sites.
- Can be converted into an EI tool.



Differences in portfolio approach

- Time & labor shifted to front end of project.
- Requires knowledge or awareness of different operational scenarios.
- Adds an additional QA element.
- Simultaneous multi-user access (depending on platform).



Intellectual Property Protection

A lot of work goes into creating a database and the logic needed to perform calculations.

Registered Trademark - PBRobot™



Copyright claim for code

Impact on permitting costs & timeline



- Significant reduction in cost for high volume projects
- Accelerated “production phase” of the project

CAVEAT: every permitting job is different

Applications beyond permitting

- Emission Inventory
- Engine tracking & compliance
- Asset management (EMS/EMIS)
- Site-specific emission factors
- MOC



Thank you!

The screenshot shows the Zephyr Environmental website homepage. At the top is the Zephyr logo and a navigation menu with links for SERVICES, INDUSTRIES, RESOURCES, CONTACT, and ABOUT. Below the navigation is a hero section with a blue header that says "Welcome to Zephyr Environmental". The main content area features a "Zephyr Environmental Corporation" section with a brief description of the company and a "CONTACT ZEPHYR" button. Below this are three columns: "Upcoming Training" with a list of courses, "Latest Issue of Currents" with a thumbnail of a magazine cover, and "Our Services" with a description of the company's consulting and training services. At the bottom, there is a "SIGN UP FOR CURRENTS NEWSLETTER" form, "RECENT POSTS" including "Congratulations to FPCC USA!", and "ZEPHYR ENVIRONMENTAL CORPORATION" contact information and social media links.

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**Visit us at www.ZephyrEnv.com
and www.HazMatAcademy.com**

Please remember to fill out the conference survey. This will be sent to you by email.

<https://www.surveymonkey.com/r/2015OGENV>

Conference participants are eligible for up to 13 contact hours 1.3 CEUs. Forms will be available after lunch on Wednesday at the registration area.

Return completed forms at the conclusion of the conference.