NCDEQ Annual Hazardous Waste Billing Process
Using the RCRAInfo Exchange Node and CRM
In the Beginning.....

- Really old process; circa 1995
  - Download RCRIS generator data to a database
  - Create letter in Word (maybe in Wordperfect)
  - Create a mail merge
  - Print the 3000+ letters
  - Take over a conference room for 3 days while letters were folded and envelopes were stuffed
  - Track payment in the database (DB2 then Access)
- Static process, no bills other than July 1
Old process; circa 2005

- Handler information was entered in RCRAInfo
- Handler information was also entered into IBEAM (NC data system)
- Bills were created after manipulation of the data
- Bills were printed (the section bought a folding machine)!!!
- Envelopes were stuffed
- Payments were tracked in the NCDEQ (iBeam) System
- Still static, but much better reporting capabilities
Old process; circa 2005

- DEQ iBeam (Internet Based Enterprise Application Management) Framework
  - Oracle / JAVA application framework
  - Very Robust, but expensive to maintain
  - Required Development / JAVA programmers to maintain
  - Resulted in double data entry (RCRAInfo and iBeam Handler records)
Old process; Exchange Node Hybrid

- iBeam Exchange Node Hybrid Application
  - Used the EPA CDX Exchange to provide Handler Data to iBeam
  - Increased efficiency by single data entry of Handler and Permit information
  - Used OpenNode2 from Windsor
    - Retrieved 2 payloads from the CDX, Handler and Permit
    - Once solicited, the Handler and Permit payloads ran through a processor to add to DEQ Oracle database
    - Scheduled once a day (early morning)
    - Only solicited changes from the previous successful run

- Risks / Problems
  - Still had 2 databases (RCRAInfo and DEQ iBeam) with one data entry portal (RCRAInfo)
  - Database Schema’s were never synchronized
  - Update errors
  - Only daily updates synced, no changes no updates
Old process; Exchange Node Hybrid
Past Annual Billing - Legacy

- Request revisions to the invoice cover letter June (estimated 2 wks)
- Audit all temporary and Short Term #s (June)
- Invoice template updated with the new fiscal year, changes to payment instructions, changes to personnel/phone numbers, changes to generator activity fees and tonnage amounts, and verify that the resource weblinks
- The invoice template is also revised
- The tonnage fees table gets updated and the tonnage fees applied to the upcoming fiscal year invoices in the background by IT, or BR data updated
- Late fees calculated (mid June)
- Run Batch Job of new fiscal year invoices, June 20th or 21st
- USB Drive sent to Correction enterprises for printing/folding/mailing
- NCDSCAs delivered by hand and large retail chain invoices in a large envelopes
Summary of Project

- Problem: Hazardous Waste Billing Process took a lot of effort on an annual basis to complete. Key subject matter experts have left the process over the past couple of years, making it even more of an “event” on an annual basis. Data entry continued to be an integral part of the process, and human error was unavoidable.

- Goal: To make the Hazardous Waste Billing Processes not be an “event” on an annual basis.
  - Improve the workflow and minimize waste within the process
  - Send electronic bills to the facilities
2019 DEQ CRM System

- Contracted with Windsor to develop a new plugin for RCRAInfo
- 1 to 2 team meetings with PM, Business, programmers and Business analyst from January through June
- UAT – User Testing in 3 sections – May 15, May 29, July 31
- Legacy IBEAM Billing Platform frozen July 1
- Initial Registration request was sent July 15 to 2800 Handlers
- Mass annual billing was August 5
2019 DEQ CRM System

- Downloaded RCRAInfo 14,000
- Historically no other audits were made in past other than temporary numbers
- Merged & Sorted – reporting those that differed in generator size
- Variances sorted by Generator status in RCRA and reviewed which database was accurate
- Reviewed All unpaid invoices in order to ascertain if collectible
  - Was Site still open?
  - Did company move?
  - Did a new owner come into site?
  - Involved Inspectors with both QC and collections
• New Plugin developed in 30-45 days
• Implemented in SQL Server
• New plugin based on RCRAInfo 5.7 containing 6 payloads
  • HD   Handler
  • PM   Permitting
  • CE   Compliance, Monitoring and Enforcement
  • CA   Corrective Action
  • GS   GIS
  • FA   Financial Assurance
  • EM   E-Manifest
• Submission Processor for processing data daily into the SQL Server staging database
MyRCRAID

- Adopted by NC 6/30/2018
- Allows facilities to self-report (EPA Form 8700-12, Site Identification) into a staging area in RCRAInfo
- Staff approves the submittal
- No more paper Notification forms
  - This will help for the SQG biennial re-notification process 2021, 2023, ...
Overall Program Successes

- Billing for 2800 Sites was executed in 10 minutes or less
- Dashboard presentation shows action items daily
- Automated invoicing/emails with 8700 updates through RCRA
- Email and Phone call tracking ability in CRM by site
- Easy click-thru navigation
- Easy excel spreadsheet downloads by current view, for staff use or Site Managers
- Accountant able to handle large daily payments single handedly when a full team was used in prior years to post payments
- Updated information on SQG in RCRA and in CRM
- Future permitting data etc. added into CRM
- Capability of large email campaigns/communications
Audit Expectations / Benefits

• Improved data Integrity
• No erroneous billing, better accounting records
• Customer Satisfaction – less errant bills, correct data in both databases
• Unseen benefit – all SQG prepared for new Notification Rules
Problems with New System

- Exchange from RCRA (Push-Pull issues)
- Auto Payment posting included a 3rd party Cash Management Bank
- Some re-invoice glitches that were caught early on and corrected
- Credit Card Payment Data incomplete in CRM
- SQG population that never updated Info in RCRA
Future Development

- Continued support and build out of reports, i.e. PowerBI

- E-Payment support and maintenance

- Development of other data products from parent RCRAInfo payloads
  - Department Permit tracking
  - Department Revenue tracking
  - GIS resources
  - Compliance Issues
  - E – Manifest data