

Project Closeout Report

Submitted to Large Project Oversight on 04/23/2021

GENERAL INFORMATION

Project Name: DEQ Environmental Regulatory Software System (ERSS), Project No. PRJ43

Agency Name: Department of Environmental Quality

Project Sponsor: James L. Semerad, Director, Division of Air Quality, DEQ

Project Manager: Rheanna Kautzman, Division of Air Quality, DEQ and Gary Haberstroh, Office of the Director, DEQ

SCHEDULE AND COST METRICS

	Baseline Start Date	Baseline End Date	Baseline Budget	Actual Finish Date	Schedule Variance	Actual Cost	Cost Variance
Original Baseline	10/01/2019	1/25/2021	\$704,500.00 ¹	4/23/2021	<10% Behind ²	\$607,970.34	(\$96,592.70)

¹ Budget did not include DEQ staff time costs which were approximately \$129,645 over the course of the project (at \$35/hr per staff ~3,700 hours spend in designing, development, testing, and training, which is ~1.25 FTE).

² There were some issues related to getting Oil and Gas Production Site data into the new system, which did result in some time delay, but had no effect on scope or budget. Note: this value does not include additional delays in administrative close out of this project (ESC scheduling, close out report, etc.).

Notes:

Minor budget changes included \$70,000 allocated to project management that was not needed. Risk funds were not used post-contract. However, we **did not** include staff time costs in the budget for this project.

Time delay was related to the Department not having an existing electronic system with oil and gas production site data to migrate and instead piggy backing on NDIC's well data. While this work OK, there is a difference between what NDIC defines as a site to be and what the air rules define as a site, which did take extra time and work with our regulated community to get better data.

SCOPE METRICS

	Number of Deliverables	Number of Deliverables Delivered at Completion	Number of Scope Changes After Planning Phase
Original Baseline	11	n/a	0
Final Baseline	11	11	0

Major Scope Changes and Impact on Budget and Schedule:

No changes in scope, no effect on budget.

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QUALITY METRICS

Number of Defects/Quality Issues Identified After Delivery	Number of Success Measures Identified in Project Charter That Were Satisfied or Achieved at Project Completion	Objective
None. Though we have identified areas for future enhancement and increased usability.	1. NDDEQ Staff resources better allocated	1.1, 1.2, 3.1, 3.2, 3.3, 4.1, 5.1, 6.1, 6.2, 6.3
	2. Regulated Community (RC) Staff time savings	3.1, 3.2, 3.3, 4.1, 6.1, 6.3
	3. Quicker Response time to non-compliance issues by the RC	2.1, 6.3
	4. Reduce late reports	3.1, 3.2, 3.3, 4.1, 6.1, 6.2, 6.3
	5. Increase Transparency	5.1
	6. Automate some processes	1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 4.1, 5.1, 6.1, 6.2, 6.3
	7. NDDEQ management review	2.1, 6.2, 6.3

Notes:

System meets all the requirements outlined in the project plan. There were some hiccups related to getting Oil and Gas Production Site data into the new system, which did result in some time delay. This was related to the Department not having an existing electronic system with this data to migrate and instead piggy backing on NDIC's well data. While this worked well, there is a difference between what NDIC defines as a site to be and what the air rules define as a site, which required regulated community assistance in data cleaning.

OBJECTIVES & LESSONS LEARNED

Objective	Measurement	Met/Not Met	Measurement Outcome
1.1. Reduce staff scanning time by 75%.	1.1.1. Measure baseline time spent scanning by staff then compare to amount of time scanning 9 months after go-live.	In-process	Initial trends show less scanning, especially with submittals by oil and gas production sites.
1.2. Reduce staff time from entering scanned documents into document management system (AQDB) by 75%	1.2.1. Measure baseline time spent entering data in by hand by staff then compare to amount of time hand entering data 9 months after go-live.	In-process	Initial trends show less scanning, especially with submittals by oil and gas production sites.

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Objective	Measurement	Met/Not Met	Measurement Outcome
2.1. Be able to query 15% of all data within submitted reports.	2.1.1. Measure current amount of queryable report data fields pre-project and then amount of queryable data fields 3 months after go-live date	Met	Reporting and queryable data is significantly more robust than in previous system.
3.1. Receive 50% of submitted documents from the regulated community (RC) electronically.	3.1.1. Measure the number of documents received via mail from the RC prior to project and then re-measure 9 months after go-live date.	In-process	Initial trends show less scanning, especially with submittals by oil and gas production sites. With COVID-19 and WFH, this adoption may be accelerated.
3.2. Accept 98% of all Quad-O/Oa reports and notifications electronically from regulated community	3.2.1. Measure the number of documents received via mail compared to electronically from the RC 9 months after go-live date.	In-process	Initial trends show less scanning, especially with submittals by oil and gas production sites.
3.3. Accept 98% of all oil well registrations electronically from regulated community	3.3.1. Measure the amount of registrations received via mail compared to electronically from the RC 9 months after go-live date.	In-process	Initial trends show less scanning, especially with submittals by oil and gas production sites. New registration system development and strong positive response from regulated community. With COVID-19 and WFH, this adoption may be accelerated.
4.1. Accept 90% of received fees through new Environmental Regulatory Software System (ERSS)	4.1.1. Be able to generate invoices and accept fee payment with electronic submittals.	Met	New oil and gas registration system has been accepting electronic payments.
	4.1.2. Measure the amount of fees paid electronically within the 1 st 9 months compared to pre-ERSS.	In-process	Applications for permits to construct have used electronic payments or mailed invoices.
5.1. Reduce AQ Open Records Request (ORR) Processing time by 25%.	5.1.1. Compare ORR requests for AQPCP prior to ERSS and 9 months after.	Met	Records readily available for public inspection. We have received positive comments from public about data availability. Historic oil and gas registrations are in the process of being digitized to be added to new system and we hope to have those made available later this year, which will result in even less processing time.

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POST-IMPLEMENTATION REPORT

What Went Wrong? or What Went Right?	Lesson Learned
Spend more time up front in testing to develop new business processes and SOPs.	Doing this in testing would make transition easier. We pushed this off until later during initial transition, which hindered the staff adoption speed.
Communications should have been reevaluated throughout the project. With new tools (teams) and change due to COVID-19 and work from home this changed the dynamic of communication and caused some issues.	Reevaluate the Communication plan as new tools came available.
Schedule more time for development of SOPs and Business Practices during testing.	With the timeframes involved with this project it was restricted, but if more time is available, more time should be used. Take it slower, but still make progress.
Share more of the workload.	I would involve more project area leads earlier in the process—especially with the SOP and business rules development. And then tap the project leads to oversee training and transition to production.
Traps and ND IT servers.	Better and earlier coordination with ND IT, though with COVID-19 resources were stretched thin on all sides.
Having Department subject matter expert with project management knowledge as a single point of contact with the vendor was beneficial.	Having skills in both areas made things run smoother, better able to prioritize issues and risks based on business needs and added in consistent communication with vendor and Department.
Having an already standard way of processing our workflows even before the new software was critical to our success. If we did not have streamlined standard processes, we would have either tried to make the software have too many exceptions to rules to try and fit our processes, which would led to bad design/implementation. Or we would have struggled to re-structure our workflows to fit new system. With our standards, most of what we do already fit the COTS, with minimal adjustments on our existing processes, and therefore easier transition by staff.	Having standard business processes before getting new system is critical.
Management/project sponsor should be <i>actively</i> engaged in the project and help manage the emotional side of change (e.g. change management). Even when staff wants a new system, there is still the fear of the unknown. To help this fear of the unknown is active testing of the system by ALL users, the only way to learn the new system is to use the system.	Use Change Management Principles to handle the personnel side of the project.

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POST-IMPLEMENTATION REPORT

How the Project Resolved Business Problems/Needs:

Project was initiated because of HB1024 directing the Department to adopt two federal rules relating to the oil and gas industry in North Dakota, 40 CFR 60, Subparts OOOO and OOOOa (Quad-O/Oa). Software was specifically developed to handle the reporting requirements of those two new oil and gas rules. New system allows for electronic submittal by industry of required reports, notifications, and submissions along with electronic recordkeeping, processing, and open records. Electronic forms have been developed for these new reports. Existing oil and gas production registration and permitting has been revamped and streamlined and now allows for electronic payment. Both streamlining and electronic payment have been VERY well received by the production segment regulated community.

All official regulatory communication with the Division of Air Quality can now be handled electronically, securely, efficiency and transparently by using this new software system. This comes at an especially good time with remote work due to COVID-19.

With the new system the Department was able to work with the regulated community to include new streamlined processes for not only reporting for Quad-O/Oa but other air regulatory requirements as well. These improvements have been well received by our regulated community and our outreach efforts on this project has improved our working relationship with the regulated community on other projects.

Benefits to the Division include less low-level data entry, scanning, and document uploads; thus, allowing staff to focus on higher level review work, saving staff hours. Transparency is also increased with a public facing module that reduces open records burden on staff. Public response to open records module has been very positive.

The Division of Air Quality has requirements to submit data to EPA. In EPA's review of NDDEQ's implementation of the Clean Air Act, they have noted an "area for state improvement" with regards to data submissions (see STATE REVIEW FRAMEWORK North Dakota, February 22, 2017). Most of these issues have been related to the old database and old methods of submitting to EPA along with changes in data submission to which the old database had trouble being modified to handle. CERIS-ND, and the sister system SLEIS, have been developed for EPA data submission and our data quality has already improved in our first rounds of monthly submissions to EPA.

External User Comments:

"I don't mind using the hard copy form but had just been making sure there wasn't a way that put it into your system easier. I prefer doing it this way [using CERIS-ND] going forward, when possible. I appreciate it. Also, since we work with numerous states, I can say your system is more intuitive and user friendly than most I've dealt with."

"I thought I stumbled onto some secret information that I wasn't supposed to." [public user using Explorer and seeing records open and available]

"I've been doing due diligence checks in North Dakota for many years, and the state has made leaps and bounds in technology." [Consultant using CERIS-ND Explorer]

Overall, we have had biased contact with people contacting us due to a question or issue, but the overall outlook from those people have been positive on the whole, with optimism for the new system once they get used to it and the bugs get worked out.

How the Project Could Solve Other Business Problems/Needs:

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This system can be expanded into other DEQ programs and could be developed as a single point of entry for the public and regulated community to use for conducting business with the DEQ. It is recommended that the DEQ consider initiatives and one-time legislative funding to migrate existing end-of-life systems to CERIS-ND over the next 5 years (note current database vendor for most DEQ systems is out of business). The estimated cost savings for Air Quality per year is \$1 million, in just paper handling and data entry staff time, with the of CERIS-ND at approximately \$124,000 annually, there are also significant cost savings to the regulated community in using CERIS-ND.