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Department IT Coordinator
Division of Sewerage and Drainage
1111 East Broad Street
Columbus, OH 43205

Subject: iPACS 2 to iPACS 5 (EN Suite, IWC) System Upgrade Proposal (Revision #3)

Dear Sonia:

City of Columbus, Department of Public Utilities utilizes iPACS 2 software to manage pretreatment compliance data to support industrial pretreatment programs mandated under the 40CFR categorical standard regulations. iPACS 2 system was written in Microsoft .NET and supports SQL Server database.

In year 2020, enfoTech released a new product called EN Suite. EN Suite is an integrated enterprise-wide information system that consists of eight (8) subsystems. EN Suite is a new product that is written in Angular, supports SQL Server database, and includes built-in features to interface with Google Map and Microsoft Power BI. The EN Suite, IWC subsystem (also known as iPACS 5) is designed for pretreatment information management.

In responding to City's inquiry, enfoTech presents this proposal to upgrade City's iPACS 2 to iPACS 5 (EN Suite, IWC).

(A) Work Scope and Cost (Pretreatment Software Upgrade)

Software	Work Scope	Cost
1. EN Suite - IWC	■ EN Suite, IWC (iPACS 5) software license	\$ 32,500
Pretreatment core	Migrate City's iPACS 2 data to the IWC database	
system license (iPACS 5)	Default system features will be provided	
2. FIS: Facility Information	 Central Facility Information Management 	Included at
System	repository	no cost
3. iPACS 5 to LIMS	 Upgrade iPACS-LIMS interface to be compatible 	\$ 10,000
Integration	with iPACS 5	
4. EN Suite – GovOnline	■ CROMERR compliant Portal to support electronic	\$ 19,500
system license	SMR reporting	
5. User Training	■ 3-Day Onsite (Columbus, Ohio)	\$ 3,000
	Total:	\$ 65,000

City of Columbus, DPU iPACS 2 to iPACS 5 (ENS-IWC) Software Upgrade Page 2 of 12

Additional details are provided in the following attachments:

- Attachment A: iPACS 5 System Overview (EN Suite-IWC COTS System)
- Attachment B: iPACS 5 and LIMS Data Exchange
- Attachment C: Project Work Plan
- Attachment D: Payment Schedule
- Attachment E: Annual System Maintenance Program

(B) Project Schedule

enfoTech estimates that the upgrade could be completed in 3 months after receiving a purchase order from the City.

This proposal is valid for 120 days from the date of submission. Thank you for the opportunity to present this proposal to the City for evaluation.

Sincerely,

Tony C. Jeng

Executive Vice President

Enclosure

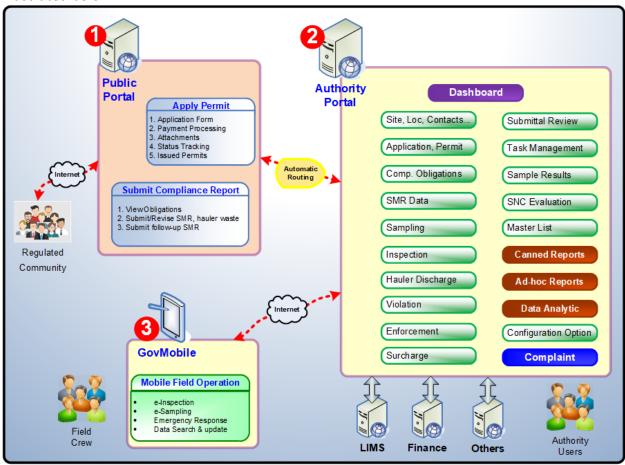
cc: File – City of Columbus DPU

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1. Attachment A: iPACS 5 System Overview (EN Suite-IWC COTS System)

iPACS 5 System, EN Suite–IWC, offers out-of-box features to support common IPP processes as illustrated below.



- 1 : Public Portal is designed for the regulated community to apply permit, submit reports, pay fees online. It integrates with the Authority Portal to facilitate work and communications between the regulated community and the authority to provide real-time alerts, improve efficiency, work collaboratively to improve environment. It's CROMERR compliant.
- 2 : Authority Portal is designed for the Authority to manage the industrial pretreatment and waste control program. It supports all common IPP processes, automate workflows, improve efficiency, turn data into information to allow the Authority to make informed decisions. It complies with open standards to easily integrate with external systems such as LIMS, DOC, ADFS, SAP, Oracle Financial, etc. The system supports iOS, Windows, Android operating environments.
- 3 : GovMbbile is designed for the Authority to perform field work electronically. It supports electronic inspection, e-sampling, emergency response, and extensive data search of the iPACS database. The system supports iOS, Windows, Android operating environments. It works on both online or offline modes.

Major Features

Facility Tracking

- Industrial users & commercial sources
- ▶ Baseline monitoring
- Water use balance
- ► Pollution control plans
- ► Billing account data
- ► Waste hauler data
- · Oil and grease tracking
- ► Complaints & inquiries

Permit Management

- · Permit application management
- · Permitting workflow management
- ► Temporary permit
- ► Facility-specific permit
- General permit
- ► Permit revision
- ► Monitoring/Reporting requirements
- ▶ Permit documents
- ► Blank SMR forms
- ► Federal, state and local limits including CWF
- Permit terms/conditions, requirement statements

Data Change History Tracking

- ► Facility name
- ► SIC/NAICS tracking
- Applicable regulations

Work Flow Management

- Rule-based workflow engine to tailor workflow for each business process
- Work scheduling
- Work task tracking with resource, due date, reminders
- ► Project management with & task tracking
- ► Task and resource allocation management
- ► Service and task cost reports

Compliance Obligations

- Auto create compliance obligations (SMR, compliance schedule, etc.)
- ► Track obligations toward compliance
- Create ad-hoc obligations based on inspection, sampling, SMR results

Inspection

- Inspection scheduling
- ► Inspection report, picture, video
- ► Field sampling data
- ► Follow-up scheduling

Sampling

- ► Sampling scheduling
- Auto generation of sample bottle and test requirements
- ► Bar-coded bottle label
- · Chain of Custody and bottle status tracking
- ► Field measurement data
- Self-monitoring report tracking
- ► Range check of sample results

SMF

- ► SMR data management (paper and e-SMR)
- ► SMR forms pre-populated based on permit
- Speedy SMR data entry using Excel, Copyand-Paste, file upload

Sample Results Management

- Range check of sample results
- LIMS EDI for bi-directional data exchange to import lab data
- Excel and Copy-and-Paste interface to import lab data to the system
- · Search sample results by site, pollutant, date

Violation & Enforcement

- Auto flag violations based on permit limits
- Auto flag late or no SMR submission
- ► Generate NOVs/letters using your templates
- ► Perform Significant Non Compliance checks
- Manage enforcement actions
- ► Escalate enforcement case
- ► Calculate Civil penalty
- ► Track compliance milestones

Calculate Averages

- Calculate averages (4-Day, 7-Day geo metric mean, Weekly, Monthly...)
- · Automatic unit conversions

Document Management

- ► Document generation
- ► Word merge
- Document template editing
- ► Picture, video, scan file support
- ▶ Document search

Surcharge & Billing

- ► Surcharge calculations
- ► Bill & Invoice generation
- ► Payment tracking
- · Support online payment or pay by check

Public Portal for e-Commerce

- Online permit application
- ► Online SMR reporting
- ► Online data validations

Reports & Data Analytic

- ► Standard canned reports
- Ad-hoc reporting
- Data mining
- ► Data export to Excel
- ► GIS spatial data analysis

Security & EDI

- ► Group & role based security
- · Encryption and cryptography
- ► Critical information auditing

Configurable & Extensible

- ► Form Designer to add custom forms
- ► Configurable workflow
- Configurable document and E-mail templates
- Integration with external systems (GIS, LIMS, mobile devices, etc.)

2. Attachment B: iPACS 5 and LIMS Data Exchange

Name	Data import/export between the iPACS 5 and the City's existing LIMS system		
Brief	iPACS employs exchange tables to communicate with an external LIMS system.		
Description			
Actors	iPACS User, iPACS, LIMS system		
Preconditions	LIMS Integration		
(Inputs)	Sample tasks must exist in the iPACS System		
	Task templates and analysis groups must exist in iPACS.		
	Relationship between iPACS and LIMS substances and units established		
	The LIMS system must allow data to be imported into it from iPACS.		
Basic Flow of	LIMS Integration		
Events	After samples are taken and marked as such in iPACS 5, iPACS system will pushes sample data and testing requirements to the iPACS-LIMS exchange tables.		
	2. LIMS will retrieve the sample data and testing requirements from the iPACS-LIMS exchange tables, and load them to LIMS		
	3. After lab testing is completed, LIMS will send sample result data to iPACS-LIMS exchange tables.		
	4. iPACS will retrieve the sample result data from the iPACS-LIMS exchange tables, and load them to iPACS 5		
Output	LIMS Integration		
	■ Data will be pulled into Sampling Results in the Monitoring module in iPACS		
Alternative	N/A		
Flows			
Exceptions	N/A		
Assumptions	N/A		

3. Attachment C: Project Work Plan

The implementation is a full-service plan that shall include project facilitation, software configuration, training, and technical support. Due to pandemic, enfoTech proposes to conduct meetings via Zoom and perform most work at our NJ offices. Sufficient meetings have been budgeted for system walk-throughs. Training will be provided onsite at DPU's office in Columbus, Ohio.

3.1 Stage 1: Project Start-up, Planning and Management

Establish enfoTech's internal environments and deliver EN Suite system (iPACS & GovOnline) at project onset, develop a Project Schedule, and conduct a project kick-off meeting.

(1) Project Kickoff

Upon receiving a notice-to-go, enfoTech proposes to hold a 2-hr project kickoff meeting via Zoom video conference. The Workshop objectives shall include the following discussion:

- Project Goal & Expected Results
- Project Team Website: enfoTech will present a Project Team Web Site for tracking project deliverables and communications
- Project Schedule: enfoTech will present a draft project schedule with milestones, and dates

(2) Project Management Processes

- 1. <u>Single Point of Contact</u>: A single Point-of-Contact will be established to work with the DPU/IT to facilitate communication between the DPU/IT project manager and various enfoTech resources.
- 2. <u>Bi-weekly Conference Calls:</u> enfoTech will host bi-weekly project calls with DPU/IT, establish call logistics, record meeting minutes, follow up all action items from the calls.
- 3. <u>Project Monitoring & Progress Reports</u>: enfoTech Project Manager will (1) monitor project progress, adjust the schedule accordingly, and keep the DPU/IT PM up to date; (2) implement measures to mitigate risks, if needed; (3) manage cost & changes
- 4. <u>Cost Management</u>: A spending tracking will be used to monitor spending against the deliverables. DPU/IT's Project Manager must approve any potential out-of-scope items. enfoTech will submit monthly reports & invoices to the DPU/IT for review and approval.
- 5. <u>Scope Management</u>: Our project goal is to complete the Project within budget, on time, and meet/exceed project requirements. Any additional services (or cost items) will be communicated to the DPU/IT's Project Manager prior to engagement of such services.

(3) Project Management Tools

- 1. **Project Team Web Site (PTWS):** enfoTech will tailor SharePoint to use as a project repository.
- 2. **Web Conferencing Tool:** enfoTech currently uses Zoom.

(4) Project Roles and Responsibilities

enfoTech Responsibilities

- Provide a single point of contact for providing overall project facilitation services
- Create and host a PTWS to serve as a central repository for documents, issues, project updates.
- Develop a project plan, monitor progress, complete all deliverables, and update the schedule.
- Host project status conference calls and follow up on action items from project calls.
- Provide all deliverables, walk-through deliverables with DPU/IT, address DPU/IT's comments

• Submit monthly project reports to the DPU/IT's project manager. The report shall include accomplishments, upcoming tasks, schedule updates, issues, and proposed issue resolutions.

DPU/IT Responsibilities

- Provide a single point of contact for (1) project-related communications, (2) coordinate inputs from subject matter experts, compile/deliver consolidated comments on deliverables, and (3) provide overall direction during the execution of the project.
- Provide subject matter experts (SME) and provide overall project requirements.
- Review deliverables and provide consolidated written comments on all of draft deliverables within 10 business days for documents that are less than 100 pages, and within 15 business days of receipt for documents that are more than 100 pages. Feedback on System review should be completed within 15 days of delivery or time mutually agreed by both parties.

3.2 Stage 2: Data Migration, System Configurations, UAT

3.2.1 Technical Approach

(A) Data Migrations, System Configurations and Improvements

enfoTech proposes to adopt the <u>Agile</u> development model to complete data migration and system configurations and provide incremental system improvements through iterative system releases and reviews. This Stage will include three (3) iterations as outlined below.

Itr.	Contents	Major System Functions & Objectives
1	Release #1 (QA) Configure iPACS based on SCD DPU/IT data migration run #1	 Core functions to support all IPP processes CROMERR functions & e-SMR capability Verify data migration results
2	Release #2 (UAT) Enhance iPACS based on DPU/IT's comments DPU/IT data migration run #2	 Verify IPP business processes Verify data migration results Approve iPACS for production use
3	Release #3 (PROD) Pre-production release for final review Final DPU/IT data migration Provide UAT user training User Guide for User Training	 Address and close out DPU/IT comments Support DPU/IT final system review Final system adjustments if necessary DPU/IT approves System for production use Provide support after system go-live

Each system release will be business process oriented. System functions delivered in previous iterations will be refined based on DPU/IT's comments to ensure end-to-end IPP process functions.

- (B) Key Configuration Areas: (1) IPP Business processes end-to-end; (2) SMR submittal process (3) Permit Documents: permit templates and final permit document
- (C) Conduct System Walkthrough and Support DPU/IT on System Reviews: enfoTech will provide walk-through with DPU/IT for each system release and assist DPU/IT to perform review.

(D) User Acceptance Testing (UAT)

After DPU/IT approves the System for UAT, enfoTech will deliver a UAT version for DPU/IT to conduct user acceptance testing and pilot with IUs for e-SMR. Our support will include:

4. Solution:

- Populate DPU/IT staff accounts with access privilege based on user's business group(s) & role
- Example public user accounts and test email addresses to verify notification functions
- 5. **Test Checklist (Excel)**: will be process-driven test check list Excel. Test checklist will include:
 - Business Processes, Test Scenarios, Acceptance criteria
 - Procedures to report issues, track resolution, re-verification, and issue close-out

6. Support DPU/IT to Complete the User Acceptance Testing

- Provide a hotline to respond to issues, answer questions, ad-hoc Zoom sessions to DPU/IT
- Monitor issues at the PTWS, resolve issues and deliver system patches to resolve issues
- Work with the DPU/IT PM to determine the readiness and timing for system training.
- All major UAT comments shall be resolved before the System is used for end user training.

3.2.2 Stage 2 Deliverables

Deliverable Deliverable	enfoTech Responsibility	DPU/IT Responsibility
2.1 System Release #1 (QA)	 Migrate data to iPACS 5 (run #1) Configure iPACS 5 Deliver iPACS 5 license and database Provide Release #1 walk through with DPU/IT 	 Provide iPACS 2 database Prepare servers for system installation Attend Release #1 walk through Provide system review comments
2.2 System Release #2 (UAT)	 Migrate data to iPACS 5 (run #2) Address DPU/IT review comments and enhance iPACS 5 configurations Provide Release #2 walk through with DPU/IT 	 Attend Release #2 walk through Provide system review comments
2.3 Test Checklist	 Provide a system test checklist 	
2.4 Support DPU/IT to complete UAT	 Address DPU/IT review comments Provide Release #2 walk through with DPU/IT 	 Perform UAT and provide system comments

3.3 Stage 3: Training and Documentation

3.3.1 Technical Approach

enfoTech will provide trainings to the DPU/IT for effective utilization of the new system.

- (A) Training Requirements: enfoTech will meet with DPU/IT via Zoom to discuss training requirements and understand DPU/IT's expectation and expected results. enfoTech will develop a training agenda to meet DPU/IT's training requirements.
- **(B) Training Courses:** (1) User training will be tailored for end users, the Admin training will be provided to the system administrator.

(C) Training Delivery: enfoTech will deliver training to DPU/IT at DPU's offices. Electronic training materials will be provided to DPU/IT to reuse training materials, make changes, or add new training topics.

3.3.2 Documentation

The **User Guide** and **Admin Guide** will be delivered. All documentations will be delivered in electronic version.

3.3.3 Stage 3 Deliverables

Deliverable	enfoTech Responsibility	DPU/IT Responsibility
3.1 Training Agenda	 Provide a draft training agenda 	Comment training
	 Finalize a training agenda 	agenda
3.2 User Training	 Deliver User training 	Attend training
(2.5 days)		
3.3 Admin Training	 Deliver Admin training 	Attend training
(0.5 Day)		
3.4 User Guide and	 Deliver User Guide and Admin Guide 	
Admin Guide		

3.4 Stage 4: Go-Live

3.4.1 Technical Approach

A good Go-live planning will be essential to achieve a smooth system transition and obtain positive user experience. The Go-Live (Transition) Plan shall consider a few factors including:

- DPU/IT's Acceptance of the System functions for go-live
- Successful execution of the final data migration
- DPU/IT's successful verification of migrated data and pre-production release
- DPU/IT outreach to educate the regulated community to participate electronic submittal
- enfoTech resources during the system go-live to support roll-out

At least 5 days will be reserved for the DPU/IT team members to browse through the final system before opening the System to end-users for production use.

3.4.2 Stage 5 Deliverables

Deliverable	enfoTech Responsibility	DPU/IT Responsibility
4.1 Go-Live	Provide a draft go-live plan	 Comment go-live plan
(transition) Plan	Finalize the go-live plan	
4.2 System Go-Live	Deliver Production ready version	 Prepare servers for
	Support DOU/IT on system go-live	system installation

3.5 Project Schedule (draft)

enfoTech estimates the migration could be completed in three months. We will work with DPU/IT to refine the schedule to accommodate DPU/IT availability.

3.6 System Maintenance and Support

After System goes live, enfoTech will provide support under the standard system maintenance agreement, renewable each year.

4. Attachment D: Payment Schedule

enfoTech proposes a deliverable-based payment schedule as illustrated in a Table below.

4.1 System Upgrade Costs

Deliverable	Type	Payment
Stage 2: Data Migration, System Configuration, UAT		
2.1 System Release #1 (QA), iPACS 5	Software	\$ 49,600
2.2 System Release #2 (UAT)	Software	\$ 12,400
2.3 Test Checklist	Document	N/C
2.4 Support DPU/IT to complete UAT	Services	N/C
Stage 3: Training & Documentation		
3.1 Training Agenda	Document	N/C
3.2 User Training (2.5 days)	Services	\$ 2,500
3.3 Admin Training (0.5 Day)	Services	\$ 500
3.4 User Guide and Admin Guide	Document	N/C
Stage 4: Go-live		
4.1 Go-Live (transition) Plan	Document	N/C
4.2 System Go-Live	Software	N/C
Total System Upgrade Cost:		\$ 65,000

4.2 Payment Schedule

- enfoTech proposes a deliverable-based payment schedule for cost tied to each deliverable listed in Section 4.1 above
- Software License upgrade fee will be payable upon the new software is uploaded to a SFTP site for DPU/IT to download.
- Annual system maintenance fee will be payable upon the software is in production use at the City or 90 days after delivery of the software license whichever is sooner.
- enfoTech will submit invoices to the City for deliverables completed under the purchase order.
- enfoTech payment terms are 30 days net from the invoice date.

5. Attachment E: Annual System Maintenance Program

After System goes live, enfoTech will provide support under the annual system support services agreement. An emergency patch will be provided for any production show-stopping issues. enfoTech standard services include the following.

(A) Technical Support Procedure

(1) Issue Tracking Website (Project Team website site):

enfoTech will expand the project team web site to manage issues reported after the Go-live. The project team web site will provide the following features:

- DPU/IT shall report issues and service requests to the PTWS, and could monitor their issues till closure. The Website will assign a unique Issue ID for each issue
- enfoTech staff will automatically receive email alert when a new issue is reported at PTWS. If the issue is a bug, enfoTech will resolve the issue in accordance with the response time. If the issue is data related, enfoTech will develop a database script to fix the data. If the issue is training related, provide proper operation instructions to the user. If the issue is an addition/change to the approved requirements, it will be handled through the change request procedure.

(2) Support Line

- Phone Line: a support line staffed for DPU/IT to report critical issue
- Regular Support: technical persons to provide services to the DPU/IT via phone, emails, adhoc Zoom sessions, and documentations.

(B) System Updates & Release

Services included in the Agreement shall include:

<u>System updates:</u> enfoTech will continue maintaining the Solution delivered to the DPU/IT and provide new system updates to the DPU/IT. In general, we will have two types of updates.

- **a. Regular updates**: are on a 6-month release frequency. enfoTech maintains a master list of the enhancement items and prioritizes them based on the critical nature and popularity of the user requests. The regular updates will include all of the issues approved for the release.
- **b. Emergency Patches**: provided on an "as needed" basis; enfoTech may issue certain emergency patches to address critical issues reported by the client.

System updates will not include enhancements. Enhancements shall be handled through a Change request procedure with additional fee.