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September 25, 2013

Mr. Clay Tappan, P.E., Chair
Research Review and Advisory Committee
Florida Department of Health
c/o CDM Smith
1715 N. West Shore Blvd., Suite 875
Tampa, FL 33607

RE: Florida Onsite Sewage Nitrogen Reduction Strategies (FOSNRS) Project Schedule

Dear Clay:

I am writing to you in your role as Chair of the FDOH Research Review and Advisory Committee, because the RRAC provides oversight of the Florida Onsite Sewage Nitrogen Reduction Strategies (FOSNRS) Project. As you know, the FOSNRS Project was a legislatively mandated study to develop strategies for nitrogen reduction from onsite sewage treatment and disposal systems (OSTDS) in Florida. The project was budgeted at $5 million and was anticipated to take approximately 5 years to complete. Funding for the project was to be appropriated by the Florida Legislature each session, so the project would have cash and budget to operate continuously through each fiscal year. This has not been the case, and several years of non-funding or inconsistent distribution of monies for the project have resulted in the project falling behind the originally anticipated schedule. In addition, project administration, deliverable requirements, permitting, and construction difficulties have further delayed the project schedule. We have repeatedly expressed this concern and our desire for a no-cost schedule extension to the Department, but have been informed that no such extension would be given. For that reason, we wish to express in writing the project team's concern for completion of the project scope by the current end date of January 2015. In short, we believe that the scope of the project, as initially envisioned by the Legislature cannot be completed unless the time frame is extended. Therefore, this letter is to formally request an amendment and no-cost extension for the FOSNRS project by one-year to enable us to successfully complete the project.

JUSTIFICATION

We believe that there are three key issues that have impeded our progress on this project: 1) inconsistent "stop and start" funding and authorization was not as initially anticipated and did not

allow proper planning and completion of work activities in a continuous fashion from project start-up, 2) the project deliverable format established in a scope of work that was required prior to development of the research plan, and 3) inability of the team to direct the research for the best results of the project, based on 1) and 2) above. The interrelated affects of these combined issues have resulted in significant effort and cost expended by the project team on budgeting, documenting, and verifying work conducted rather than increasing the impact of the project findings.

1) **Incremental Funding:** The key and overriding problem is that we have never had the flexibility to conduct work on the project in a continuous fashion based on the budget established at the beginning of the project. Instead, we have been limited based upon cash disbursements from year to year, and task authorizations only for those amounts. As highlighted in our letter of October 2011, the incremental funding and delayed budget authorization has resulted in challenges for planning and scheduling work activities. Without an authorized and continuous revenue stream in place, necessary planning (especially critical for field tasks) cannot be initiated and limits the ability of the project team to take advantage of opportunities to leverage related task efforts as they arise. This situation has worsened since that letter was written.

   As mentioned, the project was anticipated to take approximately 5 years, and this estimate was based on beginning all task areas at project start-up. The FOSNRS project began in February 2009 with an initial funding allocation of $900,000 from the legislature for fiscal year 2008-2009. After this initial allocation, cash appropriations from the legislature have been intermittent, as illustrated in Table 1.

   This uneven funding stream has directly resulted in a considerably longer project schedule than first anticipated, since we are authorized to proceed on project tasks only as cash is available to FDOH. As the table shows, after 3.4 years of the project schedule, only about half of the project budget was available and tasks authorized for starting work. Therefore, many tasks and sub-tasks in the project did not even start until August 2012 (FY 12/13 funding authorization), just over 1 year ago and nearly 4 years into the project! In fact, we are still installing several passive nitrogen reduction systems that will require monitoring over the next year. Additionally, complete cash appropriations for the project still may not be available due to the loss of approximately $350,000 of carry-over funds from FY 2012/2013. Therefore, the project team believes it is simply not feasible to attempt to shoe-horn the remaining project tasks into the approximately 1.25 years left in the project schedule.

2) **Deliverables:** As a requirement for establishment of the contract between H&S and FDOH, a fixed price deliverable schedule was necessary. The budget line items and number of individual deliverables was therefore developed to provide cash flow to conduct the work

Table 1. Summary of FOSNRS Project Cash Appropriations

Fiscal Year	Cash Appropriations	Cumulative % of Project Authorized to Begin	Comments
2008 - 2009 Project Start-up	$ 900,000	18%	Phase I Funding: Project start February 2009
2009 - 2010	$ 0	18%	No Funding: Some project areas put on hold, primarily Task Areas B and D
2010 - 2011	$2,000,000	58%	Phase II Funding: Distributed primarily to Tasks Areas A, B, and C
2011 - 2012	$ 0	58%	No Funding: No tasks fully funded at this point, Tasks B and D especially limited in funding
2012 - 2013	$1,500,000	88%	Phase III.a Funding: Significant portion of Tasks A and C funded, B and D less funded.
2013 - 2014	$ 700,000	?	Phase III.b Funding: This funding would have completed budget requirements, but ~$350K was lost from FY 2012-2013 carry over. There is still not complete funding for the project.
TOTAL	**$5,100,000[1]**		

[1] This total includes $100,000 for FDOH administration

since funds could not be allocated to the team prior to submittal of deliverables. However, the deliverables in many cases have been interpreted as final work products with requirements for addressing technical comments and analysis of data leading to deliverable revisions and other changes. The primary impact of this approach to the schedule has been dealing with 100 budget line items consisting of over 300 individual deliverables. This has led to considerable and unanticipated time spent managing and coordinating deliverable production and the resulting contract administration. In addition, since the deliverable scope was defined prior to developing the research plan (detailed work plans, QAPPs, subcontractor scopes of work, etc.) some of the initially anticipated tasks and associated deliverables became no longer warranted, which has resulted in numerous scope and budget amendments. In addition to taking time and resources, these types of expenditures do not maximize the research outcome and in fact are detrimental to research progress.

3) **Research direction:** The team is further constrained by the deliverable review and payment process. Currently as deliverables are submitted for payment of work accomplished, resulting technical comments and review have impeded completion and thus payment of the deliverable as task objectives and goals are reinterpreted. In some cases deliverables or portions thereof may no longer be in the best interest of the project. However, funding is tied to the deliverables which limits the teams' ability to make decisions on how the work could be better focused. Ultimately this impedes progress and negatively affects the schedule as work cannot move forward as necessary.

Research by its nature requires redirecting the path as new knowledge is gained. Advances in technology result from being able to react to new findings that allow improvement of current practices. Unfortunately, the uncertain funding and deliverable based process under which we are currently operating does not allow changing scope or expenditure reallocation without major contract amendment. No other research I am aware of is efficiently or effectively managed in this fashion. For example, the Water Environment Research Foundation (WERF), a major contributor to wastewater treatment research, provides funding for such research under specific goals and objectives, but leaves the details of achieving these goals to project teams selected for their expertise in the research area. As a result, municipal wastewater research has brought great advancements in wastewater treatment. The industry has moved from discharge of minimally treated wastewater to approaches such as nutrient recovery, UV disinfection, and membrane bioreactors and other processes capable of meeting any defined treatment performance, using the scientific method of research.

CONCLUSION

Results from the project to date are extremely promising and could significantly contribute to the resolution of nitrogen impairment from OSTDS in Florida, and we certainly recommend completion of this project to reap the rewards of these efforts. However, we simply cannot continue to spend the ongoing level of effort and time on management, administration, and partial task deliverables that has been expended previously without additional adverse effects to both schedule and budget. To provide the greatest project impact to management of nitrogen from OSTDS in Florida, we formally request an amendment that addresses these issues and extends the project schedule from January 2015 to the end of 2015.

We would ask that you present this request to the RRAC at your earliest convenience. This requested amendment and no-cost schedule extension will allow us to complete this very important project in a cost-effective manner and provide effective strategies for nitrogen reduction from OSTDS in Florida, and elsewhere.

Sincerely yours,
Hazen and Sawyer, P.C.

Damann L. Anderson
Vice President

Cc: P. Anderson, G. Briggs, E. Ursin, E. Roeder, FDOH