



COMMISSION FINANCE COMMITTEE
MEETING MINUTES
October 20, 2016

PRESENT: Commissioners Elofson, Lakdawala, Rodriguez and Lynch.

No. Topic

1. **INTERNAL AUDIT REPORTS**

Commissioners Elofson, Rodriguez, Lynch and Lakdawala along with HRSD and SC&H staff, reviewed the [Internal Audit Report](#) presented by SC&H Group.

Biosolids Audit

After reviewing processes in place and evaluating the current control environment, SC&H concluded that there are several process improvement opportunities that exist to increase overall effectiveness and efficiency. The majority of identified issues will be remediated with formalized, consistent procedures. HRSD management provided a detailed plan to address the improvement opportunities and SC&H will perform a progress check on the status of that plan in about a year.

SC&H expressed appreciation for the assistance and cooperation of the management and staff of HRSD's Water Quality Department during the performance of the Biosolids review.

Benefits Audit

- Reviewed the Employee Health Insurance Program, Wellness Program, and Retiree Health Program.
- The draft report is anticipated to be completed the week of October 24th.

Upcoming Audits

- Inventory process audit – October 25th kick-off meeting.
- Future audits include:
 - Procurement,
 - Customer Care Billing
 - Follow-up audits to review implementation of recommendations for previously completed audits.



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2. **ANNUAL AUDIT REPORT**

Independent Auditor presentation by KPMG, Steve Whetstine, Partner, and Daniel Coccoli, Manager

- The Comprehensive Annual Financial Report (CAFR) and two other areas were reviewed:
 - CAFR will receive an unmodified (“clean”) opinion. There were no instances of noncompliance noted, nor any significant deficiencies or material weaknesses.
 - KPMG has issued a report of no findings, a “clean report”, on the completeness and accuracy of employee census data reported to the Virginia Retirement System as of June 30, 2016.
 - KPMG will issue a report of no findings, a “clean report”, on the sufficiency of HRSD’s ability to provide liability coverage for biosolids contamination. This report provides assurance to the state that HRSD has sufficient financial reserves and does not need to obtain insurance to cover biosolids risks.
- KPMG noted that the inventory counts were good this year with all items selected from inventory lists agreeing to the number counted in the field, and the selections made in the field agreeing to the lists. They also noted that pricing documents for some of the inventory items did not agree to the amount in the inventory records, and the Finance Committee discussed having KPMG coordinate efforts with SC&H during SC&H’s upcoming inventory audit.
- There were two uncorrected audit misstatements discovered during statistical sampling procedures and one that recurs due to HRSD’s election to not capitalize bond interest from some prior years. The net effect of the differences does not have a material impact on the financial statements or the audit opinion.

3. **FY- 2016 ITEMS OF INTEREST**

- Fiscal Year 2016 - Items of Interest:
 - Bond Sale
 - Financial Policy Update
 - Plan of Finance (Capital Improvement Financing)
 - Financial policy update

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4. **COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) REVIEW**

- Fiscal Year 2016 CAFR
 - Revenues & Water Consumption
 - Net Pension Liability
 - OPEB
 - Financial Statement Overview
 - Key Financial Policy Indicators

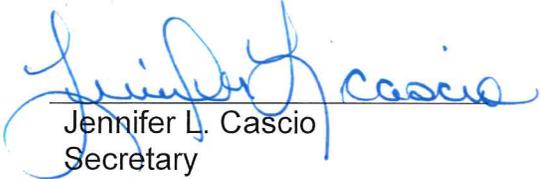
Attachments: [Internal Audit Report](#)

Public Comment: None

Next Committee Meeting Date: TBD

Meeting Adjourned: 12:15 p.m.

SUBMITTED:


Jennifer L. Cascio
Secretary

APPROVED:


Stephen Rodriguez
Committee Chair



Expertise that Works

Biosolids Recycling Program Review

Hampton Roads Sanitation District

October 5, 2016

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I. Executive Summary

Background

SC&H conducted an audit of the management procedures for the Hampton Roads Sanitation District (HRSD)'s Biosolids Recycling Program.

HRSD processes and treats wastewater at 13 treatment plants around the Hampton Roads region. The treatment process results in the production of various solid materials which can be further processed and stabilized into a recyclable product referred to as biosolids. HRSD manages these biosolids in a variety of ways, including landfill disposal, incineration, and recycling. Presently, HRSD has three treatment plants that are equipped for biosolids recycling, including the Atlantic, York River, and James River plants. Occasionally biosolids from the Nansemond plant are recycled as well.

HRSD recycles biosolids using two methods—distribution of partially processed material and direct land application of Class B biosolids. The James River and York River plants provide stabilized biosolids to a third party contractor, herein referred to as Contractor A, who further refines the material at an independent, off-site location. The resulting product is commercially marketed as a compost product. Biosolids from the Atlantic plant are further processed by HRSD to be directly applied to farmland by another third party contractor, herein referred to as Contractor B.

The Biosolids Recycling Program is contained within the Water Quality Department and is administered by the Recycling Manager and an administrative staff member, as well as operations staff at the plants. These responsibilities include contractor management and invoice processing. Biosolids that are not land applied by HRSD are managed differently from those that are. Non-land applied solids are retrieved from the treatment plants by Contractor A, who weighs the total tonnage at an off-site location and bills HRSD at an agreed upon rate based on the weight transported. On a monthly basis HRSD provides reports to the contractor, including the Notice and Necessary Information (NANI) and Monthly Plant Operating Reports (MPOR), which detail the treatment and content of the biosolids provided.

Biosolids produced for land application at the Atlantic plant require additional levels of management and regulatory consideration. These biosolids are tested to ensure they have been sufficiently stabilized to produce a Class B biosolids product and meet the mineral and nutrient requirements established by the Virginia Department of Environmental Quality (DEQ). Appropriate land application requires internal calculation of distribution rates and planning by HRSD, as well as a detailed Nutrient Management Plan (NMP) developed by Contractor B for each tract of land. Field oversight responsibilities for land application are jointly shared by the contractor and HRSD. Annual land application site selection is the responsibility of the contractor, who considers geographic location, farm availability, and previous recipients in this decision. Farmers/ landowners receive biosolids free of charge and HRSD pays the contractor at an agreed upon rate for land application and NMP creation.

HRSD must create and distribute several external reports as required by state and federal regulation. These include the Monthly Land Application Activity Reports, an Annual Financial Assurance letter, and an Annual Biosolids Land Application Report provided to the Virginia DEQ. Additionally, an annual report is provided to the federal Environmental Protection Agency (EPA), detailing biosolids activity.

Objectives

The following audit objectives were established by SC&H based upon the understanding gained during the audit's planning procedures.

- A. Identify and document key management procedures, process risks, and controls within the Biosolids Recycling Program.
- B. Assess the effectiveness and efficiency of the current Biosolids Recycling Program procedures, including contractor management and internal administration.
- C. Evaluate the process of recipient farm selection and consider the appropriateness of current distribution practices.
- D. Ensure that the Biosolids Recycling Program complies with HRSD processes and procedures, as well as applicable laws and regulations.

Scope

The audit process was initiated in April 2016 and completed in June 2016. The procedures performed focused on the policies and procedures in place at the time of this review.

Methodology and Approach

In order to achieve the objectives of this review, SC&H performed the following procedures.

Process Walkthrough and Flowchart Creation

SC&H began the audit by conducting several meetings with members of the HRSD Water Quality Department to identify and walk through the core sub-processes of the Biosolids Recycling Program. These discussions focused on process flow, required approval, inputs/outputs, and other control points. Additionally, relevant policy and procedure documentation was obtained and reviewed. Based on these discussions and review of the procedural documentation, SC&H created summarized process flowcharts. The processes identified and documented include:

- Daily Biosolids Monitoring
- Monthly Sampling of Non-Land Applied Biosolids
- Monthly Reporting of Non-Land Applied Biosolids
- Biosolids Storage
- Sampling of Biosolids for Land Application
- Pre-Land Application Procedures
- Land Application Procedures

- Contractor Invoicing

Creation of Project Plan

Based on the understanding of the processes, risks, and related controls, SC&H developed an audit program to achieve the objectives described above. This program included detailed steps to address each objective with the goal of identifying opportunities for improvement, where necessary.

Execution of Project Plan

SC&H executed the audit plan by completing the following tasks:

- Inspected pertinent process documentation and reports
- Tested invoices and associated reports for compliance with applicable internal controls, including:
 - 12 contractor invoices from the York and James River plants
 - 12 NANI and MPOR Reports
 - Five Atlantic plant contractor invoices, covering a full year of activity
- Analyzed land application recipient selection for the previous three years
- Reviewed regulatory compliance over reporting and management of biosolids, including monthly and annual reports, as well as a nutrient management plan

Summary of Work

After reviewing processes in place and evaluating the current control environment, SC&H concludes that there are several process improvement opportunities that exist to increase overall effectiveness and efficiency. The majority of identified issues can be remediated with formalized, consistent procedures.

The following section provides detailed observations and recommendations regarding five separate topics.

We appreciate the assistance and cooperation of the management and staff of HRSD's Water Quality Department during the performance of the Biosolids review. Please contact us if you have any questions or comments regarding any of the information contained in the audit report.

SC&H Group



Joseph D. Freiburger, CIA, CISA, CPA
Director

II. Detailed Observations and Recommendations

Observation 1

HRSD does not maintain formalized policy and procedural documentation pertaining to the internal management of the Biosolids Recycling Program.

Observation Detail

Policy and procedure documentation has not been formally established or documented for the Biosolids Recycling Program. This includes standard operating procedure documents with regard to daily contractor management, report creation and communication, and general administrative procedures, such as document retention practices. Additionally, no training or succession documentation is presently available. Current policy and procedural documentation in place is limited to contractor requirements with regard to biosolids retrieval and land application, as required by regulation.

Risk

Non-standardized processes can result in an overall reduction in efficiency, as functional steps may be improvised or recreated with each performance. Additionally, insufficient policy and standard operating procedural documentation creates a risk of interruption in business continuity, should the current biosolids recycling staff leave their positions. This can result in reduced efficiency in establishing a new team and can impact HRSD’s ability to meet specific regulatory requirements.

Recommendation 1.1

HRSD should document the standard operating procedures for essential internal management functions within the biosolids recycling function. The flowcharts created in conjunction with this audit may serve as an initial starting point in documenting these procedures. Operating procedures should include detailed descriptions of deadlines, regulatory requirements, and considerations for reviewing key documents such as invoices and monthly reports.

Management’s Action Plan and Implementation Date

The Recycling Manager will develop the required SOPs under the following timelines:

SOP Topic Areas	SOP(s)	SOP Completion Deadline	Training Implementation Deadline
Land application	Biosolids Sampling	December 31, 2016	May 31, 2017
	Site Map Creation	December 31, 2016	May 31, 2017
	Pre-land Application	December 31, 2016	May 31, 2017
	Land Application	December 31, 2016	May 31, 2017
	Post-land Application	December 31, 2016	May 31, 2017

Documentation/ Reporting	NANI preparation for land applied biosolids and for non-land applied biosolids	September 30, 2016	October 31, 2016
	DEQ Reports	December 31, 2016	January 31, 2017
	EPA Reports	December 31, 2016	January 31, 2017
	Waste Management Reports	July 31, 2017	August 31, 2017
	Financial Assurance	December 31, 2016	January 31, 2017
Invoicing	Land application contractor(s)	May 31, 2017	June 30, 2017
	Compost contractor	July 31, 2017	August 31, 2017
Miscellaneous	Waste Manifest Forms	July 31, 2017	August 31, 2017
	Regulatory Review	July 31, 2017	August 31, 2017
	BioPro Manual (draft)	March 31, 2017	May 31, 2017
	BioPro Manual (final)	March 31, 2018	April 30, 2018

The highest priority will be on completing all SOPs related to land application prior to the beginning of the 2017 season (mid-January through end-May, weather permitting). Training of the back-up(s) will occur during the land application season. Following the land application season, the remainder of the SOPs and training needs will be addressed. Quality Assurance (QA) controls (e.g, Recycling Manager review of contractor and Operations documentation, QA Manager audits of SOPs) will be incorporated.

Recommendation 1.2

HRSD should begin to train another individual, or individuals, to act as a back-up for the duties currently performed by the Recycling Manager. Adding an additional resource with the knowledge to successfully oversee the day-to-day responsibilities associated with administering the Biosolids Recycling Program will aid in mitigating the risk of interrupted business continuity. Additionally, should the Recycling Manager choose to take several days leave, this person would be available to continue the performance of daily responsibilities.

Management’s Action Plan and Implementation Date

The Recycling Manager has completed a Critical Task Matrix identifying all activities/responsibilities for which she is solely responsible. The plan for SOP development and training of a back-up for those critical tasks of regulatory, financial and legal significance is outlined in the Management Action Plan for Recommendation 1.1.

Implementation Date: Back-up training dates for the various SOPs are identified in the Management Action associated with Recommendation 1.1.

Observation 2

Contractor invoice review procedures are not sufficient to identify billing discrepancies.

Observation Detail

HRSD uses the services of two third-party contractors, Contractor A and Contractor B, to recycle biosolids on an on-going basis. HRSD receives invoices from Contractor A on a semi-monthly basis and invoices from Contractor B once every quarter with a final true-up invoice once land application is completed for the year. Upon receipt of a contractor invoice, the Recycling Manager reviews all supporting documentation to ensure that the invoice is properly supported and HRSD is being charged in accordance with the terms of the contract. Once they have completed their review, the Recycling Manager signs and dates the invoice. The invoice is entered into the HRSD ERP system by the Water Quality administrative assistant. The Recycling Manager accesses the ERP system and evidences their approval of the invoice. Once the invoices are approved they are sent to the Accounts Payable Department for payment processing. Invoices over \$200k are sent to Procurement for verification against the contract and approval then sent on to Accounts Payable for payment to be remitted to the contractor.

SC&H examined 12 invoices submitted to HRSD by Contractor A. Based upon the review we noted:

- Of the 12 invoices reviewed, two were not signed by the Recycling Manager. The invoices were entered into the ERP system and evidence of the Recycling Manager's approval of the invoice, within the system, was noted. However, HRSD standard procedures require the signature of the Recycling Manager on the invoice, as well as approval within the system.
- HRSD is not able to independently verify the accuracy of the truck weights documented on the bills of lading provided as invoice support. Trucks that transport material to Contractor A are weighed at Contractor A's facility. Contractor A maintains certified scales, but HRSD does not maintain a copy of the scale certification.
- Plant managers do not maintain weight documentation, nor do they formally document the number of trucks that transport material on a daily basis. Personnel at the plants do not review the invoices of Contractor A to confirm the accuracy of the services received.

SC&H also examined five invoices submitted by Contractor B – four consecutive quarterly invoices and the final true-up submitted at the completion of land application. Based on this review we noted:

- Of the five invoices reviewed, one was not signed by the Recycling Manager. The invoice was entered into the ERP system and evidence of the Recycling Manager's approval of the invoice, within the system, was noted.
- Supporting documentation related to the final true-up invoice, submitted by Contractor B, did not agree to the invoice reviewed and approved by the Recycling Manager. The final true-up invoice includes detailed information pertaining to the services rendered by

Contractor B throughout the year. Additionally, the invoice includes a charge, per acre, for each farm for which an NMP was prepared.

- Several invoice line items, pertaining to the tons of material spread and the acres associated with farms for which an NMP was created, did not agree to the support that was provided to HRSD. For all farms where material was spread, there is a charge, per ton. Per discussion with the Recycling Manager, the newly adopted land application management system was calculating truck weights incorrectly and the amounts on the invoice were accurate in agreement to the Atlantic Plant scales data. Additional support was subsequently provided, which included handwritten scale weights. SC&H reviewed the plant scale information and noted the information appeared to agree to the invoice.

Risk

Insufficient review of invoices creates the risk of HRSD overpaying for services rendered, or paying for services not performed. Systematic calculation errors reduce the quality of biosolids application data. This can result in inaccurate records and invoicing.

Recommendation 2.1

HRSD should create formalized, detailed procedures pertaining to the review of invoices received from contractors. Formalized procedures, such as specific steps pertaining to the comparison of supporting documentation to invoice line items, will streamline the process, ensure that a thorough review of the information on the invoice is conducted, and reduce the risk that HRSD is billed incorrectly for services rendered by the contractor. Invoice review can be included within the standard operating procedures documented by HRSD for essential internal management functions within the biosolids recycling function.

Management's Action Plan and Implementation Date

SOP development will include procedures for invoice review and associated QA protocols – see Management Action Plan associated with Recommendation 1.1. Procedures are in place to address the need for producing manual weight tickets when the scales at Atlantic Plant are not generating/and storing the necessary information. These procedures will be documented in the land application SOP.

Implementation Date: The Invoicing SOPs will be generated in accordance with the schedule outlined in the Management Action Plan associated with Recommendation 1.1.

Recommendation 2.2

HRSD should consider requiring initial review of invoices from Contractor A at each plant at which the biosolids pick-up services were received. Plant managers have a better insight into the volume of material that leaves the facility and should be in a good position to track the truckloads removed by the contractor on a daily basis. They may also review the invoices for the correct number of loads and verify that the tonnage reported is consistent with the weigh tickets

received from the contractor. This reduces the risk of HRSD being incorrectly billed for services rendered by the contractor.

Management's Action Plan and Implementation Date

Due to the rapid turnaround required for invoice payment (two weeks), it was necessary to centralize the review of invoices with the Recycling Manager to avoid late payments. The plants have two mechanisms for identifying the number of truckloads removed by the contractor: 1) Each truckload is documented on the MPOR, and 2) each truckload is documented with a Bill of Laden. These are signed by authorized plant personnel.

In order to ensure that HRSD is not paying for composting services that are not performed, the Recycling Manager has implemented the following process:

- When invoices are received from Contractor A the Water Quality Administrative Coordinator will ensure each Bill of Lading that accompanies invoices has a proper signature from authorized plant personnel. Payments will not be processed without proper signatures on the bill of lading.
- The Recycling Manager will review the MPOR for each plant prior to payment to ensure HRSD is being billed for the correct number of loads.
- Following confirmation with the MPOR, each invoice will be signed by the Recycling Manager to indicate receipt of the service prior to entry into ERP for payment.

Implementation Date: Completed. Process will be documented in SOPs according to the schedule outlined in the Management Action associated with Recommendation 1.1.

Recommendation 2.3

Prior to further use in daily biosolids recycling functions, HRSD should ensure the newly developed biosolids management software is operating correctly. This will increase efficiency through the reduction of subsequent reconciliation and research during the invoicing process and will reduce the risk of overpayment due to incorrect data.

Management's Action Plan and Implementation Date

The BioPro (iPacs) system was in test mode during the 2016 land application season. Several issues were identified during the testing period and have been corrected. The features tested during the 2016 season will be fully functional with all report capability complete by December 31, 2016 prior to the next planned land application season. In 2017, integration with Carlton Scales will be tested over the land application season. Any issues associated with this new element or any new issues that are identified with the system will be corrected such that the BioPro system will be fully functional for the 2018 land application system. During BioPro testing periods, as was the case for the 2016 season, back-up systems are in place to ensure full capture of all of the relevant data in the event of a test failure.

Implementation Date: Updates based on 2016 testing: Completed. Updates based on 2017 testing: July 31, 2017.

Observation 3

HRSD relies upon a third-party contractor to select recipient farms/landowners for biosolids distribution each year.

Observation Detail

The Atlantic plant produces approximately 22,000 wet tons of biosolids each year. The biosolids are distributed amongst permitted, active operators, who have received approval from their associated land owners. Distribution of biosolids is determined by a third-party contractor each year, which provides HRSD with the selected land tracts. HRSD does not have internally established controls to review the appropriateness of farm selection to ensure that biosolids are evenly provided to eligible recipients. Presently, review by HRSD is limited to ensuring the farm is appropriately permitted and that a landowner agreement is on-file.

SC&H reviewed land application data of the previous nine seasons, covering 2008 through 2016. Upon reviewing the available data, SC&H noted that, due to a system change, records were not consistent throughout the period reviewed. Additionally, due to changes in operators and tract identification numbers, SC&H was not able to independently verify the application status of all permitted operators. Based upon the available data, 33 unique operators were permitted to receive land application during the period of review. Of these operators, 11 did not receive spreading as they were not active or did not maintain a current landowner agreement, as noted by Water Quality personnel. All of the remaining 22 operators were noted as having received land application at least once in the previous nine years. Additionally, it was noted that four eligible operators are personally related to the contractor who selects biosolids recipients.

Risk

The need for enhancement of controls surrounding the review of farm selection results in a reputational risk due to the opportunity for unfair biosolids distribution practices, in practice or in appearance. Additionally, this control gap limits the ability of HRSD to justify or defend the selection process pertaining to farm selection. This could result in conflicts between HRSD and farmers who have not received land application in the last several years.

Recommendation 3.1

HRSD should implement a formalized review process pertaining to farm selection. This review should include the creation of a tracking tool that can either be integrated into the BioPro system or maintained on the HRSD shared drive. This tool should list all eligible land application recipients, aligning with permitted farms covered by the most recent DEQ permit and document the most recent land application date. Farmers who are no longer eligible for land application, or who have chosen to no longer receive spreading, should be designated as inactive within the tool. HRSD should consider implementing an application goal timeframe to ensure that all eligible

recipients receive spreading on a regular basis. The Recycling Manager should update and consult this document prior to land application each year. In instances where a farm selection is deemed inappropriate, such as a recipient having received land application in multiple years while others have not received any spreading, adjustments should be discussed with the contractor and implemented, as necessary.

Management's Action Plan and Implementation Date

Given the total permitted acreage, the amount of available biosolids, and the total number of farmers participating in the program (currently 22), HRSD's goal for spreading will be to spread on at least one tract of land owned by each farmer participating in the program over the course of a land application contract. Given that the land application contracts are typically 10 year contracts, spreading will take place a minimum of once every ten years per farmer with no more than four applications to a single tract in the 10 year window. Farms receiving less than 50-75% of the nitrogen requirement may receive more frequent applications (i.e. permitted pasture land).

HRSD has a tracking tool that identifies the owners, the farm tracts, the available acreage and the date of the most recent land application. The identifiers have changed over the course of the tracking period (since 1999), though standardized nomenclature has since been adopted. In order to increase transparency and enhance controls of the farm selection practice, the tool must be modified to provide more detail regarding site selection. The following is proposed to increase the robustness of the tool and provide the necessary transparency:

- The tracking tool will be integrated into BioPro.
- The tracking tool will be updated on an annual basis to indicate which farms are active and which are inactive.
- The tracking tool will be updated during each land application season to identify which farms were targeted for spreading and, if land application was not deemed feasible at the targeted site, the tool will include a reason for that exclusion.
 - Acceptable exclusionary factors will be documented in the land application SOP and will be communicated to the contractor. An initial list of exclusionary factors includes the following:
 - High water table at time of land application
 - Available tract acreage < 50 (tract may be removed from permitted site list if acreage loss is permanent)
 - Changing land use or zoning around site makes it unsuitable for land application (tract may be removed from permitted site list)
 - Landowner agreement not current
 - Owner and/or farmer decline land application
 - Soil tests indicate phosphorus level is too high (may require a P based plan)
 - Environmentally sensitive soil type that requires planting within 30 days of application
 - Previous complaints from adjacent landowners
 - Extended buffer zones requested

- Land not available during short land application window
- Farmer unwilling to follow Nutrient Management Plan or other regulatory requirements (land will be removed from permit)

Initial pre-season site selection will consist of the following:

- Prior to each land application season, the Contractor will identify a targeted list of application sites for the season. The total targeted acreage will exceed the required number of acres in order to ensure that sufficient acreage is available in the event that some sites are excluded during the season. The list will be reviewed by the Recycling Manager to ensure that the site selection is consistent with HRSD goals and with the criteria identified below:
 - Frequency of land application for tract (targeting a minimum of once per 10 year period and no more than four land applications per tract in the same period)
 - Frequency of land application the individual farmer has received
 - Acreage available based on Nutrient Management Plan
 - Planned Crop (typically soybeans and corn crops receive biosolids)
 - Proximity to other planned land application sites
 - Proximity to the Atlantic Plant
 - Application rate is reasonable for the intended crop and can be supported by land application equipment
 - Any adjustments requested by HRSD based on previous land application season

The Recycling Manager will evaluate the tracking tool following each land application season to ensure that the contractor is appropriately considering the relevant factors in farm selection. If necessary, the Recycling Manager will request adjustments for the following land application season (e.g., adjustments needed to ensure that HRSD's application frequency goal is being met). The Environmental Scientist/QA Manager will audit the record to ensure adherence to the site selection factors once every two years.

Implementation Date: These procedures will be documented in the Pre-Land Application SOP in accordance with the schedule outlined in the Management Action associated with Recommendation 1.1.

Observation 4

Review of forms submitted to third-party contractors responsible for composted material is not sufficient to ensure the accuracy of the information provided.

Observation Detail

HRSD provides a NANI and MPOR from each plant to one of the two third-party contractors on a monthly basis. Plant managers utilize information documented on the MPOR to populate the NANI. Once the correct information has been documented on the NANI, the plant manager or authorized plant staff signs off, certifying that the information presented on the form is accurate. The reports are provided to the Recycling Manager, who reviews the information prior to sending to the contractor.

At the Atlantic plant, biosolids must meet Class B requirements, or higher, to be used for land application. As such, the Recycling Manager performs a detailed review of the information presented on the NANI for the Atlantic Plant, to ensure that the material being provided to Contractor B meets all necessary regulatory requirements. Biosolids produced at the James River and York River plants are not directly land applied by HRSD and are not required to meet the Class B requirement. As such, the Recycling Manager performs a limited review of the information that is documented on the NANI forms associated with the James River and York River plants. However, the MPOR and NANI must still be completed and provided to the contractor, who may need to treat the materials more thoroughly, depending on the quality of the biosolids.

SC&H's review examined 12 NANI's and MPORs provided to Contractor A. Of the 12 reports reviewed, one NANI did not agree to the associated MPOR for the York River Plant. There was a 2% difference in the information reported on the NANI and the information documented in the MPOR, pertaining to the percent reduction in volatile solids.

Risk

Insufficient review of pertinent regulatory forms submitted to third-party contractors creates the risk of HRSD misreporting information. As the contractor further treats the material based upon the information provided, an incorrect NANI may result in an inappropriately processed product. This may create a financial or reputational liability, for HRSD, if the materials provided to the contractor are subsequently mistreated and spread on consumer land. This may include the cost of clean-up and remediation.

Recommendation 4.1

HRSD should ensure that all reports and forms that are provided to external sources are thoroughly reviewed and compared to source data prior to providing them to contractors or other external sources.

A thorough review of the information presented on the reports will help to mitigate the risk of information being misreported and will reduce the likelihood of liability related to biosolids application.

Management's Action Plan and Implementation Date

Appropriate QA review will be incorporated into the SOPs drafted for documentation and reporting. Recognizing that 100% accuracy of all documentation is not achievable, QA protocols are developed in consideration of the risk associated with inaccurate data. For example, the percent of volatile solids is not a parameter of interest for the composting contractor. However, the data provided for the metals concentrations is important. A more stringent QA review of the metals data would thus be warranted. The QA protocols developed will provide the most stringent QA review and auditing for the programs which have the greatest risk (i.e., those associated with land application).

Implementation Date: The Documentation/Reporting SOPs will be developed in accordance with the schedule outlined in the Management Action associated with Recommendation 1.1.

Observation 5

The current structure of HRSD annual reporting may not meet permit requirements mandated by Virginia DEQ.

Observation Detail

HRSD is required to comply with Virginia DEQ and Environmental Protection Agency (EPA) guidelines in order to obtain permits to distribute and spread biosolids. As part of these requirements, HRSD must submit monthly and annual reports pertaining to biosolids activity. The DEQ has established minimum requirements surrounding the information that must be presented in each report.

SC&H reviewed a 2015 monthly report and the 2015 annual report provided to the DEQ. All requirements were met in the monthly report, but not all requirements were met in the annual report. Several summaries were not included that were listed as a minimum requirement for the annual report. DEQ regulations note that summaries of land application sites, sites where land application was only partially completed, and the total acreage of eligible land application sites must be documented in the report. HRSD does not include this summary information because monthly reports are sent to the DEQ regarding the material produced at the Atlantic Plant. Information in these reports details the information that would be included in the summaries.

Risk

Improper reporting creates the risk of HRSD losing biosolids permits, or being penalized by a regulatory agency, for failing to be in compliance with applicable regulatory requirements.

Recommendation 5.1

HRSD should review all regulatory requirements on a regular basis, to ensure compliance in all areas. Additionally, prior to the issuance of the 2017 Atlantic Plant permit, the regulatory requirements should be reviewed to capture all changes to regulations. HRSD processes and reporting practices should be updated to reflect any regulatory changes.

Management's Action Plan and Implementation Date

With each new permit issuance and regulatory update, the Recycling Manager will document changes and prepare a checklist for compliance review by the Environmental Scientist/QA Manager. These procedures will be documented in the Regulatory Review SOP. Further, the annual report provided to DEQ in January 2017 will include the permit-required summaries.

Implementation Date: The Regulatory Review SOP will be generated in accordance with the schedule outlined in the Management Action Plan associated with Recommendation 1.1.

The new permit for Atlantic Plant will be issued in 2017. The Recycling Manager will review the biosolids requirements during the permit review period and document any changes needed to HRSD procedures.

Implementation Date: Within two weeks of draft permit issuance.