

**BIOSOLIDS TECHNICAL ADVISORY COMMITTEE
Amendments to Biosolids Regulations after Transfer from VDH to DEQ**

**FINAL MEETING NOTES
TAC MEETING – FRIDAY, MAY 22, 2009
DEQ PRO TRAINING ROOM**

Meeting Attendees

<i>TAC Members</i>	<i>Interested Public</i>	<i>DEQ Staff</i>
Karl Berger	Todd Benson - PEC	Ellen Gilinsky
Rhonda L. Bowen	Joe Garvin - VDACS	Angela Neilan
Greg Evanylo	Susan Lingenfelter - USFWS	Bill Norris
Katie Kyger Frazier	Steve McMahon - Synagro	Charlie Swanson
Tim Hayes	Sharon Nicklas – Alternate for Rhonda Bowen	Christina Wood
Diane Helentjaris - VDH	Lisa Ochsenhirt – AquaLaw /VAMWA	Neil Zahradka
Larry Land	Mary Powell – Nutri-Blend	
Darrell Marshall - VDACS	Tim Sexton - DCR	
Jacob Powell - DCR	Susan Trumbo – RecycSystems	
Ruddy Rose	C.W. Williams - Biosolids Information Group	
Wilmer Stoneman		
Ray York		

NOTE: The following Biosolids TAC Members were absent from the meeting: Jim Burns - VDH; Chris Nidel; Jo Overbey; Lloyd Rhodes*; Henry Staudinger (NOTE: Chris Nidel; Jo Overbey: & Henry Staudinger resigned from the Biosolids TAC as of May 18, 2009.) *Lloyd Rhodes is no longer employed in this area and is no longer able to serve on the TAC.

1) Procedural Items – Convene – Overview, Reminders; Meeting Notes; & Update on Financial Assurance (Angela Neilan/Neil Zahradka):

Angela Neilan, DEQ Community Involvement Specialist and Meeting Facilitator, welcomed the members of the Biosolids TAC and members of the Interested Public to the 7th Meeting of the Technical Advisory Committee. She informed the group that Mr. C.W. Williams has legal permission to video tape today's meeting.

A member of the TAC informed Mr. Williams that if he uses the video tape in any way for any type of political or commercial purpose where the focus is on any individual that you can be sued by anyone in this room and you can be held personally liable for misuse of his image. Mr. Williams acknowledged the comment and accepted responsibility for any future use of the tape.

Angela Neilan welcomed the members of the TAC and members of the public to the meeting and asked that everyone introduce themselves so that we all know who is in attendance. She thanked all those in attendance for participating in the process and for their continued interest in giving their time to the

work of this TAC.

Staff provided an overview of the agenda for the meeting and discussed the plans and schedule for development of draft regulatory language and future meetings of the TAC to review that draft language.

Staff informed the TAC members that the current plan was to have this meeting in May and then take two months off without a TAC meeting so that staff would have time to develop the draft regulation language during June and July. The current plan is to provide the draft regulation language to the TAC prior to a TAC meeting in late August (August 20, 2009 – PRO) with an additional meeting in September (September 22, 2009 – Virginia Fire Programs Office – Glen Allen) to finish review of the draft language. Following those meetings, staff will finish the regulation language for submittal to the State Water Control Board for consideration as a draft regulation at their meeting in early December.

Staff asked whether there were any additional comments or edits to the notes from the last meeting. No requests regarding revisions were offered so the notes from the April 24th meeting will be noted as "Final" and will be submitted for posting to Town Hall.

Staff informed the TAC that the language regarding financial assurance was still being developed. Once that draft language has been developed, the plan is to submit that language to the members of the Financial Assurance Subcommittee for their consideration. The proposed language will be included in the draft regulation text that the TAC will receive for review and consideration the end of July.

2) Background Documents/Presentations – Expert Panel Report – Mined and Disturbed Land Reclamation – Sampling Requirements (Neil Zahradka):

Neil Zahradka, Manager of DEQ's Office of Land Application Programs, provided an overview of the State Statute's that address "Reclamation, Sampling & Analysis, Grazing, Permitting, and Reporting:

State Water Control Law

§ [62.1-44.19:3](#). *Prohibition on land application, marketing and distribution of sewage sludge without permit; ordinances; notice requirement; fees.*

[No exclusion in law for research involving land application]

A.3. *No person shall contract or propose to contract, with the owner of a sewage treatment works, to land apply, market or distribute sewage sludge in the Commonwealth, nor shall any person land apply, market or distribute sewage sludge in the Commonwealth without a current Virginia Pollution Abatement Permit authorizing land application, marketing or distribution of sewage sludge and specifying the location or locations, and the terms and conditions of such land application, marketing or distribution. The permit application shall not be complete unless it includes the landowner's written consent to apply sewage sludge on his property.*

C. *Regulations adopted by the Board, with the assistance of the Department of Conservation and Recreation and the Department of Health pursuant to subsection B, shall include:*

[General permits could be developed for some activities]

1. Requirements and procedures for the issuance and amendment of permits, including general permits, authorizing the land application, marketing or distribution of sewage sludge;

[Regulations will contain the requirements for sampling and analysis]

6. Requirements for sampling, analysis, recordkeeping, and reporting in connection with land application, marketing, and distribution of sewage sludge;

[NMPs must be developed for all land application, including mined land reclamation]

8. Requirements for site-specific nutrient management plans, which shall be developed by persons certified in accordance with § 10.1-104.2 prior to land application for all sites where sewage sludge is land applied, and approved by the Department of Conservation and Recreation prior to permit issuance under specific conditions, including but not limited to, sites operated by an owner or lessee of a Confined Animal Feeding Operation, as defined in subsection A of § 62.1-44.17:1, or Confined Poultry Feeding Operation, as defined in § 62.1-44.17:1.1, sites where the permit authorizes land application more frequently than once every three years at greater than 50 percent of the annual agronomic rate, and other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters;

[Minimum sampling requirements if requested by the public]

J. The Department, upon the timely request of any individual to test the sewage sludge at a specific site, shall collect samples of the sewage sludge at the site prior to the land application and submit such samples to a laboratory. The testing shall include an analysis of the (i) concentration of trace elements, (ii) coliform count, and (iii) pH level. The results of the laboratory analysis shall be (a) furnished to the individual requesting that the test be conducted and (b) reviewed by the Department. The person requesting the test and analysis of the sewage sludge shall pay the costs of sampling, testing, and analysis.

He noted that the current DEQ Regulations that deal with “Mined and Disturbed Land Reclamation” was 9VAC25-32-560. Biosolids utilization methods:

9VAC25-32-560. Biosolids utilization methods.

D. Reclamation of disturbed land. Biosolids applied at rates exceeding the agronomic rate may reclaim disturbed land in one or more of the following ways: (i) surface or underground mining operations, (ii) the deposition of ore processing wastes, (iii) deposition of dredge spoils or fly ash in construction areas such as roads and borrow pits. Reclamation of disturbed land is within the jurisdiction of the Virginia Department of Mines, Minerals and Energy. That department should be contacted concerning issuance of a permit for these operations. The land reclamation management practices plan should be prepared with the assistance of the Virginia Department of Conservation and Recreation, the Soil Conservation Service and the Virginia Cooperative Extension Service.

1. Sludge standards. Refer to the standards of this article.
2. Site suitability. Site suitability requirements should conform to subdivision A 2 of this section. Exceptions may be considered on a case-by-case basis.
3. Management practices.

a. Application rates. The application rates shall be established in the management practices plan through recommendations provided by appropriate agencies including the Virginia Department of Mines, Minerals and Energy and the appropriate faculty of the Department of Crop and Soil Environmental Sciences of the Virginia Polytechnic Institute and State University.

b. Vegetation selection. The land should be seeded with grass and legumes even when reforested in order to help prevent erosion and utilize available plant nitrogen. The management practices plan should include information on the seeding mixture and a detailed seeding schedule.

c. Operations.

(1) The soil pH should be maintained at 6.0 or above if the cadmium level in the biosolids applied is at or above 21 mg/kg, during the first year after the initial application. Soil samples should be analyzed by a qualified laboratory. The application rate shall be limited by the most restrictive cumulative trace element loading (Table 8).

(2) Surface material should be turned or worked prior to the surface application of liquid biosolids, to minimize potential for runoff, since solids in liquid sludge can clog soil surface pores.

(3) Unless the applied biosolids are determined to be Class A or have been documented as subjected to Class I treatment, crops intended for direct human consumption shall not be grown for a period of three years following the date of the last sludge application unless the crop is tested to verify that the crop is not contaminated. No animals whose products are intended for human consumption may graze the site or obtain feed from the site for a period of six months following the date of the last biosolids application, unless representative samples of the animal products are tested after grazing and prior to marketing to verify that they are not contaminated.

He provided an overview of the section of the Expert Panel Report that addressed Mined and Disturbed Land Reclamation with the Panel's recommendation:

Mined and Disturbed Land Reclamation

“The panel also discussed the need for further clarification in the regulations for mined land or disturbed land reclamation. One-time application of biosolids at higher than agronomic rates to mined lands has been shown to be quite beneficial for soil reconstruction purposes. In these applications, the benefit of soil stabilization and environmental remediation should be weighed against the nutrient loss potential. Regulations that allow for the reclamation of mined land or disturbed lands in a manner that is beneficial to the soil and not harmful to the environment should be considered by DEQ.”

*“**Panel recommends:** The TAC should examine the DEQ regulations addressing the land application of biosolids on mined land and disturbed land reclamation sites.”*

He provided an overview of the sections of the current regulations that address biosolids sampling requirements:

Sampling Requirements

9VAC25-32-370. Minimum biosolids sampling and testing program.

A. Sampling and testing methods shall conform to current United States Environmental Protection Agency (EPA) guidelines establishing test procedures for analysis of pollutants or other EPA-approved methods.

B. Either the operation and maintenance manual, sludge management plan, or management practices plan shall contain a specific testing schedule. The testing schedule shall include minimum tests and their frequencies as required to monitor the facility in accordance with the appropriate certificate and the operating permit issued under this regulation.

C. The following sampling instructions shall be followed when collecting samples as required by this regulation:

1. Raw sewage or sludge samples are to be collected prior to the treatment process unit operations.
2. Final treated samples are to be taken at a point following appropriate unit operations in the treatment process. An evaluation of biosolids treatment may require monitoring of fecal coliform levels in the treated sludge.
3. Compositing of samples shall be in accordance with the treatment works operation and maintenance manual. Composite samples of sludge shall consist of grab samples taken in accordance with either the operation and maintenance manual or management practices plan, as appropriate. Composite samples shall be representative of the quality and quantity of the biosolids used. Greater frequency of grab

sampling may be desirable where abnormal variation in waste strength occurs. Automatic proportional samplers are considered a valid sampling method.

9VAC25-32-380. Minimum operational testing and control program.

A. Sampling and testing methods shall conform to current United States Environmental Protection Agency (EPA) guidelines establishing test procedures for analysis of pollutants or other EPA-approved methods.

B. The information furnished with either the operation and maintenance manual, sludge management plan, or management practices plan should recommend and describe the control tests and their frequency that should be routinely conducted by the holder of the permit in order to monitor operations and verify the treatment classification achieved (Table 3). All special sampling methods should be identified. Biosolids use site sampling and testing frequencies should be in accordance with the requirements established by the instructions contained in the biosolids use operation and maintenance manual if provided.

C. Additional operational control information may be required on an individual basis by the department.

9VAC25-32-390. Additional monitoring, reporting and recording requirements for land application.

A. Either the operation and maintenance manual, sludge management plan or management practices plan shall contain a schedule of the required minimum tests necessary to monitor land application operation. Such testing schedule information for land application of biosolids shall contain instructions for recording and reporting. Monitoring of any associated land treatment systems shall be in accordance with the biosolids use operation and maintenance manual if provided.

9VAC25-32-400. Additional monitoring, reporting and recording requirements for sewage sludge and residual solids management.

Either the operation and maintenance manual, sludge management plan, or management practices plan shall contain a schedule of required minimum tests and their frequency to be conducted for the sewage sludge and biosolids management system and shall also contain necessary information to document sewage sludge and biosolids quality. Such test schedule information should include instructions for recording and reporting. Monitoring, reporting and recording requirements for sewage sludge and biosolids quality control shall be in accordance with the sludge management plan or management practices plan in accordance with 9VAC25-32-500 B. The recordkeeping and reporting requirements for sewage sludge and biosolids management contained in the treatment works operation and maintenance manual shall apply to all application sites, regardless of size or frequency of application. However, the requirements relative to monitoring, reporting and recording of site-specific soils and monitoring, reporting and recording of ground water and surface water are not applicable for any site that meets either of the following criteria:

1. Whenever exceptional quality biosolids are marketed and distributed with a label or identification information that specifies proper quality information and describes how agronomic rates are to be determined. Also, whenever Class I treated biosolids are land applied so that (i) the annual loading rate will not result in annual maximum loading rates in excess of those specified in Table 8; (ii) applied biosolids will meet vector attraction requirements; (iii) the amount of nutrients applied does not exceed the total crop needs or agronomic loading rate; (iv) no additional biosolids are applied for at least five years, or the biosolids are applied to land maintained only as pasture or hay land for five years following the last application of biosolids and the nutrient loading rate does not exceed 70% of the annual total crop needs of the grass or hay cover (Tables A-2 and 11).

2. Whenever the application site area for biosolids processed by Class I or II treatment is no larger than 10 acres and is isolated (2,000 feet or more separation distance) from other sites receiving applications of biosolids within three years of the time biosolids are applied to the identified site and the necessary vector attraction requirements are met.

The department may recommend that specified site specific monitoring be performed by the holder of the permit for any biosolids land application practice regardless of frequency of application or size of the application area. Such recommendations will occur in situations in which groundwater contamination, surface runoff, soil toxicity, health hazards or nuisance conditions are identified as an existing problem or documented as a potential problem as a result of biosolids use operations. Requirements of 9VAC 25-32-510 through 9VAC25-32-580 shall apply in full whether or not a monitoring waiver provision is applicable.

9VAC25-32-440. Biosolids monitoring/reporting.

A. Monitoring biosolids quality shall be performed as required for permit compliance. Monitoring frequency shall be sufficient to both reflect the degree of variability, if any, expected in the biosolids quality and the frequency of application. The following guidelines should provide sufficient data for characterizing the quality of biosolids for biosolids programs that land apply continuously throughout the year.

TABLE 1	
Amount of biosolids ⁽¹⁾ (metric tons per 365-day period)	Frequency
<i>Greater than zero but less than 290</i>	<i>Once per year</i>
<i>Equal to or greater than 290 but less than 1,500</i>	<i>Once per quarter (four times per year)</i>
<i>Equal to or greater than 1,500 but less than 15,000</i>	<i>Once per 60 days (six times per year)</i>
<i>Equal to or greater than 15,000</i>	<i>Per month (12 times per year)</i>
<p><i>Note: ⁽¹⁾Either the amount of bulk sewage applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).</i></p>	

Note: Sampling shall be conducted at approximately equal intervals at the listed frequencies. Biosolids programs that store biosolids and land apply only during discrete events throughout the year shall schedule sampling events to coincide with application periods. The regulatory agency may require increased monitoring frequencies, if necessary, to adequately define any significant variability in biosolids quality. After two years of monitoring the permittee may request that the monitoring frequency be reduced, but in no case to less than once per year in any year that biosolids are applied to land.

9VAC25-32-450. Sampling.

A. *General. The sampling procedures and protocols used for the national sewage sludge survey (EPA Office of Water Regulations and Standards, March 1988) or validated equivalent methods will be approved by the board through issuance of a permit for biosolids use. Composite samples are better than single grab samples because they define representative "average" levels of sludge characteristics. A large open container such as a one- to two-gallon capacity bucket will normally be necessary to obtain complete grab samples of sludge flows. The volume or weight of grab samples should be adjusted so as to represent approximately equal volumes or weights of the sludge volume or mass being sampled. These adjusted grab samples can then be added to form a composite sample.*

B. *Liquid sludge. In the case of digesters and liquid storage holding tanks, a representative sample shall be composed of at least four grab samples obtained during daily operations at the facility or land application site. Samples of liquid biosolids obtained under pressure or vacuum should be obtained shortly after the beginning, during and at the end of the time period that the biosolids are produced at the sampling point.*

C. *Biosolids storage facilities. Equal volumes of biosolids should be withdrawn from random locations across the width and throughout the length of the storage facility at the surface, mid-depth and near the bottom of the lagoon at each grab sample location. These grab samples should be added to form a composite mix. A range of the recommended minimum number of grab samples that should be obtained from various sizes of sludge lagoons in order to obtain a representative composite sample is:*

Lagoon Surface Area (Acres)	Minimum Number of Grab Samples	
	Depth less than 4 feet	Depth greater than 4 feet
<i>1 to 9.99</i>	<i>4 to 5</i>	<i>6 to 8</i>
<i>10 or more</i>	<i>6 to 8</i>	<i>9 to 11</i>

D. *Dewatered sludge.* Small, equally sized grab samples of the dewatered sludge stream may be taken at equally spaced intervals over the period of operation of the dewatering unit. Centrifuged sludge samples may be taken from a belt conveyor or receiving hopper. Filter cake sludge samples may be taken from a belt conveyor or a portion of the cake may be removed as it leaves the unit. The smaller grab samples should be combined to form a representative composite sample. A composite sample can be obtained over the daily operational period at the land application site.

E. *Compost sampling.* Composite samples are preferred so that a representative average level of compost characteristics can be obtained from analytical testing. Although the compost material has been subjected to premixing, some variation in quality may exist and at least three grab samples of one kilogram or more should be taken of each mixture and combined to form a composite sample of that mixture. This mixture should be used for analytical testing or for combination with other composites to obtain a total composite sample representing a fixed period of operation. Compost samples may be taken with a scoop or shovel and placed in flexible bags that can be thoroughly shaken to mix grab samples.

F. *Analysis and preservation of samples.* In general, sludge samples should be refrigerated at approximately 4°C immediately after collection, which provides adequate preservation for most types of sludge physical and chemical analysis for a period up to seven days. Exact sample analysis and preservation techniques should be submitted in the sludge management plan. Analytical procedures should be updated as needed.

9VAC25-32-460. Soils monitoring and reporting.

Soil should be sampled and analyzed prior to sludge application to determine site suitability and to provide background data. After the land application program is underway, it may be necessary to continue monitoring possible changes in the soil characteristics of the application site. Reduced monitoring will usually apply for typical agricultural utilization projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (see Table 5). Reduced monitoring may also apply to one time sludge applications to forest or reclaimed lands. For background analysis, random composite soil samples from the zone of incorporation is required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre).

Generally, one subsample per acre should be taken for application sites of 10 acres or more receiving frequent applications. For frequent land application sites greater than 50 acres, a controlled area of approximately 10 acres in size may be provided that is representative of site loading and soil characteristics. The control area should be sampled through random collection of approximately 20 subsamples taken according to standard agricultural practices. Records of soil analysis must be maintained by the owner and submitted as required.

**TABLE 2
PARAMETERS FOR BIOSOLIDS ANALYSIS⁽¹⁾**

A. *Suggested minimum*

Source of sludge

Type of sludge (lime stabilized, aerobically digested, etc.)

Percent solids (%)

Volatile solids (%)

pH (standard units)

Total kjeldahl nitrogen (%)

Ammonia nitrogen (%)

Nitrates (mg/kg)

Total phosphorus (%)

Total potassium (%)

Alkalinity as CaCO₃(mg/kg)⁽²⁾

Arsenic (mg/kg)

Cadmium (mg/kg)
Copper (mg/kg)
Lead (mg/kg)
Mercury (mg/kg)
Molybdenum (mg/kg)
Nickel (mg/kg)
Selenium (mg/kg)
Zinc (mg/kg)

⁽¹⁾Values reported on a dry weight basis unless indicated.

⁽²⁾Lime treated sludges (10% or more lime by dry weight) should be analyzed for percent CaCO₃.

B. Additional parameters such as the organic chemicals listed in Table 12 may be required for screening purposes as well as aluminum (mg/kg), water soluble boron (mg/kg), calcium (mg/kg), chlorides (mg/l), manganese (mg/kg), sulfates (mg/kg), and those pollutants for which removal credits are granted.

C. Microbiological testing may be necessary to document the sludge treatment classification (Table 3). Microbiological standards shall be verified by the log mean of the analytical results from testing of nine or more samples of the sludge source. Sampling events shall be separated by an appropriate period of time so as to be representative of the random and cyclic variations in sewage characteristics.

TABLE 3

STANDARDS FOR DOCUMENTATION OF PATHOGEN CONTROL AND VECTOR ATTRACTION REDUCTION LEVELS FOR BIOSOLIDS

A. Pathogen control standards (dry weight of sludge solids basis).

1. Class I treatment for Class A pathogen control.

a.⁽¹⁾ Composting or other acceptable time-temperature treatment* shall result in a biosolids content equal to or less than either 1,000 fecal coliform per gram or three salmonella per four grams of total solids in treated sludge prior to removal for use or preparation for distribution.

b. Stabilization**⁽²⁾ Verify a biosolids content less than either 1,000 MPN fecal coliform per gram of total solids, or three salmonella, or one virus (PFU), or one helminth egg, per four grams of total sludge solids and provide that vector attraction reduction requirements will be met upon use.

2. Class II treatment for Class B pathogen control.

a.⁽¹⁾ When the influent sludge stream to the stabilization unit operation contains more than 6 log₁₀ fecal coliform per gram of total solids, a reduction of 1.5 log₁₀ of fecal coliform or more may be required for stabilization.

b. Stabilization⁽²⁾. Verify biosolids content maximum of 6.3 log₁₀ of fecal coliform per gram of total solids in sludges subjected to adequate treatment and provide that vector attraction reduction requirements will be met upon use.

B. Vector attraction reduction requirements (must satisfy one of the following for approval of land application of biosolids).

1. Thirty-eight percent volatile solids (VS) reduction by digestion processes, or:

a. Less than 38% reduction by anaerobic digestion if additional treatment (additional 40 days or more at 32°C or more) results in less than 17% additional VS reduction:

$$\text{Additional VS Reduction} = \text{VSD1\%BFVSD2} / \text{VSD1\%BF(VSD1)(VSD2)}$$

D1 = Initial conventional digestion period

D2 = Additional 40-day digestion period

b. Less than 38% reduction by aerobic digestion if the specific oxygen uptake rate (SOUR) of sludge is 1.5 or less milligrams of oxygen per hour per gram of total sludge solids (dry weight basis) at a temperature of 20°C.

c. Less than 38% reduction by aerobic digestion if additional treatment (additional 30 days or more at 20°C or more) results in less than 15% additional VS reduction.

d. Less than 38% reduction if treated in an adequately aerated unit operation for 14 days or more at a temperature exceeding 40°C and the average sludge temperature exceeds 45°C.

2. Sludge pH is 12 or more (alkaline addition) for two consecutive hours and remains at 11.5 or higher for 22 additional hours (no further alkaline additions), or

3. Seventy-five percent or more total solids in treated sludge if no untreated primary sludge is included, or 90% total solids if unstabilized primary sludge is included, prior to any mixing with other materials, or

4. Either incorporation of treated sludge into the soil within six hours of surface application, or direct injection below the surface of the land so that no evidence of any significant amounts of sludge is present on the land surface within one hour of injection.

5. For land application of biosolids receiving Class I treatment:

a. For surface application: apply to land within eight hours of final treatment and incorporate below the surface within six hours of application, or achieve one of the appropriate vector attraction reduction requirements by treatment.

b. For subsurface application: inject within eight hours of final treatment or achieve one of the appropriate vector attraction reduction requirements by treatment.

TABLE 5 RECOMMENDED SOIL TEST PARAMETERS FOR LAND APPLICATION SITES⁽¹⁾				
<i>Parameter</i>	<i>BIOSOLIDS APPLICATION</i>			<i>STORAGE</i>
	<i>Infrequent⁽²⁾</i>	<i>Frequent Below Agronomic Rates⁽²⁾</i>	<i>Frequent at Agronomic⁽²⁾⁽³⁾</i>	<i>Supernatant⁽⁴⁾</i>
<i>Soil organic matter (%)</i>			*	*
<i>Soil pH (Std. Units)</i>	*	*	*	*
<i>Cation exchange capacity (me/100g)</i>			*	
<i>Total nitrogen (ppm)</i>			*	*
<i>Organic nitrogen (ppm)</i>			*	*
<i>Ammonia nitrogen (ppm)</i>			*	
<i>Available phosphorus (ppm)</i>	*	*	*	*
<i>Exchangeable potassium (ppm)</i>	*	*	*	
<i>Exchangeable sodium (mg/100g)</i>			*	*
<i>Exchangeable calcium (mg/100g)</i>			*	*
<i>Exchangeable magnesium (mg/100g)</i>	*		*	*
<i>Copper (ppm)</i>			*	*
<i>Nickel (ppm)</i>			*	*

Zinc (ppm)			*	*
Cadmium (ppm)			*	*
Lead (ppm)			*	*
Manganese (ppm)			*	
Molybdenum (ppm)			*	
Selenium (ppm)			*	
Particle size analysis or USDA Textural estimate (%)			*	*
Hydraulic conductivity (in/hr)				*
<p>⁽¹⁾Note: Unless otherwise stated, analyses shall be reported on a dry weight basis(*).</p> <p>⁽²⁾See 9VAC25-32-560 B 3.</p> <p>⁽³⁾Testing requirements to be adjusted in accordance with prior analytical test results. Heavy metal analyses are not required but once every three years before application.</p> <p>⁽⁴⁾Liquid biosolids derived from biosolids use facilities.</p>				

9VAC25-32-520. Sludge quality and composition.

A. *Sampling and testing sludge.* Samples shall be collected so as to provide a representative composition of the sludge. Analytical testing shall be performed by a laboratory capable of testing in accordance with current EPA-approved methods or other accepted methods. The operational section of this regulation establishes the minimum constituents that shall be analyzed and the sampling and preservation procedures that should be utilized. The sludge management plan or management practices plan shall detail both the sampling and testing methods used to characterize the sludge.

B. *Nonhazardous declaration.* Regulations under the Resource Conservation and Recovery Act (RCRA) and the Virginia Hazardous Waste Management Regulations (9VAC20-60) identify listed hazardous wastes and hazardous waste characteristics. Municipal wastewater or sewage sludge is neither excluded nor specifically listed as hazardous waste. Hazardous wastes as established through RCRA and appropriate state regulations are not managed under this regulation. The owner shall monitor sludge characteristics as required to determine if it is hazardous or nonhazardous and declare to the department that the sludge generated at his facility is nonhazardous.

C. *Sludge treatment.* Sludges shall be subjected to a treatment process sequence designed to reduce both the pathogen content and the solids content to the appropriate level for the selected method of management, such as land application. For such use options, the sludge treatment provided shall minimize the potential for vector attraction and prevent objectionable odor problems from developing during management. Acceptable levels of pathogen reduction may be achieved by various established conventional treatment methods including Class I treatment to accomplish Class A pathogen control and Class II treatment to accomplish Class B pathogen control 9VAC25-32-610. The level of pathogen control achieved by nonconventional treatment must be verified by microbiological monitoring (Table 3).

For land application, Class B pathogen, or better, shall be achieved. Such Class I or II treatment may involve either: anaerobic or aerobic digestion, high or low temperature composting, heat treatment, air drying, or chemical treatment processes utilizing alkaline additives or chlorine. For use of treated sludge or sludge products involving a high potential for public contact, it may be necessary to achieve further pathogen reduction (Class A) beyond that attained by the above processes. Such Class I treatment may be accomplished by (i) heat treatment and drying, (ii) thermophilic composting, (iii) alkaline treatment. A three-log reduction or more (a thousand-fold

reduction) in pathogenic bacteria and viral microorganisms to meet conventional treatment standards. Raw sludge levels of pathogenic bacteria and viral microorganisms can be effectively reduced to safe levels by conventional Class I treatment methods.

Properly treated sludges can be safely utilized and should not create any nuisance problems when managed in accordance with approved sludge management or management practices plans. A sludge that receives Class I or II treatment for adequate pathogen control and is treated or managed to properly reduce vector attraction and pollutants within acceptable levels (Table 7-A) is referred to as "biosolids." A Class I treated sludge with approved control of vector attraction and acceptable levels of pollutants (Table 7-A) is referred to as "exceptional quality biosolids."

D. Sludge composition. The characterization of sludge properties is a necessary first step in the design of a use/disposal system. Monitoring and testing for certain pollutants shall be achieved prior to specific use or disposal practices. For the purposes of this regulation, sludge management and testing methods shall account for moisture content including (i) liquid sludge defined as sludges with less than 15% total solids, (ii) dewatered sludge normally defined as sludges with 15% to 30% total solids; or (iii) dried sludge normally defined as sludges with more than 30% total solids.

9VAC25-32-600. Biosolids characteristics; nutrients; trace elements; organic chemicals.

A. The primary agronomic value of biosolids, the nutrient content, shall be established prior to agricultural use. The applied nitrogen and phosphorous content of biosolids shall be limited to amounts established to support crop growth. Nitrate nitrogen developed as a result of biosolids application shall be controlled in order not to accumulate in groundwater as a pollutant. Thus, the amount of biosolids applied to land shall be restricted based on the nitrogen requirements of the crop grown on the amended site immediately following application (agronomic rate). In addition, soil erosion and site runoff should not result in phosphorous pollution of surface waters as a result of surface application of biosolids. The results of approved groundwater monitoring programs may be utilized to verify frequent application rates.

B. The heavy metal content of biosolids may restrict the application rate below the agronomic rate. However, municipal biosolids would not normally contain excessive heavy metal concentrations unless a significant amount of a high metal content wastewater without pretreatment is routinely discharged into the municipal system. If a biosolid contains heavy metal concentrations below the ceiling values listed in Table 7, or is processed and evaluated as exceptional quality biosolids, the application rate for agricultural use shall be unrestricted up to the agronomic rate for infrequent applications. The accumulated amount of trace elements can restrict the application rate for frequent applications of biosolids.

C. Municipal biosolids can contain synthetic organic chemicals from industrial wastewater contributions and disposal of household chemicals and pesticides. Municipal biosolids typically contain very low levels of these compounds; however, biosolids may be required to be tested for certain toxic organic compounds prior to agricultural use (Table 12). If performed and validated, these test results shall be utilized to evaluate the maximum allowable annual loading rate for the tested biosolids. If analytical test results verify that biosolids contains levels of organic chemicals exceeding concentration limits incorporated in federal regulations or standards, appropriate restrictions shall be imposed for agricultural use of that biosolid.

9VAC25-32-660. Maximum application rates for biosolids.

If soils exhibit very high soil test phosphorus of 55 or more parts per million phosphorus (Mehlich I analytical test procedure or equivalent procedure approved by the Department of Conservation and Recreation), the maximum application rates for phosphorus contained in biosolids together with phosphorus contained in other applied nutrient sources to the site and all applicable phosphorus management practices shall be consistent with the nutrient management plan.

TABLE 7
A. RECOMMENDED CEILING LIMITS FOR THE TRACE ELEMENT CONTENT OF
BIOSOLIDS ACCEPTABLE FOR LAND APPLICATION

<i>TRACE ELEMENT</i>	<i>CONCENTRATION IN MILLIGRAMS PER KILOGRAMS (DRY WEIGHT)</i>
<i>Arsenic</i>	75
<i>Cadmium</i>	85
<i>Copper</i>	4300
<i>Lead</i>	840
<i>Mercury</i>	57
<i>Molybdenum</i>	75
<i>Nickel</i>	420
<i>Selenium</i>	100
<i>Zinc</i>	7500

B. MAXIMUM MONTHLY AVERAGE TRACE ELEMENT CONCENTRATIONS FOR
APPLICATION OF EXCEPTIONAL QUALITY BIOSOLIDS TO LAWNS OR HOME GARDENS
IN RESIDENTIAL LOCATIONS

<i>TRACE ELEMENT</i>	<i>CONCENTRATION IN MILLIGRAMS PER KILOGRAMS (DRY WEIGHT)</i>
<i>Arsenic ⁽¹⁾</i>	41
<i>Cadmium</i>	39
<i>Copper</i>	1500
<i>Lead</i>	300
<i>Mercury</i>	17
<i>Molybdenum ⁽¹⁾</i>	
<i>Nickel</i>	420
<i>Selenium</i>	100
<i>Zinc</i>	2800

Note: ⁽¹⁾The monthly average concentration is currently under study by USEPA.

TABLE 8
MAXIMUM CUMULATIVE APPLICATION OF BIOSOLIDS TRACE ELEMENTS THAT CAN BE
APPLIED TO SOILS USED FOR CROP PRODUCTION⁽¹⁾

<i>TRACE ELEMENT</i>	<i>Kg/ha</i>	<i>(lbs/AC)</i>
<i>Arsenic⁽²⁾</i>	<i>41</i>	<i>(36)</i>
<i>Cadmium</i>	<i>39</i>	<i>(35)</i>
<i>Copper</i>	<i>1,500</i>	<i>(1,340)</i>
<i>Lead</i>	<i>300</i>	<i>(270)</i>
<i>Mercury</i>	<i>17</i>	<i>(16)</i>
<i>Molybdenum⁽²⁾</i>		
<i>Nickel</i>	<i>420</i>	<i>(375)</i>
<i>Selenium</i>	<i>100</i>	<i>(89)</i>
<i>Zinc</i>	<i>2,800</i>	<i>(2,500)</i>

Notes: ⁽¹⁾Such total applications to be made on soils with the biosolids/soil mixture pH adjusted to 6.0 or greater if the biosolids cadmium content is greater than or equal to 21 mg/kg.

The maximum cumulative application rate is limited for all ranges of cation exchange capacity due to soil background pH in Virginia of less than 6.5 and lack of regulatory controls of soil pH adjustment after biosolids application ceases.

⁽²⁾The maximum cumulative application is currently under study by USEPA.

TABLE 12

A. ORGANIC CHEMICAL TESTING THAT MAY BE REQUIRED TO IDENTIFY AN EXCEPTIONAL QUALITY BIOSOLIDS

Organic Chemicals

Aldrin/dieldrin (total)

Benzo (a) pyrene

Chlordane

DDT/DDE/DDD (total) (1)

Dimethyl nitrosamine

Heptachlor

Hexachlorobenzene

Hexachlorobutadiene

Lindane

Polychlorinated biphenols

Toxaphene

Trichloroethylene

(1)Note: DDT 2,2--Bis (chlorophenyl)--1,1,1--Trichloroethane

DDE 1,1--Bis (chlorophenyl)--2,2--Dichloroethane

DDD 1,1--Bis (chlorophenyl)--2,2--Dichloroethane

He provided an overview of the section of the Expert Panel Report that addressed Sampling with the Panel's Discussions and Recommendation noted:

Sampling Requirements

“When conducting the study, the panel will also take the following steps:

- 3) Perform a detailed analysis of the chemical and biological composition of biosolids*

Panel Discussion

The panel was limited in the performance of this task considering no funding was available to conduct new analyses. The vast number of constituents in biosolids combined with the specialized analytical methodologies to detect and quantify these constituents involves significant cost. Thus the Panel relied on existing data.

The complete results of the latest US EPA limited biosolids survey are expected to be released by the end of calendar year 2008. This survey will report on the concentrations of 145 chemical constituents in biosolids through the United States. It will not characterize all of the chemical and microbiological constituents in biosolids.

In an effort to gather information on the biosolids material being land applied in Virginia, the expert panel sent a request to 43 wastewater treatment plants that generate biosolids land applied in Virginia. The request asked generators land applying in Virginia to submit testing analyses conducted on biosolids produced over the past five years. Much of these data would have been previously submitted in order to satisfy state and federal regulatory requirements, particularly metals and priority pollutants required by NPDES permits. The panel also requested any additional pathogen and any other analysis results beyond the existing regulatory requirements.

In response to the request, 15 facilities submitted data. These facilities and test parameters are summarized in an attachment to this report. Data included details on the parameters required by Virginia and EPA regulations, and showed compliance with those requirements. Further, several facilities included data on other results including fecal coliform, Escherichia coli, salmonella, helminth ova, and percent volatile solids reduction. Two facilities, the District of Columbia Water and Sewer Authority (DCWASA) Blue Plains plant and the city of Milwaukee (manufacturer of Milorganite®) submitted additional data on other potential contaminants.

The results of this survey demonstrate that an extensive history of the compliance regarding levels of regulated parameters is available. Information on non-regulated parameters is limited, although it was noted that in the small data set obtained by the Panel, the levels of most of these other parameters were non-detectable based on the sensitivity of the analytical methodology.

Some panel members noted that increased field sampling by DEQ inspectors could be used to further verify compliance with the regulated parameters, particularly with respect to nutrients as well as when there have been reports of illnesses associated with a particular application. Other panelists believed the work associated with additional field sampling was unnecessary due to the history of compliance associated with land application. The panel noted that a field sample collected during land application would be a grab sample, the results of which would not be directly interchangeable with the results of composite samples taken at the wastewater treatment facility. For this reason, the significance of non-compliance with a field grab sample would have to be clearly defined as part of a protocol defined in the regulatory requirements. In addition, any defined protocol should address who would bear the cost of additional field sampling.

The Panel was unable to make a consensus recommendation regarding the need for additional parameters to be regulated. The presence (identification and quantification) of any current or new constituent in biosolids does not necessarily mean the public is exposed to these constituents nor does it necessarily translate to a negative health impact.

The panel also discussed the importance of effective industrial pre-treatment programs to the successful operation and compliance of wastewater treatment plants, including novel and emerging programs that may address some of the newer constituents of concern. Pre-treatment is an effective means of minimizing some potentially harmful contaminants from reaching wastewater plants in the first place, thus ensuring select contaminants are excluded from biosolids as well as the treated liquid effluent discharged to receiving water bodies.

The Panel makes the following recommendation based on the discussion above:

Panel Recommends: To support research being conducted in response to questions regarding biosolids effects on human health, wildlife, or water quality, the panel suggests that DEQ inspectors are ideally suited to be neutral parties that could obtain sample materials for such studies. Collecting additional samples for parameters beyond those required by the regulation would benefit researchers at Virginia universities. A protocol for requesting such material through DEQ should be devised that includes chain of custody procedures and a communication plan that includes generators and researchers, ensuring that generators from whom biosolids are obtained are informed regarding the results of the study.”

4) Facilitated TAC Discussion – Mined Land Reclamation (Angela Neilan):

Angela Neilan facilitated a discussion among the TAC members on “Mined Land Reclamation”.

The TAC's discussions on this topic included the following:

- Lee Daniels had researched the concept of the use of a one time higher than agronomic rate application of biosolids to mined lands as a way to reclaim the lands on a more rapid basis than the use of just agronomic rates.
- There is an initial spike of nitrogen that results from this one time application but apparently there are no measurable effects on groundwater.
- A rate of 35 dry tons per acre is the recommended "higher than agronomic rate" application rate. This is 5 to 10 times larger than the normal agronomic rate.
- This rate of 35 dry tons per acre is lower than the rates for similar applications in neighboring states. Maryland uses 60 dry tons per acre; while Pennsylvania uses 40 to 50 dry tons per acre.
- The value of 35 dry tons per acre is believed to provide longer term and better environmental benefits than the short term environmental risk of the spike in nitrogen. The 35 dry tons per acre is a "one-time" application rate.
- A question was raised as to whether DCR had a section in their Nutrient Management Plan requirement that addresses "mined land reclamation". DCR responded that there was not a section that directly addressed this topic. DCR noted that they would look at the agronomic rate for the crop being proposed for the site and see how much nitrogen and phosphorus was being applied. It was noted that when looking at a mined land site, you can't look at soil surveys to determine the types of soils on the site because the soils have been removed and rearranged to access the desired mining materials. Mined Lands are normally grouped into the lowest level of productivity, "Productivity Group 5". It was also noted that in the past these types of properties had been looked at in the past with the requirement for addition of wood chips or some other carbonatious materials as well as the availability of nitrogen.
- Mined lands are normally the least productive soils and the use of a large amount of biosolids is used in a one time application to raise the productivity from a low to a normal level. Productivity is also a function of the soils ability to hold and to supply water which necessitates an increase in organic matter.
- The Division of Mines, Minerals and Energy regulations require that a "reclamation plan" be on file. That plan usually requires that the overburden be included as part of the berm and that the layers are to be put back in place, minus the materials removed as part of the mining process. It was noted that the topsoil is normally stockpiled, but it tends to disappear during the process and doesn't always get put back in place. In addition the topsoil component is such a small portion that it doesn't have the same value as the original once it is put back in place.
- A question was raised as to whether there was a significant difference between "orphan" sites versus "active" mined land sites to make a difference in the application rates for the one time application of biosolids.

ACTION ITEM: Staff will contact Lee Daniels to determine whether there is a significant difference between "orphans" and "active" mined land sites to warrant a difference in the recommended application rates.

- A question was raised as to what specific requirements and considerations were included in neighboring states' Mined Land Reclamation Requirements.

ACTION ITEM: Staff will research the Mined Land Reclamation Requirements for neighboring states to determine any applicable rates or requirements that could be included as part of the biosolids regulations.

- DCR noted that the statute requires that a Nutrient Management Plan be developed for land application of biosolids. DCR has agreed to evaluate mined land reclamation sites on a case-by-case basis. The sites are still considered land application and the expectation is that the level will be at the recommended agronomic rates. If the proposed rates are greater than agronomic rates than the agreement is to address those levels in an approved plan.
- A question was raised regarding any guidance for NMPs addressing "mined land reclamation" sites. There is currently no guidance available to address these situations. They are handled on a case-by-case basis.
- A higher rate is designed to restart the soil as some form of productive land. The one time higher than agronomic rate application is designed to provide an extra boost to restart the system.
- A question was raised regarding whether the distinction between "frequent" versus "infrequent" applications of biosolids and this concept of a "one-time" application. It was noted that with "reclaimed lands" the concept is to make the one-time application then it is "hands-off" the site until the end of the treatment period or bond period which is "5-Years". If any additional applications were to be made during that "5-Year" period then the 5-Year clock would restart.
- Annual applications at an agronomic rate to a reclaimed land site typically fail as a means to reclaim the site.
- A question was raised as to whether the regulation should require that biosolids be mixed with some carbonatious materials to increase the organic content of the biosolids. DCR noted that this was something that might be worth considering.
- It was suggested that the DEQ staff should consider a revision of the section of the regulations that currently place a restriction on the amount of biosolids to a level of "15 dry tons" to provide for the higher than agronomic rate of 35 dry tons per acre being considered for mined land reclamation sites.
- Staff noted that DEQ can't identify the rate in their regulations; that is up to DCR as part of the NMP requirements.
- A question was raised as to whether DCR currently had anything in their standards and criteria for NMP that addressed the application rates for mined lands. DCR responded that these topics are not currently addressed. It was suggested that the development of DCR guidance in this area would be helpful.

OPEN CHAIR: Steve McMann - Synagro: They had one site where wood chips were added to a biosolids application site. There was a large supply of wood chips available in close proximity to a particular mined land reclamation site. The land owner had two trucks and agreed to haul the wood chips to the site. The ratio used was 2 parts wood chips to 1 part biosolids. The materials were applied to the site and then incorporated into the soil. It was a very labor intensive effort. There are situations where the use of this type of combined application could be considered, i.e. where a material may be available in close proximity to an application site. Could be considered on a case-by-case basis, but should not be a requirement.

- It was noted that the General Assembly specifically crafted language in the Code that stipulates that biosolids that are suitable for land application in Virginia require "no further treatment". Any proposed wording changes to address the inclusion of carbonatious materials needs to specify that this does not constitute "further treatment".
- A question was raised as to what would a Nutrient Management Plan for a land reclamation site look like? DCR noted that the time requirements could be built into the NMP. The NMP would look different than the NMP for a farm of a normal application site and would require prior approval.
- There have been land reclamation sites that have required the use of multiple application rates and with and without additional materials (sawdust) and the additional incorporation of these materials, so each NMP would have to be considered separately on a case-by-case basis.
- A question was raised regarding the absence of a representative from the Division of Mines Minerals and Energy from these discussions. It was noted that DCR would work in consultation with DMME to develop the NMP for these types of sites. Staff noted that a lot of today's discussions have been outside of DEQ's regulatory process and that it is really DCR's call to work with DMME to work out the details.
- DCR noted that it would be important in DEQ's process to classify the addition of a carbonatious source as "not further treatment"; to change the "greater than 15 dry tons" restriction that currently exists in the regulations and to require that any application at higher than agronomic rates requires prior approval.
- A need for coordination between DEQ, DCR and DMME to address the issues related to mined land reclamation sites was stressed.

ACTION ITEM: Staff will work with DCR and DMME to develop a Memorandum of Understanding regarding specific agency roles in dealing with mined land reclamation sites and the application of biosolids to those sites. In addition, it was suggested that the Extension Service and Virginia Tech should be included in this mix.

- A question was raised regarding the ultimate use of these reclaimed sites. It was noted that typically these sites are used for commercial use, such as shopping malls. Depending on the location of the site, they may also be used for forestry or crop production.
- The use of higher than agronomic rates on a site might trigger local land use regulation restrictions, so the local governments in the area should be notified.
- A question was raised regarding the recommendation for "35 dry tons per acre". It was noted that this was a recommendation made by Lee Daniels as the "lowest greater than agronomic rate application that would be beneficial. It is a research-based recommendation. The rate was developed as a "maximum rate" that would balance environmental risks and environmental benefits.
- Staff reminded the group that DEQ cannot establish the rate within the regulations.
- It is tough to get reclaimed land re-established. Most mined land sites are pretty remote and provide a real opportunity for the use of biosolids without a lot of the baggage that goes with the application of biosolids on a normal farm. It was recommended that there should be a lot of flexibility built into the regulations for this type of use.
- It was recommended that the requirement for coordination between and among DEQ, DCR, DMME, Extension and Virginia Tech should be included in the regulations.
- It was suggested that there was a little better handle on these reclamation sites than that

available for a land owner or farmer on a "normal" site since there was a "bond requirement" built into the mined land reclamation sites.

5) Facilitated TAC Discussion – Sampling Requirements (Angela Neilan/Neil Zahradka):

Neil Zahradka briefly reviewed the current requirements and noted that was a topic that covers a lot of requirements and there are lots of sections in the regulations that address what we are sampling for. He noted that the areas of "sampling" that the Expert Panel looked at included "new sources"; "ongoing sampling" and "sampling at the time of a health complaint". Angela Neilan facilitated a discussion among the TAC members on "Sampling Requirements" including requirements related to "A New Source"; "Ongoing Sampling"; and "At the Time of a Health Complaint".

The TAC's discussions on this topic included the following:

- It would be difficult to identify what chemical compound or element that you would end up sampling for if you had a "new source" of biosolids. For a "new source" of biosolids that ought to be some kind of bioassay to determine the "ability to grow crops". A bioassay to ensure the materials suitability for crop production would be needed. The testing of any "new source" would be needed.
- A "new source" would be a source that has not been land applied in Virginia to date and a source that has never been land applied anywhere, i.e. no previous history or track record of land application in the U.S.
- If a source had been land applied in another state but not previously in Virginia that information could be provided. The documentation of any previous land applications should be provided for any "new source" never previously land applied in Virginia.
- A question was raised as to whether there was anything that Virginia currently samples for that is not sampled for in any neighboring states.

ACTION ITEM: Staff will review the sampling requirements in neighboring states to determine whether there are any components that are sampled for in Virginia that are not included in neighboring states requirements.

- It was recommended that any documentation for a "new source" needs to include information on all parameters required in the Virginia regulations.
- Staff noted that the requirements for testing for all of the Virginia parameters is already included in the application requirements, i.e. the test requirement for PCBs is not required in the regulations but is required as a one time test at the time of application.
- PCBs were selected by EPA as a constituent to test in the second round after 503. There is a risk assessment level that has been set by EPA for PCBs. There are apparently very few STPs that exceed that risk assessment level. It was recommended that the regulations should require that there be an initial test done for any new source that is proposed to come into Virginia to determine their PCB level.
- The regulation places the requirement on the Generator to perform the sampling. The Applicant is required to provide that sampling data as part of the application. There are no new

requirements placed on the Applicant. This language needs to be clarified.

ACTION ITEM: Staff will clarify the requirements for sampling and reporting for the Generator and the Applicant in drafting proposed regulatory language.

- It was recommended that the regulations should specify that any biosolids materials land applied in Virginia have been tested and meets all Virginia regulatory requirements.
- A question was raised regarding the difference, if any, between the Virginia Requirements and the 503 Requirements. Staff responded that for metals that the sampling requirements are pretty much exactly the same, we just need to make sure that we have all of the required nutrient information.

ACTION ITEM: Staff will confirm whether the DEQ requirements are stricter than or as strict as the 503 requirements.

- Virginia is not more stringent in what needs to be tested for, but is more conservative in the area of Nutrient Management Plan requirements.
- All of the management practices in Virginia; standards; and buffer requirements are much more stringent. The metal numbers are exactly the same as 503.
- EPA is currently looking at the addition of more metals and organics to the sampling requirements for 503.
- The topic of sampling "at the time of a health complaint" was introduced. Staff noted that there is nothing in the regulation that addresses this topic. This topic was discussed during the General Assembly session, but no specific recommendations were made. Is there a value to doing specific sampling "at the time of a health complaint"?
- There is no direct demonstrated "cause and effect". There is legally no clinical reason to test because most cases have a delayed onset of conditions that may occur months after an application has occurred. The need for more data and the establishment of a registry or complaint database to help to determine any "cause and effect" was noted.
- Specific sampling at the "time of a health complaint" would be difficult since the symptoms are normally more of an irritant and not necessarily an organism that can be tested for. The specific sampling and testing would be difficult to identify and to specify in regulations.
- It was noted that just because you can test doesn't mean that it's a meaningful or useful test.
- Bacteria are found in places other than just biosolids.
- A question was raised if there was a health complaint what would we be testing for? It was noted that testing might not be helpful or practicable. What you would be testing for would be things that are likely below threshold limits. Most diagnosis involving toxins are diagnoses of exclusion. Most toxins you can't detect.
- As a practical matter, toxic metals can cause a lot of problems, i.e. cadmium or lead.
- Exposure can be different. Multiple people can have the same level of exposure and only one could become sick from the exposure. It would be difficult to address hypersensitive individuals and determine what should be tested for in those instances.
- The need for the development of case records of complaints was noted.
- Sampling in response to a single health complaint may not be necessarily useful. The Expert Panel debated this concern and recommended the establishment and use of some form of Health Surveillance Protocol. Staff noted that this was more of an interagency issue than a regulatory issue. Staff also noted that there was a pilot project underway in a neighboring state (Ohio) that

uses a protocol developed in North Carolina that is attempting to collect information regarding the land application of biosolids and any possible links to health effects. Staff noted that any such protocol in Virginia would likely be developed and implemented outside of the regulatory process.

- The soil sampling requirements identified in the regulations (Table 5) are out of date and need to be updated during the drafting of regulatory language. The table needs to be amended. Some of the parameters don't make any sense. A concern was raised over the use of the terms "extractable" versus "exchangeable". The term "extractable" is an indicator of availability. There needs to be an "index of availability" provided for in the regulations. It doesn't matter whether there is an "exchangeable or an extractable" requirement as long as the ultimate result is the determination of an "index of availability". It was recommended that the current use of the term "exchangeable" should be changed to "available". It was also noted that the important consideration was "bioavailability" not the "total".
- Need to test the biosolids not the soil for a particular component or nutrient.
- The list of soil sampling requirements was developed 20 years ago and needs to be updated.

ACTION ITEM: Staff will look at the testing/sampling requirements to develop an updated list.

- The Center for Poison Control suggested to the group that they may be able to play a role as a resource to VDH and DEQ in the collection and development of clinical information from individual primary care physicians related to health complaints related to the land application of biosolids.

6) Animal Health Issues - Facilitated Discussion (Neil Zahradka/Angela Neilan)

Neil Zahradka introduced the topic of "Animal Health Issues" and provided an overview of the current regulations related to site access time restrictions related to grazing:

9VAC25-32-620. Site access time restrictions.

A. Unrestricted access (UA). Biosolids that have undergone Class I treatment to achieve Class A pathogen control may be applied or incorporated into the soil of agricultural lands and immediate public access is permitted. A waiting period is required up to 30 days following application (to allow adhering biosolids to be washed from the foliar portion of the plants by precipitation). This waiting period is required before (i) crops are harvested for human consumption, or (ii) domestic animals are allowed to graze on the site.

B. Restricted access (RA). Following application or incorporation of biosolids that have undergone Class II treatment to achieve Class B pathogen control public access and crop management shall be restricted as follows: (i) access to any site with a high potential for contact with the ground surface (public use) by the general public shall be controlled for a minimum time period of one year, (ii) access to agricultural sites and other sites with a low potential for public exposure shall be controlled for 30 days, (iii) food crops with harvested parts that touch the biosolids/soil mixture and are not totally above the land surface shall not be harvested for 14 months, (iv) food crops with harvested parts below the surface of the land shall not be harvested for 20 months following application, when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil, (v) food crops with subsurface harvested parts shall not be harvested for 38 months following application, when the biosolids remain on the land surface less than four months prior to incorporation, (vi) feeding of harvested crops to animals shall not take place for a total of one month following surface application (two months for lactating dairy livestock), (vii) grazing by animals whose products will or will not be consumed by humans is prevented

for at least 30 days (60 days for lactating dairy livestock), and (viii) harvesting turf grass for placement on land with a high potential for public exposure or a lawn is prevented for 12 months.

C. Modified Access (MA). If a biosolids processing sequence is used to treat PSRP or PSLP biosolids that eliminates or inactivates helminth eggs (EH), public use access restrictions are reduced to six and eight months respectively, which shall include two summer months. A summary listing of access restrictions is presented in Table 9.

Angela Neilan started the "facilitated" part of the discussion.

The TAC's discussions on this topic included the following:

- The grazing restriction of 30 to 60 days were based on the exposure to or contact with the animal with people and was developed based on beef cattle and lactating livestock respectively.
- A question was raised as to the restriction for horses? Based on the EPA Risk Assessment the 30 day grazing restriction could apply to horses. There is nothing inherent that would make the restriction any different for horses and cattle. The increased restriction for lactating cattle was based on the increase of interaction with people.
- Chromium was originally included in the regulation and the 503 requirements because of its use in water treatment processes and cooling towers. Chromium has now been replaced by the use of Molybdenum. Molybdenum was added as an additional risk assessment factor because of its potential to create copper deficiencies in young cattle. The risk assessment method used by EPA sets the 503 pollutant concentration level for molybdenum at 44-45 milligrams per kilogram. Conservatively, this figure is usually rounded to 40. It was noted that this ceiling level is never seen. There are instances where treatment plants may reach a level of 50, but that is usually in cases where there are a lot of laundries connected to the system.
- It was noted that in regard to other metals on the list that the normal is for their levels to be an order of magnitude below the lowest level.
- Staff noted that Indiana had adopted additional grazing restrictions for the presence of molybdenum. The restriction was an additional 30 days grazing restriction. It was noted that the implication is that molybdenum doesn't persist in the soil. A question was raised as to what makes Indiana so unique as the only state to impose this additional restriction to provide protection to grazing livestock?

ACTION ITEM: Staff will research the Indiana situation to see what made them impose the additional grazing restriction.

- The need for language in the regulation to spell out the requirements to educate and inform the landowners of changes in the regulations and specific chemicals of concern was noted. It was suggested that language could be included in the landowner agreements that could address education and information requirements.
- It was noted that over the course of the past 20 years that the concern over or issues with molybdenum have been raised more than any other metal.
- There have been cases of copper deficiencies where molybdenum could be an issue.
- Staff noted that there needs to be an interagency agreement between DEQ and VDACS regarding how to address copper deficiencies as they may relate to the presence of molybdenum in biosolids.
- High pH in association with higher molybdenum levels can result in a higher risk, especially

- with the use of lime-stabilized biosolids.
- It is important to know the soil pH!
- A question was raised regarding whether lactating livestock also included goats? The response was yes.
- It was noted that the topic under discussion, the presence of molybdenum above certain levels, might not "ring the bell" on a consistent basis, but was one worth consideration. It was suggested that we need to look at our records to determine the source of biosolids that contain these levels of molybdenum so that we can look at the treatment processes being used to determine its source. It was noted that it is not an occasional spike. There are some treatment plants that reach a level of 50; 55; or 60 ppm on a routine basis. All biosolids are below the lower levels, but there are some facilities that are testing above that level at some stage of their treatment process.
- A recommendation was made that DEQ should examine their database and materials presented during the Expert Panel discussion to determine if there is a need for the establishment of a lower threshold level or additional grazing restrictions.

ACTION ITEM: Staff will review the database and Expert Panel materials to determine if there is a need for the establishment of a lower threshold level and/or additional grazing restrictions for the presence of molybdenum.

- A question was raised regarding the source of the molybdenum? It was noted that the sources usually consisted of community cleaners and water cooling towers.
- A concern was raised over the possibility of "nitrogen toxicity". Staff noted that weather conditions, especially drought conditions could result in "nitrogen toxicity" in some cases. This is more of an extension service issue rather than a DEQ issue.

7) Permitting – Facilitated Discussion (Neil Zahradka/Angela Neilan)

Neil Zahradka introduced the topic of “Permitting” as it relates to “Research” and “Distribution and Marketing” and provided an overview of the current regulations related to those areas:

Distribution and Marketing of Exceptional Quality Biosolids

9VAC25-32-570. Distribution and marketing.

A. Exceptional quality. Distribution or marketing provides for the sale or distribution of exceptional quality biosolids or mixtures of Class I treated biosolids with other materials such that the mixture achieves the Class A pathogen control standard. Distribution or marketing of Class I treated biosolids that have been mixed with inert materials may be approved on a case-by-case basis. Inert materials shall not contain pathogens or attract vectors. Use of such mixtures for agricultural purposes should be evaluated through proper testing or research programs designed to access the suitability of the material for such use. Exceptional quality biosolids marketed as fertilizers or soil conditioners must be registered with the Virginia Department of Agriculture and Consumer Services. The permit applicant shall obtain such registration prior to issuance of a permit by the board for residential, agricultural, reclamation or silvicultural use.

1. Because of the high potential for public contact with distributed and marketed sludge or sludge products, only biosolids processed to meet criteria specified for Class I treatment process sequences designed to eliminate or further reduce pathogens (PFRP) shall be sold or given away for application to

land. In addition, the biosolids must meet vector attraction reduction requirements, and other quality standards (Table 8) as required for the intended use.

2. Exceptional quality biosolids may be distributed and marketed in either bulk amounts (unpacked) or as a bagged product. For purposes of this regulation, a bulk use quantity of biosolids will be defined as a volume of that sludge product containing 15 dry tons or more of sewage sludge. Application of bulk use quantities of exceptional quality biosolids to home vegetable gardens shall not exceed an equivalent annual loading rate of approximately one pound dry weight of biosolids per square foot (garden products may constitute a significant portion of a family diet and the amount of applied biosolids cannot be specifically controlled as in agricultural use). Exceptional quality biosolids can ideally be used as soil amendments for horticulture and landscaping purposes such as:

a. Use in potting soil mixes;

b. Use for seed beds, for establishment of grass and other vegetation and for topdressing of existing lawns and landscape vegetation.

3. Only exceptional quality biosolids produced from an approved sludge processing facility can be distributed and marketed. Biosolids sold for use as soil amendments or fertilizers must be registered with the Virginia Department of Agriculture and Consumer Services. Approved sludge processing facilities are those facilities constructed and operated in compliance with required permits. Approved methods of Class I processing for biosolids for distribution or marketing include, but may not be limited to, the methods described in this article.

B. Permits. Any owner who proposes to distribute or market exceptional quality biosolids or materials derived from Class I biosolids (distributor), including soil additives or compost in bulk use quantities, shall be required to obtain a written approval issued by the board. The derived material shall achieve acceptable vector attraction reduction standards and contain acceptable levels of solids and pollutant concentrations in accordance with this regulation. A permit for distribution or marketing is not required provided that an operation permit has been issued for land application of the processed material as part of either an approved sludge management plan (12VAC5-585-140 H) or an approved management practices plan (12VAC5-585-240). Approval of the distribution of bulk use quantities of exceptional quality biosolids is not required for a holder of a valid permit that authorizes distribution in bulk use quantities. All requests for bulk use approval shall be directed initially to the appropriate regional office of the department. The Virginia Department of Health, the Virginia Department of Agriculture and Consumer Services and the Virginia Department of Conservation and Recreation may participate in the review of such permits involving land application. A permit for distribution of bulk use quantities of biosolids will require the submittal and review of an acceptable distribution information sheet as described in this regulation. The approval of a distribution information sheet for bulk use quantities of exceptional quality biosolids will be issued in the form of a letter of approval of such use by the department's regional offices.

The permittee shall maintain records on the sludge processing facility operation, maintenance and laboratory testing. Records shall be maintained for all samples to include the following: (i) the date and time of sampling, (ii) the sampling methods used, (iii) the date analyses were performed, (iv) the identity of the individual obtaining each sample and the analysts, and (v) the results of all required analyses and measurements. The records shall include all data and calculations used and shall be available to the department for inspections at reasonable times. All required records shall be kept for a minimum of five years.

C. Information furnished to all users. Biosolids distributed for public use in Virginia shall have proper identification of the producer and a description of the product including an acceptable statement of quality based on representative analytical testing. This information shall be provided by the owner in either brochures for bulk distribution or by proper labeling on bagged material. Labeling requirements should be addressed in a management plan or in the operation and maintenance manual for the processing facility.

Information provided to users of marketed or distributed biosolids should note the following: (i) the nutrient content, (ii) the acceptable land application rates, (iii) the CCE value, the pH, (iv) to follow the stated directions for use, and (v) that for any uses not specified the user should contact the distributor at a listed address or telecommunications number.

D. Distribution information. Distribution information should be maintained by the sludge processing facility owner or holder of a permit for distribution or marketing (distributor) and completed by any single biosolids

distributor or user receiving bulk use quantities of marketed or distributed biosolids of more than 50 cubic yards during a period of 24 consecutive hours or less. Copies of this information should be maintained by the sludge processing facility or distributor and be made available upon request by the department. These records should include the following information, as a minimum:

1. Date;
2. Name, address, and phone number of user;
3. Amount of exceptional quality biosolids obtained;
4. Location and property owner where biosolids are being used;
5. Size of area where biosolids are spread;
6. Proximity of site to closest river or water supply source; and
7. Description of site uses.

Only the information listed in subdivisions 1 through 4 of this subsection shall be necessary for submission by a biosolids distributor.

The department reserves the right to prohibit the distribution of bulk use quantities of biosolids when it appears that such distribution is being accomplished in such a manner so as to circumvent the foregoing requirements.

E. Other uses. The use of a nonhazardous sewage sludge product, such as incinerator ash, will be evaluated on a case-by-case basis as provided for by this regulation.

Angela Neilan started the "facilitated" part of the discussion on "research".

The TAC's discussions on this topic included the following:

- Staff noted that the statute now says that a VPA or VPDES permit is required whenever biosolids are land applied in Virginia. The VDH regulations contained an exemption for "research", but DEQ had to take that out of the regulations during the "exempt action". A fee exception for research was left in the "Fee Regulations". Under the current regulation, research on biosolids would have to have/obtain their own permit or would have to operate as part of an existing permit.
- It was noted that there was an exemption in state law that exempts research on state lands. It was also noted however that there is more research done on private lands than on state owned lands in Virginia.
- Staff suggested that DEQ might be able to generate a "General Permit" that would be available for "research". However, an additional regulatory action would be required. A NOIRA would have to be developed for a General Permit for Research so that research would not be precluded to apply at only agronomic rates. Staff noted that it could take 2 years to develop a General Permit.

ACTION ITEM: Staff will look at the wording in the Code and regulations to determine what can be done to be able to provide for research on biosolids applications in general and specifically at application rates that are over the agronomic rate. Staff will look at providing a mechanism to allow the research and also provide the necessary environmental protection.

- A question was raised regarding what the Nutrient Management Plan for a research application at over the agronomic rate would look like and what rate(s) would be identified in the plan? Staff responded that the research components and the need to apply at over the agronomic rate could be addressed in the narrative of the NMP.
- A question was raised as to how DCR currently addresses research projects in relation to their

Nutrient Management Plan requirements.

ACTION ITEM: DCR staff will check to see how "Research" is currently handled through the Nutrient Management Plan Regulation and will relay that information to DEQ staff for consideration during the development of the Biosolids Regulations.

- It was noted that there will be studies and research projects that will be looking at application rates for biosolids in excess of agronomic rates. There needs to be a way to accommodate that level of research.
- A concern was raised that applications in excess of the agronomic rates may create some local government concerns. Staff noted that the statute currently requires that the local board/local government is notified.
- Staff asked the group whether the creation of a new section in the regulations to deal with and address the issues associated with "research" would be useful. The response was that such a section would be helpful.

ACTION ITEM: Staff will develop draft regulatory language to address "research" projects and create a new regulatory section to address issues related to "research" and to clearly state what is allowed.

- It was recommended that there be some consideration for expedited procedures for these types of projects. These projects normally occur on discrete pieces of property and by design are a one-time application at higher than agronomic rates.
- It was suggested that the regulatory language be revised and clarified so that "research" does NOT mean "land application". The code could be read to mean that "research projects" are not "land application", but there still needs to be some oversight of the project.
- Under the VDH regulations, research projects were never held to the agronomic rates. The projects were submitted to VDH and always went through an approval process prior to the issuance of a research permit.
- It was recommended that the definition of "research" contained in the regulations should be different than that for "land application" so that there is a clear distinction between the two activities.
- It was noted that there are some instances where "research" projects can cover a large area of land and there are also instances where "research" and "land application treatments" are occurring on the same properties at the same time.
- A reference was made to a statute that addressed research on state-owned land. This was House Bill 1790 from the 2005 Session of the General Assembly.

ACTION ITEM: Staff will review the text of the 2005 legislation to confirm the requirements and exemptions provided for research on state-owned properties. Text provided as reference below:

CHAPTER 65

An Act to amend the Code of Virginia by adding in Article 1 of Chapter 1 of Title 10.1 a section numbered [10.1-104.4](#), relating to nutrient management plans for state-owned lands.

[H 1790]

Approved March 20, 2005

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Article 1 of Chapter 1 of Title 10.1 a section numbered [10.1-104.4](#) as follows:

§ [10.1-104.4](#). *Nutrient management plans required for state lands; review of plans.*

A. On or before July 1, 2006, all state agencies, state colleges and universities, and other state governmental entities that own land upon which fertilizer, manure, sewage sludge or other compounds containing nitrogen or phosphorous are applied to support agricultural, turf, plant growth, or other uses shall develop and implement a nutrient management plan for such land. The plan shall be in conformance with the following nutrient management requirements:

1. For all state-owned agricultural and forestal lands where nutrient applications occur, state agencies, state colleges and universities, and other state governmental entities shall submit site-specific individual nutrient management plans prepared by a certified nutrient management planner pursuant to § [10.1-104.2](#) and regulations promulgated thereunder. However, where state agencies are conducting research involving nutrient application rate and timing on state-owned agricultural and forestal lands, such lands shall be exempt from the application rate and timing provisions contained in the regulations developed pursuant to § [10.1-104.2](#).

2. For all state-owned lands other than agricultural and forestal lands where nutrient applications occur, state agencies, state colleges and universities, and other state governmental entities shall submit nutrient management plans prepared by a certified nutrient management planner pursuant to § [10.1-104.2](#) and regulations promulgated thereunder or planning standards and specifications acceptable to the Department.

B. Plans or planning standards and specifications submitted under subdivisions A 1 and A 2 shall be reviewed and approved by the Department. Such approved plans and planning standards and specifications shall be in effect for a maximum of three years, and shall be revised and submitted for approval to the Department at least once every three years thereafter.

C. State agencies, state colleges and universities, and other state governmental entities shall maintain and properly implement any such nutrient management plan or planning standards or specifications on all areas where nutrients are applied.

D. The Department may (i) provide technical assistance and training on the development and implementation of a nutrient management plan, (ii) conduct periodic reviews as part of its responsibilities authorized under this section, and (iii) assess an administrative charge to cover a portion of the costs for services associated with its responsibilities authorized under this section.

E. The Department shall develop written procedures for the development, submission, and the implementation of a nutrient management plan or planning standards and specifications that shall be provided to all state agencies, state colleges and universities, and other state governmental entities that own land upon which nutrients are applied.

Angela Neilan started the "facilitated" part of the discussion on "distribution and marketing".

The TAC's discussions on this topic included the following:

- In Virginia there are uniform requirements for the content and labeling of "distribution and marketing" materials and VDACS registration.
- As far as permitting goes, a VPA Individual Permit is required for "distribution and marketing". This requires the same permit approval process as any other permit. Staff noted that a General Permit could be developed to address the issues related to "distribution and marketing" but that would require a separate regulatory action. There are approximately a dozen permits for

"distribution and marketing" that have carried over from the VDH BUR. It is likely that as the development of EQ biosolids increases that there will be more permit applications.

- Under the current regulations a permit is required for EQ biosolids distribution and marketing. A question was raised as to whether there was a "volume" limit imposed in the regulations and whether "bags" of the materials need a permit? No matter the volume this material would still need a permit. The code requires that if biosolids are distributed and marketed that a permit is required.
- A Sewage Treatment Plant decides to produce an EQ biosolids for marketing and distribution, they hire a contractor to set up a composting or pelletizing operation, if they don't already have a land application permit then there would need to be a VPA permit for that distribution and marketing operation but there would NOT need to be a VPA permit for an individual that comes into a store and purchases bags of the material for use on their property. The homeowner who comes in and purchases a bag or bags of the material doesn't need a permit. The entity that is distributing and marketing the material has to have a permit. Staff noted that a facility that has a VPDES permit (in Virginia) can authorize the distribution and marketing of EQ materials under that permit.
- A question was raised as to whether a farmer who buys bulk load (bags) of this "distribution and marketing" material for use on his farm needs a permit? Staff responded that the farmer in this case would not need a permit, as long as there was an existing permit that covered the material itself. (Distribution and Marketing Permit)
- The Nutrient Management Plan portion requires for "distribution and marketing" is essentially the labeling requirements that spell out the content and proper use of the materials. Making sure that the material meets EQ standards.
- VDACS regulates the labeling requirements and requires that it be registered with VDACS.
- A question was raised as to whether this results in having to provide the same information to two different agencies (DEQ and VDACS)?
- VDACS requires that you get a fertilizer license that is renewed annually, depends on whether it is registered as a soil amendment or a fertilizer. The cost could be \$50 to \$100 for registration. Have to have a guaranteed analysis of the content of the materials at the time of the initial applications and what will be on the label and test results one time. The quantity of material sold in each county in Virginia has to be tracked and reported annually on volume sold per county. A fee of \$.25 per ton is then paid to VDACS for the registration and labeling. The requirements are different that that required by DEQ. It was suggested that the initial information might be similar between the two requirements.
- A concern was noted that the instance where a farmer purchases a bulk load of "distribution and marketing" materials for use on his farm might constitute "land application" and would require a permit under the statute. The existence of a label would not meet DCR requirements for a Nutrient Management Plan and would not meet the requirements of the statute. It was suggested that the statute clearly makes a distinction between "land application" and "distribution and marketing". Land application of biosolids is a land application under a permit and a Nutrient Management Plan is required prior to application. There is no permit requirement for application of distribution and marketing by a farmer.
- A question was raised regarding EQ biosolids materials that are "cake" materials and how those are addressed? Staff responded that the way it is currently being handled is that those materials are being land applied under the old VDH BUR permits. But would require a "distribution and marketing" permit for that material now.
- Everything thing needs a permit. It has to either be a "land application" permit or a

"distribution and marketing" permit. A Nutrient Management Plan is required for all "land application" permits.

- "Land application" of biosolids requires the person putting the material down needs a permit. "Distribution and Marketing" materials can be put down by anyone that buys the material, so there is no permit required for the person putting it down. The material has to be produced under a permit.
- The question that is lingering is with a "distribution and marketing" material what does the Nutrient Management Plan look like? DCR noted that they had suggested some language changes at the last meeting that might address this issue. A concern was raised regarding the ability to enforce nutrient management plan requirements on individuals that are purchasing bags of materials for their personal use. They are not the permit holders so it would be impossible to enforce these types of requirements on their use of the materials. It was suggested that the ultimate tool to use for any environmental problem, i.e. violation of water quality, etc. would be use of the State Water Control Law. The question is what is required for those individuals that are getting bulk amounts of EQ materials and whether it constitutes "land application".

OPEN CHAIR: Hunter Richardson - Synagro: DEQ should be giving the approval for the material and its consistency, while VDACS is responsible for the labeling of the materials and how it is to be handled and applied. Both agencies have a role. Guidance for the end user should be just like the homeowner who purchases this material for their individual use. The use of the material should be in accordance with the label instructions.

- It was noted that unlike "land application" biosolids "distribution and marketing" materials are not free.
- It is a material that walks and acts like a commercial fertilizer. It has a consistent analysis. Any environmental issues would be pursued the agricultural stewardship act or through the State Water Control Law.

8) Fees – Facilitated Discussion (Neil Zahradka/Angela Neilan)

Neil Zahradka introduced the topic of “Fees” as it relates to “EQ Biosolids”; “Research Permits” and “Annual Maintenance Fee” and provided an overview of the current statute and regulations related to those areas:

State Water Control Law

Items highlighted in yellow pertain to permit fees – issuance, modification and maintenance – and reimbursement to localities for local monitor activities.

§ 62.1-44.15:6. *Permit fee regulations.*

BI. Permit fees charged an applicant for a Virginia Pollutant Discharge Elimination System permit or a Virginia Pollution Abatement permit shall reflect the average time and complexity of processing a permit in each of the various categories of permits and permit actions. However, notwithstanding any other provision of law, in no instance shall the Board charge a fee for a permit pertaining to a farming operation engaged in production for market or for a permit pertaining to maintenance dredging for federal navigation channels or other Corps of Engineers sponsored dredging projects or for the regularly scheduled renewal of an individual permit for an existing facility. Fees shall be charged for a major modification or reissuance of a permit initiated by the permittee

that occurs between permit issuance and the stated expiration date. No fees shall be charged for a modification or amendment made at the Board's initiative. In no instance shall the Board exceed the following amounts for the processing of each type of permit/certificate category:

<u>Type of Permit/Certificate Category</u>	<u>Maximum Amount</u>
1. Virginia Pollutant Discharge Elimination System	
Major Municipal	\$21,300
Minor Municipal greater than 100,000 gallons per day	\$7,500
Minor Municipal 10,001-100,000 gallons per day	\$6,000
Minor Municipal 1,000-10,000 gallons per day	\$5,400
Minor Municipal less than 1,000 gallons per day	\$2,000
2. Virginia Pollution Abatement	
Municipal/Sludge	\$ 7,500
General Permit	\$ 600
Other	\$ 750

The fee for the major modification of a permit or certificate that occurs between the permit issuance and expiration dates shall be 50 percent of the maximum amount established by this subsection. No fees shall be charged for minor modifications or minor amendments to such permits. For the purpose of this subdivision, "minor modifications" or "minor amendments" means specific types of changes defined by the Board that are made to keep the permit current with routine changes to the facility or its operation that do not require extensive review. A minor permit modification or amendment does not substantially alter permit conditions, increase the size of the operation, or reduce the capacity of the facility to protect human health or the environment.

B2. Each permitted facility shall pay a permit maintenance fee to the Board by October 1 of each year, not to exceed the following amounts:

<u>Type of Permit/Certificate Category</u>	<u>Maximum Amount</u>
1. Virginia Pollutant Discharge Elimination System	
Major Municipal greater than 10 MGD	\$4,750
Major Municipal 2-10 MGD	\$4,350
Major Municipal less than 2 MGD	\$3,850
Minor Municipal greater than 100,000 gpd	\$1,500
Minor Municipal 10,001-100,000 gpd	\$1,200
Minor Municipal 1,000-10,000 gpd	\$1,080
Minor Municipal less than 1,000 gpd	\$ 400
2. Virginia Pollution Abatement	

An additional permit maintenance fee of \$1,000 shall be collected from facilities in a toxics management program and an additional permit maintenance fee shall be collected from facilities that have more than five process wastewater discharge outfalls. Permit maintenance fees shall be collected annually and shall be remitted by October 1 of each year. For a local government or public service authority with permits for multiple facilities in a single jurisdiction, the permit maintenance fees for permits held as of April 1, 2004, shall not exceed \$20,000 per year. No permit maintenance fee shall be assessed for facilities operating under a general permit or for permits pertaining to a farming operation engaged in production for market.

C. When promulgating regulations establishing permit fees, the Board shall take into account the permit fees charged in neighboring states and the importance of not placing existing or prospective industries in the Commonwealth at a competitive disadvantage.

G. The Board is authorized to promulgate regulations establishing a schedule of reduced permit fees for facilities that have established a record of compliance with the terms and requirements of their permits and shall establish criteria by regulation to provide for reductions in the annual fee amount assessed for facilities accepted into the Department's programs to recognize excellent environmental performance.

§ 62.1-44.19:3. Prohibition on land application, marketing and distribution of sewage sludge without permit; ordinances; notice requirement; fees.

F. The Board shall adopt regulations prescribing a fee to be charged to all permit holders and persons applying for permits and permit modifications pursuant to this section. All fees collected pursuant to this subsection shall be deposited into the Sludge Management Fund. The fee for the initial issuance of a permit shall be \$5,000. The fee for the reissuance, amendment, or modification of a permit for an existing site shall not exceed \$1,000 and shall be charged only for permit actions initiated by the permit holder. Fees collected under this section shall be exempt from statewide indirect costs charged and collected by the Department of Accounts and shall not supplant or reduce the general fund appropriation to the Department.

G. There is hereby established in the treasury a special fund to be known as the Sludge Management Fund, hereinafter referred to as the Fund. The fees required by this section shall be transmitted to the Comptroller to be deposited into the Fund. The income and principal of the Fund shall be used only and exclusively for the Department's direct and indirect costs associated with the processing of an application to issue, reissue, amend, or modify any permit to land apply, distribute, or market sewage sludge, the administration and management of the Department's sewage sludge land application program, including but not limited to, monitoring and inspecting, the Department of Conservation and Recreation's costs for implementation of the sewage sludge application program, and to reimburse localities with duly adopted ordinances providing for the testing and monitoring of the land application of sewage sludge. The State Treasurer shall be the custodian of the moneys deposited in the Fund. No part of the Fund, either principal or interest earned thereon, shall revert to the general fund of the state treasury.

P. The Board shall adopt regulations requiring the payment of a fee for the land application of sewage sludge, pursuant to permits issued under this section. The person land applying sewage sludge shall (i) provide advance notice of the estimated fee to the generator of the sewage sludge unless notification is waived, (ii) collect the fee from the generator, and (iii) remit the fee to the Department as provided for by regulation. The fee shall be imposed on each dry ton of sewage sludge that is land applied in the Commonwealth. The regulations shall include requirements and procedures for:

1. Collection of fees by the Department;
2. Deposit of the fees into the Fund; and
3. Disbursement of proceeds by the Department pursuant to subsection G.

Fee Regulations Regarding Biosolids

Underlined sections were added to the regulation on January 1, 2008 to address biosolids.

Items highlighted in yellow pertain to permit fees – issuance, modification and maintenance – and reimbursement to localities for local monitor activities.

9VAC25-20-20. Purpose.

Section 62.1-44.19:3 of the Code of Virginia requires the promulgation of regulations establishing a fee to be charged to all permit holders and persons applying for permits and permit modifications associated with land application of sewage sludge. Section 62.1-44.19:3 of the Code of Virginia also requires the promulgation of regulations requiring the payment of a fee by persons land applying sewage sludge. These regulations establish the required fee assessment and collection system.

9VAC25-20-40. Applicability.

A. This chapter applies to:

3. All land appliers land applying biosolids on permitted sites in the Commonwealth of Virginia, except as specifically exempt under 9VAC25-20-50 C. The fee due shall be as specified under 9VAC25-20-146.

B. An applicant for a permit, permit authorization or certificate involving a permit that is to be revoked and reissued shall be considered an applicant for a new permit. The fee due shall be as specified under 9VAC25-20-110.

C. Permit maintenance fees apply to each Virginia Pollutant Discharge Elimination System (VPDES) permit holder and each Virginia Pollution Abatement (VPA) permit holder, except those specifically exempt under 9VAC25-20-50 B of this chapter. The fee due shall be as specified under 9VAC25-20-142.

9VAC25-20-50. Exemptions.

A. No permit application fees will be assessed to:

3. Permit holders who request minor modifications or minor amendments to permits, permit authorizations or certificates as defined in 9VAC25-20-10.

4. Permit, permit authorization or certificate holders whose permits, permit authorizations or certificates are modified or amended at the initiative of the board.

6. An applicant for a permit, permit authorization, permit modification, or certificate pertaining solely to biosolids research.

B. No permit maintenance fees will be assessed to:

4. Permits pertaining solely to biosolids research.

C. No fee shall be imposed on the land application of materials classified as “exceptional quality biosolids” or the equivalent thereof, as defined by 9VAC25-32.

Part II

Payment, Deposits and Use of Fees

9VAC25-20-60. Due dates.

D. Sewage sludge land application fees

1. Except as specified in this regulation, all fees are due on the day specified by the department. Payment of the fee shall be made by land appliers following notification by the Department of the fee due. No permit, or modification of an existing permit, will be approved in the jurisdiction where payment of the established fee by the land applier has not been received by the due date, until such time that the fees are paid in full. Existing permits may be revoked or approved sources may be reclassified as unapproved, unless the required fee is paid within 60 days of the notification by the Department of the fee due.

9VAC25-20-90. Deposit and use of fees.

9) Sludge Management Fund

All sewage sludge land application fees collected from permit holders who land apply sewage sludge in the Commonwealth of Virginia, and fees collected from permit holders and persons applying for permits and permit modifications pursuant to §62.1-44.19:3 of the Code of Virginia shall be deposited into the Sludge Management Fund established by, and used and accounted for as specified in §62.1-44.19:3 of the Code of Virginia. Payments to the Department of Conservation and Recreation for their costs related to implementation of the sewage sludge land application program and to localities with duly adopted ordinances providing for the testing and monitoring of the land application of sewage sludge will be made from this fund. Fees collected shall be exempt from statewide indirect costs charged and collected by the Department of Accounts and shall not supplant or reduce the general fund appropriation to the Department.

Part III

Determination of Fee Amount

9VAC25-20-100. General.

Each application for a new permit, permit authorization or certificate, each application for reissuance of a permit, permit authorization or certificate, ~~and~~ each revocation and reissuance of a permit, permit authorization or certificate, and each application of a dry ton of sewage sludge is a separate action and shall be assessed a separate fee, as applicable. The fees for each type of permit, permit authorization or certificate that the board has the authority to issue, reissue or modify will be as specified in this part.

9VAC25-20-110. Fee schedules for individual VPDES and VPA new permit issuance, and individual VWP, SWW and GWW new permit issuance and existing permit reissuance.

A. Virginia Pollutant Discharge Elimination System (VPDES) permits. The following fee schedules apply to applications for issuance of a new individual VPDES permit or certificate. (Note: All flows listed in the table below are facility "design" flows.)

VPDES Municipal Major	\$21,300
VPDES Municipal Minor/Greater Than 100,000 GPD	\$ 7,500
VPDES Municipal Minor/10,001 GPD 100,000 GPD	\$ 6,000
VPDES Municipal Minor/1,001 GPD-10,000 GPD	\$ 5,400
VPDES Municipal Minor/1,000 GPD or less	\$ 2,000
<u>VPDES Municipal Minor/1,000 GPD or less that includes authorization for land application or land disposal of sewage sludge</u>	<u>\$5,000</u>

For a new VPDES permit that includes authorization for land application or land disposal of sewage sludge, \$5000 of the fee will be deposited into the Sludge Management Fund.

B. Virginia Pollution Abatement (VPA) permits. The following fee schedules apply to applications for issuance of a new individual VPA permit or certificate. (Note: Land application rates listed in the table below are facility "design" rates.)

VPA Municipal Sludge Operation	\$7,500 <u>\$5,000</u>
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9VAC25-20-120. Fee schedules for major modification of individual permits or certificates requested by the permit or certificate holder.

The following fee schedules apply to applications for major modification of an individual permit or certificate requested by the permit or certificate holder:

1. Virginia Pollutant Discharge Elimination System (VPDES) permits. The application fees listed in the table below apply to a major modification that occurs (and becomes effective) before the stated permit expiration date. (Note: All flows listed in the table below are facility "design" flows.)

VPDES Municipal Major	\$10,650
VPDES Municipal Minor/ Greater Than 100,000 GPD	\$ 3,750
VPDES Municipal Minor/10,001 GPD - 100,000 GPD	\$ 3,000
VPDES Municipal Minor/1,001 GPD - 10,000 GPD	\$ 2,700
VPDES Municipal Minor/1,000 GPD or Less	\$ 1,000

The fee for modification of a VPDES permit due to changes relating to authorization for land application or land disposal of sewage sludge shall be \$1,000.

2. Virginia Pollution Abatement (VPA) permits. The application fees listed in the table below apply to a major modification that occurs (and becomes effective) before the stated permit expiration date. (Note: Land application rates listed in the table below are facility "design" rates.)

VPA Municipal Sludge Operation	\$3,750 \$1,000
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9 VAC 25-20-142. Permit maintenance fees.

A. The following annual permit maintenance fees apply to each individual VPDES and VPA permit, including expired permits that have been administratively continued, except those exempted by 9 VAC 25-20-50 B or 9 VAC 25-20-60 A 4:

1. Virginia Pollutant Discharge Elimination System (VPDES) permitted facilities. (Note: All flows listed in the table below are facility "design" flows.)

VPDES Municipal Major/Greater Than 10 MGD	\$4,750
VPDES Municipal Major/2 MGD - 10 MGD	\$4,350
VPDES Municipal Major/Less Than 2 MGD	\$3,850
VPDES Municipal Minor/Greater Than 100,000 GPD	\$1,500
VPDES Municipal Minor/10,001 GPD - 100,000 GPD	\$1,200
VPDES Municipal Minor/1,001 GPD - 10,000 GPD	\$1,080
VPDES Municipal Minor/1,000 GPD or Less	\$ 400

2. Virginia Pollution Abatement (VPA) permits. (Note: Land application rates listed in the table below are facility "design" rates.)

VPA Municipal Sludge Operation	\$ 750
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Part IV

Sewage Sludge Fees and Reimbursable Costs

9VAC25-20-146. Established Fees

A. Land appliers shall remit the established fees to the Department as specified in this regulation. The land appliers shall collect the required fees from the owners of the sewage treatment works and facilities that generate the biosolids. Such works and facilities shall be approved sources of biosolids in accordance with this regulation. Land application shall only include biosolids from approved sources as listed in the land application permit. The established fee shall be imposed on each dry ton of biosolids that is land applied in the Commonwealth of Virginia in accordance with 9VAC25-31 or 9VAC25-32.

B. The amount of the established fee and disbursement are as follows:

1. The fee shall be \$7.50 per dry ton of biosolids land applied in the Commonwealth of Virginia.

2. Disbursement of the established fees collected by the Department shall be made to reimburse or partially reimburse those counties, cities and towns with duly adopted local ordinances that submit documentation of reimbursable expenses acceptable to the department as provided for in this regulation.

3. Disbursement of the established fees collected by the Department shall be made to reimburse the Department of Conservation and Recreation's costs for implementation of the sewage sludge application program.

9VAC25-20-147. Records and reports.

A. Records. Permittees shall maintain complete records of the land application activities and amounts of biosolids that they land apply in the Commonwealth of Virginia. Such records shall be maintained by the permittee in a form that is available for inspection by the Department for five years after the date of the activity. Records of land application activities shall include the following minimum information:

1. Name of Permittee, DEQ permit number and dates of activity.

2. Identification of land application site, including the county where taxes are remitted and permitted site identification name, letters and numbers, as appropriate.

3. The source of biosolids and approximate field area receiving those biosolids.

4. The amount of biosolids applied in dry tons and the method and calculations used to determine the reported value.

5. Dates and type of any interactions with local monitors and names of individuals involved in the interactions.

6. Name of responsible representative of permittee and a statement signed and dated by that representative indicating that the information submitted has been verified by that representative as correctly reported in accordance with this regulation.

B. Reports and notification. The permittee shall submit a monthly report by the 15th day of the month unless another date is specified in the permit in accordance with 9 VAC 25-32-80.1.4, following the month that land application occurs. That report shall include the recorded information listed in subsection A of this section and present a calculation of the total fee that is required in accordance with this regulation. The submitted report shall include a summary list of the total amount of biosolids applied and the calculated fee based on the land-applied biosolids for each county in which land application occurred in alphabetical order by county.

9VAC25-20-148. Reimbursable local monitoring costs.

The following describes the kinds of activities for which expenses may, if reasonable, be submitted for reimbursement:

1. Charges for reviewing the permit to identify potential health and environmental protection issues upon notification by the permittee that operations will be initiated on permitted sites.

2. Charges and expenses, including local travel for site monitoring, inspections, collection and delivery of samples to a nearby laboratory and examination of records.

3. Charges for recordkeeping.

4. Charges for complaint and incident response.

5. Charges for biosolids and soil sample testing costs.

6. Charges for the training of local monitors.

9VAC25-20-149. Reimbursement of local monitoring costs

Reimbursement of local monitoring costs deemed reasonable by the Department will be made in order of receipt of an acceptable invoice. Such invoices will be reimbursed for reasonable costs up to \$2.50, as adjusted, per dry ton of biosolids land applied in a county during the period of time specified in the submitted invoice. If

sufficient revenue exists from the fees collected monthly, then invoiced claims exceeding \$2.50, as adjusted, per dry ton of biosolids land applied in that county, during the period of time specified in the submitted invoice, may be released for reimbursement of up to \$4.00 per dry ton of biosolids land applied in that county during the month that the reimbursable costs were incurred, based on the order of receipt of the invoice.

A. Application. Local government must submit a reimbursement application to request reimbursement from the Department. All information is to be clearly typed or printed and all required or supporting documents must be attached. The county administrator or designated local biosolids monitor shall sign and date the application where indicated. The original signed application with one copy of each of the supporting documents is to be forwarded to the Department. Applications may not be submitted by facsimile or through electronic means. A reimbursement invoice form as described in this regulation must be completed before a reimbursement application can be submitted. The invoice form must include all expenses for which reimbursement is requested during the designated time period.

B. Application forms and submittal. The application for reimbursement must be submitted within 30 days of the last day of the month in which the reimbursable activity occurred. All applications received after this time frame will be ineligible for reimbursement. The following is a description of the application forms and an explanation of their use. The application forms and detailed instructions can be obtained from the Department.

1. Form 1—Reimbursement Application. An Invoice Form shall be submitted with each application for reimbursement. The invoice form should list all reimbursable charges. To be reimbursed for eligible expenses, an applicant must provide documentation to demonstrate that the expenses were incurred. Invoices are acceptable proof of incurred expenses. Include legible copies of invoices signed by the local biosolids monitor or agent who performed or managed the monitoring activities. All invoices are to include the following:

a. DEQ Permit Number and site identification;

b. (Number), or site address;

c. Biosolids contractor's name;

d. Date and type of activity monitored;

e. Name of biosolids monitor;

f. Number of hours to be reimbursed and charge per hour;

g. List of expenses for which reimbursement is sought;

h. Type of sampling activity performed and associated laboratory expense vouchers.

The application requires the county administrator to certify that the responsible official has read and understands the requirements for reimbursement and that the application submitted is not fraudulent. The local monitor must attest to the accuracy and completeness of the information provided.

2. Form 2—Multiple Owners Payment Assignment Form. When there are multiple local governments as claimants, a separate, signed and notarized invoice form for each claimant must be filled out and submitted with the application.

Submittal of the original completed reimbursement application, including the application worksheets and the appropriate supporting documentation, should be accomplished by mailing these documents to: Department of Environmental Quality, Receipts Control, P.O. Box 1105, Richmond, Virginia 23218.

C. Processing applications.

1. If contacted by the Department regarding an incomplete reimbursement application, an applicant will have 14 days from the date of the call or letter to submit the information requested and cure any deficiencies. Extensions of the 14-day deadline will not be granted. An application that does not contain all of the required information after the 14-day time frame may be rejected or processed "as is," which can result in complete denial or a partial reimbursement.

2. Only invoices pertaining to the monitoring activity claimed in the current application will be accepted. Costs omitted from previous claims are ineligible for reimbursement in subsequent claims. Likewise, invoices submitted in previous claims will not be eligible documentation for reimbursement of costs in subsequent claims.

To reduce the risk of disqualification of costs, costs for different monitoring activities should be invoiced separately. If possible, invoices should be structured so that costs are grouped according to task or activity.

D. Reconsideration process.

1. Claimants may submit a written response indicating why costs denied on the reimbursement decision should be paid.

2. If the claimant disagrees with the decision in the reimbursement payment package, a Notice of Intent (NOI) to object and a Reconsideration Claim Form must be submitted to the Department within the filing deadlines specified in the reconsideration procedure package.

If filing deadlines are not met, the decision in the reimbursement payment package is final. This written objection is to be in the format specified in the reconsideration procedure package and explain the reasons for disagreement with the decisions in the reimbursement payment letter, and supply any additional supporting documentation. Upon receipt of this information and at the claimant's request, the Department may schedule a reconsideration meeting to reevaluate the denied costs.

3. Claimants will be given an opportunity to contest the reimbursement decisions in accordance with the Administrative Process Act.

Within the filing deadline, the claimant must submit a written summary of the issues that will be contested using the Reconsideration Claim Form.

4. The reconsideration procedures provide the Department the opportunity to correct certain errors. The following types of errors can be corrected:

a. Failure of the reviewer to verify an Invoice Form that was received prior to completing the verification package for the reimbursement.

b. Errors the reviewer makes in verifying an Invoice Form.

c. Failure of the claimant to submit all invoices.

5. Notwithstanding the above, some types of errors cannot be corrected. It is the responsibility of the claimant or consultant, or both, to ensure that all application forms (Invoice Forms, and sampling and testing verification) are completely and accurately filled out. Failure to exercise proper care in preparing an application may result in a denial of costs, which cannot be corrected through the reconsideration process, including:

a. Items omitted from the Invoice Form will not be eligible for reimbursement.

b. Unverified sampling and testing results will not be eligible for reimbursement.

c. No additions or revisions to the Invoice Forms will be accepted from the claimant after the reviewer forwards the verification package to the Department.

d. Using one invoice in multiple claims. Invoices submitted in an application cannot be used as documentation for reimbursement of costs in subsequent claims.

e. The following are types of errors that cannot be corrected:

(i). Failure to claim performed work on the invoice.

(ii). Failure to claim sampling and testing costs as authorized.

(iii). Failure to claim all costs in a submitted invoice.

(iv). Failure to submit to the reviewer all supporting documentation to demonstrate the necessity of work performed that exceeds expected activities. Such documentation must be submitted before the reviewer forwards the verification package to the Department.

Angela Neilan started the "facilitated" the "fee" part of the discussion.

The TAC's discussions on this topic included the following:

- For EQ biosolids, the fee that is required (\$750 per dry ton) is not specified in the statute; it is specified in the "enactment clause" and says that DEQ can change that amount.
- A question was raised as to whether there was a reason to not maintain the exemption for distribution and marketing EQ biosolids? The possible expansion of the development of "distribution and marketing" materials could drastically change the face of the program, if DCWASA goes to their planned production of 100% EQ materials. There was no reason noted to not maintain the exemption.
- "Research" projects are exempt from the \$5,000 permit fee requirement in the Fee Regulations.
- There is an annual maintenance fee in the fee regulations. There is always an initial permit application fee. When the permit reaches its expiration date and a permit is reissued, there is no renewal fee at that time, but over the course of the permit that has been an annual maintenance fee that is intended to equal that original amount. In the fee regulation this annual maintenance fee is identified. The current \$750 per dry ton was based on a 10 year period and was calculated as 10% of the initial \$7,500 permit fee. That fee is now \$5,000 by statute. There was no statutory directive to change the annual maintenance to reflect this revised rate. The proposal in this regulatory action is to change that annual maintenance fee to \$500 per dry ton.
- The Fees couldn't be changed in the Final Exempt Action but are included as part of this regulatory action.
- Staff noted that no one has had a permit for a full year, so no one has been charged the \$750 per dry ton amount. It was suggested that if the current \$750 fee is charged that there be a credit for the \$250.

ACTION ITEM: Staff will discuss the idea of a credit with the DEQ administrative staff to determine its feasibility.

- Staff noted that the statute was clear that the \$5,000 initial permit fee applies to any permit involving or related to the land application of biosolids. The Distribution and Marketing fee is also \$5,000.
- Staff noted that for VPDES facility that modifies its permit to add land application to its permit is not being charged the \$1,000 modification fee in addition to the existing modification fee in the VPDES section of the fee regulation. The \$1,000 is just assigned differently and goes into the Sludge Management Fee.
- Modifications to the fee regulations were not explicitly defined in statute.
- The fees go into the administration of the program. The \$750 is in the enactment clause. The \$750 per dry ton was based on staff hours.

10) Submission of Data - Facilitated Discussions (Neil Zahradka/Angela Neilan)

Neil Zahradka introduced the topic of "Submission of Data" as it relates to "Electronic documents" and "Annual Reporting Requirements" and provided an overview of the current regulations related to those areas:

Reporting Requirements

9VAC25-32-440. Biosolids monitoring/reporting.

B. An activity report shall be submitted (postmarked) to the department by the 15th day of the month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4, following any month in which land application occurs. The report shall indicate those sites where land application activities took place during the previous month.

C. Biosolids application rates should be based on the annual average sludge quality. The average sludge quality should be established from the results of approved analytical testing of composite samples obtained during the most recent 12 months of monitoring. For proposed treatment works, rates may be initially based on the biosolids characteristic produced by similar generating facilities.

D. The required treatment and quality characteristics and the maximum allowable land application loading rates shall be established for biosolids use. In addition, operational monitoring results shall verify that required sludge treatment has achieved the specified levels of pathogen control and vector attraction reductions (Table 3). Adequate records on sludge composition, treatment classification, sludge application rates and methods of application for each site shall be maintained by the generator and owner. Table 4 shows a sample operating report for documenting the minimum required information. Reporting shall be yearly (postmarked by February 19 for the preceding calendar year) unless otherwise required. The generator and owner shall maintain the records as necessary for a minimum period of five years until further notification by the department. Sites receiving frequent applications of sludge that meet or exceed maximum cumulative constituent loadings and dedicated disposal sites should be properly referenced for future land transactions (see the sample Sludge Disposal Site Dedication Form - Table A-1).

TABLE 4

EXAMPLE OF REPORT FOR SUBMISSION TO FIELD OFFICES

FIELD REPORT

PROJECT/PERMITTEE: _____ PERMIT NO./FIELD NO: _____

(LAND OWNER/FARMER:) _____ FIELD ACRES: _____

APPLICATION MODE: _____ DATE AS OF: _____

GALLONS, WET TONS OR CUBIC YARDS

APPLIED: Month to Date _____ Year to Date _____

DRY TONS/ACRE APPLIED: Month to Date _____ Year to Date _____

Lifetime to Date _____

CROP/YIELD _____ SOIL pH _____

LBS. APPLIED/ACRE

SLUDGE PARAMETER	MONTH TO DATE	YEAR TO DATE	LIFETIME TO DATE
P.A.N.		N/A	
CaCO ₃		N/A	
P.		N/A	
K		N/A	
As			
Cd			
Cu			
Mo			
Ni			
Pb			
Se			
Zn			
Other:			

As

Cd

Cu

Mo

Ni

Pb

Se

Zn

Other:

Angela Neilan started the "facilitated" the "submission of data" part of the discussion.

The TAC's discussions on this topic included the following:

- In order to keep up with technology and to create a functional database, staff is proposing that the submission of electronic data be part of the regulations.
- This includes permit applications, operating reports, annual reports, etc.
- Staff noted that there is also a group working on the issues related to "electronic signatures"
- The thought is to make the materials more easily searchable and to be able to meet FOIA requirements. Staff noted that the DEQ is part of a Commonwealth wide initiative to go "paperless".
- A question was raised whether "forms" for submission of data, etc. would be developed and provided so that the information could be available in a consistent and a more searchable method/form? Staff responded that it is one of the things that is being looked at as a way to make things more consistent.
- Staff noted that the "annual reporting requirements" (9VAC25-32-440) is not very specific as to what information is required. The regulations currently contain an example report. The intent is to make that "example report" more explicit. Staff noted that the annual reporting requirements are not well defined, while the requirements for the monthly report are fairly detailed.
- A question was raised as to whether an annual report is really necessary if you are already getting monthly reports? Couldn't the information just be summarized and compiled from the monthly submittals?

ACTION ITEM: Staff will look over the annual report requirements to make sure that it is providing useful information.

- It was noted that the annual report requirements were the result of the requirements of 503.
- Staff raised the issue of what should be done with the VDH BUR permits that have been administratively continued without expiration dates. Need to figure out when is the absolute deadline for those BUR permits to no longer be valid. The statute gives DEQ authorization to terminate those permits. Need to make sure that adequate time is allowed for the VPA process to go through. These needs to be a drop dead date. Once the VPA permit is issued that it takes precedent over a previous VDH BUR permit and the BUR permit would expire.

11) Next Meeting Dates:

The next meeting of the Biosolids TAC will be on Thursday, August 20, 2009 at the DEQ Piedmont Regional Office and will run from 9:00 AM to 4:00 PM to review proposed regulatory language. (The proposed language will be distributed via email to the TAC by the end of July.) The final meeting of the TAC to complete review of the proposed regulations will be held on Tuesday, September 22, 2009 at the Virginia Fire Programs Meeting Room in Glen Allen.

12) Public Comment:

Public Comments were provided by the following:

- C.W. Williams - Chair Person of the Biosolids Information Group: "Due to personal reasons was unable to attend previous meetings of the TAC. As a founding member of this group, dedicated to research and the dissemination of factual documented information has taken the time to listen to the tapes of the previous meetings. These tapes clearly confirm that the TAC has not addressed the health and environmental issues raised by the citizens. The tapes reflect that the TAC has not taken into consideration tapes and testimony of individuals who have become ill and presented their tapes and testimony before the Expert Panel. In addition, the sensitivity for additional buffer consideration is limited to those with "hearts outside of their bodies" and the recommendations by a representative of the Farm Bureau who is representing his self serving interests and those of a small minority of the Farm Bureau members who are receiving sludge pollution, commonly referred to as biosolids. Whereas DEQ has the information that demonstrates the changes that need to be made it has not yet addressed the issues raised by Virginias, thereby contributing to the failure of the TAC committee and the process. Much like the Expert Panel issues which are now being burdened on this TAC group. DEQ is urged to draft language changes that address its mandate to protect the Health, Safety and Welfare of those Virginias that are subjected to forced exposure to volatile chemicals and disease causing micro-organisms constituents that are scientifically documented and known to be in sludge, aka, biosolids. Since the TAC has neither the relevant facts of citizen exposure and effects nor the expertise to objectively address the underlying issues, the burden rests on DEQ, which has funding, documents and expertise or access to expertise and an obligation,

enforcement authority and statutory authority to develop language to address citizen concerns in a manner consistent with the Code of Virginia. There is no question as to the requirements of neither the Expert Panel nor the issues to be addressed by this TAC to develop the base regulatory language on the facts while protecting the Health, Safety and Welfare of the citizens and their environment. To accomplish the advertised purpose of the TAC, you will need to stand on your integrity and convictions for the betterment of the Commonwealth's environment and the citizen's health, safety and welfare. Do not allow your efforts to be wasted on time, intellect or tax payers' money. The continued distraction of Virginia's waterways, ecosystem and human suffering must stop. The documented increase of complaints must be addressed. There is no justification for ignoring citizen concerns. Thank you."

13) Meeting Adjournment: Meeting was adjourned at approximately 12:20 P.M.