PERMIT QUALITY REVIEW

United States Virgin Islands

U.S. Environmental Protection Agency
Region 2, New York

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I. PQR Background

National Pollutant Discharge Elimination System (NPDES) Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, the EPA promotes national consistency, and identifies successes in implementation of the NPDES program and opportunities for improvement in the development of NPDES permits.

The EPA Region 2 staff conducted a review of the U.S. Virgin Islands Territorial Pollutant Discharge Elimination System (TPDES) permitting program which included desktop permit reviews and an on-site visit to the U.S. Virgin Islands Department of Planning and Natural Resources (USVI DPNR) office in St. Thomas on March 18-19, 2013 and the St. Croix office on March 20, 2013.

The 2013 U.S. Virgin Islands (USVI) PQR consisted of two components: permit reviews and special focus area reviews. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports, or documents in the administrative record that provide the basis for the development of the permit conditions.

The core permit review involved the evaluation of selected permits and supporting materials. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standardized PQR checklist tools, and talking with USVI DPNR staff about the permit development process. The core review focused on the Central Tenets[1] of the NPDES permitting program to evaluate the USVI TPDES program. In addition, discussions between the EPA and territorial staff addressed a range of topics including program status, the permitting process, responsibilities, organization, and staffing. The purpose of core topic area permit reviews is to evaluate specific issues or types of permits in all states and territories. The core topics reviewed in the USVI TPDES program were: nutrients, pretreatment program, pesticide general permit, and stormwater.

Special focus area reviews target regionally-specific permit types or particular aspects of permits. The special focus areas selected by the EPA Region 2 included coral reefs, municipal separate storm sewer systems (MS4s), and rum distilleries. These reviews provide important information to USVI DPNR, EPA Region 2, EPA HQs, and the public on specific program areas.

It was infeasible to review all of the TPDES permit issued by the USVI. Instead, a small selection of permits was reviewed to provide a snapshot of the USVI TPDES program. A total of 16 permits were reviewed as part of the 2013 USVI PQR. Eleven permits were reviewed for the

[1] Central Tenets of the National Pollutant Discharge Elimination System (NPDES) Permitting Program. http://www.epa.gov/npdes/pubs/tenets.pdf

core review – of these eleven, four permits were reviewed for special focus areas. Permits were selected based on issuance date and the review categories that they fulfilled (Appendix A).

II. State Program Background

A. Program Structure

The USVI DPNR, Division of Environmental Protection (DEP) manages the TPDES program. DEP is organized into multiple groups that are responsible for specific program areas such as solid waste, air quality management, air pollution control, water quality management, and water pollution control. The water pollution control group within DEP is responsible for the TPDES program. USVI DPNR has one office in Frederiksted, St. Croix and one office at Cyril D. King Airport, St. Thomas. As of June 2013, USVI DPNR had one TPDES permit writer in the St. Croix office and one permit writer in the St. Thomas office. In St. Thomas, there was a lapse from February 2013 to June 2013 when there was no staff permit writer. The responsibilities of the permit writer for each geographic jurisdiction include drafting municipal and industrial TPDES permits, conducting site visits, responding to public comments, and administrative tasks. Typically, the permit writer on St. Thomas handles the permits for facilities on St. Thomas and St. John and the permit writer in St. Croix is responsible for all St. Croix facilities. However, depending on workload, staffing and expertise, a permit writer may administer a permit on a different island.

The conditions in a permit are developed solely by the permit writer. Training for permit writers includes attending the EPA's five-day NPDES Permit Writer's Course and reviewing the EPA's 2010 NPDES Permit Writer's Manual[2] and the USVI DPNR draft Standards of Procedure (SOPs). The SOPs have never been formally finalized but are regularly updated. USVI DPNR does not use a permit or fact sheet template to develop permits but does include a sample permit and fact sheet in the draft SOPs.

USVI DPNR typically provides the permittee and EPA Region 2 with a pre-public notice draft of the permit and many comments are resolved during this period. When the public notice draft of the permit is ready, the permittee is responsible for arranging the notice in local newspapers and the files are available at the USVI DPNR office for the public to review.

The TPDES administrative records and enforcement records are maintained as one file in the USVI DPNR office on the same island as the facility. Some TPDES files (e.g. draft permits, fact sheets, correspondence, etc) are maintained electronically rather than in hard copy. USVI DPNR does not have a policy for which documents should be maintained in hard copy or electronic copy but whenever possible, documents are maintained electronically.

B. Universe and Permit Issuance

As of April 2013, USVI DPNR is responsible for administering approximately 69 individual permits, including eight major permits (two publicly owned treatment works (POTWs) and six

[2] U.S. Environmental Protection Agency NPDES Permit Writer's Manual. 2010. http://cfpub.epa.gov/npdes/writermanual.cfm

non-POTWs). USVI DPNR also administers general permits for stormwater runoff from construction sites and industrial activity, as well as point source discharges of pesticides. As of April 2013, USVI DPNR had seven backlogged permits meaning that the TPDES program was 89.9% current.

USVI DPNR permit processing procedures occur entirely within DEP. When issued, many permits include the date by which the USVI DPNR must receive the permit renewal application. Individual permit applicants submit the EPA standard forms directly to the permit writers. When received, applications and other correspondence are stamped by the permit writer and included in the administrative file. Whenever possible, USVI DPNR requests that both physical and electronic copies of applications or reports be submitted. If an application is deemed incomplete, the permit writer works closely with the permittee to ensure completeness. Typically, requests to resolve incomplete applications for minor permits are handled informally. However, permittees that submit incomplete applications for major permits are sent an official email or letter requesting that the missing information be provided.

III. Core Review Findings

A. Basic Facility Information and Permit Application

1. Facility Information

Basic facility information is necessary to properly establish permit conditions. For example, information regarding facility type, location, processes and other factors is required by NPDES permit application regulations (40 CFR 122.21) because it is essential for developing technically sound, complete, clear and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

All final permits that were reviewed for the core review included permit issuance dates, effective dates and expiration dates, authorized signatures, and specific authorization-to-discharge information. However, one permit was issued (signed and dated) after the effective date of the permit.

2. Technology-Based Effluent Limitations

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets, and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology-based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

TBELs for POTWs

POTWs must meet secondary or equivalent to secondary standards (including limits for BOD_5, TSS, pH, and percent removal) and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of three POTW permits were reviewed as part of the USVI 2013 PQR, two major

permits and one minor permit. None of the POTW permits that were reviewed had fact sheets or a statement of basis.

The EPA found that the permits did not provide a description of wastewater treatment processes or a discussion of the basis of the TBELs. As there was no fact sheet or statement of basis available, the EPA was unable to determine the basis of the permit conditions. The permits did consistently apply secondary treatment standards, although these standards were not always established correctly. Of the three POTW permits reviewed, none specified that the effluent limitation for BOD_5 has a 30-day averaging period, two lacked a location for influent monitoring, and in one permit it was unclear if both short- and long-term effluent limitations were established for BOD_5 and TSS.

TBELs for Non-POTW Dischargers

Permits issued to non-POTWs must require compliance with a level of treatment performance equivalent to Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT) for existing sources, and consistent with New Source Performance Standards for new sources. Where federal effluent limitations guidelines (ELGs) have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case basis using best professional judgment (BPJ) in accordance with the criteria outlined at 40 CFR 125.3(d).

A total of eight non-POTW permits were reviewed as part of the core review (five major and three minor permits) and only four of the major permits had a fact sheet or statement of basis. None of the minor permits had a fact sheet or statement of basis. Documentation of the calculations used to develop the effluent limitations based on ELGs was not included in any of the permit records reviewed. Three of the four available fact sheets did not satisfactorily explain the facility categorization and determination of applicable ELGs. It was difficult to determine if USVI DPNR evaluated whether ELGs were applicable to these facilities.

The administrative records typically lack documentation of development of TBELs and it was unclear how the final effluent limitations were developed. Documentation did not include a discussion of the applicability of ELGs or illustration of calculations used to develop the TBELs. In many cases, it was difficult to discern if final effluent limitations were technology- or water quality-based effluent limitations. Four of the eight final non-POTW permits reviewed did not establish both short- and long-term limitations as required by 40 CFR 122.45(d).

3. Water Quality-Based Effluent Limitations

The NPDES regulations at 40 CFR 122.44(d) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve territorial water quality standards, including narrative criteria for water quality. To establish water quality-based effluent limits (WQBELs), the permitting authority must evaluate the proposed discharge and determine whether technology-based requirements are sufficiently stringent, and whether any pollutants or pollutant parameters could cause or contribute to an

excursion above any applicable water quality standard. A total of 11 permits were evaluated for their WQBELs – 3 POTWs and 8 non-POTWs.

The 2013 USVI PQR assessed the process that USVI DPNR permit writers use to implement these requirements. Specifically, the PQR reviewers looked at permits, fact sheets (when available) and any other documentation in the administrative record to evaluate how permit writers:

- determined the appropriate water quality standards applicable to receiving waters;
- evaluated and characterized the effluent and receiving water including identifying pollutants of concern;
- determined critical conditions;
- incorporated information on ambient pollutant concentrations;
- assessed any dilution considerations; and
- determined whether limits were necessary for pollutants of concern and, where necessary, calculated such limits or other permit conditions.

For impaired waters, the PQR assessed whether and how permit writers developed limits consistent with the assumptions of applicable EPA-approved total maximum daily loads (TMDLs).

Permits and fact sheets, when available, did not discuss impairment status or identify if a TMDL has been developed for the receiving water body. The on-site interview with USVI DPNR staff revealed that there is limited, if any, consideration of the impairment status of the receiving water when developing the permit.

The administrative record did not provide a discussion of the reasonable potential analysis for pollutants present in the effluent. The administrative record also did not include a discussion of the reasonable potential for whole effluent toxicity (WET) or the basis of establishing, or not establishing, WET limitations in the permit.

The EPA was unable to recreate how effluent limitations were developed based on the content of the fact sheet and supporting record. In addition, we found that many permits did not establish effluent limitations consistent with the requirements of 40 CFR 122.45(d) which states that, for continuous dischargers, all permit effluent limitations shall, unless impracticable, be stated as maximum daily and average monthly limitations for all dischargers other than POTWs. For POTWs, 40 CFR 122.45(d) states that average weekly and average monthly discharge limits must be established. As explained in the EPA's Technical Support Document[3], EPA considers

[3] Technical Support Document for Water Quality-based Toxics Control. http://water.epa.gov/scitech/datait/models/upload/2002_10_25_npdes_pubs_owm0264.pdf

the 7-day average limit for POTWs to be impracticable for the purpose of controlling the discharge of toxics and therefore, requires a maximum daily limit for toxics.

Another finding of the core review was that only one of the three POTW permits correctly established pathogen limitations for enterococci as required by 40 CFR 131.41 and USVI WQS at 12 VIRR 184.

Three of the eight permits reviewed for the core review included mixing zones. The EPA was unable to determine if the effluent limitations in the permit apply at end-of-pipe or at the edge of the mixing zone. Additionally, it is unclear how the size of the mixing zone is determined. USVI Water Quality Standards (WQS) at 12 VIRR 184 allows for thermal mixing zones and provides a standard equation to calculate the appropriate size but provides no additional guidance for mixing zones for other parameters. However, USVI DPNR establishes mixing zones for other parameters besides temperature. The administrative record provided no discussion of the development or basis for the mixing zone or effluent limitations.

B. Monitoring and Reporting

NPDES regulations at 40 CFR 122.41(j) require facilities discharging pollutants to waters of the US to periodically evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and where applicable, internal processes, and report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i) requires that NPDES permits establish, at minimum, annual monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48 requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity. The regulations at 40 CFR 122.44(i) also require reporting of monitoring results, developed on a case-by-case basis, with a frequency dependent on the nature and effect of the discharge.

The TPDES program seems to require the appropriate monitoring requirements based on the facility type, type of the discharge, and corresponding limit basis. However, of the eleven permits reviewed for the core review, ten did not clearly identify the location of the outfalls or receiving waters. When coordinates are provided, it is unclear if the coordinates represent the location of the receiving water or the outfall location. In many cases, no coordinates were provided at all. The locations of internal or external monitoring locations were also not consistently identified in the permits.

C. Special and Standard Conditions

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain an enumerated list of “standard” permit conditions. Further, the regulations at 40

CFR 122.42 require that NPDES permits for certain categories of dischargers must contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and may not alter or omit any standard condition, unless such alteration or omission results in a requirement more stringent than required by the federal regulations.

In addition to standard permit conditions, the permit may also contain additional requirements that are unique to a particular permittee or discharger. These case-specific requirements are generally referred to as "special conditions". Special conditions might include requirements such as: additional monitoring or special studies (e.g., pollutant management plans), best management practices [see 40 CFR 122.44(k)], or permit compliance schedules [see 40 CFR 122.47]. Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

All of the permits reviewed as part of the core review included a standard section (Part II) that includes all of the general conditions found at 40 CFR 122.41. However, Part II also includes the additional standard conditions for non-POTWs, as required by 40 CFR 122.42(a), but does not include the additional conditions for POTWs, as required by 40 CFR 122.42(b). Therefore, the POTW permits do not include all applicable standard conditions.

D. Administrative Process

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6), coordinating the EPA and state review of the draft (or proposed) permit (40 CFR 123.44), providing public notice (40 CFR 124.10), conducting hearings if appropriate (40 CFR 124.11 and 40 CFR 124.12), responding to public comments (40 CFR 124.17), and modifying a permit (if necessary) after issuance (40 CFR 124.5). The EPA discussed each element of the administrative process with USVI DPNR, and reviewed materials from the administrative process as they relate to the core permit review.

USVI DPNR distributes a pre-public notice draft of the permit to the permittee and to the EPA for review. Often, the permittee's and the EPA's comments are resolved during this phase. Afterward, the draft permit is public noticed and the 30-day public comment period begins. As the permittee and EPA have the opportunity to review a pre-public notice draft of the permit, USVI DPNR rarely, if ever, receives comments on a draft permit during the comment period. However, the EPA is often not provided with a proposed permit to review before final issuance, as required by 40 CFR 122.2.

During the review of an administrative record, the EPA determined that a non-POTW facility failed to submit the appropriate renewal application 180 days before the expiration of the previous permit. As the application was not submitted in a timely manner, the permit cannot be administratively extended (40 CFR 122.6, 40 CFR 122.21). The permit is currently expired and the facility is discharging without a permit. In this, and similar situations when an application is submitted late, it is important that the TPDES permitting staff properly inform enforcement staff so that any necessary action can be taken.

The EPA had originally intended to include twelve permits within the core review. However, upon reviewing the permit and administrative records, the EPA determined that one permit was not within the EPA's regulatory universe. The TPDES program regulates waters of the USVI which, as defined in 12 VIRR 184, includes wells, springs, irrigation and drainage systems, in addition to harbors, streams, lakes, etc. Waters of the United States, as defined by the NPDES regulations at 40 CFR 122.2, do not include discharges to groundwater or land. Therefore, any TPDES permit that discharges solely to land or groundwater is not within the EPA's regulatory universe. As this facility discharges solely to an irrigation system, it is not within the EPA's universe and was, therefore, not reviewed as part of the 2013 USVI PQR.

E. Administrative Record

The administrative record is the foundation that supports the NPDES permit. If the EPA issues the permit, the contents of the administrative record are prescribed by regulation, with 40 CFR 124.9 identifying the required content of the administrative record for a draft permit and 40 CFR 124.18 describing the requirements for final permits. Authorized state and territorial programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data, draft permit, fact sheet or statement of basis, all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations, meeting reports, correspondence between the applicant and regulatory personnel, all other items supporting the file, final response to comments and, for new sources where the EPA issues the permit, any Environmental Assessment, Environmental Impact Statement, or Finding of No Significant Impact.

One pre-draft permit was reviewed as part of the core review; therefore, records documenting public notice procedures, response to comments, and public hearing requests were not available. For the ten finalized permits that were reviewed, the supporting record did not consistently include documentation that public notice procedures were implemented accordingly (e.g., copy of the public notice was not in the administrative file) or documentation of comments that had been received during the public comments period. For example, seven administrative files did not include a fact sheet, two did not include proof of public notice, one did not include a draft permit, and one file did not include an application. Additionally, some documents vital to the administrative record are filed in hard copy and others are filed electronically. There is no notation in the hard copy files that some documents may be electronic.

In one instance, a facility with a flow greater than 1.0 MGD was listed as a minor facility in the permit. The administrative record did not contain an EPA major/minor rating sheet to provide a basis as to why the facility was classified as a minor.

1. Fact Sheet or Statement of Basis

Under 40 CFR 124.8 and 124.56 fact sheets are required for major NPDES permits, general permits, permits that incorporate a variance or warrant an explanation of certain conditions, and permits subject to widespread public interest. Of the seven major permits reviewed as part of the

PQR, two had a fact sheet and two had a statement of basis. No minor permits reviewed had a fact sheet or a statement of basis.

Fact sheets for POTWs and non-POTWs were either nonexistent or insufficient in providing an adequate description of facility location and treatment processes. There is often no discussion of the reasonable potential analysis, impairments, or pollutants of concern, description of facility processes, a summary of an endangered species review, facility diagrams, anti-backsliding, antidegradation, or other pertinent information.

The available fact sheets consistently lacked the following elements, a required by 40 CFR 124.8 and 124.56:

- general facility information (e.g., description of activity, detailed description of outfall location, type and quantity of waste/pollutants discharged, etc),
- summary rationale of permit conditions (e.g., basis of draft permit conditions, etc)
- detailed rationale of permit conditions (e.g., explanation and calculations of effluent limitations, specific explanations of toxic pollutant limitations, limits on internal waste streams and indicator pollutants, etc)
- administrative requirements (e.g., description of the procedures for reaching a final decision on the draft permit, contact person name and telephone number, etc).

While USVI DPNR indicated that best professional judgment is often used during permit development, the administrative records do not provide a discussion of the analysis or decision-making process. Many of the receiving waters are on the United States Virgin Islands Clean Water Act Section 303(d) 2010 List of Impaired Waters but there is no discussion in the fact sheet of the impairments or their impact on the effluent limits established in the draft permit. Of the three available fact sheets, none included documentation of the most stringent applicable effluent limitation (TBELs vs WQBELs) and must be included as the final effluent limitation. Overall, the records reviewed did not provide transparency as to how effluent limitations were developed and did not allow for a straightforward duplication of the development of the effluent limitations.

IV. Core Topic Areas

A. Nutrients

For more than a decade, both nitrogen and phosphorus pollution has consistently ranked as one of the top causes of degradation of surface waters in the United States. Since 1998, the EPA has worked to reduce the levels and impacts of nutrient pollution and, as a key part in this effort, has provided support to states and territories to encourage the development, adoption and implementation of numeric nutrient criteria as part of their water quality standards (see the EPA's *National Strategy for the Development of Regional Nutrient Criteria*). In a 2011 memo to the EPA regions titled *Working in Partnerships with States to Address Nitrogen and Phosphorus*

Pollution through use of a Framework for State Nutrient Reductions, the EPA announced a framework for managing nitrogen and phosphorus pollution that in part relies on the use of NPDES permits to reduce nutrient loading in targeted or priority watersheds. To assess how nutrients are addressed in the TPDES permitting program in the USVI and implementation of this framework, the EPA reviewed three of the eleven permits reviewed in the core permit review (two POTWs and one non-POTW). The administrative records for these three permits did not contain fact sheets or statements of basis.

1. Background

In the USVI water quality impacts from nutrient over-enrichment are addressed through implementation of numeric total phosphorus criteria for all class waters. There are no criteria for total nitrogen nor are there any nutrient criteria established for inland waters. Specifically, USVI regulations at 12 VIRR 186-2, 186-3 and 186-4 provide numeric ambient water quality criteria for total phosphorus to protect the designated uses for Class A, B and C waters, which include marine and coastal waters. The criteria for each water class provide that phosphorus as total P shall not exceed 50 ug/l in any waters and shall apply at and beyond the boundary of the applicable mixing zone.

2. Program Strengths

USVI DPNR seems to generally address total phosphorus for discharges to Class B waters in its TPDES program.

3. Critical Findings

Based on our review, the EPA presents the following findings.

- All three permits discharge to Class B waters and are subject to the same water quality criterion for total phosphorus.
- USVI DPNR established numeric limitations for total phosphorus in all three permits reviewed based on the water quality criterion.
- One POTW permit established a numeric receiving water limitation at the edge of the mixing zone. The limitation was consistent with the water quality criterion for total phosphorus. The permit did not establish a total phosphorus effluent limitation.
- One POTW permit established a numeric total phosphorus effluent limitation. The limitation was consistent with the water quality criterion for total phosphorus and expressed as criteria end-of-pipe.
- The non-POTW permit established a numeric total phosphorus effluent limitation. The limitation was expressed as a quarterly average and sample maximum that were higher than the water quality criterion. Since there was no fact sheet available for review, it was not clear whether a mixing zone has been authorized for this discharge.

B. Pesticide General Permits

On October 31, 2011, the EPA issued a final NPDES *Pesticide General Permit (PGP) for Discharges From the Application of Pesticides* to waters of the United States. This action was in response to a 2009 decision by the U.S. Sixth Circuit Court of Appeals (National Cotton Council of America v. EPA, 553 F.3d 927 (6th Cir., 2009)) in which the court vacated EPA's 2006 Final Rule on Aquatic Pesticides and found that point source discharges of biological pesticides, and chemical pesticides that leave a residue, into waters of the US were pollutants under the Clean Water Act. The federal PGP applies where the EPA is the permitting authority. Approximately 40 delegated NPDES authorities, including the Virgin Islands, have issued their own pesticide general permits since November 2011.

1. Background

On January 7, 2009, the Sixth Circuit vacated the EPA's 2006 NPDES Pesticides Rule under a plain language reading of the CWA. National Cotton Council of America v. EPA, 553 F.3d 927 (6th Cir., 2009). The Court held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant." In response to this decision, on April 9, 2009, the EPA requested a two-year stay of the mandate to provide the Agency time to develop general permits, to assist NPDES-authorized states to develop their NPDES permits, and to provide outreach and education to the regulated community. On June 8, 2009, the Sixth Circuit granted the EPA the two-year stay of the mandate. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted the EPA's request for an extension to allow more time for pesticide operators to obtain permits for pesticide discharges into U.S. waters. The court's decision extended the deadline for when permits would be required from April 9, 2011 to October 31, 2011.

As a result of the Court's decision to vacate the 2006 NPDES Pesticides Rule, NPDES permits are required for discharges of biological pesticides and of chemical pesticides that leave a residue to waters of the US. The EPA proposed a draft pesticide general permit on June 4, 2010 to cover certain discharges resulting from pesticide applications. The EPA Regional offices and NPDES authorities may issue additional general permits or individual permits if needed.

On November 1, 2012 the USVI DPNR issued its own TPDES General Permit for Point Source Dischargers to Waters of the United States Virgin Islands from the Application of Pesticides (Permit No. VIPGP0000). The general permit is effective from November 1, 2012 to October 31, 2017. A notice of draft permit was published in local newspapers in September 2012 for a thirty day public comment period. Activities that are eligible for coverage under this permit are listed in Part 1.1 and are the same as the activities eligible for coverage under the EPA permit.

For this PQR, Region 2 reviewed the USVI DPNR pesticide general permit (USVI PGP) with a focus on verifying its consistency with NPDES program requirements. There are currently no approved application packages for entities in the USVI covered by the USVI PGP. One notice of intent (NOI) was submitted and the application was found to be deficient.

2. Program Strengths

In general, the USVI PGP is equivalent to the federal requirements and USVI DPNR has been timely in establishing its general permit for the regulated community.

The Virgin Islands Department of Health (VIDOH) submitted an NOI and application package which included a Pollutant Minimization Plan (PMP). A deficiency letter was sent to VIDOH because the PMP did not meet most of the requirements of the permit. The revised plan will undergo review once it is submitted and discharges under this permit are not allowed until the application package is approved. No additional NOIs are expected because no other applicator is likely to exceed the threshold. However, USVI DPNR should consider conducting an outreach campaign to ensure that any additional entities that may require permit coverage be informed of the requirements.

3. Critical Findings

The USVI PGP is very similar to the EPA PGP. The two primary differences between the permit are that the USVI PGP does not permit discharges from pesticide applications to waters designated as USVI DPNR Class A waters, as defined in 12 VIRR 186) and the thresholds that trigger the submittal of an NOI are significantly smaller than EPA's. The thresholds for the USVI PGP are:

- Mosquito and Other Flying Insect Pest Control – Treatment with adulticide during a calendar year over more than 640 acres
- Weed and Algae Pest Control – Treatment during a calendar year over more than either 10 linear miles or 40 acres of water
- Animal Pest Control – Annual treatment of more than 10 linear miles for 40 acres of water
- Forest Canopy Pest Control – Annual treatment area of more than 640 acres

Technology-based effluent limits, water quality based effluent limits, monitoring requirements, corrective actions and reporting requirements are the same as those in the EPA permit.

C. Pretreatment

The general pretreatment regulations (40 CFR 403) establish responsibilities of federal, state, and local government, industry and the public to implement pretreatment standards to control pollutants from industrial users which may cause pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

1. Background

Since the USVI is not approved to administer the pretreatment program, it is administered by EPA Region 2. The pretreatment review for the 2013 USVI PQR was conducted by EPA Headquarters. The PQR analysis for pretreatment implementation was based on a review of three POTW permits without pretreatment programs with design flows ranging from 0.004 MGD

(million gallons per day) to 8 MGD. As identified by the Integrated Compliance Information System (ICIS), there are no POTWs in the USVI that have approved pretreatment programs.

The goal of this pretreatment program review was to assess the status of the pretreatment program in the USVI as well as assess specific language in POTW NPDES permits. With respect to NPDES permits, focus was placed on the following regulatory requirements for pretreatment activities and pretreatment programs:

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);
- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);
- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW);
- 40 CFR 403.9 (POTW Pretreatment Program and/or Authorization to revise Pretreatment Standards: Submission for Approval);
- 40 CFR 403.12(i) (Annual POTW Reports); and
- 40 CFR 403.18 (Modification of POTW Pretreatment Program).

Since there are no approved pretreatment programs in the USVI, only 40 CFR 122.42(b) and 122.44(j) are applicable for the purpose of this PQR. However, the provisions at 40 CFR 122.44(j)(2) and 122.44(j)(3) are applicable only to POTWs where development of a pretreatment program has been deemed necessary.

The USVI DPNR is not delegated to administer the pretreatment program. Form 2A of the permit application for POTWs (EPA Form 3510-2A) requires the permittee to submit information on each significant industrial user and categorical industrial user within its service area that discharges to that POTW. There are seven publicly-owned treatment works in the USVI. To date, the USVI DPNR has not notified the EPA that any of these POTWs have identified any significant industrial users (SIUs) in their NPDES permit applications.

2. Program Strengths

The general conditions for all three POTW permits states that civil penalties will apply if any pollutants are introduced that violate a pretreatment standard or toxic effluent standard. Additionally, all three permits required the permittee to implement a Preventative Maintenance Program for the wastewater treatment facility and collection system.

3. Critical Findings

EPA Region 2 relies on the USVI to identify when circumstances at a POTW have changed so as to warrant the development of a pretreatment program. A procedure should be developed to ensure that EPA Region 2 is made aware when changes at a facility may warrant the development of a pretreatment program. Additionally, a procedure should be developed to ensure

that EPA Region 2 is aware of any indirect industrial dischargers reported on a permit application.

All POTW permits must also include the additional standard conditions for POTWs, as required by 40 CFR 122.42(b) and discussed in Section III.B of this report. Additionally, none of the permits reviewed for pretreatment had fact sheets. Fact sheets are required for all major permits (40 CFR 124.8 and 124.56), as discussed in Section III.E.1 of this report, and are vital to documenting the rationale for permitting decisions, such as whether or not a pretreatment program is required or not.

40 CFR 122.44(j)(1) states that POTWs must identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW. The POTW permits reviewed for pretreatment did not explicitly incorporate this provision, however, the POTW Application Form 2A requires that the permittee submit the same information as requested in 40 CFR 122.44(j)(1). Therefore, the requirements at 40 CFR 122.44(j)(1) are met when the permittee submits the permit application.

D. Stormwater

The NPDES program requires stormwater discharges from certain municipal separate storm sewer systems (MS4s), industrial activities, and construction sites to be permitted. Generally, the EPA and NPDES-authorized states and territories issue individual permits for medium and large MS4s and general permits for smaller MS4s, industrial activities, and construction activities. USVI DPNR is authorized to issue stormwater permits under the TPDES program.

1. Background

At this time, USVI DPNR has two general permits associated with the regulation of stormwater discharges from construction activities and industrial facilities. Review of both of these permits are included as part of the USVI 2013 PQR:

- Virgin Islands General Permit Authorization for Storm Water Discharges Associated with Construction Activity (VIGSA0000)
- Virgin Islands Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (VIMSGP)

USVI DPNR should consider posting their final general permits and any supporting documents on their website for better accessibility of information to the public and permittees.

TPDES General Permit Authorization for Stormwater Discharges from Construction Activity (Permit No. VIGSA0000)

On October 10, 2012, the EPA completed its review of the USVI DPNR's draft *General Permit for Stormwater Discharges from Construction Activity* and transmitted comments on the draft permit. The USVI DPNR Construction General Permit (CGP) was reviewed for completeness by the EPA Region 2 permitting staff in the New York and Puerto Rico offices using the EPA 2008 *NPDES General Permit for Stormwater Discharges from Construction Activities*. The USVI

CGP is nearly completely verbatim from the federal CGP and the previous USVI CGP. The EPA review of the draft permit did not result in significant comments or concerns.

As of November 2013, 13 permittees have applied for coverage under the USVI CGP. The CGP includes the federal requirements for the protection of endangered or threatened species, critical habitat, and historic places. The permit also identifies threatened species that the USVI has deemed locally important for protection. The permit was issued on November 29, 2012, and expires on November 30, 2017.

Virgin Islands Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (VIMSGP)

On April 20, 2011, the EPA completed its review of the USVI DPNR's draft *General Permit for Stormwater Discharges Associated with Industrial Activity* ("MSGP") and transmitted comments on the draft permit. The USVI MSGP was reviewed by EPA Region 2 permitting and compliance staff and the Office of Regional Counsel. Region 2 used EPA's 2008 *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* to review the USVI MSGP for completeness. The USVI MSGP is nearly completely verbatim from the EPA MSGP issued in 2008.

Six permittees have applied for coverage under the USVI MSGP. The MSGP includes the federal requirements for the protection of endangered or threatened species, critical habitats, and historic places. The permit also identifies species that the USVI has deemed locally important for protection. The permit does not include any references to snow or de-icing as the climate of the USVI does not deem it necessary. The permit was issued on December 1, 2012, and expires on December 31, 2016. Based on our 2011 review of the draft USVI MSGP, the EPA had the following findings:

- The EPA recommends that the USVI make NOIs under the USVI MSGP publicly available and/or include language in the future USVI MSGP permit that requires the permittee to make the NOI and SWMMP available to the public upon request.
- The USVI MSGP does not adequately address the ELG requirements for turbidity, as described in 40 CFR Part 450. As the USVI MSGP was issued before the 40 CFR Part 450 regulations were adopted, USVI DPNR will need to address any requirements of those provisions not adequately addressed in the current USVI MSGP when the permit is renewed.

IV. Special Focus Area Findings

A. Coral Reefs

1. Background

Coral reefs are biodiverse areas that make up less than 1 percent of the marine environment but help to support 25 percent of oceans' species. Coral reefs on the whole have been significantly

degraded over the past 25 years. Parts of the Caribbean have experienced an 80% reduction in coral cover due to massive coral bleaching and overfishing.

According to the National Oceanic and Atmospheric Administration Coral Reef Information System, coral reefs are a major and conspicuous component of the shelf regions of the USVI. Fringing and patch reefs, along with spur and groove formations, are typical along St. John and St. Thomas. St Croix, however, has several large barrier reefs, some of which are associated with well-developed lagoons. Several threatened and endangered species of coral thrive in the waters of the USVI. Specifically, the staghorn coral, *Acropora cervicornis,* and elkhorn coral, *Acropora palmate,* which are both listed as a threatened species by the federal government, are found in USVI territorial waters.

Species indigenous to the USVI and species listed as threatened or endangered by the federal government are protected by the USVI Endangered and Indigenous Species Act of 1990. The USVI Endangered Species Act protects all indigenous species, including live and dead coral. Specifically, 12 VIC 105(a) states that no person may take, sell, or transport any indigenous species, including live and dead coral, unless that person holds a valid permit or license to do so. Additionally, 12 VIC 105(b) states that no person may take, sell, or transport any specimen of a species listed as endangered or threatened by the federal or territorial government.

Aside from their stunning beauty and rich marine life, coral reefs provide a wide variety of ecosystem services, including: protection to coastal communities from storm surge, providing habitat for fisheries, sequestering carbon, attraction for lucrative recreation and tourism, and extraction of chemical compounds for medical uses.

Considering that one of the stated purposes of the CWA is to restore and maintain the chemical, physical, and biological integrity of water resources, EPA Region 2 reviewed the USVI DPNR's process for identifying the risk to threatened or endangered coral species as part of the 2013 USVI PQR.

2. Program Strengths

The USVI DPNR TPDES program, within the Division of Environmental Protection (DEP), collaborates with USVI Division of Fish and Wildlife (F&W) on endangered species review for each Notice of Intent for coverage under the USVI CGP or USVI MSGP. The F&W endangered species review is for both locally protected and federally listed coral species. An official memorandum or letter, from the Director of F&W to the Director of the DEP, details the results of the endangered species review. If F&W determines that the discharge may negatively impact indigenous, endangered or threatened coral species, F&W and DEP collaborate closely to determine which pollutants in the discharge need additional effluent limitations and to identify additional best management practices that will reduce negative impacts to coral species. The additional effluent limitations or best management practices are incorporated into the TPDES permit or Stormwater Pollution Prevention Plan.

3. Critical Findings

USVI DPNR does not conduct endangered species reviews for individual permits or NOIs for general permits other than the USVI CGP and USVI MSGP. If a permit writer believes that endangered species may be a concern, they may ask F&W to do a review but there is no official policy requiring endangered species for review for individual permits. USVI DPNR should consider conducting a cumulative impact analysis to identify the location of coral species that may be impacted by TPDES discharges.

USVI DPNR's procedures for conducting endangered species reviews and responding to any potential threats from TPDES discharges are not memorialized in USVI regulations or in the draft SOPs.

4. Suggested Practices and Action Items

- USVI DPNR could benefit from having a written policy regarding when an endangered species review is required for an individual permit.

- USVI DPNR could benefit from conducting an analysis of the location of listed coral species in relation to TPDES permitted discharges and determine what the cumulative impact may be.

B. Municipal Separate Storm Sewer Systems

Polluted stormwater runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s), from which it is often discharged untreated into local waterbodies. To prevent harmful pollutants from being washed or dumped into an MS4, operators of MS4s must obtain an NPDES permit and develop a stormwater management program. Phase 1, issued in 1990, requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permits for their stormwater discharges. Phase II, issued in 1999, requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized area that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.

Generally, Phase 1 MS4s are covered by individual permits and Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a stormwater management program (SWMP) to reduce the contamination of stormwater runoff and prohibit illicit discharges.

The United States Census Bureau defines an urbanized area as a municipality of 50,000 persons or a municipality which contains 1,000 persons per square mile. As of the 2010 Census, there are no urbanized areas, as defined by the Census Bureau, in the USVI. The federal regulations for the stormwater program provide that the permitting authority may determine that a discharge contributes "to a violation of a water quality standard or is a significant contributor to a violation of pollutants to waters of the United States." Such a determination, using Residual Designation Authority, would allow USVI DPNR to issue an MS4 permit and address any impairment caused

by stormwater runoff from a specific source not covered by any of the Territory's current general or individual stormwater permits.

1. Suggested Practices and Action Items

- USVI DPNR should evaluate their impaired waters listing to determine if there are waters for which stormwater is a significant contributor to an exceedance of water quality standards.

- USVI DPNR should review Residual Designation Authority at 40 CFR 122.26(a)(v).

- USVI DPNR should investigate all options to protect against stormwater impacts from MS4s even if the "urbanized areas" definition is not met (e.g., encouraging and promoting green infrastructure practices in new or re-development projects).

C. Rum Distilleries

1. Background

For the 2013 USVI PQR, Region 2 reviewed the permit and facility requirements for Cruzan VIRIL Limited (formerly VI Rum) and Diageo USVI to specifically focus on potential permit requirements related to waste streams from rum distillation facilities since this is a key industrial sector for the U.S. Virgin Islands. Currently, Diageo USVI does not have a discharge necessitating TPDES permit coverage but is expected to apply for coverage under the USVI MSGP.

Cruzan Rum is a rum distillery on St. Croix. Funds received by the Government of the Virgin Islands through the rebate of federal excise taxes levied on Cruzan's produced rum constitute a significant portion of the Territory's general revenue. Cruzan Rum has historically discharged untreated wastewater from fermentation and distillation processes through an ocean outfall to the Caribbean Sea. Treatment to remove solids from fermentation commenced in 2001. Prior to the installation of treatment, the discharge plume was visible for miles along the south coast of St. Croix. The Caribbean Basin Economic Recovery Act, passed by Congress in 1983, provides an exemption for this discharge from the Clean Water Act. The law provides an exemption for rum distilleries from effluent limitations, national standards, and ocean discharge criteria, provided that the Governor of the Territory certifies that the discharge will not interfere with the attainment of water quality or protection of marine biota.

The Regional Administrator of EPA Region 2 and the Governor of the Virgin Islands entered into a Memorandum of Understanding in August 2002 which established a funding mechanism of up to $6 million for "study and potential implementation of wastewater treatment options" for Cruzan Rum. As a result, the EPA agreed to allow the USVI to reissue the TPDES permit for VI Rum (now Cruzan Rum) in August 2002, allowing a flow increase but without any increase in solids discharges.

In 2003, the EPA concluded that there is a potential for negative impacts from the Cruzan Rum discharge on the coastal environment, based on the results of a 2002 ambient survey. A prior EPA report identified general concerns regarding solids discharges and shading from the plume. In a July 30, 2004 letter, the EPA stated that its monitoring results "offer adequate evidence that the discharge does not meet the requirements necessary to retain the Caribbean Basin Economic Recovery Act exemption." At the conclusion of the MOU treatability study period and after numerous discussions between the EPA and USVI DPNR, the USVI agreed to reissue the Cruzan Rum TPDES permit in 2008 with a requirement that Cruzan design and construct a treatment facility for the rum distillery effluent within three and a half years of the effective date of the permit.

Cruzan Rum is currently discharging under the terms of the permit issued by USVI DPNR on February 22, 2008. In accordance with the permit, Cruzan Rum has chosen a treatment option which will eliminate the discharge of effluent to the Caribbean Sea. The option includes direct feed of the effluent to an on-site evaporator for concentrations of solids. Water condensate will be reused in the distillery and solids will be sold to an animal feed supplier. On December 18, 2009, the Governor announced that the USVI Public Finance Authority successfully closed on $39 million of revenue bonds "that were sold to provide funds to construct wastewater facilities to address long-standing effluent disposal issues at the Cruzan VIRIL, Ltd. rum distillery." Cruzan Rum broke ground on the new treatment facility on April 16, 2010, substantively meeting its permit obligation. EPA Region 2 staff visited the facility during the first week of February 2011, and confirmed that the permittee is on track to meet its construction completion milestones. Construction was completed by the end of October. Cruzan is currently engaged in plant startup and commissioning of new equipment. For the 2013 USVI PQR, the EPA reviewed a preliminary draft TPDES permit which includes a schedule for gradually decreasing the shutdown periods of the new system, during which the facility would be discharging. This has the effect of increasing the period of time where the discharge has been eliminated, to the goal of complete elimination of the discharge by the end of the permit term.

The Diageo Company has constructed a rum distillery, also on the southern shore of St. Croix, producing rum under several brands, including Captain Morgan. This facility was also designed with a zero discharge treatment system. The two facilities differ in that Diageo has utilized an anaerobic treatment system, capturing biogas for utilization in electric generation. This creates a byproduct of pellets which the company plans to use as landfill cover. This byproduct differs from the slurry produced by Cruzan, in that it contains fewer nutrients that can be used as fertilizer or feed, and is in the form of dry pellets as opposed to wet slurry.

2. Program Strengths

The previous TPDES permit for the Cruzan Rum facility included a well written compliance schedule which kept the permittee on track for selecting, designing, and installing a treatment technology. The installation of waste treatment at Cruzan Rum represents significant progress, because the technology chosen not only mitigates the discharge, but will eventually eliminate the discharge of distillery waste. The sustainable design also includes recycling water back into the process and production of a byproduct that can be recycled as fertilizer or feedstock. Similarly,

Diageo chose a sustainable design that does not have a significant discharge, utilizes biogas, recycles water back into the production process, and creates a byproduct that could potentially be reused.

3. Critical Findings

The draft Cruzan Rum permit includes some documentation of the rationale for permit limits within the document. However, there was no fact sheet documenting the assumptions, rationale, and regulatory justification for permit conditions. In particular, there is no analysis of reasonable potential to cause or contribute to a violation of water quality standards. The record also lacks detail about the production process and treatment system, receiving water, and a map showing the facility location. The EPA did not review a permit for Diageo as there is no process discharge and they intend to apply for the required coverage under the VI MSGP.

4. Suggested Practices and Action Items

- A fact sheet must be developed for the Cruzan Rum permit to document and explain the basis for permit limitations and conditions.
- The fact sheet for the Cruzan Rum permit should include documentation of a narrative or numeric analysis of reasonable potential to cause or contribute to an exceedance of water quality standards for the periods when the treatment system is shut down and the facility is discharging.
- The compliance schedule included in the Cruzan Rum permit must be enforceable, require that the discharge be eliminated by the end of the permit term, and conform to the EPA's regulatory requirements for compliance schedules at 40 CFR 122.47.
- USVI DPNR must ensure that the Diageo facility obtains TPDES permit coverage for any discharges of storm water from the facility.

V. Action Items

This section provides a summary of the main findings of the 2013 USVI PQR and describes the action items that were developed as part of the PQR to improve USVI DPNR's TPDES permitting program. The action items will serve as the basis for ongoing discussion between the EPA and USVI DPNR. These discussions will focus on developing strategies to address each action item to eliminate program deficiencies and improve program performance.

The action items are divided into three categories to identify the priority that should be placed on each item and to facilitate discussions between the EPA and USVI DPNR.

- **Critical Findings (Category 1) -** Most Significant: action items will address a current deficiency or noncompliance with a federal regulation.
- **Recommended Actions (Category 2) -** Recommended: action items will address a current deficiency with the EPA guidance or policy.

- **Suggested Practices (Category 3)** - Suggested: proposed action items are listed as recommendations to increase the effectiveness of USVI DPNR's TPDES permit program.

Action items based on critical findings and recommended actions should be used to augment the list of "follow up actions" currently established as indicator performance measures and tracked under the EPA's Strategic Plan Water Quality Goals.

A. Basic Facility Information and Permit Application

USVI DPNR TPDES permits generally contain appropriate permit issuance, effective and expiration dates, authorized signature, and contained specific authorization-to-discharge information. However, in one instance, the issuance date of a permit was after the effective date.

The following is an action item to help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must issue (sign and date) a permit prior to the effective date of the permit. (Category 2)

B. Technology-Based Effluent Limitations

USVI DPNR's TPDES permits do not consistently establish short- and long-term average effluent limitations. While secondary treatment standards are consistently addressed in POTW permits, these standards are not always established correctly (e.g., no influent monitoring for BOD_5). Due to the lack of detail in the administrative record, there was often no documentation of the calculations used to develop effluent limitations based on ELGs or a discussion of the applicability of ELGs. In some files, it was unclear if USVI DPNR had applied ELGs. Additionally, there was no discussion of the basis of the TBELs established in the permit. In many cases, it was difficult to discern if final effluent limitations were technology- or water quality-based.

The following are action items to help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must establish short- and long-term effluent limitations in order to be consistent with EPA regulations at 40 CFR 122.45(d). (Category 1)
- USVI DPNR must establish, when applicable, secondary treatment standards at least as stringent as the federal requirements in order to be in accordance with EPA regulations at 40 CFR 133.102 and 40 CFR 133.105. (Category 1)
- USVI DPNR must include a discussion of the calculations used to develop effluent limitations based on ELGs, or a discussion of the applicability of ELGs, in the fact sheet for major facilities in order to be in accordance with EPA regulations at 40 CFR 124.56. (Category 1)
- USVI DPNR must include in the fact sheet a discussion of the basis for the TBELs established in a major permit in order to be in accordance with EPA regulations at 40 CFR 124.56. (Category 1)

- USVI DPNR should include a discussion of the calculations used to develop effluent limitations based on ELGs, or a discussion of the applicability of ELGs, in the administrative record for minor facilities as discussed in the EPA's 2010 NPDES Permit Writer's Manual. (Category 2)

- USVI DPNR must include in the administrative record a discussion of the basis for the TBELs established in a minor permit as discussed in the EPA's 2010 NPDES Permit Writer's Manual. (Category 2)

C. Water Quality-Based Effluent Limitations

USVI DPNR's administrative record for permits does not include a discussion of the receiving water impairments or identify if a TMDL has been developed for the receiving water body. The fact sheets and administrative record did not provide a discussion of the reasonable potential analysis for pollutant present in the effluent or for WET. Many of the TPDES permits reviewed did not establish maximum daily and average monthly limitations for continuous dischargers as required by 40 CFR 122.45(d). Effluent limitations for enterococci are also not consistently established in TPDES permits. Additionally, the permits and administrative records for facilities with mixing zones do not provide sufficient information regarding the development of the mixing zone and do not clearly indicate where the effluent limitation must be met (e.g., at end-of-pipe or at the edge of the mixing zone).

The following are action items to help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must include in the fact sheet or administrative record a discussion of the reasonable potential analysis for pollutants present in the effluent and for WET in order to be in accordance EPA regulations with 40 CFR 124.56. (Category 1)

- USVI DPNR must establish maximum daily and average monthly effluent limitations for all dischargers other than POTWs in order to be in accordance with EPA regulations at 40 CFR 122.45(d). (Category 1)

- USVI DPNR must establish, when applicable, effluent limitations for enterococci in order to be in accordance with 12 VIRR 184 and EPA regulations at 40 CFR 131.41. (Category 1)

- USVI DPNR must include a discussion of the development of mixing zones in the fact sheet or administrative record in order to be accordance with EPA regulations at 40 CFR 124.56 and clearly identify where the effluent limitations apply in the permit. (Category 1)

- USVI DPNR should include a discussion of the receiving water impairments or identify if a TMDL has been developed in the fact sheet or administrative record. (Category 2)

D. Monitoring and Reporting

USVI DPNR's TPDES permits do not consistently provide the location of the receiving water, outfall, or internal monitoring locations as required by 40 CFR 124.56.

The following action item will help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must clearly identify the location of the receiving water, outfall, and internal monitoring locations for all TPDES permits in order to be consistent with EPA regulations at 40 CFR 122.56. (Category 1)

E. Special and Standard Conditions

Standard conditions established at 40 CFR 122.41 were consistently included in TPDES permits. However, the additional standard conditions specific to POTWs established at 40 CFR 122.42(a) were not established in POTW permits.

The following action item will help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must establish the standard conditions applicable to specified categories of NPDES permits in order to be in accordance with 40 CFR 122.42. (Category 1)

F. Administrative Process

The administrative record did not consistently include documentation that a proposed permit had been provided to the EPA for review before the final issuance of the permit. Additionally, some TPDES permits discharge into waters such as irrigation systems, which are not regulated by the NPDES program.

The following are action items to help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must provide the EPA with a proposed permit, defined in 40 CFR 122.22, for review before the issuance of the final permit in order to be in accordance with federal regulations at 40 CFR 123.44. (Category 1)
- USVI DPNR must ensure that a permit is not administratively extended unless the appropriate renewal application was received 180 days before the expiration date of the previous permit in order to be in accordance with federal regulations at 40 CFR 122.6 and 122.21. (Category 1)
- USVI DPNR should identify in the Integrated Compliance Information System (ICIS) permits that do not discharge to waters regulated by the federal NPDES program. (Category 3)

G. Administrative Record

The administrative records reviewed did not consistently include a draft permit, fact sheet or statement of basis, or documentation that the draft permit had been public noticed. While parts of the administrative record may be stored electronically, the administrative record should contain a reference to where the additional information could be located to support the permitting decision.

When available, fact sheets did not meet the federal requirements at 40 CFR 124.8 and 124.56. Fact sheets did not adequately describe the type of facility or activity which is subject to the permit, the type and quantity of wastes or pollutants of concern, applicability of federal technology-based standards, the receiving water quality, or the applicable TMDL and water quality standards. Fact sheets also do not clearly provide documentation of the reasonable potential analysis or a determination of calculated effluent limitations (both technology- and water quality-based). The administrative record did not contain sufficient information to support the basis of the draft permit conditions including references to applicable statutory or regulatory provisions or other appropriate supporting information.

In one instance, the reviewed permit was classified as a minor but had a design flow of more than 1 MGD. The EPA was unable to determine why the facility was classified as a minor.

The following are action items to help USVI DPNR strengthen its TPDES permit program:

- USVI DPNR must create fact sheets, which include all information required by 40 CFR 124.56, for all major permits when they are developed in order to be in accordance with federal regulations at 40 CFR 124.8. (Category 1)
- USVI DPNR must include in the administrative record a description of the permitted facility or activity in the administrative record in order to be consistent with EPA regulations at 40 CFR 124.8 and documentation of the public notice in accordance with 40 CFR 124.10. (Category 1).
- USVI DPNR should include all elements of the administrative record described in Section 11.2.1 of the 2010 EPA Permit Writer's Manual. (Category 2)
- USVI DPNR should make improvements to its standard fact sheet and permits to include a more robust discussion and documentation of the basis of permit conditions such as the development of effluent limitations and mixing zones and to include a discussion of the existing impairments in the receiving waterbody and the current status of TMDL development. (Category 2)
- USVI DPNR should include the EPA major/minor discharger ranking sheet in the administrative record. (Category 3)
- USVI DPNR should formalize guidance for filing hard copy and/or electronic files. (Category 3)

H. Nutrients

At this time, there are no action items for the USVI TPDES program specific to nutrients.

I. Pesticide General Permit

In addition to continuing with the implementation of the PGP, action items to help the USVI DPNR strengthen its TPDES permit program include the following:

- USVI DPNR should follow up on the status of the VI DOH application and verify that no unauthorized discharges are occurring (Category 3).
- USVI DPNR should conduct a targeted outreach campaign to ensure that entities that are likely to be covered by the permit are aware of the requirements (Category 3).

J. Pretreatment

USVI DPNR is not delegated to administer a pretreatment program and there are no facilities subject to pretreatment requirements in the USVI. Action items regarding pretreatment at this time are:

- The USVI DPNR should consider undertaking its own evaluation of whether there are any SIUs or CIUs within the territory. (Category 3)
- EPA Region 2 should develop a procedure to ensure notification when indirect industrial discharges are reported on a permit application and when changes at a facility may warrant pretreatment program development. (Category 3)

K. Stormwater

Action items to help the USVI DPNR strengthen its TPDES permit program include the following:

- The EPA recommends that the USVI make NOIs under the USVI MSGP publicly available and/or include language in the future USVI MSGP permit that requires the permittee to make the NOI and SWMMP available to the public upon request. (Category 2)
- USVI DPNR must, at reissuance of the MSGP, address any requirements of 40 CFR Part 450 which are not adequately addressed in the current USVI MSGP, which was issued before those provisions were adopted, in order to be consistent with federal regulations... (Category 1)
- USVI DPNR should post all general permits and supporting documentation online to increase transparency. (Category 3)

L. Coral Reefs

The following action items could leverage the USVI DPNR TPDES permit program to help protect coral reefs:

- USVI DPNR could benefit from having a written policy regarding when an endangered species review is required for an individual permit. (Category 3)
- USVI DPNR could benefit from conducting an analysis of the location of listed coral species in relation to TPDES permitted discharges and determine what the cumulative impact may be. (Category 3)

M. Municipal Separate Storm Sewer Systems

At this time, the USVI does not have any municipalities which exceed the federal population size trigger for permitting as a MS4 nor has the USVI designated any municipalities within the territory as an MS4. USVI currently has 87 waterbodies listed on the 2012 303(d) List of Impaired Waters. Sixteen of those water bodies are listed as a high or medium priority. Urban runoff or storm sewers are listed as the source of the impairment for seven waterbodies on the 2012 303(d) List. Even though there are no municipalities that meet the population triggers for when an MS4 permit is required at this time, the Territory should evaluate the seven listed waterbodies that indicate storm water as a source of impairment and consider whether using RDA is appropriate for the municipalities that encompass these waters.

Action items to help the USVI DPNR strengthen its TPDES permit program include:

- USVI DPNR should evaluate its impaired waters listing to determine if there are waters for which municipal stormwater is a significant contributor to an exceedance of water quality standards. (Category 3)
- USVI DPNR should review the Residual Designation Authority at 40 CFR 122.26(a)(v) . (Category 3)
- USVI DPNR should investigate all options to protect against stormwater impacts from MS4s even if the "urbanized areas" definition is not met (e.g., encouraging and promoting green infrastructure practices in new or re-development projects). (Category 3)

N. Rum Distilleries

Action items to help the USVI DPNR strengthen its TPDES permit program include the following:

- USVI DPNR must include in the administrative record for Cruzan Rum documentation of a narrative or numeric analysis of reasonable potential to cause or contribute to an exceedance of water quality standards for the periods when the treatment system is shut down and the facility is discharging in order to be in accordance with federal regulations at 40 CFR 124.8 and 124.56. (Category 1)
- USVI DPNR must ensure that all conditions or references to compliance schedules in permits are consistent with the EPA regulations at 40 CFR 122.47. (Category 1)
- USVI DPNR must ensure that the Diageo facility obtains TPDES permit coverage for any discharges of storm water from the facility in order to be in accordance with federal regulations at 40 CFR 122.26. (Category 1)

Appendix A – Permits Reviewed

TPDES No.	Permit Name	Topics for Review
VI0000019	Hovensa, L.L.C.	Core Review; Coral Reefs
VI0000051	Virgin Islands Water and Power Authority – Estate Richmond	Core Review; Coral Reefs
VI0020036	Virgin Islands Waste Management Authority – Anguilla Wastewater Treatment Facility	Core Review; Nutrients; Pretreatment
VI0020044	Virgin Islands Waste Management Authority – Red Point Wastewater Treatment Facility	Core Review; Pretreatment
VI0020052	Cruzan Viril, Ltd.	Core Review; Coral Reefs, Rum Distilleries
VI0039829	BCM/CHI Frenchman's Reef, Inc.	Core Review
VI0040231	Grapetree Shores, Inc. – Divi Carina Bay Resort	Core Review; Nutrients
VI0040266	Virgin Islands Waste Management Authority – George Simmonds Wastewater Treatment Plant	Core Review; Nutrients; Pretreatment
VI0040291	Coral World VI, Inc	Core Review
VI0040746	Market Square East, Inc.	Core Review
VI0040479	Ritz Carlton Hotel	Core Review
VI0002003	Mangrove Lagoon Wastewater Treatment Facility	Core Review
VIGSA0033	Diageo USVI	Rum Distilleries
General Permits		
VIGSA0000	Virgin Islands General Permit Authorization for Storm Water Discharges Associated with Construction Activity	Stormwater
VIG87000	Virgin Islands Pesticide General Permit (PGP) for Point Source Discharges to Waters of the United States Virgin Islands from the Application of Pesticides	Pesticides
VIR050000	Virgin Islands Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (VIMSGP)	Stormwater

Appendix B – Action Items

I. Category 1 Action Items – Critical Findings

Topic Area	Action Item
Technology-Based Effluent Limitations	USVI DPNR must establish short- and long-term effluent limitations in order to be consistent with EPA regulations at 40 CFR 122.45(d).
	USVI DPNR must establish, when applicable, secondary treatment standards in order to be in accordance with EPA regulations at 40 CFR 133.102 and 40 CFR 133.105.
	USVI DPNR must include a discussion of the calculations used to develop effluent limitations based on ELGs, or a discussion of the applicability of ELGs, in the fact sheet for major facilities in order to be in accordance with EPA regulations at 40 CFR 124.56.
	USVI DPNR must include in the fact sheet a discussion of the basis for the TBELs established in a major permit in order to be in accordance with EPA regulations at 40 CFR 124.56.
Water Quality-Based Effluent Limitations	USVI DPNR must include in the fact sheet or administrative record a discussion of the reasonable potential analysis for pollutants present in the effluent and for WET in order to be in accordance EPA regulations with 40 CFR 124.56.
	USVI DPNR must establish maximum daily and average monthly effluent limitations for all dischargers other than POTWs in order to be in accordance with EPA regulations at 40 CFR 122.45(d).
	USVI DPNR must establish, when applicable, effluent limitations for enterococci in order to be in accordance with 12 VIRR 184 and EPA regulations at 40 CFR 131.41.
	USVI DPNR must include a discussion of the development of mixing zones in the fact sheet or administrative record in order to be accordance with EPA regulations at 40 CFR 124.56 and clearly identify where the effluent limitations apply in the permit.

Monitoring and Reporting	USVI DPNR must clearly identify the location of the receiving water, outfall, and internal monitoring locations for all TPDES permits in order to be consistent with EPA regulations at 40 CFR 122.56.
Special and Standard Conditions	USVI DPNR must establish the standard conditions applicable to specified categories of NPDES permits in order to be in accordance with 40 CFR 122.42.
Administrative Process	USVI DPNR must provide the EPA with a proposed permit, defined in 40 CFR 122.22, for review before the issuance of the final permit in order to be in accordance with federal regulations at 40 CFR 123.44.
	USVI DPNR must ensure that a permit is not administratively extended unless the appropriate renewal application was received 180 days before the expiration date of the previous permit in order to be in accordance with federal regulations at 40 CFR 122.6 and 122.21.
Administrative Record	USVI DPNR must create fact sheets, which include all information required by 40 CFR 124.56, for all major permits when they are developed in order to be in accordance with federal regulations at 40 CFR 124.8.
	USVI DPNR must include in the administrative record a description of the permitted facility or activity in the administrative record in order to be consistent with EPA regulations at 40 CFR 124.8 and documentation of the public notice in accordance with 40 CFR 124.10.
Stormwater	USVI DPNR must, at reissuance of the MSGP, address any requirements of 40 CFR Part 450 which are not adequately addressed in the current USVI MSGP, which was issued before those provisions were adopted, in order to be consistent with federal regulations.
Rum Distilleries	USVI DPNR must include in the administrative record for Cruzan Rum documentation of a narrative or numeric analysis of reasonable potential to cause or contribute to an exceedance of water quality standards for the periods when the treatment system is shut down and the facility is discharging in order to be in accordance with federal regulations at 40 CFR 124.8 and 124.56.

Rum Distilleries (cont.)	USVI DPNR must ensure that all conditions or references to compliance schedules in permits are consistent with the EPA regulations at 40 CFR 122.47.
	USVI DPNR must ensure that the Diageo facility obtains TPDES permit coverage for any discharges of storm water from the facility in order to be in accordance with federal regulations at 40 CFR 122.26.

II. Category 2 Action Items – Recommended Actions

Topic Area	Action Item
Basic Facility Information and Permit Application	USVI DPNR must issue (sign and date) a permit prior to the effective date of the permit.
Technology-Based Effluent Limitations	USVI DPNR should include a discussion of the calculations used to develop effluent limitations based on ELGs, or a discussion of the applicability of ELGs, in the administrative record for minor facilities as discussed in the EPA's 2010 NPDES Permit Writer's Manual.
	USVI DPNR must include in the administrative record a discussion of the basis for the TBELs established in a minor permit as discussed in the EPA's 2010 NPDES Permit Writer's Manual.
Water Quality-Based Effluent Limitations	USVI DPNR should include a discussion of the receiving water impairments or identify if a TMDL has been developed in the fact sheet or administrative record.
Administrative Record	USVI DPNR should include all elements of the administrative record described in Section 11.2.1 of the 2010 EPA Permit Writer's Manual.
	USVI DPNR should make improvements to its standard fact sheet and permits to include a more robust discussion and documentation of the basis of permit conditions such as the development of effluent limitations and mixing zones and to include a discussion of the existing impairments in the receiving waterbody and the current status of TMDL development.
Stormwater	The EPA recommends that the USVI make NOIs under the USVI MSGP publicly available and/or include language in the future USVI MSGP permit that requires the permittee to make the NOI and SWMMP available to the public upon request.

III. Category 3 Action Items – Suggested Practices

Topic Area	Action Item
Administrative Process	USVI DPNR should identify in ICIS permits that do not discharge to waters regulated by the federal NPDES program.
Administrative Record	USVI DPNR should include the EPA major/minor discharger ranking sheet in the administrative record.
	USVI DPNR should formalize guidance for filing hard copy and/or electronic files.
Pesticide General Permit	USVI DPNR should follow up on the status of the VI DOH application and verify that no unauthorized discharges are occurring
	USVI DPNR should conduct a targeted outreach campaign to ensure that entities that are likely to be covered by the permit are aware of the requirements
Pretreatment	The USVI DPNR should consider undertaking its own evaluation of whether there are any SIUs or CIUs within the territory.
	EPA Region 2 should develop a procedure to ensure notification when indirect industrial discharges are reported on a permit application and when changes at a facility may warrant pretreatment program development.
Stormwater	USVI DPNR should post all general permits and supporting documentation online to increase transparency.
Coral Reefs	USVI DPNR could benefit from having a written policy regarding when an endangered species review is required for an individual permit.
	USVI DPNR could benefit from conducting an analysis of the location of listed coral species in relation to TPDES permitted discharges and determine what the cumulative impact may be.

MS4s	USVI DPNR should evaluate its impaired waters listing to determine if there are waters for which municipal stormwater is a significant contributor to an exceedance of water quality standards.
	USVI DPNR should review the Residual Designation Authority at 40 CFR 122.26(a)(v).
	USVI DPNR should investigate all options to protect against stormwater impacts from MS4s even if the "urbanized areas" definition is not met (e.g., encouraging and promoting green infrastructure practices in new or re-development projects).