THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA, COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION, and ALLEGHENY COUNTY HEALTH DEPARTMENT, Plaintiffs, v. ALLEGHENY COUNTY SANITARY AUTHORITY, Defendant.	Civ. No. 2:07-cv-00737

MODIFIED CONSENT DECREE

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WHEREAS, the Allegheny County Sanitary Authority ("ALCOSAN"), a municipal authority organized under the Municipal Authorities Act, as amended, 53 Pa. C.S.A. §§ 5601-5623, operates the Conveyance and Treatment System, including the Sewage Treatment Plant, that serves the citizens of the City of Pittsburgh and many surrounding municipalities, all of which are located within the jurisdiction of the U.S. District Court for the Western District of Pennsylvania;

WHEREAS, the Sewage Treatment Plant is a large publicly-owned treatment work with flows equal to at least 1,000,000 gallons per day ("MGD") and a service population equivalent exceeding 10,000 persons;

WHEREAS, the geographic area served by ALCOSAN includes a unique sewer system where approximately 83 municipalities own their own Collection Systems and convey Sewage to the Conveyance and Treatment System, including the Sewage Treatment Plant, and most of those 83 municipalities have entered or agreed to enter into administrative orders and agreements with the Commonwealth of Pennsylvania Department of Environmental Protection ("Commonwealth" or "PADEP") and/or the Allegheny County Health Department ("ACHD") to assess, repair, and improve their municipal systems;

WHEREAS, Plaintiff, the United States of America ("United States"), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), the Commonwealth, and ACHD (hereinafter the United States, the Commonwealth and ACHD will sometimes be collectively referred to as the "Plaintiffs") have filed a Complaint against ALCOSAN seeking injunctive relief and civil penalties pursuant to:

a. the Clean Water Act, 33 U.S.C. § 1251 *et seq*. ("The Clean Water Act"), specifically Section 309 of the Clean Water Act, 33 U.S.C. § 1319;

b. the Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1. - 691.1001 ("Clean Streams Law"), specifically Sections 601 and 605 of the Clean Streams Law, 35 P.S. §§ 691.601 and 695.605; and

c. the Local Health Administration Law, Act 315 of August 24, 1951, P.L. 1304, as amended, 16 P.S. §12001, *et. seq.*, ("Local Health Administration Law") and the rules and regulations of the ACHD promulgated thereunder ("ACHD's Rules and Regulations");

WHEREAS, the United States, the Commonwealth, and ACHD allege that ALCOSAN has violated and continues to violate Sections 301 and 402 of the Clean Water Act, 33 U.S.C. §§ 1311 and 1342, Sections 3, 202 and 401 of the Clean Streams Law, 35 P.S. §§ 691.3, 691.202 and 691.401, and ACHD's Rules and Regulations, Article XIV, Sewage Management, § 1404.1, as amended ("ACHD's Article XIV") by impermissibly discharging untreated Sewage from the Conveyance and Treatment System as it existed as of December 31, 2015 to the Allegheny, Ohio and Monongahela Rivers and several smaller water bodies;

WHEREAS, on September 22, 2018, the Commonwealth, as the permitting agency for the National Pollutant Discharge Elimination System ("NPDES") permit program, noticed for public comment the draft of the NPDES Permit to be reissued to ALCOSAN;

WHEREAS, the Commonwealth has subsequently issued the final version of the reissued NPDES Permit to ALCOSAN, which is a Phase II NPDES permit as referenced in EPA's Combined Sewer Overflow Policy;

WHEREAS, the NPDES Permit requires ALCOSAN to immediately implement a water-quality-based long-term control plan;

WHEREAS, the NPDES Permit also requires ALCOSAN, *inter alia,* to revise its Nine Minimum Control Plan, to modify its operation and maintenance procedures, to revise its industrial pretreatment program, to eliminate sanitary sewer overflows, to meet certain monitoring and reporting requirements, and to cooperate with Customer Municipalities to develop area-wide planning and combined sewer overflow control activities.

WHEREAS, Section V.C.2. of EPA's Combined Sewer Overflow Policy (59 Fed.Reg. at 18,696) specifies, among other things, that compliance schedules for permittees, such as ALCOSAN, under a Phase II NPDES permit be placed in a judicial order;

WHEREAS, since immediate implementation of the water-quality-based long-term control plan and the tasks associated therewith cannot occur, the Plaintiffs and ALCOSAN (collectively, the "Parties"), as required by EPA's Combined Sewer Overflow Policy, have entered into this Consent Decree to establish, through a judicial order, judicially-enforceable schedules and requirements for the development and implementation of a water-quality-based long-term control plan and associated tasks;

WHEREAS, this Consent Decree was originally entered by the Court on January 23, 2008 (the "Date of Entry");

WHEREAS, ALCOSAN has been implementing the Consent Decree and accordingly developed a Wet Weather Plan and submitted it to the Plaintiffs on January 29, 2013;

WHEREAS, the submitted Wet Weather Plan included a "Selected Plan" for meeting the requirements of the Clean Water Act that ALCOSAN estimated will cost more than $3.5 billion to fully implement;

WHEREAS, ALCOSAN included several interim "2026 Alternatives" in the Wet Weather Plan, based upon an affordability analysis, which were intended to serve as stepping stones towards implementation of the Selected Plan;

WHEREAS, ALCOSAN selected one of the interim "2026 Alternatives" and recommended its implementation, calling it the "Recommended Plan";

WHEREAS, the Parties have concluded that efforts by the Customer Municipalities to reduce the volume of Dry Weather Flow and Wet Weather Flow through Green Infrastructure Measures and other Municipal Source Reduction Measures, might reduce the need for some of the storage and conveyance facilities included in the Selected Plan or in the Recommended Plan;

WHEREAS, in 2015 PADEP and ACHD issued administrative orders to the Customer Municipalities directing them to submit "Source Reduction Studies" that include certain measures for reducing Dry Weather Flow and Wet Weather Flow;

WHEREAS, on January 21, 2016, the EPA issued an information request pursuant to § 308 of the Clean Water Act, 33 U.S.C. § 1318, to the Pittsburgh Water and Sewer Authority (a Customer Municipality) requesting "Source Reduction Studies";

WHEREAS, Interim Measures (further described in Appendix Z) have been selected for implementation from the technologies described in the "2026 Alternatives";

WHEREAS, the Plaintiffs and ALCOSAN believe that the Interim Measures, in combination with the construction of Green Infrastructure Measures and the development and implementation of Municipal Source Reductions Measures developed by the Municipalities, may reduce or eliminate the need for full implementation of the Selected Plan;

WHEREAS, the Parties have agreed that implementation of the Interim Measures by December 31, 2036 according to the schedule in Appendix Z is practicable;

WHEREAS, following implementation of the Interim Measures, ALCOSAN will need to conduct post-construction monitoring in order to collect data on the effectiveness of the Interim Measures and any other controls which may be implemented throughout the region, including green infrastructure or source reduction measures, in order to determine the extent to which additional controls in the Selected Plan continue to be necessary in order to meet the requirements of the Clean Water Act;

WHEREAS, uncertainty regarding the extent to which full implementation of the Selected Plan will be necessary prevents the Parties from determining an appropriate schedule for full implementation of the Selected Plan until after the completion of post-construction monitoring as described above; and

WHEREAS, the Parties agree, and the Court finds, that settlement of the claims alleged in the Complaint without further litigation or trial of any issues, is fair, reasonable and in the public interest and that the entry of this Consent Decree is the most appropriate way of resolving the claims alleged in the Complaint.

NOW THEREFORE, without admission by ALCOSAN of any of the non-jurisdictional allegations in the Complaint, and without adjudication of any issue of fact or law, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action and over the Parties to this action pursuant to Section 309(b) of the Clean Water Act, 33 U.S.C. § 1319(b).

2. The Complaint states claims against ALCOSAN under the Clean Water Act, the Clean Streams Law, Local Health Administration Law, and ACHD's Article XIV, for injunctive relief and civil penalties. By entering this Consent Decree, ALCOSAN does not admit any liability to the Plaintiffs arising out of the transactions or occurrences alleged in the Complaint

and maintains that the provisions in this Consent Decree are for compromise and settlement purposes only.

3. ALCOSAN waives any and all objections it might have to the Court's jurisdiction to enter and enforce this Consent Decree.

4. The authority for the United States to bring this action is vested in the United States Department of Justice pursuant to Section 506 of the Clean Water Act, 33 U.S.C. § 1366, and 28 U.S.C. §§ 516 and 519. The authority for the Commonwealth to bring this action is pursuant to Section 309(e) of the Clean Water Act and Sections 601 and 605 of the Clean Streams Law, 35 P.S. § 691.601 and 691.605. The authority for ACHD to bring this action is pursuant to Section 12010 of the Local Health Administration Law, 16 P.S. § 12010, and ACHD's Article XIV.

II. VENUE

5. Venue is proper in this Court pursuant to Section 309(b) of the Clean Water Act, 33 U.S.C. §1319(b) and 28 U.S.C. §§1391(b) and 1395(a).

III. PARTIES BOUND

6. The United States is acting at the request and on behalf of the Administrator of EPA.

7. The Commonwealth of Pennsylvania is a state of the United States and, pursuant to Section 309(e) of the Clean Water Act, 33 U.S.C. § 1319(e), is required to be a party in this action. The Department of Environmental Protection is the agency within the Commonwealth of Pennsylvania that administers and enforces the Clean Streams Law and is delegated by EPA to administer and enforce the federal NPDES permit program.

8. ACHD is a county department of health operating under the authority of Local Health Administrative Law, 16 P.S. §§ 12001 to 12028.

9. ALCOSAN is a "person" within the meaning of Section 502(5) of the Clean Water Act, 33 U.S.C. § 1362(5), and Section 1 of the Clean Streams Law, 35 P.S. § 691.1, and a "municipality" within the meaning of Section 502(4) of the Clean Water Act, 33 U.S.C. § 1362(4).

10. The provisions of this Consent Decree shall apply to and be binding on ALCOSAN, its directors, employees, agents, servants, successors and assigns, and upon the United States, the Commonwealth, and ACHD.

11. From the Date of Entry until its termination, ALCOSAN shall give written notice of this Consent Decree to each person or entity to whom ALCOSAN may transfer ownership or operation of the Conveyance and Treatment System or any portion thereof and shall provide a copy of this Consent Decree to each such person or entity. ALCOSAN shall notify EPA, the United States Department of Justice, PADEP, and ACHD, in writing, of each successor-in-interest at least 21 days prior to each such transfer.

12. ALCOSAN shall provide a copy of this Consent Decree to each engineering, consulting and contracting firm to be retained to perform the work or any portion thereof required by this Consent Decree, upon the execution of any contract relating to such work. ALCOSAN shall also provide a copy to each engineering, consulting and contracting firm already retained to perform such work no later than 30 days after the Date of Entry.

13. Any action taken to implement ALCOSAN's duties under this Consent Decree by a contractor or consultant retained by ALCOSAN shall be considered an action of ALCOSAN for purposes of determining compliance with this Consent Decree. Except as permitted in Section XIII (Force Majeure), Paragraph 101 of Section VIII (Review and Approval of Submittals), and Paragraph 170 of Section XXI (General Provisions), ALCOSAN, in an action to

enforce this Consent Decree, shall not assert as a defense against the United States, EPA, PADEP, or ACHD, any act or failure to act by any of its directors, employees, agents, servants, contractors, successors and assigns.

IV. PURPOSE

14. The purpose of the Parties entering into this Consent Decree is to ensure that ALCOSAN undertakes measures necessary to comply with the Clean Water Act, including, but not limited to, 33 U.S.C. § 1342(q) and the regulations promulgated thereunder, the Clean Streams Law and the regulations promulgated thereunder, the terms of the NPDES Permit, and the ACHD's Rules and Regulations.

V. DEFINITIONS

15. Unless otherwise defined herein, terms used in this Consent Decree shall have the meanings given to those terms in the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.,* and the regulations promulgated under that act or, if not defined in the Clean Water Act or its regulations, then as defined in the Clean Streams Law and the regulations promulgated thereunder. All other words shall be given their ordinary meaning. The following terms used in this Consent Decree apply to this Consent Decree only and shall be defined as set forth below:

"ACHD" shall mean the Allegheny County Health Department.

"ALCOSAN" shall mean the Allegheny County Sanitary Authority.

"Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities" shall mean all Intermunicipal Trunk Sewers and Associated Facilities transferred to ALCOSAN on or after January 31, 2020.

"ALCOSAN Sewer Pipe" shall mean all pipes and interceptors in the Conveyance and Treatment System, except those in the Sewage Treatment Plant and in ALCOSAN's deep tunnel system.

"Appendix" shall mean any appendix to this Consent Decree, and "Appendices" shall mean all such appendices.

"Collection System" shall mean a system of sewer pipes designed to collect Sewage, or designed to collect Stormwater and Sewage, and/or which conveys Sewage, Infiltration and/or Inflow from a sewered area for Discharge, transport, or treatment. "Collection System" shall not include a system that is not connected to the Regional Collection System.

"Combined Sewer Outfall" shall mean an Outfall within the Conveyance and Treatment System identified in Appendix A, unless changed by written agreement of the Parties.

"Combined Sewer Overflow" shall mean a Discharge from a Combined Sewer Outfall.

"Combined Sewer System" shall mean (i) the portion of the Regional Collection System within the Boroughs of: Aspinwall, Braddock, Crafton, East Pittsburgh, Etna, Homestead, McKees Rocks, North Braddock, Pitcairn, Rankin, Sharpsburg, Turtle Creek, and Wilmerding, and the Township of Stowe; (ii) the portion of the Regional Collection System designed, constructed and operated to collect and convey Sewage and Storm Water and/or permitted to be used as a combined sewer system within the City of Pittsburgh, the Boroughs of : Carnegie, Ingram, Millvale, Munhall, Swissvale, West Homestead and West View, the Township of Wilkins, and McDonald Borough; (iii) Outfall C-51, which is located in Scott Township, but not including the Collection System serving Scott Township; and (iv) the portion of the Regional Collection System, not already listed above in this definition, within a Customer Municipality and designed, constructed, and operated to collect and convey Sewage and Storm Water and permitted to be used as a combined sewer system.

"Commonwealth" shall mean the Commonwealth of Pennsylvania Department of Environmental Protection.

"Consent Decree" shall mean this Consent Decree and all Appendices hereto.

"Conveyance and Treatment System" shall mean the Collection System owned and/or operated by ALCOSAN, as well as the Sewage Treatment Plant and other treatment facilities owned and/or operated by ALCOSAN. As described in Paragraph 66.c, the requirements of this Consent Decree that pertain to the Conveyance and Treatment System do not apply to the Regionalized Intermunicipal Trunk Sewers and Associated Facilities until January 31, 2021, and shall not apply to the Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities until the end of the calendar year immediately following the calendar year of transfer.

"Customer Municipality" shall mean a Municipality created to operate and maintain its Municipal Sewer system under contract with ALCOSAN that conveys Sewage directly or indirectly to the Conveyance and Treatment System.

"Date of Entry" shall mean January 23, 2008, the date this Consent Decree was first approved, signed, and entered by the United States District Court Judge for the Western District of Pennsylvania.

"Date of Lodging" shall mean the date this Consent Decree was first filed for lodging with the United States District Court for the Western District of Pennsylvania.

"Demonstration Approach" shall mean the demonstration approach to controlling and/or eliminating Discharges described in EPA's Combined Sewer Overflow Policy.

"Discharge" shall mean a spill, release or diversion of Sewage.

"Dry Weather Discharge" shall mean, for purposes of this Consent Decree, a Discharge from the combined sewer portion of a Collection System, other than a Wet Weather Discharge, except those Discharges that are caused by a third-party not retained by ALCOSAN.

"Dry Weather Flow" shall mean flow within the Regional Collection System during periods when there is no direct or immediate precipitation, snow melt or flood condition influence upon the Regional Collection System.

"Enforceable Document" shall mean: (a) an approved Corrective Action Plan reviewed and approved by PADEP pursuant to 25 Pa. Code §§ 94.1 *et seq*.; (b) an Official Plan Revision reviewed and approved by PADEP pursuant to the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, *as amended*, 35 P.S. §§ 750.1-750.20a ("Sewage Facilities Act"); (c) a long term control plan of a Municipality approved by PADEP; (d) a requirement in an NPDES permit; (e) a judicial consent decree; and/or (f) an administrative order issued by EPA or PADEP.

"Enforceable Source Reduction Document" shall mean an Enforceable Document that establishes flow targets for a Customer Municipality, includes or requires a long term plan that identifies the activities and the schedule that will be undertaken by the Customer Municipality in order to achieve those flow targets, and provides for periodic revisions to incorporate technological developments, changes in ownership in whole or in part of Collection Systems, and revisions to the flow targets.

"EPA" shall mean the United States Environmental Protection Agency.

"EPA's Combined Sewer Overflow Policy" shall mean the policy issued by EPA regarding combined sewer overflows, entitled "Combined Sewer Overflow (CSO) Control Policy," 59 Fed. Reg. 18,688 (April 19, 1994).

"Final Measures" shall mean the ALCOSAN projects identified in the Selected Plan described in Section 9.6 of the Wet Weather Plan, excluding any facilities or other controls described in Appendix Z.

"Force Main" shall mean a pipe that receives Sewage from the discharge side of a pump and is intended to convey such Sewage under pressure.

"Gravity Sewer Lines" shall mean pipes that contain Sewage flowing as a result of the force of gravity.

"Green Infrastructure Measures" shall mean the range of stormwater control measures that use plant systems, soil systems, permeable pavement, or stormwater management, harvest and reuse, or piping to store, infiltrate, evapotranspire, or reuse stormwater and reduce flows to the Collection System. Green Infrastructure Measures may include, but shall not be limited to, restoration of natural hydrology, extended detention wetland areas, green roofs, cisterns, and direct stream removal.

"Hydrograph" shall mean a graphical representation of the temporal distribution of runoff volume as a result of a precipitation event.

"Industrial User" shall mean any source regulated under Section 307(b), (c), or (d) of the Clean Water Act that introduces Pollutants into the Regional Collection System.

"Infiltration" shall mean water, other than Sewage, that enters a sewer system through structural or mechanical defects in the system.

"Inflow" shall mean water, other than Sewage or Infiltration, that enters a sewer system from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, French drains, foundation drains, streams, springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, Storm Water, surface runoff, street wash waters or drainage.

"Interceptor" shall mean a sewer within the Conveyance and Treatment System that is owned by ALCOSAN as of December 31, 2015 and designed to collect Sewage from a Sanitary

Sewer System and/or a Combined Sewer System and convey it to the Sewage Treatment Plant. In addition, for purposes of this Modified Consent Decree and this definition, the Ohio River Tunnel Segment identified in Appendix Z, Interim Measures PHASE 2, paragraph 2 of this Modified Consent Decree, the Regional Tunnels (the Allegheny River Tunnel Segment and Monongahela River Tunnel Segment) identified in Appendix Z, Interim Measures PHASE 3, paragraph 2 of this Modified Consent Decree, and any similar tunnels that may be constructed during implementation of the Final Measures, are each considered to be an "Interceptor."

"Interim Measures" shall mean the construction projects and activities described in Appendix Z.

"Intermunicipal Trunk Sewers and Associated Facilities" shall mean the existing sewer pipes and associated existing wet weather facilities that, as of the date of entry for this Modified Consent Decree, are part of the Municipal Collection System and depicted on the map provided by ALCOSAN on June 20, 2018 and attached hereto as Appendix AA.

"Municipal Collection System" shall mean a Collection System owned or operated by a Customer Municipality that conveys Sewage and/or Storm Water to the Conveyance and Treatment System or to points in the Regional Collection System, including permitted and unpermitted Outfalls. A Municipal Collection System shall not include Storm Water collection or Sewage systems that are not connected to the Conveyance and Treatment System.

"Municipal Source Reduction Agreement" shall mean a legally binding agreement between ALCOSAN and a Customer Municipality that establishes flow targets for the Customer Municipality, includes a long term plan that identifies the activities and the schedule that will be undertaken by the Customer Municipality in order to achieve those flow targets, and provides for

periodic revisions to incorporate technological developments, changes in ownership in whole or in part of Collection Systems, and revisions to the flow targets.

"Municipal Source Reduction Measures" shall mean the range of measures, including without limitation, Green Infrastructure Measures, sewer separation, and Inflow and Infiltration control measures.

"Municipality" shall mean a county, city, borough, town, township or school district, as well as an authority (other than ALCOSAN) created by one or more of these entities.

"Nine Minimum Control(s)" shall mean those controls and best management practices for Sewage conveyance and treatment systems described in EPA's Combined Sewer Overflow Policy.

"NPDES Permit" shall mean National Pollutant Discharge Elimination System ("NPDES") permit number PA0025984 issued by PADEP to ALCOSAN pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342 and Section 202 of the Clean Streams Law, 35 P.S. § 691.202, the previous versions of said NPDES permit issued to ALCOSAN, and all future extensions, modifications, amendments, renewals or reissuances of this permit. A copy of the NPDES permit for ALCOSAN is attached to this Consent Decree in Appendix D (NPDES Permit).

"Outfall" shall mean a structure designed, constructed, or operated to allow a discharge. For purposes of this Consent Decree, however, "Outfall" shall exclude Discharges from the Sewage Treatment Plant.

"Paragraph" shall mean a portion of this Consent Decree identified by Arabic numerals.

"Participating Municipality" shall mean every Customer Municipality except McCandless Township, Franklin Park Borough, Kilbuck Township, Ohio Township, and the portion of Ross Township that contributes sewage flows to the Lowries Run Interceptor.

"Parties" shall mean the United States, the Commonwealth, ACHD, and ALCOSAN. A "Party" shall mean any one of these entities.

"Peak Dry Weather Flow" shall mean the annual average of the highest flow value for each day of Dry Weather Flow, in MGD. Peak Dry Weather Flow shall be calculated by summing the highest flow values for each day of Dry Weather Flow within a calendar year for which such values can be observed or estimated, and then dividing that figure by the number of days of Dry Weather Flow within that calendar year in which such values are observed or estimated.

"Plaintiffs" shall mean the United States, the Commonwealth and ACHD.

"Plant Secondary Capacity" shall mean the maximum amount of flow that can be fully treated by both the Sewage Treatment Plant aeration basins and final clarifiers, or their equivalent.

"Point of Connection" shall mean any physical connection to the Conveyance and Treatment System in existence on December 31, 2015 that routes flow to that system from one or more Municipal Collection Systems.

"Pollutant" shall mean dredged spoil, solid waste, incinerator residue, filter backwash, garbage, Sewage, sewage sludge, munitions, chemical wastes, biological materials, radiological materials (except those regulated under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and/or agricultural waste discharged into water.

"Post-Construction" shall mean the period of time following completion of construction of the remedial controls, and implementation of the remedial activities, required by the Interim Measures or by the Final Measures.

"Presumption Approach" shall mean the presumption approach to controlling and/or eliminating Discharges described in EPA's Combined Sewer Overflow Policy.

"Primary Treatment" shall mean the combination of treatment processes and technologies, such as screening, grit removal, and settling, that provides primary clarification or its equivalent, the removal of solids and floatables and, if necessary, disinfection and the removal of any harmful disinfection residuals, where necessary.

"Pump Station" shall mean a facility comprised of hydraulic pumps or other mechanical equipment designed and utilized to impart energy to the Sewage in the form of hydraulic pressure, velocity, or elevation.

"Regional Collection System" shall mean, collectively, the Conveyance and Treatment System and all the Municipal Collection Systems.

"Regionalized Intermunicipal Trunk Sewers and Associated Facilities" shall mean all such Intermunicipal Trunk Sewers and Associated Facilities transferred to ALCOSAN by January 31, 2020 pursuant to Paragraph 66.c.

"Regulator" shall mean a device that is designed, constructed, and operated to control the volume of flow that is either (a) conveyed to one or more locations on the Conveyance and Treatment System and/or (b) discharged to receiving waters.

"Sanitary Sewer Outfall" shall mean an Outfall within the Conveyance and Treatment System identified in Appendix B, unless changed by written agreement of the Parties.

"Sanitary Sewer Overflow" shall mean a Discharge from a Sanitary Sewer Outfall or any other point (including but not limited to manholes and broken mains) within the Sanitary Sewer System at a location prior to a sewage treatment plant.

"Sanitary Sewer System" shall mean the portion of the Regional Collection System that is not part of the Combined Sewer System or the combined portion of the Conveyance and Treatment System.

"Secondary Treatment" shall mean "secondary treatment" as that term is defined in 40 C.F.R. § 133.

"Section" shall mean a portion of this Consent Decree identified by upper case Roman numerals.

"Sensitive Areas" shall mean, consistent with EPA's Combined Sewer Overflow Policy, areas as determined by the NPDES authority in coordination with state and federal agencies, as appropriate, which include designated Outstanding Natural Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, public drinking water intakes or their designated protection areas, and shellfish beds. The areas to be treated as Sensitive Areas for purposes of this Consent Decree only are those identified as such in Appendix C.

"Sewage" shall mean wastes, and wastewater, collected from residences, public buildings, industries, and commercial establishments and conveyed through the Regional Collection System.

"Sewage Parameters" shall mean the following parameters:

i. biochemical oxygen demand;

ii. fecal coliform;

iii. total suspended solids;

iv. E-coli;

v. dissolved oxygen;

vi. ammonia; and

vii. nitrite plus nitrate.

"Sewage Treatment Plant" shall mean the devices, processes, and/or systems owned and operated by ALCOSAN at 3300 Preble Avenue, Pittsburgh, Pennsylvania, that are used to store, treat, recycle, and reclaim Sewage.

"Storm Water" shall mean runoff and/or drainage resulting from precipitation, including rainfall and snowmelt.

"Subparagraph" shall mean a portion of a Paragraph identified by lower case letters or lowercase Roman numerals.

"Subsection" shall mean a portion of a Section, identified by upper case letters.

"Treatment" shall mean (a) Secondary Treatment and (b) any additional treatment that may be necessary to meet Water Quality Standards, to protect designated uses, and to protect human health.

"Validate" or "Validation" shall mean, for purposes of the models required under this Consent Decree, the calibration and verification of such models in accordance with EPA guidance, established industry standards, and good engineering practices.

"Water Quality Standards" shall mean the standards promulgated pursuant to Sections 301(b)(1)(C) and 402(a) of the Clean Water Act, 33 U.S.C. §§ 1311(b)(1)(C) and 1342(a).

"Wet Weather Discharge" shall mean a Discharge when the flow in a Collection System exceeds the storage and conveyance capacity of that system and is directly caused or influenced

by Inflow and/or Infiltration that is the direct or immediate result of precipitation, snow melt, or flood conditions.

"Wet Weather Flow" shall mean flow within the Regional Collection System consisting of Sewage, Inflow, and/or Infiltration during periods when there is a direct or immediate precipitation, snow melt or flood condition influence upon the Regional Collection System.

"Wet Weather Plan" shall mean the following portions of the long term clean water plan submitted by ALCOSAN to EPA on January 9, 2019, as modified by Appendix Z of this Modified Consent Decree: Table 9-78 (Summary of Capital Improvements Associated with Selected Plan); Section 11.2.1.5; Sections 11.2.5 (Woods Run WWTP Expansion) through and including 11.2.10 (Upper Monongahela CSO Retention Treatment Basin); and Figure 11-11 (Schedule of Activities for ALCOSAN's Interim Measures Wet Weather Plan).

"Wet Weather Routing Plan" shall mean the wet weather routing plan set forth in Section 11.3.2 (Operation and Maintenance) of the long term wet weather control plan submitted by ALCOSAN to EPA on January 9, 2019, and any revisions pursuant to Paragraph 63.

VI. CLEAN WATER ACT REMEDIAL CONTROLS AND REMEDIAL ACTIVITIES

A. Compliance Requirements:

16. The Wet Weather Plan is deemed approved by the Plaintiffs upon entry of this Modified Consent Decree. To further the objectives of this Modified Consent Decree, within the time frames established as part of the Wet Weather Plan process described in this Consent Decree, ALCOSAN shall implement the Interim Measures, the Final Measures and the other requirements of this Modified Consent Decree with the goal of:

a. eliminating all Sanitary Sewer Overflows from the Conveyance and Treatment System;

b. eliminating Dry Weather Discharges from the Conveyance and Treatment System;

c. discharging from the Conveyance and Treatment System only to the extent that such Discharges, as demonstrated by Post-Construction compliance monitoring, will meet the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy; and

d. constructing and operating conveyance, storage, and treatment facilities for flows from the Regional Collection System in accordance with Section VI, Subsections B (Planning, Design, and Construction Requirements) and C (Operational Requirements).

B. Planning, Design, and Construction Requirements

17. Sanitary Sewer System Flow. Prior to termination of this Consent Decree, ALCOSAN shall design and construct facilities for the Conveyance and Treatment System with the goal of meeting the requirements of the subparagraphs below.

a. Eliminating all Sanitary Sewer Overflows from the Conveyance and Treatment System.

b. Capturing and providing Treatment for a flow volume equivalent to all of the Sanitary Sewer System flow that is generated in the Regional Collection System in planning year 2046. Notwithstanding the foregoing, ALCOSAN need not design and construct facilities to capture and provide Treatment for a given amount of Sanitary Sewer System flow from a Customer Municipality within the Regional Collection System if:

i. One of the following applies:

(a) the Customer Municipality has constructed or is legally committed under an Enforceable Document to construct facilities to capture and provide Treatment for that amount of Sanitary Sewer System flow;

(b) that amount of Sanitary Sewer System flow is in excess of a flow target that the Customer Municipality is required to meet under an Enforceable Source Reduction Document or agrees to in a Municipal Source Reduction Agreement; or

(c) insufficient capacity exists to convey a given amount of flow from the Customer Municipality to the Conveyance and Treatment System, the Customer Municipality certifies that it does not intend to create and/or cannot create capacity sufficient to convey that given amount of flow to the Conveyance and Treatment System, and PADEP and EPA have determined that the Customer Municipality can comply with the Clean Water Act through means other than conveying this amount of flow to the Conveyance and Treatment System;

ii. ALCOSAN submits a proposal to the Plaintiffs to exclude such municipal flow on the grounds set forth above in Subparagraphs 17(b)(i) with sufficient detail for review and approval by EPA and PADEP, and for review and comment by ACHD, in accordance with Section VIII (Review and Approval of Submittals); and

iii. EPA and PADEP approve of ALCOSAN's proposal to exclude the municipal flow from its planning, design, and construction of such facilities.

18. Combined Sewer System Flow Within the time frames established as part of the Wet Weather Plan process set forth in this Modified Consent Decree, ALCOSAN shall design and construct facilities for the Conveyance and Treatment System sufficient to capture and treat flows from the Combined Sewer System for at least twenty years after completion of

construction of the remedial controls, and implementation of the remedial activities, required under the approved Wet Weather Plan, as follows:

a. Demonstration Approach – If ALCOSAN submits the Wet Weather Plan utilizing the Demonstration Approach pursuant to Section VI, Subsections H (Wet Weather Plan – General Requirements) and J (Wet Weather Plan – Demonstration Approach), and EPA's Combined Sewer Overflow Policy, then: ALCOSAN shall design and construct facilities for the Conveyance and Treatment System sufficient to capture and provide Treatment to the volumetric equivalent of all Peak Dry Weather Flow generated in the Regional Collection System; and, for the volumetric equivalent of all Wet Weather Flow generated in the Combined Sewer System portion of the Regional Collection System, ALCOSAN shall design and construct facilities that will meet the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy. Notwithstanding the foregoing, ALCOSAN need not design and construct facilities to capture and provide such treatment to a given amount of Combined Sewer System flow from a Customer Municipality within the Regional Collection System if:

i. One of the following applies:

(a) the Customer Municipality has constructed or is legally committed under an Enforceable Document to construct facilities to achieve such capture and treatment;

(b) that amount of Combined Sewer System flow is in excess of a flow target that the Customer Municipality is required to meet under an Enforceable Source Reduction Document or agrees to in a Municipal Source Reduction Agreement; or

(c) insufficient capacity exists to convey a given amount of flow from the Customer Municipality to the Conveyance and Treatment System, the Customer Municipality certifies that it does not intend to create and/or cannot create capacity sufficient to convey that given amount of flow to the Conveyance and Treatment System, and PADEP and EPA have determined that the Customer Municipality can comply with the Clean Water Act through means other than conveying this amount of flow to the Conveyance and Treatment System;

ii. ALCOSAN submits a proposal to the Plaintiffs to exclude such municipal flow on the grounds set forth above in Subparagraphs 18(a)(i), with sufficient detail for review and approval by EPA and PADEP, and for review and comment by ACHD, in accordance with Section VIII (Review and Approval of Submittals); and

iii. EPA and PADEP approve of ALCOSAN's proposal to exclude the municipal flow from its planning, design, and construction of such facilities.

b. 85% Presumption Approach – If, in accordance with Paragraphs 45-47, EPA and PADEP make a Preliminary Determination that ALCOSAN may utilize a Presumption Approach, and ALCOSAN elects to submit the Wet Weather Plan utilizing the Presumption Approach based on 85% capture of the volumetric equivalent of all Combined Sewer System flow pursuant to Section VI, Subsection I (Wet Weather Plan – Presumption Approach) and EPA's Combined Sewer Overflow Policy, then ALCOSAN shall design and construct facilities for the Conveyance and Treatment System sufficient to meet the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy, and sufficient to:

i. provide Treatment to the volumetric equivalent of all Peak Dry Weather Flow generated in the Regional Collection System;

ii. eliminate or capture for treatment at least 85% of the volumetric equivalent of all Combined Sewer System flow that is generated in the Regional Collection System; and

iii. for the volumetric equivalent of all Wet Weather Flow within the above-referenced captured flow, provide the best practicable technology ("BPT"), including, at a minimum, primary clarification or the equivalent of primary clarification, solids and floatables disposal, and disinfection of effluent, if necessary, to meet all applicable Water Quality Standards, protect designated uses and protect human health, including, where necessary, removal of harmful disinfection chemical residuals.

Notwithstanding the foregoing, ALCOSAN need not design and construct facilities to capture a and provide such treatment for a given amount of Combined Sewer System flow from a Customer Municipality within the Regional Collection System if ALCOSAN demonstrates compliance with the requirements set forth in Subparagraphs 18(a)(i) through (iii), above.

c. Mass Pollutant Removal Presumption Approach – If, in accordance with Paragraphs 45-47, EPA and PADEP make a Preliminary Determination that ALCOSAN may utilize a Presumption Approach, and ALCOSAN elects the mass-pollutant-removal Presumption Approach pursuant to EPA's Combined Sewer Overflow Policy, then ALCOSAN shall design and construct facilities for the Conveyance and Treatment System sufficient to capture and provide treatment to remove the mass of those Pollutants in the flow volumes that would be eliminated or captured for treatment in accordance with the 85% Presumption Approach

discussed above in Subparagraph 18(b). Notwithstanding the foregoing, ALCOSAN need not design and construct facilities to capture and provide such treatment to remove this given mass of Pollutants from the Combined Sewer System flow from a Customer Municipality within the Regional Collection System if ALCOSAN demonstrates compliance with the requirements set forth in Subparagraphs 18(a)(i) through (iii), above.

C. Operational Requirements

19. Sanitary Sewer System Flow Within the time frames established as part of the Wet Weather Plan process described below, ALCOSAN shall operate the Conveyance and Treatment System with the goal of:

a. eliminating all Sanitary Sewer Overflows from the Conveyance and Treatment System; and

b. capturing and providing Treatment, for at least twenty years after completion of construction of the remedial controls, and implementation of the remedial activities, required under the approved Wet Weather Plan, for a flow volume equivalent to all of the Sanitary Sewer System flow that is routed to the Conveyance and Treatment System from the Municipal Collection Systems within the Regional Collection System.

20. Combined Sewer System Flow Within the time frames established as part of the Wet Weather Plan process set forth in this Modified Consent Decree, ALCOSAN shall operate the Conveyance and Treatment System such that it captures and treats flows from the Combined Sewer System for at least twenty years after completion of construction of the remedial controls, and implementation of the remedial activities required under the approved Wet Weather Plan, as follows:

a. Demonstration Approach – If ALCOSAN elects the Demonstration Approach pursuant to Paragraph 48 and EPA's Combined Sewer Overflow Policy, then ALCOSAN shall operate the Conveyance and Treatment System such that:

i. it captures and provides Treatment to the volumetric equivalent of all Peak Dry Weather Flow routed to the Conveyance and Treatment System from the Regional Collection System;

ii. it provides, for the volumetric equivalent of all Wet Weather Flow routed from the Combined Sewer System portion of the Regional Collection System to the Conveyance and Treatment System, the maximum pollution reduction benefits reasonably attainable to protect designated uses and human health; and

iii. Discharges from the combined sewer system portion of the Conveyance and Treatment System meet the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy.

b. 85% Presumption Approach – If, in accordance with Paragraphs 45-47, EPA and PADEP make a Preliminary Determination that ALCOSAN may utilize a Presumption Approach, and ALCOSAN elects to submit the Wet Weather Plan utilizing the Presumption Approach based on the elimination or capture of 85% by volume equivalent of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis ("85% System Flow") pursuant to Section VI, Subsection I (Wet Weather Plan – Presumption Approach) and EPA's Combined Sewer Overflow Policy, then ALCOSAN shall operate the Conveyance and Treatment System such that it meets the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy, and such that:

i. it eliminates or captures the 85% System Flow that is routed to the Conveyance and Treatment System from the Regional Collection System;

ii. it provides Treatment to the volumetric equivalent of all Peak Dry Weather Flow routed to the Conveyance and Treatment System from the Regional Collection Systems; and

iii. for the volumetric equivalent of all Wet Weather Flow within this 85% System Flow, it provides BPT, including, at a minimum, primary clarification or the equivalent of primary clarification, solids and floatables disposal, and disinfection of effluent, if necessary, to meet all applicable Water Quality Standards, protect designated uses and protect human health, including, where necessary, removal of harmful disinfection chemical residuals.

c. Mass Pollutant Removal Presumption Approach – If, in accordance with Paragraphs 45-47 , EPA and PADEP make a Preliminary Determination that ALCOSAN may utilize a Presumption Approach, and ALCOSAN elects the mass-pollutant-removal Presumption Approach pursuant to EPA's Combined Sewer Overflow Policy, then ALCOSAN shall operate the Conveyance and Treatment System such that it captures and provides treatment to remove the mass of those Pollutants in the flow volumes that would be eliminated or captured for treatment in accordance with the 85% Presumption Approach discussed above in Subparagraph 20(b).

D. Permitting Requirements

21. NPDES Permit.

a. The NPDES Permit, which is attached to this Consent Decree in Appendix D (NPDES Permit), applies to all of the Combined Sewer Outfalls listed in Appendix A

(Combined Sewer Outfalls) and the Outfalls at the Sewage Treatment Plant. Any violation of the NPDES Permit, in and of itself, shall not be deemed a violation of this Consent Decree.

b. The NPDES Permit addresses, *inter alia*, the implementation of a water quality based Long-Term Control Plan ("LTCP") and certain associated combined sewer overflow control requirements. Such associated requirements include, but are not limited to, review and potential revisions to ALCOSAN's operation and maintenance procedures, review and potential revisions to ALCOSAN's implementation of a Nine Minimum Controls plan, review and potential revisions to ALCOSAN's industrial pretreatment program, the elimination of Sanitary Sewer Overflows; obligations for monitoring and reporting and cooperation with Customer Municipalities to implement area-wide planning and combined sewer overflow control activities, protection of sensitive areas, public participation in developing the wet weather LTCP, maximization of flow to the Sewage Treatment Plant for treatment, evaluation and selection of control alternatives, evaluation and selection of a presumption or demonstration approach, development of an operational plan, implementation schedule and financing plan for selected control options, post-construction compliance monitoring, and characterization, monitoring and modeling of the combined sewer systems (collectively, the "Associated LTCP Implementation Requirements").

c. This Consent Decree is intended to address the Associated LTCP Implementation Requirements, and to the extent the NPDES Permit and this Consent Decree provide different schedules for the implementation of the LTCP and/or different schedules for the performance of Associated LTCP Implementation Requirements, the schedule set forth in the Consent Decree shall govern enforcement proceedings as long as the Consent Decree is in effect. Also, to the extent the NPDES Permit and this Consent Decree establish different requirements

for monitoring and/or reporting of the implementation of the long-term control plan, and/or for monitoring and/or reporting of the performance of Associated LTCP Implementation Requirements, the monitoring and reporting requirements set forth in the Consent Decree shall govern enforcement proceedings as long as the Consent Decree is in effect.

22. Waiver of Appeal of NPDES Permit. On the basis of the requirements of this Consent Decree, including those provisions relating to the Associated LTCP Implementation Requirements, ALCOSAN agrees to the terms of the NPDES Permit attached hereto in Appendix D (NPDES Permit), and therefore waives its right to appeal the issuance of the NPDES Permit in the form attached in Appendix D, provided, however, that nothing herein shall limit ALCOSAN's right to appeal provisions in subsequent revisions, amendments, or renewals of its NPDES permit.

E. Sewage Treatment Plant Operation

23. Operation of Plant Influent Pumps. Beginning 180 days after the Date of Entry, ALCOSAN shall operate the Sewage Treatment Plant influent pumps to increase pumping rates, up to the maximum available treatment capacity of the Sewage Treatment Plant, in response to increases in wet-well elevation.

24. Sewage Treatment Plant Operating Plan. Within 180 days after the Date of Entry, ALCOSAN shall submit a "Sewage Treatment Plant Operating Plan" to be used before, during, and after Wet Weather Flow events. The Sewage Treatment Plant Operating Plan shall include the following components:

a. specific actions that ALCOSAN proposes to conduct before an anticipated Wet Weather Flow event and the purpose of each action;

b. specific actions that ALCOSAN proposes to conduct during a Wet Weather Flow event and the purpose of each action;

c. specific actions that ALCOSAN proposes to conduct after a Wet Weather Flow event and the purpose of each action;

d. a description of how the proposed actions will vary with different Wet Weather Flow events;

e. identification of operational and maintenance problems that have or are likely to impair ALCOSAN's ability to treat Wet Weather Flows and comply with its NPDES Permit; and

f. a description of preventative operational and maintenance measures to be implemented to seek to prevent such problems in the future.

25. Review, approval, and implementation of the Sewage Treatment Plant Operating Plan shall be in accordance with Section VIII (Review and Approval of Submittals).

26. Whenever any material and substantial alteration or addition is made to the Sewage Treatment Plant and/or its operation during Wet Weather Flow events, ALCOSAN shall submit to the Plaintiffs for comment and approval, in accordance with Section VIII (Review and Approval of Submittals), an update of the Sewage Treatment Plant Operating Plan.

F. Operation and Maintenance of Conveyance and Treatment System

27. Operation and Maintenance Program. ALCOSAN shall implement an operation and maintenance program for the Conveyance and Treatment System. Initially, this operation and maintenance program shall be in accordance with Appendix I (Operation and Maintenance of the Conveyance and Treatment System). However, as described in Paragraph 7 of Appendix I, after December 31, 2018 ALCOSAN may propose a revision to its O&M Plan that does not meet the requirements of Paragraph 1–6 of Appendix I, provided that it reflects best practices based on historic maintenance records.

a. If the Plaintiffs do not approve or partially approve any revisions proposed in accordance with this Paragraph within 60 days of receipt, the proposed revisions that were not approved shall be deemed disapproved, and ALCOSAN will have the right to invoke dispute resolution pursuant to Section XIV (Dispute Resolution), except that the following timelines in Section XIV shall be modified for such disputes:

i. Under Paragraph 143, ALCOSAN's Statement of Position shall be served within 30 days from Plaintiffs' receipt of its Notice of Dispute;

ii. Under Paragraph 143, Plaintiffs' Statement(s) of Position, if any, shall be served within 30 days of receipt of ALCOSAN's Statement of Position;

iii. Under Paragraph 144, a final decision resolving the dispute shall be issued within 60 days after receipt of ALCOSAN's Reply;

iv. Under Paragraph 145, ALCOSAN shall have 15 days of receipt of the final decision, or 15 days from the expiration of the 30-day period for the issuance of a final decision, to file with the Court and serve on the Agencies a motion for judicial review of the final decision.

b. Upon approval by the Plaintiffs in accordance with Section VIII (Review and Approval of Submittals), the revised O&M Plan shall be enforceable under this Consent Decree without a modification to this Consent Decree or its Appendixes under Section XIX (Modification).

c. If a requirement or frequency in any revised O&M Plan that was proposed after December 31, 2018 and approved in accordance with Section VIII is inconsistent with a requirement or frequency in Appendix I, the approved requirement or frequency in the revised O&M Plan shall govern.

28. Compliance with Nine Minimum Controls. In addition to the measures required of ALCOSAN pursuant to this Subsection, ALCOSAN shall undertake the measures identified in Section VI, Subsection Q (Compliance with Nine Minimum Controls).

29. Regulators. ALCOSAN shall, in accordance with Appendix E (Regulator Capacity Evaluation and Modification), evaluate the capacity of, and modify as necessary, the Regulators within the Conveyance and Treatment System.

30. Industrial Users. ALCOSAN shall, in accordance with Appendix F (Reduction of Water Quality Impacts from Industrial Users), implement measures to reduce water quality impacts on receiving waters from Industrial Users through Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System.

31. Control of Solids and Floatables. ALCOSAN shall implement the solids and floatables control program for the Conveyance and Treatment System set forth in Appendix G (Control of Solid and Floatable Materials).

32. Dry Weather Discharges. ALCOSAN shall, in accordance with Appendix H (Elimination of Dry Weather Discharges), implement a program to eliminate Dry Weather Discharges from the Conveyance and Treatment System.

33. Sewer Pipe Repair. ALCOSAN shall assess, repair, and maintain the ALCOSAN Sewer Pipes in accordance with the provisions of Appendix I (Operation and Maintenance of the Conveyance and Treatment System).

34. System Inventory and Maps. ALCOSAN, as required by Appendix I (Operation and Maintenance of the Conveyance and Treatment System), shall develop an inventory of the Conveyance and Treatment System and a map of the Conveyance and Treatment System and the Regional Collection System.

G. Monitoring and Modeling

35. Overflow Monitoring. In accordance with Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring), ALCOSAN shall evaluate each Discharge from the Conveyance and Treatment System.

36. Flow Monitoring. In accordance with Appendix M (Flow Monitoring) and this Consent Decree, ALCOSAN shall conduct flow monitoring of the Regional Collection System, including measurement of flows routed to the Conveyance and Treatment System from the Municipal Collection Systems.

a. For the ALCOSAN Point of Connection Meters (as that term is defined in Appendix M (Flow Monitoring)), ALCOSAN shall measure the flows at locations that are as close in proximity as possible to each Point of Connection, unless it is not feasible to monitor flow in proximity to a particular Point of Connection. Where it is not feasible to conduct such flow monitoring, or to obtain actual flow monitoring data, ALCOSAN shall utilize other established methodologies to characterize the flow rates for each Point of Connection.

b. For the flow routed to the Conveyance and Treatment System from the Municipal Collection Systems, in lieu of conducting flow monitoring at some of the Points of Connection to the Conveyance and Treatment System, ALCOSAN may submit to Plaintiffs, as part of its flow monitoring plan prepared and submitted pursuant to Section VIII (Review and Approval of Submittals) and Appendix M (Flow Monitoring), a proposal to utilize existing flow monitoring data gathered from past flow monitoring efforts by or on behalf of ALCOSAN. ALCOSAN may for the Point of Connection Meters or for any flow monitoring it conducted in the Regional Collection System, make such a proposal if such past flow monitoring was conducted (i) at locations as close in proximity as possible to each Point of Connection, if the location to be monitored is a Point of Connection Meter, (ii) after January 1, 1997, and (iii) in

accordance with the protocols proposed by ALCOSAN and approved by the Plaintiffs pursuant to Appendix M (Flow Monitoring). In its proposal, ALCOSAN shall include a summary and assessment of the data that it proposes to utilize, and an explanation of whether and how the past flow monitoring data meet the requirements of this subparagraph. ALCOSAN shall not receive credit for flow monitoring efforts for Synoptic ALCOSAN Point of Connection Meters. For purposes of this Consent Decree, "Synoptic ALCOSAN Point of Connection Meter" shall mean an ALCOSAN Point of Connection Flow Meter where three or more other flow meters are tributary to the location of that flow meter.

c. In accordance with Appendix M (Flow Monitoring), ALCOSAN shall perform flow monitoring and collect, and compile flow monitoring data for each Participating Municipality. If a Participating Municipality fails to cooperate with ALCOSAN or fails to grant ALCOSAN access to conduct flow monitoring within its municipal borders on or before October 1, 2007, ALCOSAN shall immediately notify the Plaintiffs. ALCOSAN will not be required to conduct flow monitoring of the Regional Collection System in those Participating Municipalities that refuse to grant reasonable access to ALCOSAN or refuse to provide information or authorizations necessary to conduct the flow monitoring on or before December 15, 2007. For purposes of this subparagraph, ALCOSAN cannot claim that it was denied necessary information, necessary authorization, or reasonable access if it seeks reimbursement of flow monitoring costs directly from the Participating Municipality.

37. Rainfall Monitoring. In accordance with Appendix N (Rainfall Monitoring), ALCOSAN shall implement a rainfall monitoring program within the geographical area comprising the Regional Collection System.

38. Model Validation. ALCOSAN shall ensure that it has obtained sufficient flow monitoring data and rainfall data to correlate Wet Weather Flow rates with rainfall measurements and to Validate and re-Validate the Hydrologic and Hydraulic Model, as hereinafter defined, developed by ALCOSAN, before and after its implementation of the Wet Weather Plan, in accordance with this Consent Decree. In performing such Validation of the Hydrologic and Hydraulic Model, ALCOSAN shall perform sensitivity analyses using actual flow and rainfall monitoring data from temporary and long term monitoring points, to the extent such data are available and reliable. ALCOSAN shall also provide to the Plaintiffs a summary of the Validation of the model evidencing the use of such actual system monitoring data. ALCOSAN shall provide this information within 60 days of each such Validation and re-Validation, and shall include with such submittals a written certification of the model Validation and/or re-Validation by a professional with experience in model Validation.

39. Hydrologic and Hydraulic Model. In accordance with Appendix P (Hydrologic and Hydraulic Model), ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, a plan ("Hydrologic and Hydraulic Model Plan") for the development of a computerized hydrologic and hydraulic model ("Hydrologic and Hydraulic Model") of the Conveyance and Treatment System and "Critical Portions", as defined in Appendix P (Hydrologic and Hydraulic Model), of the Municipal Collection Systems. ALCOSAN shall include in its Hydrologic and Hydraulic Model Plan a schedule that provides for complete implementation of the Hydrologic and Hydraulic Model before submission of its Wet Weather Plan. Following review and approval of the Hydrologic and Hydraulic Model Plan in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall proceed

with the development and implementation of the Hydrologic and Hydraulic Model in accordance with the schedule and requirements set forth in the approved plan.

40. Outfall Pollutant Monitoring. In accordance with Appendix O (Combined Sewer Overflow Pollutant Monitoring), ALCOSAN shall evaluate the Pollutant concentrations in Discharges from the Combined Sewer Outfalls.

41. Receiving Water Quality Monitoring. ALCOSAN shall assess and monitor the water quality of receiving waters in accordance with Paragraphs 1 through 11 of Appendix Q (Receiving Water Quality Monitoring) for the purpose of determining whether and to what extent these waters are in attainment with all applicable Water Quality Standards (a) prior to the submission of the Wet Weather Plan, (b) during the implementation of the Wet Weather Plan, and (c) during any Post-Construction monitoring period. In accordance with those Paragraphs, and within one year after the Date of Entry, ALCOSAN shall submit to the Plaintiffs, pursuant to Section VIII (Review and Approval of Submittals), a Receiving Water Quality Monitoring Plan, as hereinafter defined in Paragraph 1 of Appendix Q (Receiving Water Quality Monitoring). Upon approval by the Plaintiffs, ALCOSAN shall implement the Receiving Water Quality Monitoring Plan in accordance with the schedule and requirements therein. As set forth in Paragraph 9 of Appendix Q (Receiving Water Quality Monitoring), ALCOSAN shall also submit to the Plaintiffs, in accordance with Section VIII (Review and Approval of Submittals), any proposed revisions to its Receiving Water Quality Monitoring Plan.

42. Receiving Water Quality Monitoring to Develop and Validate Receiving Water Quality Model.

a. Validation of Receiving Water Quality Model Required as Part of Wet Weather Plan Utilizing the Demonstration Approach - In preparation for the development of a

Receiving Water Quality Model, as hereinafter defined, which is a prerequisite to ALCOSAN's submission of a Wet Weather Plan that follows the Demonstration Approach, ALCOSAN shall monitor the quality of receiving waters, in accordance with Paragraphs 12 through 15 of Appendix Q (Receiving Water Quality Monitoring), for the purpose of the development and Validation of the Receiving Water Quality Model. In accordance with those provisions and on or before the date that ALCOSAN submits its Receiving Water Quality Model Plan, as hereinafter defined, ALCOSAN shall submit to the Plaintiffs, for review and approval pursuant to Section VIII (Review and Approval of Submittals), a plan for the development and Validation of the Receiving Water Quality Model (the "Receiving Water Quality Model Validation Monitoring Plan"). Upon approval by the Plaintiffs, ALCOSAN shall implement the Receiving Water Quality Model Validation Monitoring Plan in accordance with the schedule and requirements set forth therein.

b. Validation of Receiving Water Quality Model Required as Part of Post-Construction Receiving Water Quality Monitoring – If as set forth in Paragraph 43.b., EPA and PADEP, in consultation with ACHD, determine, based upon the performance of any Post-Construction receiving water quality monitoring, that one or more receiving water bodies are not in attainment with all applicable Water Quality Standards then, unless ALCOSAN demonstrates to the Plaintiffs that such nonattainment is not attributable to the Conveyance and Treatment System, ALCOSAN shall conduct further monitoring of the quality of receiving waters, in accordance with Paragraph 43.b. and Paragraphs 5 through 11 of Appendix Q (Receiving Water Quality Monitoring), for the purpose of the development and Validation of the Receiving Water Quality Model required pursuant to Appendix R (Receiving Water Quality Model) for Post-Construction.

43. Receiving Water Quality Model

a. Submission of a Receiving Water Quality Model. No later than one year prior to the date of its submission of a Wet Weather Plan based on the Demonstration Approach, ALCOSAN shall submit to the Plaintiffs for review and approval, pursuant to Section VIII (Review and Approval of Submittals), a plan for the development of one or more receiving water quality models (the "Receiving Water Quality Model Plan") that meets the requirements of Appendix R (Receiving Water Quality Model). In its Receiving Water Quality Model Plan, ALCOSAN shall propose a schedule for the submission of a receiving water quality model ("Receiving Water Quality Model") that meets the requirements of Appendix R. Upon approval by the Plaintiffs, ALCOSAN shall implement the approved Receiving Water Quality Model Plan in accordance with the schedule and terms set forth therein.

b. Submission of a Post-Construction Receiving Water Quality Model and Revised Wet Weather Plan Following Determination of Nonattainment Based on Post-Construction Receiving Water Quality Monitoring. If, based upon the performance of any Post-Construction receiving water quality monitoring, EPA and PADEP, in consultation with ACHD, determine that the receiving waters are not in attainment with all applicable Water Quality Standards, consistent with EPA's Combined Sewer Overflow Policy, after completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan, then EPA or PADEP shall provide written notice of such determination to ALCOSAN:

i. After receipt of such written notice, ALCOSAN shall have 180 days either to demonstrate to the Plaintiffs that such determination of nonattainment is not attributable to the Conveyance and Treatment System; or, if

the Plaintiffs do not approve of ALCOSAN's demonstration or if ALCOSAN opts not to submit such a demonstration, then within that same time period ALCOSAN shall characterize impacts on receiving waters as defined in Appendix R (Receiving Water Quality Model), from Combined Sewer Overflows by submitting to the Plaintiffs a Post-Construction model ("Post- Construction Receiving Water Quality Model"), developed in accordance with Appendix R (Receiving Water Quality Model), to characterize the water quality in such receiving waters. In developing its Post-Construction Receiving Water Quality Model, ALCOSAN shall update the information applicable to such model that it has obtained pursuant to the following appendices: Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring); Appendix M (Flow Monitoring); Appendix N (Rainfall Monitoring); Appendix O (Combined Sewer Overflow Pollutant Monitoring); and Appendix P (Hydrologic and Hydraulic Model); and

ii. If ALCOSAN submits a Post-Construction Receiving Water Quality Model pursuant to the preceding Subparagraph, then within 360 days after submitting the Post-Construction Receiving Water-Quality Model to the Plaintiffs, ALCOSAN shall submit a revised Wet Weather Plan to the Plaintiffs unless ALCOSAN has demonstrated to the Plaintiffs, through the Post-Construction Receiving Water Quality Model that such nonattainment is not attributable to the Conveyance and Treatment System.

44. To the extent that ALCOSAN relies on monitoring data and models referred to in subsection G to make decisions with respect to the Wet Weather Plan, or to propose

modifications to the Wet Weather Plan, ALCOSAN shall ensure that such data, plans, and models are updated as appropriate, including at a minimum after implementation of the Interim Measures, and submitted to EPA and PADEP. Such updates must take into account the impacts of Regionalization pursuant to Paragraph 66.c.

H. Wet Weather Plan - General Requirements

45. Preliminary Determination. EPA's Combined Sewer Overflow Policy provides that regional sewer authorities such as ALCOSAN may use either a "Demonstration Approach" or a "Presumption Approach" when identifying control measures required to bring combined sewer overflows into compliance with the Clean Water Act. Consistent with that Policy, ALCOSAN may use the Presumption Approach only if EPA and PADEP determine that, based upon (a) the characterization, monitoring, and modeling of the Conveyance and Treatment System and the characterization of the receiving waters, (b) consideration of Sensitive Areas, and (c) available information pertaining to the Municipal Collection Systems, it is reasonable to presume that such an approach will bring ALCOSAN into compliance with the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy. This determination shall be termed the "Preliminary Determination." In making this Preliminary Determination, EPA and PADEP shall not disapprove the use of the Presumption Approach based solely on whether information exists to provide a clear indication of the type and level of combined sewer overflow controls necessary to protect all applicable Water Quality Standards, unless EPA and PADEP determine, based on such information, that it is not reasonable to presume that this approach will bring ALCOSAN into compliance with the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy.

46. If ALCOSAN wishes to use a Presumption Approach, then within two years of the Date of Entry, it shall request that EPA and PADEP make a Preliminary Determination and

shall, by that date, submit to EPA, PADEP and ACHD a document explaining why it believes implementation of a Presumption Approach is appropriate and consistent with the Clean Water Act including EPA's Combined Sewer Overflow Policy. ALCOSAN's submission shall include all information ALCOSAN wishes EPA and PADEP to consider in making the Preliminary Determination and shall, at a minimum, include the following estimates and the extent to which such estimates support a Presumption Approach:

a. the estimated annual volume of flow of Sewage (in gallons per year) that is generated in the Regional Collection System in a typical year, and the estimated percentage of this annual volume of flow that is captured for treatment in a typical year, as of the Date of Entry;

b. the estimated annual volume of flow of Sewage (in gallons per year) that will be generated in the Regional Collection System in a typical year, and the estimated percentage of this annual volume of flow that will be captured for treatment in a typical year, after implementation of the Wet Weather Plan and after the elimination of Sanitary Sewer Overflows from the Conveyance and Treatment System;

c. the estimated loadings (in lbs/day) of Sewage Parameters that will be discharged during a range of storm events from each Combined Sewer Outfall after implementation of the Wet Weather Plan; and

d. other available information (such as volume measurements and sampling results from Combined Sewer Overflows) that supports the information required under Subparagraphs (a), (b), and (c) of this Paragraph.

47. If ALCOSAN requests a Preliminary Determination in accordance with Paragraphs 45-46, EPA and PADEP provide a Preliminary Determination that the use of the

Presumption Approach is appropriate based on the factors set forth in Paragraph 45, and ALCOSAN elects to pursue the Presumption Approach following such Preliminary Determination, then by September 30, 2012, ALCOSAN shall submit a Wet Weather Plan based upon such approach, in accordance with Section VI, Subsection I (Wet Weather Plan - Presumption Approach).

48. If EPA and PADEP do not provide ALCOSAN with a Preliminary Determination to submit a Wet Weather Plan based on the Presumption Approach in accordance with this Subsection, or if ALCOSAN elects to pursue a Demonstration Approach notwithstanding its receipt of a Preliminary Determination to utilize the Presumption Approach, then by September 30, 2012, ALCOSAN shall, submit a Wet Weather Plan based upon the Demonstration Approach, in accordance with Section VI, Subsection J (Wet Weather Plan - Demonstration Approach).

I. Wet Weather Plan - Presumption Approach

49. If ALCOSAN submits the Wet Weather Plan utilizing the Presumption Approach in accordance with Section VI (Clean Water Act Remedial Controls and Remedial Activities), Subsection H (General Requirements), then ALCOSAN shall submit such plan in accordance with the requirements for the Presumption Approach set forth in EPA's Combined Sewer Overflow Policy, Section VI (except for Subsection J (Wet Weather Plan - Demonstration Approach)), and Appendix S (Wet Weather Plan Requirements for Presumption Approach).

50. In developing the Wet Weather Plan based on the Presumption Approach, ALCOSAN shall utilize the relevant information obtained by ALCOSAN from Customer Municipalities pursuant to Section VI, Subsection N (Coordination with Customer Municipalities), and the information developed by ALCOSAN pursuant to (a) the system inventory and system inspection requirements of Appendix I (Operation and Maintenance of the

Conveyance and Treatment System), (b) Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring), (c) Appendix M (Flow Monitoring), (d) Appendix N (Rainfall Monitoring), (e) Appendix O (Combined Sewer Overflow Pollutant Monitoring), (f) Appendix P (Hydrologic and Hydraulic Model), and (g) Appendix Q (Receiving Water Quality Monitoring).

51. ALCOSAN shall include in the Wet Weather Plan based on the Presumption Approach:

a. the information required under Paragraphs 45-46 (Preliminary Determination) and all additional updated information obtained by ALCOSAN in the interim period between the Preliminary Determination regarding ALCOSAN's proposed use of the Presumption Approach and its submission of the Wet Weather Plan;

b. water quality sampling results, diurnal flow patterns, hydrographs, estimated flow volumes (including flow volume information received from Customer Municipalities), estimated concentration and/or mass of Sewage Parameters, and any other data that ALCOSAN has used to identify the range of remedial controls and remedial activities that will meet the compliance requirements in Section VI, Subsection A (Compliance Requirements);

c. an analysis of alternative remedial controls and alternative remedial activities conducted in accordance with Appendix S (Wet Weather Plan Requirements for Presumption Approach), including an evaluation of such controls and activities to quantify their effectiveness in achieving the requirements identified in Section VI, Subsection A (Compliance Requirements), and the rationale for the proposed controls to be constructed and activities to be implemented to achieve such compliance requirements;

d. if ALCOSAN proposes to operate the Sewage Treatment Plant such that all flows are not routed through all or any portion of the primary or secondary treatment processes, a bypass demonstration in accordance with Appendix T (Bypass Demonstration);

e. design criteria and quantifiable performance criteria for the proposed remedial controls and remedial activities;

f. a cost analysis for controlling Combined Sewer Overflows in accordance with Appendix U (Cost Analysis for Combined Sewer Overflow Remedial Controls and Remedial Activities);

g. an implementation plan and a schedule, including interim milestones, for the proposed remedial controls and for the proposed remedial activities to ensure that the program of construction (including facilities improvements and expansions) and implementation described in the Wet Weather Plan are completed at the earliest date practicable;

h. a proposal for addressing the Sensitive Areas listed in Appendix C (Sensitive Areas), as well as any other sensitive areas identified by ALCOSAN in the Wet Weather Plan, in a manner that is consistent with EPA's Combined Sewer Overflow Policy;

i. a Post-Construction compliance monitoring plan, to be initiated pursuant to the approved schedule set forth therein after completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan to determine:

i. whether the proposed remedial controls, as built, and remedial activities, as implemented, meet the design and performance criteria set forth in the Wet Weather Plan;

ii. whether the remedial controls and remedial activities are sufficient to ensure compliance with ALCOSAN's then-current NPDES permit; and

iii. whether any Combined Sewer Overflows remaining after implementation of the Wet Weather Plan will preclude compliance with the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy.

ALCOSAN's Post-Construction compliance monitoring shall include additional receiving water quality monitoring, in accordance with Paragraphs 1 through 10 of Appendix Q (Receiving Water Quality Monitoring), to determine the effect of Discharges from the Conveyance and Treatment System upon receiving waters after the completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan. As set forth in Paragraph 10 of Appendix Q (Receiving Water Quality Monitoring), ALCOSAN shall submit a revised Post-Construction receiving water quality monitoring plan two years prior to the estimated completion of construction of remedial controls and implementation of remedial activities required under the approved Wet Weather Plan.

52. If, based upon the performance of any Post-Construction receiving water quality monitoring, EPA and PADEP, in consultation with ACHD, determine that the receiving waters are not in attainment with all applicable Water Quality Standards, consistent with EPA's Combined Overflow Policy, after completion of construction of the remedial controls and implementation of remedial activities required under the approved Wet Weather Plan, then EPA or PADEP shall provide written notice of such determination to ALCOSAN:

a. After receipt of such written notice, ALCOSAN shall have 180 days either to demonstrate to the Plaintiffs that such determination of nonattainment is not attributable to the

Conveyance and Treatment System; or, if the Plaintiffs do not approve of ALCOSAN's demonstration or if ALCOSAN opts not to submit such a demonstration, then within that same time period ALCOSAN shall characterize impacts on receiving waters as defined in Appendix R (Receiving Water Quality Model), from Combined Sewer Overflows by submitting to the Plaintiffs a Post-Construction Receiving Water Quality Model to characterize the water quality in such receiving waters. In developing its Post-Construction Receiving Water Quality Model, ALCOSAN shall update the information applicable to such model that it has obtained pursuant to the following appendices: Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring); Appendix M (Flow Monitoring); Appendix N (Rainfall Monitoring); Appendix O (Combined Sewer Overflow Pollutant Monitoring); and Appendix P (Hydrologic and Hydraulic Model); and

b. If ALCOSAN submits a Post-Construction Receiving Water Quality Model pursuant to the preceding Subparagraph, then within 360 days after submitting the Post-Construction Receiving Water Quality Model to the Plaintiffs, ALCOSAN shall submit a revised Wet Weather Plan to the Plaintiffs unless ALCOSAN has demonstrated to the Plaintiffs, through the Post-Construction Receiving Water Quality Model, that such nonattainment is not attributable to the Conveyance and Treatment System.

J. Wet Weather Plan - Demonstration Approach

53. If ALCOSAN elects to utilize the Demonstration Approach, or if EPA and PADEP determine that ALCOSAN may not utilize the Presumption Approach pursuant to Paragraph 48, above, then ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, a Wet Weather Plan in accordance with the requirements for the Demonstration Approach as set forth in EPA's Combined Sewer Overflow Policy, Section VI (Clean Water Act Remedial Controls and Remedial Activities) (except for Subsection

I (Wet Weather Plan - Presumption Approach)), and Appendix V (Wet Weather Plan for Demonstration Approach).

a. No later than one year prior to the date of its submission of a Wet Weather Plan based on the Demonstration Approach, ALCOSAN shall submit to the Plaintiffs for review and approval, pursuant to Section VIII (Review and Approval of Submittals), a Receiving Water Quality Model Plan that meets the requirements of Appendix R (Receiving Water Quality Model). In its Receiving Water Quality Model Plan, ALCOSAN shall propose a schedule for the submission of a Receiving Water Quality Model that meets the requirements of Appendix R.

b. As set forth in Paragraph 42(a), on or before the date that ALCOSAN submits a Receiving Water Quality Model Plan, ALCOSAN shall also submit to the Plaintiffs for review and approval, pursuant to Section VIII (Review and Approval of Submittals), the Receiving Water Quality Model Validation Monitoring Plan.

54. In developing the Wet Weather Plan based on the Demonstration Approach, as well as the models required for the Wet Weather Plan under this Consent Decree, ALCOSAN shall utilize the information obtained by ALCOSAN from Customer Municipalities pursuant to Section VI, Subsection N (Coordination with Customer Municipalities), and the information developed by ALCOSAN pursuant to Appendices I (Operation and Maintenance of the Conveyance and Treatment System), L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring), M (Flow Monitoring), N (Rainfall Monitoring), O (Combined Sewer Overflow Pollutant Monitoring), P (Hydrologic and Hydraulic Model), Q (Receiving Water Quality Monitoring), and R (Receiving Water Quality Model).

55. The Wet Weather Plan based on the Demonstration Approach shall include:

a. water quality sampling and modeling results, diurnal flow patterns, hydrographs, estimated flow volumes (including flow volume information received from Customer Municipalities), the estimated concentration and/or mass of Sewage Parameters, and any other data that ALCOSAN has used to identify the range of remedial controls and remedial activities that will meet the compliance requirements in Section VI, Subsection A (Compliance Requirements);

b. an analysis of alternative remedial controls and alternative remedial activities conducted in accordance with Appendix V (Wet Weather Plan Requirements for Demonstration Approach), including an evaluation of such controls and activities to quantify their effectiveness in achieving the requirements identified in Section VI, Subsection A (Compliance Requirements), and the rationale for the proposed controls to be constructed and activities to be implemented to achieve such compliance requirements;

c. if ALCOSAN proposes to operate the Sewage Treatment Plant such that all flows are not routed through all treatment units, a bypass demonstration in accordance with Appendix T (Bypass Demonstration);

d. design criteria and quantifiable performance criteria for the proposed remedial controls and remedial activities;

e. a cost analysis for controlling Combined Sewer Overflows in accordance with Appendix U (Cost Analysis for Combined Sewer Overflow Remedial Controls and Remedial Activities);

f. an implementation plan and a schedule, including interim milestones, for the proposed remedial controls, and for the proposed remedial activities, to ensure that the

program of construction (including facilities improvements and expansions) and implementation described in the Wet Weather Plan are completed at the earliest date practicable;

g. a proposal for addressing the Sensitive Areas listed in Appendix C, as well as any other sensitive areas identified by ALCOSAN in its Wet Weather Plan, in a manner consistent with EPA's Combined Sewer Overflow Policy;

h. a Post-Construction compliance monitoring plan, to be initiated pursuant to the approved schedule set forth therein and after completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan, to determine:

i. whether the proposed remedial controls, as built, and remedial activities, as implemented, meet the design and performance criteria set forth in the Wet Weather Plan;

ii. whether the remedial controls and remedial activities are sufficient to ensure compliance with ALCOSAN's then-current NPDES permit; and

iii. whether any Combined Sewer Overflows remaining after implementation of the Wet Weather Plan will preclude compliance with the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy.

ALCOSAN's Post-Construction compliance monitoring shall include additional receiving water quality monitoring, in accordance with Paragraphs 1 through 10 of Appendix Q (Receiving Water Quality Monitoring), to determine the effect of Discharges from the Conveyance and Treatment System upon receiving waters after completion of construction of the remedial

controls and implementation of the remedial activities required under the approved Wet Weather Plan.

56. If, based upon the performance of any Post-Construction receiving water quality monitoring, EPA and PADEP, in consultation with ACHD, determine that the receiving waters are not in attainment with all applicable Water Quality Standards, consistent with EPA's Combined Sewer Overflow Policy, after completion of construction of the remedial controls and implementation of remedial activities required under the approved Wet Weather Plan, then EPA or PADEP shall provide written notice of such determination to ALCOSAN:

a. After receipt of such written notice, ALCOSAN shall have 180 days either to demonstrate to the Plaintiffs that such nonattainment is not attributable to the Conveyance and Treatment System; or, if the Plaintiffs do not approve of ALCOSAN's demonstration or if ALCOSAN opts not to submit such a demonstration, then within that same time period, ALCOSAN shall characterize impacts on receiving waters, as defined in Appendix R (Receiving Water Quality Model), from Combined Sewer Overflows by submitting to the Plaintiffs a Post-Construction Receiving Water Quality Model to characterize the water quality in such receiving waters. In developing its Post-Construction Receiving Water Quality Model, ALCOSAN shall update the information applicable to such model that it has obtained pursuant to the following appendices: Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring); Appendix M (Flow Monitoring); Appendix N (Rainfall Monitoring); Appendix O (Combined Sewer Overflow Pollutant Monitoring); and Appendix P (Hydrologic and Hydraulic Model); and

b. If ALCOSAN submits a Post-Construction Receiving Water Quality Model pursuant to the preceding Subparagraph, then within 360 days after submitting the Post-Construction Receiving Water Quality Model to the Plaintiffs, ALCOSAN shall submit a revised

Wet Weather Plan to the Plaintiffs unless ALCOSAN has demonstrated to the Plaintiffs, through the Post-Construction Receiving Water Quality Model that such nonattainment is not attributable to the Conveyance and Treatment System.

K. [Reserved.]

57. [Reserved.]

58. [Reserved.]

59. [Reserved.]

60. [Reserved.]

61. [Reserved.]

L. Wet Weather Routing Plan

62. ALCOSAN shall implement the Wet Weather Routing Plan in accordance with the schedule and provisions set forth therein. Any proposed revision to the Wet Weather Routing Plan must provide procedures for operating the Conveyance and Treatment System to maximize Wet Weather Flow to the Sewage Treatment Plant without significantly affecting effluent quality and without destabilizing Treatment, and shall include the following:

a. the specific actions that ALCOSAN proposes to take before, during, and after Wet Weather Flow, and the purpose of each such action;

b. a description of how the proposed actions vary with different Wet Weather Flow;

c. the estimated percent reduction in biological oxygen demand and total suspended solids (*i.e.,* the average reduction in these parameters over all times in which routing will occur during Wet Weather Flow within a 12 month period) that ALCOSAN shall achieve upon implementation of its proposed Wet Weather Routing Plan;

d. a date by which ALCOSAN shall propose final percent reductions in biological oxygen demand and total suspended solids for its approved Wet Weather Routing Plan, which percent reductions, upon approval by the Plaintiffs, shall be enforceable under this Consent Decree;

e. a description of the components of the Conveyance Treatment System, including any portions of the Conveyance and Treatment System, that are to be used to store or treat Wet Weather Flow during such wet weather routing; and

f. a description of operational and maintenance measures to be implemented at the Sewage Treatment Plant processes and units.

Upon EPA's and PADEP's approval of the Wet Weather Plan, ALCOSAN shall implement the Wet Weather Routing Plan in accordance with the schedule and provisions set forth therein.

63. ALCOSAN shall conduct an annual review of its Wet Weather Routing Plan and may submit to the Plaintiffs for review and approval, in accordance with Section VIII (Review and Approval of Submittals), any proposed revisions to its approved plan.

64. In the event that ALCOSAN begins a bypass of Primary Treatment or Secondary Treatment in accordance with the approved Wet Weather Routing Plan, ALCOSAN shall record and provide to the Plaintiffs in the progress reports submitted under Section VII (Reporting and Recordkeeping) the following information:

a. the starting time and ending time and date of the bypass;

b. the percentage of flow that received Primary Treatment;

c. the percentage of flow that received Secondary Treatment; and

d. what actions were taken during the bypass to optimize treatment of the Sewage.

65. ALCOSAN shall separately submit a written report to the Plaintiffs of any routing or process unit bypasses that are not consistent with the approved Wet Weather Routing Plan or the approved Wet Weather Plan with the monthly Discharge Monitoring Report ("DMR") for the period in which such event occurred. ALCOSAN shall include in such report a description of the cause of such deviation, the impact of such deviation on the Conveyance and Treatment System and receiving waters, and the steps to be taken by ALCOSAN to prevent such deviations in the future.

M. Implementation of Wet Weather Plan

66. Wet Weather Plan.

a. Interim Measures. ALCOSAN shall implement the Interim Measures in accordance with Appendix Z. In any event, all Interim Measures shall be implemented no later than December 31, 2036. Notwithstanding any other provision of this Consent Decree, the submission of a request to modify the schedule for implementation of any Interim Measures shall not result in an extension of that schedule unless the extension is included in the proposed modification and the modification is approved pursuant to Section XIX of this Consent Decree. The Parties shall not extend the December 31, 2036 deadline without leave of Court.

b. Flow Reduction Measures.

i. On or before December 31, 2018, ALCOSAN shall submit to the Plaintiffs for review and comment a report in which ALCOSAN shall state whether it recommends modifications to the Interim Measures or Final Measures based upon information from the Municipalities or other relevant program information. The report shall evaluate: (1) the proposed Municipal Source Reduction Measures (e.g., Green Infrastructure Measures, etc.); and (2) the regional implications of any proposed Municipal Source Reduction Measures on

whether alternate or revised Interim Measures and Final Measures can achieve the requirements of this Consent Decree. If ALCOSAN recommends modifications to the Interim Measures, the report shall describe the nature of the anticipated modifications, the financial implications of the anticipated modification, and the basis for ALCOSAN's belief that the anticipated modification will satisfy the requirements of this Consent Decree.

ii. ALCOSAN shall undertake good faith efforts to enter into a Municipal Source Reduction Agreement with each Customer Municipality by January 31, 2025. This requirement does not apply to Customer Municipalities that are subject to Enforceable Source Reduction Documents.

iii. In designing each of the projects described in Phases 2 and 3 of Appendix Z, ALCOSAN shall consider the impact of any Green Infrastructure Measures, and other Municipal Source Reduction Measures that have been installed or that are subject to Municipal Source Reduction Agreements or Enforceable Source Reduction Documents. ALCOSAN may submit a proposed revision to the Wet Weather Plan pursuant to Paragraph 67 of this Consent Decree relying on Municipal Source Reduction Agreements or Enforceable Source Reduction Documents. Nothing in this Paragraph limits the time period during which the provisions of Paragraph 67 are in effect.

c. Regionalization. ALCOSAN shall undertake good faith efforts to take responsibility for at least 200 miles of the Intermunicipal Trunk Sewers and Associated Facilities by January 31, 2020. Such responsibility shall include, at a minimum, operating and maintaining the Regionalized Intermunicipal Trunk Sewers and Associated Facilities, and amending the Wet

Weather Plan pursuant to Paragraph 67(e). Except as otherwise expressly limited in this Modified Consent Decree, or as expressly limited in an Appendix, the terms of this Modified Consent Decree that are applicable to the Conveyance and Treatment System shall not apply to the Regionalized Intermunicipal Trunk Sewers and Associated Facilities until January 31, 2021, and shall not apply to the Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities until the end of the calendar year immediately following the calendar year of transfer. On or before January 31, 2021 and continuing thereafter as necessary until termination of this Consent Decree, ALCOSAN, in accordance with Section VIII, shall update the following to account for Regionalization: (i) the O&M Plan identified in Paragraph 27 and Appendix I; (ii) the Revised Nine Minimum Controls plan described in Section VI, Subsection Q; (iii) the evaluation of regulator capacity described in Paragraph 29 and Appendix E; (iv) the solids and floatables control plan described in Paragraph 31 and Appendix G; (v) the program to eliminate Dry Weather Discharges described in Paragraph 32 and Appendix H; (vi) the program described in Paragraph 33 and Appendix I to assess, repair, and maintain sewer pipes; (vii) the inventory of the Conveyance and Treatment System and map of the Conveyance and Treatment System and the Regional Collection system described in Paragraph 34 and Appendix I; (viii) the program to monitor Combined Sewer Overflows and Sanitary Sewer Overflows described in Paragraph 35 and Appendix L; and (ix) any other materials described in Section VI, Subsection.F (Operation and Maintenance of Conveyance and Treatment System).

d. Post-Interim Monitoring.

i. Following the construction of all projects specified in Appendix Z, ALCOSAN shall conduct Post-Construction monitoring in accordance with the requirements of this Consent Decree, including Paragraphs 35-43.

ii. If Post-Construction Monitoring shows that ALCOSAN has met the requirements of the Consent Decree, it need not implement the Final Measures but must continue to comply with all other provisions of this Consent Decree.

iii. If Post-Construction Monitoring shows that ALCOSAN has not met the requirements of the Consent Decree, it shall, within one year following the conclusion of post-construction monitoring, submit a proposed schedule for construction of the Final Measures that is as expeditious as practicable. ALCOSAN may simultaneously submit a proposed modification of the Final Measures in accordance with Paragraph 67 along with an alternative schedule for construction of the proposed modified Final Measures.

67. Revisions to Wet Weather Plans.

a. ALCOSAN shall submit, in accordance with Section VIII (Review and Approval of Submittals), a revision to the Wet Weather Plan in any of the following circumstances:

i. Following EPA's and PADEP's approval of the Wet Weather Plan, EPA or PADEP determine, based on information and/or analyses not available at the time of their Wet Weather Plan approval (including without limitation the transfer of Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities), that it is necessary for ALCOSAN to modify the Wet Weather Plan to achieve and maintain the compliance requirements set forth in Section VI, Subsection A (Compliance Requirements);

ii. Following EPA's and PADEP's approval of the Wet Weather Plan, EPA or PADEP determine, due to changes in the applicable Water Quality

Standards, e.g. through approval of a Use Attainability Analysis plan, or assignment of wasteload allocations developed as part of total maximum daily loads ("TMDLs") for certain Pollutants, that it is necessary for ALCOSAN to modify the Wet Weather Plan to achieve and maintain the compliance requirements set forth in Section VI, Subsection A (Compliance Requirements);

iii. Following ALCOSAN's implementation of the previously approved Wet Weather Plan, and based on any Post-Construction receiving water quality monitoring conducted after such implementation, EPA or PADEP determine, pursuant to Paragraphs 52 or 56 of this Consent Decree, that the receiving waters are not in attainment with all applicable Water Quality Standards, consistent with EPA's Combined Sewer Overflow Policy; provided, however, that ALCOSAN shall not have to submit a revised Wet Weather Plan following this determination if ALCOSAN demonstrates to the Plaintiffs that such nonattainment is not attributable to the Conveyance and Treatment System pursuant to the procedures set forth in Subsection G; and/or

iv. ALCOSAN proposes modifications to its approved Wet Weather Plan and such modifications are approved in accordance with Section VIII (Review and Approval of Submittals).

b. At any time, ALCOSAN may submit for review and approval pursuant to Section VIII (Review and Approval of Submittals), a revision of the Interim Measures or the Final Measures that alters the control measures in a way that achieves system-wide performance equivalent to, or better than, the performance of the unmodified Interim Measures or Final Measures and meets the requirements of the CWA. The EPA and PADEP, in consultation with

ACHD, may consider the date by which overflow reductions will be achieved in determining whether a revision to the Interim Measures achieves "equivalent or better system-wide performance." ALCOSAN shall include the following information with any such submission: (1) a description of the specific technology to be applied; (2) the locations where the technology will be used; (3) the design limits of the proposed use of the technology; (4) the costs of installation and maintenance and who is obligated to install and maintain the technology; (5) the impact of the alternate technology on the schedule for implementing the Interim Measures or Final Measures; (6) reliable computer modeling and/or other evidence sufficient to demonstrate that the proposed modification of the Interim Measures or Final Measures will achieve equivalent or better performance than the unmodified Interim Measures or Final Measures; (7) an updated schedule for the revised portion of the WWP that is as expeditious as practicable; and (8) information showing that there has been an opportunity for public participation with respect to the proposed modification, including one or more public meetings. The technology referred to in this sub-paragraph may include, without limitation, Green Infrastructure Measures that are subject to Municipal Source Reduction Agreements or Enforceable Source Reduction Documents.

c. A proposal to modify the Interim Measures pursuant to Subparagraph 67.b may include a proposal to eliminate or modify the Upper Monongahela Retention Treatment Basin Project, provided that the proposal, taken in its entirety, meets the all the requirements of Subparagraph 67.b.

d. At the time that ALCOSAN submits an implementation schedule for the Final Measures, it may, after coordinating with the Customer Municipalities, propose modifications to the level of control of Combined Sewer Overflows and Sanitary Sewer

Overflows to be achieved by the WWP, provided that the proposed modified Final Measures meet the requirements of the Clean Water Act and this Consent Decree.

e. By January 31, 2024, and at the request of EPA and PADEP thereafter, ALCOSAN shall submit for review and approval pursuant to Section VIII (Review and Approval of Submittals), an amendment to the Wet Weather Plan for the Regionalized Intermunicipal Trunk Sewers and Associated Facilities. The proposed amendment shall include: (i) the identification of projects designed to address SSOs on these portions of the Collection System consistent with the levels of control specified in the Interim Measures or Final Measures, as applicable; and (ii) implementation schedules for each project to be completed during the Interim Measures. The implementation schedules for projects to be completed during the Final Measures, as amended, will be provided pursuant to Paragraph 66.d.iii.

68. If EPA and/or PADEP make a determination that ALCOSAN must submit a revised or modified Wet Weather Plan in accordance with the preceding Paragraph, EPA and PADEP shall provide such determination to ALCOSAN in writing. In this written determination, EPA and PADEP shall state the bases for their determination at that time, although EPA and PADEP may provide additional bases upon which the determination was made if ALCOSAN contests the determination through the dispute resolution provisions of this Consent Decree. If ALCOSAN does not dispute EPA's and PADEP's determination in accordance with the procedures set forth in Section XIV (Dispute Resolution), then, except as set forth in Paragraphs 52 or 56, ALCOSAN shall submit to the Plaintiffs a revised Wet Weather Plan within 365 days after such determination, unless the Parties agree to a shorter period of time taking into account the nature and extent of the required modifications to the Wet Weather Plan. ALCOSAN shall submit its revised Wet Weather Plan to the Plaintiffs in accordance with Section VIII (Review

and Approval of Submittals). In its Wet Weather Plan revisions, ALCOSAN may propose Combined Sewer Overflow capture and treatment approaches that are recognized either under EPA's Combined Sewer Overflow Policy or under any subsequent EPA amendments to this Policy. Upon approval by EPA and PADEP, ALCOSAN shall implement the requirements in the revised Wet Weather Plan in accordance with the schedule and other provisions set forth therein.

N. Coordination With Customer Municipalities

69. Process for Seeking Information from Customer Municipalities. In developing the Wet Weather Plan and in carrying out the other requirements of this Consent Decree, ALCOSAN shall seek to obtain from the Customer Municipalities, as more specifically set forth below, the information described in Paragraph 70, regarding the Municipal Collection Systems.

a. ALCOSAN shall first request that the Customer Municipality provide the information within 60 days of its initial request.

b. If the Customer Municipality fails to provide some or all of the information requested within this 60 day-period, then ALCOSAN shall: (i) within 15 days of such failure, notify the Plaintiffs, and (ii) for the information described in Subparagraphs 70(a) through (d), within 60 days of such failure, request that the Customer Municipality provide access to ALCOSAN so that ALCOSAN may itself, if feasible, obtain the requested information pursuant to the requirements of Subparagraph 69(c). If the Customer Municipality also fails or refuses to provide ALCOSAN with full access to gather all the requested information, then, within 15 days of such additional failure, ALCOSAN shall so notify the Plaintiffs, which may request or order the Customer Municipality to provide the information to ALCOSAN.

c. If the Customer Municipality provides access, and agrees to reimburse ALCOSAN at customary rates and charges that ALCOSAN may seek (except for the flow monitoring identified in Paragraph 36 which flow monitoring ALCOSAN agrees to perform if a

Participating Municipality provides cooperation and reasonable access to ALCOSAN), then ALCOSAN shall promptly obtain the requested information and notify the Plaintiffs that it has obtained such access. If the Customer Municipality refuses to reimburse ALCOSAN for its customary rates and charges, then within 15 days of such refusal ALCOSAN shall notify the Plaintiffs, which may request or order the Customer Municipality to provide the information to ALCOSAN.

d. When a Customer Municipality provides the requested information to ALCOSAN and where such information is relevant to the requirements of this Consent Decree, ALCOSAN shall assess the reliability of the information and, where it is found to be sufficiently reliable using established engineering practices, ALCOSAN shall utilize that information as needed.

e. If (i) ALCOSAN ultimately has less than the full information it requested pursuant to Subparagraphs 69(a), and 45 days have elapsed since ALCOSAN notified the Plaintiffs pursuant to Subparagraph 69(b) or 69(c), whichever is the last notice provided, and the Customer Municipality has not provided the requested information in response to a request by one or more of the Plaintiffs, or if (ii) ALCOSAN establishes to the Plaintiffs that the information provided by a Customer Municipality is not sufficiently reliable using established engineering practices, then ALCOSAN shall make reasonable assumptions (with supporting documentation), where such information is needed, in order to complete the relevant Consent Decree requirements.

70. Information ALCOSAN is to Seek from Customer Municipalities. ALCOSAN shall request from each of the Customer Municipalities, and consider in developing its Wet Weather Plan if relevant to such plan, the following information:

a. By August 31, 2007, or 60 days after the Date of Entry, whichever is later, the most recent maps of the Regional Collection System (or portions thereof) developed by or for the Customer Municipality;

b. By August 31, 2007, or 60 days after the Date of Entry, whichever is later, all physical surveys of the Regional Collection System trunk sewer lines that provide the final conveyance from the Customer Municipality to the Conveyance and Treatment System, all physical surveys of the Regional Collection System Regulators located along a trunk sewer line closest to the Conveyance and Treatment System, and the results of television inspections of these portions of the Regional Collection System developed by or for the Customer Municipality;

c. By February 1, 2010, all flow monitoring data not collected by ALCOSAN pursuant to Paragraph 36 and Appendix M, including any available data on flows for each connection to the Customer Municipality, that may assist ALCOSAN in characterizing, for ALCOSAN's Hydrologic and Hydraulic Model, flow volumes generated by the Customer Municipality and flow volumes routed to the Conveyance and Treatment System;

d. By August 1, 2010, all hydraulic capacity evaluations and system hydraulic characterizations of the Regional Collection System (or portions thereof) developed by or for the Customer Municipality;

e. By August 31, 2009, all Sanitary Sewer Overflow response plans developed by or for the Customer Municipality that apply to the Sanitary Sewer Outfalls listed in Appendix B;

f. By August 1, 2010, all LTCPs developed by or for a Customer Municipality; and

g. Within 60 days after the Date of Entry, all draft and final plans and plan amendments regarding the Nine Minimum Control measures for combined sewer overflow control measures ("Municipal Nine Minimum Control Plans"), and documentation summarizing each Customer Municipality's implementation of the Nine Minimum Controls measures ("Municipal Nine Minimum Control Plan Documentation"), developed by or for the Customer Municipality.

71. Information ALCOSAN is to Provide to Customer Municipalities. ALCOSAN shall make available to the Customer Municipalities through secure access to its web site all flow monitoring plans developed by or for ALCOSAN and submitted to the Plaintiffs for approval pursuant to this Consent Decree within 15 days of the date of submission. ALCOSAN shall also make the following information available to the Customer Municipalities through secure access to its web site within 60 days of the date that it is finalized or received and verified by ALCOSAN:

a. all Combined Sewer Overflow and Sanitary Sewer Overflow monitoring data that has been screened by ALCOSAN using the quality control and quality assurance procedures approved by the Plaintiffs pursuant to Appendix M (Flow Monitoring);

b. a schematic map or GIS map showing the locations of all known Outfalls and Interceptors in the Conveyance and Treatment System and "Critical Portions of the Municipal Collection System," as defined in Appendix P, (Hydrologic and Hydraulic Model), Paragraph 2;

c. summaries of the Hydrologic and Hydraulic Model results used to characterize the Regional Collection System;

d. all Overflow Response Plans developed by or for ALCOSAN pursuant to this Consent Decree;

e. ALCOSAN's approved Revised Nine Minimum Control Plan, any amendments thereto, and a copy of the annual evaluation prepared by ALCOSAN pursuant to Paragraph 93 regarding the efficacy of measures implemented pursuant to its the Revised Nine Minimum Control Plan; and

f. the periodic progress reports submitted to the Plaintiffs pursuant to Section VII (Reporting and Recordkeeping);

g. 60 days advance notice before ALCOSAN formally proposes to the Plaintiffs any material changes to either the Interim Measures, Final Measures, or Wet Weather Plan in terms of level of control or technologies; and

h. current information on the status of the GROW Program including, for all projects: a description of projects already funded and approved for implementation, implementation status of already approved projects, status of approved projects under construction, an estimate of flow reductions anticipated for approved projects and a summary of flow reductions achieved following project evaluation, summary of GROW program applications received and under review, announcements for pending rounds of project applications, and announcement of current round selected projects upon selection.

72. Providing Comments on Customer Municipality Nine Minimum Control Plans. By six months of the Date of Entry or six months of receipt of a draft Municipal Nine Minimum Control Plan and Nine Minimum Control Plan Documentation from a Customer Municipality, whichever is later, ALCOSAN shall provide comments to that Customer Municipality and the Plaintiffs regarding each Customer Municipality's proposed nine minimum controls.

73. ALCOSAN's Annual Report on Customer Municipality Data and Coordination. By July 30th of each year following one year from the Date of Entry until completion of construction of the remedial controls, and implementation of the remedial activities required under the approved Wet Weather Plan, ALCOSAN shall also report annually to EPA, PADEP, and ACHD regarding ALCOSAN's perspective on:

a. the availability and utility of data received by January 31st from each Customer Municipality for the preceding year;

b. the conformance of such data with any agency-approved flow monitoring plan, including data quality assurance and controls;

c. the utility of such data to ALCOSAN in developing and implementing a Wet Weather Plan in coordination with the Customer Municipalities; and

d. issues, impediments, and opportunities concerning coordination between the Customer Municipalities and ALCOSAN.

74. Soliciting Comment on ALCOSAN's Wet Weather Plan. In developing the Wet Weather Plan, no later than six months before the date that such plan is due to the Plaintiffs under this Consent Decree, ALCOSAN shall solicit comment on its draft Wet Weather Plan and shall coordinate with the Customer Municipalities by providing public participation opportunities on the proposed Wet Weather Plan in accordance with Section VI, Subsection O (Public Participation). ALCOSAN shall consider such comments from Customer Municipalities and the public in further developing and finalizing the Wet Weather Plan.

75. Customer Municipality Input on Managing Sewer System Flow. As part of the evaluation of remedial controls and remedial activities that ALCOSAN shall undertake in developing the Wet Weather Plan in accordance with Appendix S (Wet Weather Plan

Requirements for Presumption Approach) or Appendix V (Wet Weather Plan Requirements for Demonstration Approach), ALCOSAN shall solicit input from each Customer Municipality on the following:

a. the forecasts of total flow (in gallons per day and, if available, in gallons-per-day-per-inch-mile of sewer line), that each Point of Connection will contribute to the Conveyance and Treatment System upon implementation of the Wet Weather Plan, and the total service population for each Point of Connection;

b. a characterization of the flows from both the contributing Combined Sewer System and/or the Sanitary Sewer System at each Point of Connection, a description of how each such characterization was prepared, and a description of how such flows will be managed and/or maintained at each Point of Connection; and

c. a program for managing contributions from the Customer Municipality so that such contributions to the Conveyance and Treatment System do not result in exceedances of system capacity or do not preclude compliance with the requirements of the Clean Water Act, consistent with EPA's Combined Sewer Overflow Policy.

76. Municipal Pollution Prevention Programs. Within 10 days of determining that conveyances of grease, litter, or chemicals from any Customer Municipality caused or are causing blockages within the Conveyance and Treatment System (including Regulators and backflow devices) that result in Dry Weather Discharges from the Conveyance and Treatment System, interference at the Sewage Treatment Plant, Sanitary Sewer Overflows from the Conveyance and Treatment System, and/or any other violation of the Clean Water Act, ALCOSAN shall notify the Customer Municipality that its pollution prevention program is

insufficient to prevent these adverse impacts and provide a copy of this notice to EPA, PADEP, and ACHD.

O. Public Participation

77. Public Participation Plan. Within six months from the Date of Entry, ALCOSAN shall develop a "Public Participation Plan" to ensure that the public served by the Regional Collection System is actively involved in the development of the Wet Weather Plan.

78. Content of Public Participation Plan. ALCOSAN shall include in its Public Participation Plan, proposed activities for providing the public with notice and information regarding the development of the Wet Weather Plan, including (a) the goals of the Wet Weather Plan, (b) the types of remedial controls and remedial activities available and being considered in the Wet Weather Plan to meet the requirements of the Clean Water Act and this Consent Decree, (c) the process for evaluating the various remedial controls and remedial activities in the Wet Weather Plan, and (d) opportunities to comment upon the various remedial controls and remedial activities under consideration for the Wet Weather Plan.

79. Customer Municipality Advisory Committee. Within six months from the Date of Entry, ALCOSAN shall create an ALCOSAN-Customer Municipality Advisory Committee ("Advisory Committee") with at least ten members. The Advisory Committee members may be appointed by the County Executive and shall be comprised of representatives from various Customer Municipalities, with at least one member from each of ALCOSAN's eight watershed planning basins within the Regional Collection System. ALCOSAN shall arrange and attend a meeting with the Advisory Committee at least quarterly to discuss (a) the status and coordination of the RCS Flow Monitoring Plan, as hereinafter defined in Appendix M (Flow Monitoring); and (b) the development of the Wet Weather Plan and municipal comments on the Wet Weather Plan and related issues, which ALCOSAN shall consider in developing its Wet Weather Plan.

80. Informational Newsletters and Meetings. After the Date of Entry, ALCOSAN shall, on a quarterly basis, produce and distribute informational newsletters to each of the Customer Municipalities and to any persons or organizations requesting such information.

81. On at least an annual basis, ALCOSAN shall hold informational meetings open to the Customer Municipalities.

82. In the newsletters and meetings, ALCOSAN shall convey information on the status of the Wet Weather Plan, ALCOSAN-municipal cooperation, and steps that citizens within the Customer Municipalities may take to protect the receiving waters, including the proper disposal of litter and grease and the proper application and/or disposal of fertilizers and herbicides. In lieu of publishing some or all of its own quarterly newsletters, ALCOSAN may provide this information through newsletters published by third parties, including the "Overflow Connection," as long as the newsletters reach the Customer Municipalities and any persons or organizations requesting such information.

83. Public Outreach Regarding Overflows. In accordance with Appendix K (Public Notification and Outreach), ALCOSAN shall implement a public educational outreach program to inform the public of the location of all Outfalls within the Conveyance and Treatment System, the possible health and environmental effects of Discharges of Sewage, and that recreational activities, such as swimming or boating, should be limited as a result of such Discharges.

P. Overflow Response

84. Overflow Response Plan. Within 30 days of the Date of Entry, ALCOSAN shall submit to EPA and ACHD, for review and approval, an "Overflow Response Plan" designed to mitigate potential harm to the health and welfare of persons in the event of a Sanitary Sewer Overflow from the Conveyance and Treatment System or a Combined Sewer Overflow to receiving waters. ALCOSAN shall include in its Overflow Response Plan the following:

a. a summary of the actions ALCOSAN will undertake to promptly advise ACHD of Discharges from a Combined Sewer Outfall and/or a Sanitary Sewer Outfall within the Conveyance and Treatment System to receiving waters, including notification if such Discharge has caused an adverse impact on water quality (as measured by reduced or elevated levels of dissolved oxygen, fecal coliform, and other relevant parameters for which Water Quality Standards are in effect);

b. a description of the actions ALCOSAN will undertake in the event of such Discharge to provide notice, as appropriate, to EPA, the United States Coast Guard Service, PADEP, local law enforcement authorities, and other appropriate federal, state and local agencies, including notification if such Discharge has caused an adverse impact on water quality (as measured by reduced or elevated levels of dissolved oxygen, fecal coliform, and other relevant parameters for which Water Quality Standards are in effect) and immediate notification if such Discharge may cause an imminent and substantial endangerment to public health, welfare, or the environment;

c. procedures for implementation of institutional controls and actions to be employed in consultation with PADEP and ACHD, such as fencing, deployment of buoys, etc., to advise the public of, and limit access to and contact with, waterways, ground surfaces and resources affected by such Discharges;

d. procedures to identify the location and probable cause of each such Discharge;

e. a description of corrective actions to be taken to halt or minimize such Discharges and to reduce the volume of untreated wastewater transmitted to the portion of the Conveyance and Treatment System where the Discharge is occurring;

f. identification of personnel and resources to be made available by ALCOSAN, in coordination with federal, state, county, and municipal authorities, to identify and halt or minimize the source of such a Discharge, and a description of the response training and preparedness for the effective implementation of the Overflow Response Plan; and

g. a description of sampling, analysis, and reporting to determine whether and how receiving waters have been adversely impacted by such a Discharge, including:

i. criteria for determining when sampling is appropriate, the nature and extent of such sampling, including the frequency and duration of samples to be taken, the parameters to be sampled (5-day biochemical oxygen demand, fecal coliform, dissolved oxygen, and other relevant parameters for which Water Quality Standards are in effect), and the location of such sampling events;

ii. procedures for conducting laboratory analyses consistent with 40 C.F.R. Part 136 and approved quality assurance/quality control procedures approved by the Plaintiffs; and

iii. provisions for reporting of all such data and information to EPA, PADEP, ACHD, and other appropriate federal, state and local agencies.

85. In its proposed Overflow Response Plan, ALCOSAN may propose a "tiered" approach to responding to Sanitary Sewer Overflows from the Conveyance and Treatment System and Combined Sewer Overflows based on the varying levels of risk to human health, welfare, and the environment associated with a Sanitary Sewer Overflow from the Conveyance and Treatment System or a Combined Sewer Overflow, and considering factors such as:

a. whether the overflow results from hydraulic limitations of the Conveyance and Treatment System to be addressed in the Wet Weather Plan;

b. the volume and characteristics of the Discharge in relation to the volume and characteristics of the receiving waters;

c. the concentration of Sewage or Pollutants in the Discharge;

d. whether the Discharge contains hazardous Pollutants from an Industrial User;

e. whether the location of the Discharge is in a Sensitive Area; and

f. the nature and extent of precipitation events and receiving water usage at the time of the Discharge.

If ALCOSAN submits such a tiered approach, ALCOSAN must address for all tiers the requirements in Subparagraphs (a) through (g) of Paragraph 84, but ALCOSAN need not propose actions for each of the requirements in these Subparagraphs for those tiers that correspond to overflows presenting only minimal risks to human health, welfare, and the environment.

86. Nothing in this Subsection shall prohibit the Plaintiffs from requesting or ordering ALCOSAN to conduct additional sampling and analysis, or to take other actions, as deemed necessary by the Plaintiffs, to respond to a Discharge from a Combined Sewer Outfall and/or a Sanitary Sewer Outfall within the Conveyance and Treatment System to receiving waters.

87. ALCOSAN shall review the Overflow Response Plan on an annual basis and propose any modifications to its Overflow Response Plan to EPA and ACHD pursuant to Section VIII (Review and Approval of Submittals).

88. Overflow Reporting. Beginning 60 days from the Date of Entry, ALCOSAN shall provide to ACHD the information in Appendix W (Dry Weather Discharge Reporting

Form) for each Dry Weather Discharge from the Conveyance and Treatment System to any waters of the United States and waters of the Commonwealth of Pennsylvania. Within 24 hours of any such Dry Weather Discharge, ALCOSAN shall provide to ACHD by facsimile or email an initial notification identifying the date and location of each such Discharge. Within five days of each such Discharge, ALCOSAN shall also submit to ACHD the information required in Appendix W (Dry Weather Discharge Reporting Form). In addition, ALCOSAN shall summarize all such Dry Weather Discharges in the progress reports that it submits to the Plaintiffs in accordance with Section VII (Reporting and Recordkeeping). Based upon the activities required by Appendix I (Operation and Maintenance of the Conveyance and Treatment System), ALCOSAN shall also provide to PADEP and ACHD, on a monthly basis, the results of ALCOSAN's inspections and investigations of any Dry Weather Discharges found within the Conveyance and Treatment System.

89. Beginning 60 days from Date of Entry, in accordance with the schedule set forth in Appendix X (Reporting Schedule), and for the portion of the Conveyance and Treatment System identified in Appendix X where ALCOSAN is modeling or monitoring Outfalls, ALCOSAN shall submit to PADEP and ACHD with the monthly DMRs a summary of all Combined Sewer Overflows that occurred during Wet Weather Flow and all Sanitary Sewer Overflows from the Conveyance and Treatment System.

90. ALCOSAN shall maintain copies of the notifications and reports required under the two preceding Paragraphs, as required by Paragraph 96.

Q. Compliance With Nine Minimum Controls

91. Interim Nine Minimum Controls. Prior to the date on which ALCOSAN commences implementation of its Revised Nine Minimum Control Plan, as hereinafter defined,

ALCOSAN shall have commenced implementation of the following Nine Minimum Control activities:

a. Proper operation and regular maintenance programs for the Conveyance and Treatment System, including the Combined Sewer Outfalls listed in Appendix A;

b. Maximum use of the Conveyance and Treatment System for storage;

c. Review and modification of pretreatment measures ALCOSAN has put in place in accordance with 40 C.F.R. § 403.5 and the NPDES Permit to ensure that impacts from Discharges from the Conveyance and Treatment System are minimized;

d. Maximization of flow to the Sewage Treatment Plant for treatment;

e. Elimination of Combined Sewer Overflows during Dry Weather Flow;

f. Control of solid and floatable materials from Combined Sewer Overflows;

g. Pollution prevention;

h. Public notification to ensure that the public receives adequate notification of Combined Sewer Overflows and the impacts from such Discharges; and

i. Monitoring to characterize the impacts of Combined Sewer Overflows and the efficacy of the Nine Minimum Controls.

92. Revised Nine Minimum Control Plan.

a. Within six months from the Date of Entry, ALCOSAN shall prepare and submit to the Customer Municipalities for comment a draft of revisions to its September 1996 - Combined Sewer Overflow Program Phase I Activity Report, "Implementation of the Nine Minimum Controls" ("Nine Minimum Control Plan"). ALCOSAN shall provide the Customer Municipalities with at least 90 days by which to submit comments on such draft plan.

b. To avoid duplication of effort and to enhance the effectiveness of control measures for Combined Sewer Overflows, ALCOSAN shall consider the comments submitted by the Customer Municipalities and all nine minimum control plans provided by the Customer Municipalities in developing and implementing ALCOSAN's revised Nine Minimum Control Plan for Combined Sewer Overflows.

c. Within 120 days after the due date for receiving comments from all the Customer Municipalities on ALCOSAN's draft revised Nine Minimum Control Plan, ALCOSAN shall submit to the Plaintiffs, in accordance with Section VIII (Review and Approval of Submittals), proposed revisions to its Nine Minimum Control Plan (the "Revised Nine Minimum Control Plan"). The Revised Nine Minimum Control Plan shall address the following activities for the Conveyance and Treatment System, and a schedule for implementation of each such activity:

i. Proper operation and regular maintenance programs for the Conveyance and Treatment System, including the Combined Sewer Outfalls listed in Appendix A;

ii. Maximum use of the Conveyance and Treatment System for storage;

iii. Review and modification of pretreatment measures that ALCOSAN has put in place in accordance with 40 C.F.R. § 403.5 and the NPDES Permit to ensure that impacts from Discharges from the Conveyance and Treatment System are minimized;

iv. Maximization of flow to the Sewage Treatment Plant for treatment;

v. Elimination of Combined Sewer Overflows during Dry Weather

vi. Flow;

vii. Control of solid and floatable materials from Combined Sewer Overflows;

viii. Pollution prevention;

ix. Public notification to ensure that the public receives adequate notification of Combined Sewer Overflows and the impacts from such Discharges; and

x. Monitoring to characterize the impacts of Combined Sewer Overflows and the efficacy of the Nine Minimum Controls.

d. Upon approval by the Plaintiffs, ALCOSAN shall implement its Revised Nine Minimum Control Plan in accordance with the provisions and schedule set forth therein. ALCOSAN shall use best efforts to implement its approved Revised Nine Minimum Control Plan in coordination with the Customer Municipalities' Municipal Nine Minimum Control Plans, to maximize the overall effectiveness of the control measures in protecting receiving waters from the impacts of Combined Sewer Overflows.

93. Ongoing Review of Nine Minimum Control Plan. ALCOSAN shall, on at least an annual basis, evaluate the efficacy of the measures implemented under its Revised Nine Minimum Control Plan, as well as other measures undertaken by ALCOSAN pursuant to this Consent Decree, in reducing the impacts of Combined Sewer Overflows on receiving waters. Based on such evaluation, ALCOSAN may submit to the Plaintiffs for review and approval pursuant to Section VIII (Review and Approval of Submittals) additional proposed changes to its

Revised Nine Minimum Control Plan, which ALCOSAN shall implement upon approval by the Plaintiffs in accordance with the provisions and schedule set forth therein.

VII. REPORTING AND RECORDKEEPING

94. Progress Reports. Commencing six months from the Date of Entry, and continuing every year thereafter, ALCOSAN shall submit an annual progress report to EPA, PADEP, and ACHD. ALCOSAN shall include in these progress reports all information necessary to determine ALCOSAN's compliance with the terms of this Consent Decree. Such information shall include the following, for each activity under this Consent Decree not completed at that time:

a. the status of activities required under Paragraph 29 and Appendix E (Regulator Capacity Evaluation and Modification);

b. the status of activities required under Paragraph 30 and Appendix F (Reduction of Water Quality Impacts from Industrial Users);

c. the status of activities required under Paragraph 31 and Appendix G (Control of Solid and Floatable Materials), and, as required by Paragraphs 2, 3, and 5 of Appendix G, the information required therein;

d. the status of activities required under Paragraph 32 and Appendix H (Elimination of Dry Weather Discharges);

e. the status of the ALCOSAN Sewer Pipe assessment and repair activities required under Paragraph 33;

f. the status of system inventory and mapping activities required under Paragraph 34;

g. all data and information that ALCOSAN is required to report to the Plaintiffs pursuant to the monitoring requirements set forth in Paragraphs 35-37 and 40-41 and Appendices L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring), M (Flow Monitoring), N (Rainfall Monitoring), O (Combined Sewer Overflow Pollutant Monitoring) and Q (Receiving Water Quality Monitoring);

h. all data and information that ALCOSAN is required to report to the Plaintiffs pursuant to the modeling requirements set forth in Paragraphs 39, 42, 43, and 44 and Appendices P (Hydrologic and Hydraulic Model) and R (Receiving Water Quality Model);

i. the status of actions undertaken by ALCOSAN to develop the Wet Weather Plan in accordance with this Consent Decree;

j. the status of ALCOSAN's implementation of its approved Wet Weather Plan, including the requirements found in Section VI, Subsection M (Implementation of Wet Weather Plan);

k. the results and impacts of any routing or bypassing conducted pursuant to Section VI, Subsection L (Wet Weather Routing Plan);

l. the status of efforts towards Regionalization in accordance with Paragraph 66(c);

m. the status of all activities undertaken by ALCOSAN to coordinate with Customer Municipalities in accordance with Section VI, Subsection N (Coordination with Customer Municipalities);

n. the status of ALCOSAN's implementation of the approved Overflow Response Plan, as required by Section VI, Subsection P (Overflow Response);

o. the status of ALCOSAN's implementation of its approved Interim Wet Weather Plan, including the requirements found in Paragraphs 66 and 67;

p. for each project completed under the Interim Wet Weather Plan, the cost of the project ALCOSAN estimated at the time the Interim Wet Weather Plan was submitted to EPA, and the actual cost of the project, including the cost of any change orders for the project; and

q. a list of all violations of the requirements of this Consent Decree, including the date of the violation, the provision(s) violated, a description of the nature of the violation, and any action taken to correct the violation.

If in any reporting period there is no change in the progress of ALCOSAN's compliance with a requirement under this Consent Decree, ALCOSAN may simply cross-reference and summarize the status of its compliance from previous progress reports.

95. Maintaining Records.ALCOSAN shall maintain the following documents for five years from the date that they are created:

a. all written reports prepared pursuant to Section VI, Subsection P (Overflow Response);

b. all complaints received by ALCOSAN from a Customer Municipality or other entity pertaining to the matters addressed by this Consent Decree;

c. all the documents required to be maintained pursuant to Appendix I (Operation and Maintenance of the Conveyance and Treatment System), Paragraph 6(g);

d. documentation of all measures undertaken by ALCOSAN to comply with the terms of this Consent Decree;

e. all work orders and documents associated with each investigation of system problems related to Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System and all reports prepared by ALCOSAN pursuant to Section VI, Subsection P (Overflow Response); and

f. a summary of each investigation of system problems related to Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System and all reports prepared by ALCOSAN pursuant to Section VI, Subsection P (Overflow Response).

96. ALCOSAN shall maintain records of the following information for a period of five years after termination of the Consent Decree:

a. all data and information developed by ALCOSAN pursuant to the monitoring requirements set forth in Section VI, Subsection G (Monitoring and Modeling) and Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring); and

b. all reports, plans, permits and documents submitted to EPA, PADEP, and ACHD pursuant to this Consent Decree, including all underlying research and data.

97. ALCOSAN shall notify EPA, PADEP, and ACHD no less than 30 days prior to the disposal or destruction of the records listed in Paragraphs 95 and 96. For the documents in Paragraph 95, ALCOSAN shall make such records available to EPA, PADEP, and ACHD upon request. For the documents in Paragraph 96, ALCOSAN shall, upon EPA's, PADEP's, and ACHD's request for some or all of such records, deliver such records prior to such disposal or destruction.

VIII. REVIEW AND APPROVAL OF SUBMITTALS

98. This Section shall govern ALCOSAN's submission of each plan, proposal, report, or other document required by this Consent Decree.

99. Except as specifically noted in this Consent Decree, ALCOSAN shall provide all submittals to EPA and PADEP for review and approval, and to ACHD for review and comment. Any tables or data contained in such reports must be submitted in spreadsheet format or in another format as agreed by the Parties, and any other text-based document must be submitted in electronic format with embedded searchable text.

100. Upon receipt of a submittal, EPA and PADEP may:

a. request additional information to enable EPA and PADEP to adequately evaluate the submittal;

b. approve the complete submission;

c. approve specifically identified portions of the submission;

d. approve the complete submission or portions of the submission upon specified conditions; and/or

e. disapprove the submission, in whole or in part, and direct that ALCOSAN modify the submission consistent with the comments provided by EPA and PADEP.

Notwithstanding the foregoing, ALCOSAN need not obtain EPA and PADEP approval of the periodic progress reports that it submits pursuant to Section VII (Reporting and Recordkeeping), although EPA and PADEP may request additional information or determine that the submittal fails to meet the requirements of this Consent Decree.

101. The Plaintiffs shall use their best efforts to coordinate the timing and substance of their responses to ALCOSAN and shall provide their responses in accordance with the timeframes for the Plaintiffs' review set forth in Appendix Y (Schedule for Agency Review of Submittals) to this Consent Decree.

a. In the event that ALCOSAN's subsequent obligations run from the date of approval of a submittal, and the Plaintiffs do not provide their respective approvals on the same date, ALCOSAN's subsequent obligation shall run from the latter or last of the required approvals.

b. In the event that the Plaintiffs fail to respond in accordance with the timeframes for the Plaintiffs' review set forth in Appendix Y (Schedule for Agency Review of Submittals) for the various listed submittals, and that failure is not due to the incompleteness of ALCOSAN's submittal, ALCOSAN shall be entitled to an extension of time for each subsequent affected obligation equal to the amount of time the Plaintiffs' responses exceeds the particular approval timeframe for that submittal in Appendix Y. In the event that the Plaintiffs fail to respond in a timely manner to any submittal not listed in Appendix Y (Schedule for Agency Review of Submittals), ALCOSAN may request an extension of time for each subsequent affected obligation.

c. In the event that the respective responses of the Plaintiffs impose inconsistent obligations upon ALCOSAN which make it impossible for ALCOSAN to comply with all obligations, then ALCOSAN shall notify the Plaintiffs, who shall endeavor to expeditiously resolve any inconsistency. During this period, ALCOSAN's obligation under the Consent Decree shall be stayed until the Plaintiffs' resolution of such inconsistency. If one of the Plaintiffs' responses is inconsistent only to the extent that it imposes additional and/or more stringent requirements, however, ALCOSAN shall comply with the additional and/or more stringent requirements, subject to its right to invoke the procedures in Section XIV (Dispute Resolution).

102. In the event that EPA or PADEP requests additional information, ALCOSAN shall provide the additional information to EPA and PADEP, with a copy to ACHD, in accordance with the timeframes set forth in the request, but in no instance shall EPA or PADEP provide ALCOSAN with less than 30 days to provide the additional information.

103. In the event EPA and PADEP approve the complete submission, ALCOSAN shall proceed to take the actions identified in the plan, proposal, or other approved document, in accordance with the associated approved schedule. If no date for initiating the actions is identified in the approval or the approved document, ALCOSAN shall begin implementation as soon as practicable, but no later than 60 days following receipt of both EPA's and PADEP's approvals and shall continue such implementation unless specifically provided otherwise in this Consent Decree.

104. In the event EPA and PADEP either approve a specifically-identified portion of a submission or approve a specifically-identified portion of the submission upon specified conditions, ALCOSAN shall proceed to take the actions identified in the approved portion of the submission, unless ALCOSAN establishes that it cannot carry out those actions due to EPA's and PADEP's failure to approve another portion of the same submission or of another related submission. ALCOSAN shall implement these actions in accordance with all conditions and schedules in the document approved by EPA and PADEP, and if no schedule is set forth in such document, as soon as practicable but no later than 60 days following receipt of both EPA's and PADEP's approvals and continuing on an on-going basis. Implementation of any approved portion of a submission shall not eliminate the potential for ALCOSAN to incur stipulated penalties pursuant to Section XII (Stipulated Penalties) for any portion of the submission that does not comply with the terms and provisions of this Consent Decree. However, if ALCOSAN

establishes that it cannot carry out the actions in the approved portion due to EPA's and PADEP's disapproval of a deficient portion of the same submission or another related submission, ALCOSAN shall not be subject to stipulated penalties for failing to implement the approved portion of the submission.

105. In the event EPA and PADEP disapprove all or a portion of a submission, ALCOSAN shall revise the submission to address all of EPA's and PADEP's written comments. ALCOSAN shall resubmit the revised submission to EPA and PADEP within 60 days of receipt of EPA's and PADEP's written comments and disapproval of the prior submission, unless within 15 days of such receipt ALCOSAN requests additional time and EPA and PADEP grant such request, or unless ALCOSAN invokes the procedures in Section XIV (Dispute Resolution). ALCOSAN shall continue to resubmit a revised submission based on comments or disapproval from EPA or PADEP in this manner until ALCOSAN receives written approval for the submission or a determination pursuant to the procedures set forth in Section XIV (Dispute Resolution).

106. If ALCOSAN does not dispute EPA's and PADEP's disapproval of a submission or portion of a submission, or if EPA's and PADEP's disapproval of a submission or portion of a submission is upheld following ALCOSAN's invocation of dispute resolution, then stipulated penalties shall accrue for such violation from the date upon which ALCOSAN received written notification that the submission or portion of a submission was disapproved.

107. All submittals approved pursuant to this Consent Decree, including approved modifications thereof, shall become incorporated into and enforceable under this Consent Decree upon such approval. In the event the Plaintiffs approve a portion of a plan, proposal or other

document pursuant to this Section, then the approved portion shall become incorporated into and enforceable under this Consent Decree.

108. With each plan, proposal or report submitted by ALCOSAN under this Consent Decree, ALCOSAN shall have the Executive Director of ALCOSAN, or other person authorized pursuant to 40 C.F.R. § 122.22, certify under penalty of law that the information contained in the submittal is true, accurate, and complete, by signing the following statement:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
>
> Signature: _____
> Name: _____
> Title: _____

IX. EFFECT OF SETTLEMENT

109. In consideration of ALCOSAN's obligations under this Consent Decree, this Consent Decree resolves the civil claims that were alleged in the Complaint filed by the Plaintiffs based on ALCOSAN's alleged violations through the Date of Lodging.

X. CIVIL PENALTY

110. ALCOSAN shall pay a civil penalty to the United States, the Commonwealth and ACHD in the total amount of $ 1,200,000 for violations as alleged by the United States, Commonwealth and ACHD in the Complaint and all unauthorized Discharges and noncompliant Discharges through the Date of Lodging. ALCOSAN shall pay this civil penalty in three equal payments, first to the United States, second to the Commonwealth, and third to ACHD. Specifically, ALCOSAN shall pay $ 400,000 to the United States within 30 days after the Date

of Entry, $ 400,000 to the Commonwealth within 180 days after the Date of Entry, and $ 400,000 to ACHD within 360 days after the Date of Entry.

111. The United States, the Commonwealth, and ACHD shall be deemed a judgment creditor for purposes of collection of this penalty.

112. ALCOSAN shall pay the civil penalty as follows:

a. Payment of the civil penalty to the United States shall be made by Electronic Funds Transfer (EFT) to the U.S. Department of Justice (DOJ) lockbox bank, referencing DOJ No. 90-5-1-1-4414. Payment shall be made in accordance with instructions provided by the United States to ALCOSAN following execution of this Consent Decree. Any EFT received at the DOJ lockbox bank after 11:00 A.M. Eastern Time shall be credited on the next business day.

b. Payment of the civil penalty to the Commonwealth shall be made by tendering a certified or cashier's check for the appropriate amount payable to the "Commonwealth of Pennsylvania, Clean Water Fund." The payment shall be mailed to:

Program Manager, Water Management
Pennsylvania Department of Environmental Protection, Southwest Region
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222-4745

c. Payment of the civil penalty to ACHD shall be by certified check made payable to the "Allegheny County Environmental Health Fund" and forwarded to:

Chief, Water Pollution Control and Solid Waste Management
Allegheny County Health Department
3901 Penn Avenue, Building #5
Pittsburgh, PA 15224-1318

113. Upon making payment of the civil penalty to the United States, the Commonwealth, and/or ACHD, ALCOSAN shall mail notice thereof simultaneously to the following:

Docket Clerk (3RC00)
U.S. EPA - Region III 1650 Arch Street
Philadelphia, PA 19103-2029;

Regional Counsel (3RC00)
U.S. EPA - Region III 1650 Arch Street
Philadelphia, PA 19103-2029; and

Chief, Environmental Enforcement Section Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-4414.

The transmittal letter forwarding such notice shall include the caption, civil action number and judicial district of this action.

114. If ALCOSAN fails to tender all or any portion of the civil penalty payments as required by this Section (Civil Penalty), interest on the unpaid amount shall accrue in accordance with the provisions of 28 U.S.C. § 1961 and ALCOSAN shall pay such interest from the date that a payment is due until the full amount owed is paid.

XI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

115. Description of Project. Within 120 days after the Date of Entry, ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, a proposal to perform stream restoration activities in accordance with EPA's May 1, 1998, EPA Supplemental Environmental Projects Policy. In its proposal, ALCOSAN shall select among the projects listed in Appendix J (Supplemental Environmental Projects). ALCOSAN shall also include in its proposal the following information:

a. the reasons for selecting the particular project(s) in its proposal;

b. the estimated cost to implement the proposed project(s);

c. the proposed schedule, including interim milestones, for performing and completing the implementation of the particular project(s); and

d. the specific construction activities it proposes to undertake as part of the proposed project.

116. SEP Amount. ALCOSAN shall expend no less than $ 3,000,000 in the implementation of this Supplemental Environmental Project ("SEP"). Such expenditures may include engineering and design costs incurred within two years of Date of Lodging to carry out the subsequently approved SEP.

117. Stipulated Penalties. If ALCOSAN does not expend the total expenditure for the SEP set forth in Paragraph 116, but EPA and PADEP determine that ALCOSAN has made a good faith effort to complete the SEP and ALCOSAN demonstrates that it has expended at least 90 percent of the SEP amount set forth in Paragraph 116 above, ALCOSAN shall not be liable for any stipulated penalty relating to the SEP. If, except as set forth above, EPA and PADEP determine that the SEP has not been completed in accordance with this Consent Decree, or ALCOSAN fails to expend the full SEP amount, ALCOSAN shall pay to EPA, PADEP, and ACHD, collectively, the accrued stipulated penalty and any portion of the SEP amount not expended as an additional civil penalty.

118. Schedule. ALCOSAN shall complete the approved SEP for one or more stream projects listed in Appendix J in accordance with the requirements and timeframes set forth in its proposal, as approved by EPA and PADEP, but in no case later than three years from the date of approval of the SEP proposal.

119. No Independent SEP Obligation or Credit. ALCOSAN hereby certifies that, as of the date of this Consent Decree, ALCOSAN is not required to perform or develop the SEP

described herein by any federal, state or local law or regulation; nor is ALCOSAN required to perform or develop the SEP by any other agreement or grant, or as injunctive relief in this or any other case. ALCOSAN further certifies that it has not received, and is not presently negotiating to receive, credit in any other enforcement action for the SEP described herein. In addition, ALCOSAN certifies that prior to the commencement of the negotiations for this Consent Decree, the SEP described herein had not been started by ALCOSAN, or funds committed thereto by ALCOSAN, and that this SEP is being performed in settlement of this litigation.

120. SEP Reports.

a. SEP Progress Reports. Beginning six months after the commencement of ALCOSAN's approved SEP, and continuing every six months thereafter until the SEP is completed, ALCOSAN shall submit a semi-annual progress report to EPA, PADEP, and ACHD. In these reports, ALCOSAN shall provide written summaries of the SEP implementation progress, and such summaries shall describe, at a minimum:

i. the actions taken to implement the SEPs in the preceding half year;

ii. the actions planned to implement the SEP in the forthcoming half year;

iii. any current or foreseeable delays in implementing the SEP, and the actions being taken to address such delays; and

iv. an itemized accounting of the costs expended for the preceding period and to date.

b. SEP Completion Report. Within 120 days after the completion of the approved SEP described in ALCOSAN's approved SEP proposal, ALCOSAN shall submit a

report ("SEP Completion Report") to EPA, PADEP, and ACHD. The SEP Completion Report shall contain the following information:

i. A description of the SEP as implemented, including a description of any deviations from ALCOSAN's SEP proposal as approved by EPA and PADEP, and, if deviations were necessary, a justification for each such deviation;

ii. Itemized costs for the SEP;

iii. Certification that the approved SEP for one or more streams has been completed pursuant to ALCOSAN's approved SEP proposal and the provisions of this Consent Decree; and

iv. A description of the environmental and public health benefits resulting from the implementation of the SEPs. In itemizing its costs in the SEP Completion Report, ALCOSAN shall clearly identify and provide supporting documentation for all eligible SEP costs. Where the SEP Completion Report includes costs not eligible for SEP credit, ALCOSAN must clearly identify those costs as such. For purposes of this Subparagraph, "supporting documentation" includes invoices, purchase orders, or other documentation that specifically identifies and itemizes the individual costs of the goods and/or services for which payment is being made. Cancelled drafts do not constitute acceptable documentation unless such drafts specifically identify and itemize the individual costs of the goods and/or services for which payment is being made.

121. SEP Documentation. ALCOSAN shall maintain legible copies of documentation of the underlying data and information for all documents or reports submitted to EPA, PADEP, and ACHD pursuant to this Section, and shall provide the documentation of any such underlying

data and information not more than 60 days after ALCOSAN's receipt of a request for such information. In all reports that are to be submitted by ALCOSAN under this Section, ALCOSAN shall include the certification required under Section VIII (Review and Approval of Submittals).

122. ALCOSAN shall submit all notices required by this Section in accordance with Section XVIII (Notices) and all other submittals in accordance with Section VIII (Review and Approval of Submittals).

123. Review of SEP Completion Report.

a. After receipt of a SEP Completion Report pursuant to Paragraph 120(b), above, EPA and/or PADEP shall provide ALCOSAN with one of the following:

i. a written Notice of Deficiency specifying any deficiencies in the SEP Completion Report and a grant of 120 days in which ALCOSAN may correct such deficiencies and resubmit the revised SEP Completion Report;

ii. a written Notice of SEP Completion in which EPA and/or PADEP conclude that the SEP has been completed satisfactorily; or

iii. a written Notice of SEP Noncompletion in which EPA and/or PADEP conclude that the SEP has not been completed satisfactorily.

b. If EPA and/or PADEP provide ALCOSAN with a notice pursuant to either option (i) or (iii), above, then EPA and/or PADEP shall permit ALCOSAN the opportunity to object in writing to the notice within 45 days of receipt of such notice. The Parties shall then have an additional 30 days from the receipt by EPA and/or PADEP of the objection to reach agreement on changes necessary. During such review period, ALCOSAN's obligation to take any further action in regard to the disputed deficiencies set forth in any such notice shall be

governed by Paragraphs 104 and 105. If agreement cannot be reached on any such issue within this 30 day period, EPA and/or PADEP shall provide a written statement of its decision on adequacy of the completion of the SEP to ALCOSAN, which decision shall be final and binding upon ALCOSAN unless ALCOSAN invokes the procedures set forth in Section XIV (Dispute Resolution).

124. Public Statements About SEP Activities. Any public announcement, oral or written, made by ALCOSAN pertaining to ALCOSAN undertaking the SEPs shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action taken on behalf of the U.S. Environmental Protection Agency, the Pennsylvania Department of Environmental Protection, and the Allegheny County Health Department."

XII. STIPULATED PENALTIES

125. ALCOSAN shall be liable to the Plaintiffs for the following stipulated penalties per violation, in accordance with this Section:

a. for failure by ALCOSAN to perform any of the activities identified in the Wet Weather Plan (or revised Wet Weather Plan), as approved by EPA and PADEP, in accordance with the terms and schedules therein:

Period of Violation	Penalty per day per violation
1-30 days	$ 1,500
31-60 days	$ 2,000
Each day over 60 days	$ 2,500

b. for failure by ALCOSAN to provide a plan, proposal, or other submittal as required under this Consent Decree:

Period of Violation	Penalty per day per violation
1-30 days	$ 1,000
31-60 days	$ 1,500
Each day over 60 days	$ 2,000

c. for failure by ALCOSAN to perform any of the activities identified in this Consent Decree other than providing plans, proposals, and submittals and other than the activities required by the approved Wet Weather Plan (or an approved revised Wet Weather Plan):

Period of Violation	Penalty per day per violation
1-30 days	$ 750
31-60 days	$ 1,000
Each day over 60 days	$ 1,500

d. for Dry Weather Discharges occurring from the combined sewer portion of the Conveyance and Treatment System, including Dry Weather Discharges from the Combined Sewer Outfalls, prior to the completion of construction of the remedial controls and implementation of the remedial activities set forth in the approved Wet Weather Plan, $1000 per such Dry Weather Discharge per day; provided, however, that ALCOSAN shall not be liable for stipulated penalties under this Subparagraph if it certifies, prior to the approval of ALCOSAN's (i) Revised Nine Minimum Control Plan, (ii) Operations and Maintenance Plan, (iii) Overflow Response Plan, (iv) Wet Weather Plan, and (v) Dry Weather Discharge Elimination Plan, that it is otherwise in compliance with this Consent Decree, and if it certifies, after the approval of these plans, that it is in compliance with these plans to the extent they have been approved by the Plaintiffs. ALCOSAN shall provide such certifications on at least a quarterly basis, in accordance with the requirements set forth in Paragraph 108 of this Consent Decree, for each quarter in which such a Dry Weather Discharge occurs.

e. for Dry Weather Discharges occurring from the combined sewer portion of the Conveyance and Treatment System, including Dry Weather Discharges from the

Combined Sewer Outfalls, after the completion of construction of the remedial controls and implementation of the remedial activities set forth in the approved Wet Weather Plan, $1,500 per such Dry Weather Discharge per day.

f. for Discharges occurring from the sanitary sewer portion of the Conveyance and Treatment System, including Discharges from the Sanitary Sewer Outfalls identified in Appendix B, prior to completion of construction of the remedial controls and implementation of the remedial activities set forth in the approved Wet Weather Plan, $500 per such Discharge per day; provided, however, that ALCOSAN shall not be liable for stipulated penalties under this Subparagraph if it certifies, prior to the approval of ALCOSAN's (i) Revised Nine Minimum Control Plan, (ii) Operations and Maintenance Plan, (iii) Overflow Response Plan, and (iv) Wet Weather Plan, that it is otherwise in compliance with this Consent Decree, and if it certifies, after the approval of these plans, that it is in compliance with these plans to the extent they have been approved by the Plaintiffs. ALCOSAN shall provide such certifications on at least a quarterly basis, in accordance with the requirements set forth in Paragraph 108 of this Consent Decree, for each quarter that such a Discharge occurs.

g. for Discharges occurring from the sanitary sewer portion of the Conveyance and Treatment System, including Discharges from the Sanitary Sewer Outfalls, collectively, in each calendar month after the completion of construction of the remedial controls and implementation of the remedial activities set forth in the approved Wet Weather Plan:

Monthly Sanitary Sewer Discharges	Penalty per Discharge per Day
1–5	$ 500
6–25	$ 1,000
Over 25	$ 2,000

126. ALCOSAN shall not be liable for more than one stipulated penalty for the same violation, but ALCOSAN may be liable for more than one stipulated penalty where an event results in separate violations of Subparagraphs 125(a) through 125(g), above.

127. ALCOSAN shall divide the preceding stipulated penalties referenced in Subparagraphs 125(a) through 125(g) into three equal payments and tender such payments to the United States, the Commonwealth, and ACHD in accordance with this Section.

128. Stipulated civil penalties shall automatically begin to accrue on the first day ALCOSAN fails to satisfy an obligation or requirement of this Consent Decree as set forth in Subparagraphs 125(a) through 125(g), and shall continue to accrue until the violation or deficiency is corrected. Stipulated penalties shall continue to accrue throughout all dispute resolution processes; provided, however, that stipulated penalties (a) shall not accrue, if, pursuant to Paragraph 144, the Director of the Water Protection Division, EPA Region 3, PADEP's Southwest Regional Director, and/or the Chief of ACHD's Water Pollution Control and Solid Waste Management Program, take more than 90 days after the receipt of ALCOSAN's reply to the Plaintiffs' Statements of Position, as hereinafter defined, to issue a final decision resolving the dispute or (b) shall not accrue, if, pursuant to Paragraph 147, the United States, the Commonwealth and/or ACHD provide irreconcilable positions in their respective Statements of Position on the disputed matter.

129. Payment of stipulated civil penalties as set forth above shall be in addition to all other rights or remedies which may be available to the Plaintiffs by reason of ALCOSAN's failure to comply with the requirements of this Consent Decree and all applicable Federal, state or local laws, regulations, wastewater discharge permit(s) and all other applicable permits. The United States, the Commonwealth, and ACHD, reserve the right to take additional enforcement

action and seek additional penalties up to the statutory maximum for each day of continuing noncompliance. ALCOSAN shall receive a credit against any stipulated penalty owed under this Consent Decree, however, if ALCOSAN also pays a civil penalty to the United States, the Commonwealth, and/or ACHD outside of this Consent Decree for the same violation.

130. Stipulated civil penalties shall be paid no later than 30 days following the first day in which the United States, the Commonwealth, and/or ACHD send to ALCOSAN a demand for payment of the stipulated penalties which have accrued to date.

a. Payment of stipulated civil penalties to the United States shall be made electronically or by submitting a certified or cashier's check payable to "Treasurer, the United States of America," and tendered to:

United States Attorney, Western District of Pennsylvania
633 U.S. Post Office & Courthouse
Pittsburgh, PA 15219

b. Payment of stipulated civil penalties to the Commonwealth shall be made by a cashier's or certified check made payable to the "Commonwealth of Pennsylvania, Clean Water Fund" and sent to:

Program Manager, Water Management
Pennsylvania Department of Environmental Protection,
Southwest Region
400 Waterfront Drive,
Pittsburgh, Pennsylvania 15222-4745.

c. Payment of stipulated penalties to ACHD shall be by certified check made payable to the "Allegheny County Environmental Health Fund" and forwarded to:

Chief, Water Pollution Control and Solid Waste Management
Allegheny County Health Department
3901 Penn Avenue, Building #5
Pittsburgh, PA 15224-1318.

131. Upon payment of stipulated penalties to the United States, the Commonwealth, and/or ACHD, ALCOSAN shall send copies of the certified check or cashier's check, together with a letter describing the stated basis for the penalties, to the U.S. Department of Justice, EPA, PADEP, and ACHD at the addresses provided in Section XVIII (Notices). In the transmittal letter, ALCOSAN shall reference the caption and civil action number for this case, as well as DOJ number 90-5-1-1-4414.

132. In the event that a stipulated civil penalty is not paid when due, the stipulated civil penalty shall be payable with interest from the original due date to the date of payment at the statutory judgment rate set forth at 28 U.S.C. §1961(a).

133. ALCOSAN shall not be liable for the stipulated penalties set forth in this Section if it establishes that the underlying violation is the result of a *force majeure* event in accordance with Section XIII (Force Majeure).

134. The United States, the Commonwealth, and ACHD, in their sole and unreviewable discretion, may waive all or part of their portion of the stipulated penalties that accrue against ALCOSAN pursuant to this Consent Decree.

XIII. FORCE MAJEURE

135. Force Majeure Events. "Force Majeure," for the purposes of this Consent Decree, is defined as an event arising from causes beyond the control of ALCOSAN or the control of its employees, agents, consultants, and contractors, which delays or prevents the performance of any obligation under this Consent Decree. Unanticipated or increased costs or expenses associated with implementation of this Consent Decree and changed financial circumstances shall not be considered Force Majeure events. In addition, the failure by ALCOSAN to apply for a required permit or approval or to provide in a timely manner all information required to obtain a permit or

approval that is necessary to meet the requirements of this Consent Decree, or failure of ALCOSAN to approve contracts, shall not be considered a Force Majeure event.

136. Notice of Force Majeure Events. When ALCOSAN knows or should have known, by the exercise of due diligence, of an event that might delay completion of any requirement of this Consent Decree, whether or not the event is a Force Majeure event, ALCOSAN shall notify EPA, PADEP, and ACHD, in writing, within 15 business days after ALCOSAN first knew, or in the exercise of due diligence under the circumstances, should have known, of such event. The notice shall indicate whether ALCOSAN claims that the delay should be excused due to a Force Majeure event. The notice shall describe in detail the basis for ALCOSAN's contention that it experienced a Force Majeure delay, the anticipated length of the delay, the precise cause or causes of the delay, the measures taken or to be taken to seek to prevent or minimize the delay, and the timetable by which those measures shall be implemented. ALCOSAN shall adopt all reasonable measures to avoid or minimize such delay. Failure to comply with these notice requirements shall preclude ALCOSAN from asserting any claim of Force Majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. ALCOSAN shall be deemed to know of any circumstance of which ALCOSAN, or any entity controlled by ALCOSAN, including its contractors, knew or should have known.

137. Extensions Based on Force Majeure. If EPA, PADEP, and ACHD find that a delay in performance is, or was, caused by a Force Majeure event, they shall extend the time for performance, in writing, for a period equal to the period of delay and stipulated penalties shall not be due for such period. In proceedings on any dispute regarding a delay in performance, the dispute resolution provisions of Section XIV (Dispute Resolution) shall apply, and ALCOSAN

shall have the burden of proving that the delay is, or was, caused by a Force Majeure event, and that the amount of additional time requested is necessary to compensate for that event.

138. No Automatic Extensions of Subsequent Obligations Based on Force Majeure. An extension of one compliance date based on a particular event shall not automatically extend any other compliance date, although ALCOSAN may request Force Majeure consideration for additional extensions for subsequent requirements, provided that ALCOSAN demonstrates at a subsequent time that the Force Majeure event will affect or has affected the timely completion of subsequent requirements of the Consent Decree.

139. Commercial Unavailability The failure by ALCOSAN to secure equipment, materials or vendors required by this Consent Decree due to the commercial unavailability of equipment, materials, or vendors shall not constitute a Force Majeure event under this Consent Decree, but shall be governed by this Paragraph as follows:

a. ALCOSAN shall be solely responsible for compliance with any deadline and the performance of any work as described in Section VI (Clean Water Act Remedial Controls and Remedial Activities) that requires the acquisition and installation of equipment, materials, or contracting with a vendor.

b. If it appears that the commercial unavailability of equipment, materials or vendor may delay ALCOSAN's performance of such work according to an applicable implementation schedule, ALCOSAN shall:

i. notify EPA, PADEP, and ACHD of any such delays as soon as ALCOSAN reasonably concludes that the delay could affect its ability to comply with any of the implementation schedules required by this Consent Decree, and

ii. propose a modification to the applicable schedule of implementation.

c. Prior to providing the notice required by this Paragraph, ALCOSAN shall have undertaken reasonable efforts to obtain such equipment and/or contacted a reasonable number of vendors and shall have obtained a written representation that the equipment, materials or the vendor(s) are in fact commercially unavailable. In the notice, ALCOSAN shall reference this Paragraph of this Consent Decree, identify the milestone date(s) it contends it will not be able to meet, provide EPA, PADEP, and ACHD with written correspondence to the vendor identifying efforts made to secure the equipment, materials or services of the vendor, and describe the specific efforts ALCOSAN has taken and will continue to take to secure such equipment, materials, or services. ALCOSAN may propose a modified schedule or modification of other requirements of this Consent Decree to address such commercial unavailability.

d. If EPA, PADEP, and ACHD do not accept ALCOSAN's proposed modification based on commercial unavailability, ALCOSAN shall continue to comply with the schedules either set forth in this Consent Decree or approved by the Plaintiffs pursuant to this Consent Decree; provided, however, that ALCOSAN may invoke Section XIV (Dispute Resolution) to contest EPA's, PADEP's, and ACHD's disapproval of ALCOSAN's claim of commercial unavailability.

XIV. DISPUTE RESOLUTION

140. Exclusive Mechanism for Resolving Disputes. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve any and all disputes raised by ALCOSAN arising under or with respect to this Consent Decree. The procedures set forth in this Section shall not apply, however,

to actions by the United States, the Commonwealth, and ACHD to enforce obligations of ALCOSAN that have not been disputed in accordance with this Section.

141. Notice of Disputes. If ALCOSAN believes it has a dispute with respect to this Consent Decree with all or some of the other Parties, it shall, within 14 days of the circumstances giving rise to the dispute, serve upon the United States, the Commonwealth, and ACHD a notice, in writing, setting forth the matter(s) in dispute ("Notice of Dispute"). The dispute shall be considered to have arisen when ALCOSAN sends the other Parties the Notice of Dispute.

142. Informal Dispute Resolution. Any dispute which ALCOSAN raises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the Parties. The period for informal negotiations shall not exceed 20 days from the date that the United States, the Commonwealth, and ACHD receive from ALCOSAN the Notice of Dispute, unless this 20-day period is modified by written agreement of ALCOSAN and the United States, Commonwealth, and ACHD.

143. Formal Dispute Resolution. If the dispute cannot be resolved by the Parties within 20 days from receipt of the Notice of Dispute, ALCOSAN shall comply with the position of the United States, the Commonwealth, and ACHD unless, within 50 days of the Plaintiffs' receipt of such Notice of Dispute, ALCOSAN invokes the formal dispute resolution procedures of this Section by serving on the United States, the Commonwealth, and ACHD a written statement reflecting its position on the dispute ("ALCOSAN's Statement of Position"). ALCOSAN's Statement of Position shall set forth the nature of the dispute with a proposal for its resolution as well as any factual data, analysis or opinion supporting that position and any supporting documentation relied upon. The United States, the Commonwealth, and ACHD may, within 30 days of receipt of ALCOSAN's Statement of Position, serve upon ALCOSAN their

respective or collective positions on the dispute ("Plaintiffs' Statement(s) of Position") on the dispute with an alternate proposal for resolution as well as any factual data, analysis, or opinion supporting those positions and all supporting documentation relied upon by the United States, the Commonwealth, and ACHD. In any such dispute invoked by ALCOSAN, it shall have the burden of demonstrating that the position of the United States, the Commonwealth, and ACHD is arbitrary and capricious or not in compliance with applicable law or this Consent Decree. The foregoing standard of review shall apply to all disputes which arise under or with respect to this Consent Decree. Within 10 days after ALCOSAN's receipt of the Plaintiffs' Statement(s) of Position, ALCOSAN may serve a reply upon the United States, the Commonwealth and ACHD ("Reply").

144. Decision on Dispute and Appeal. Following (a) the United States', the Commonwealth's, and ACHD's receipt of ALCOSAN's Statement of Position; (b) ALCOSAN's receipt of any Statement(s) of Position by the Plaintiffs; and (c) the United States', the Commonwealth's, and ACHD's receipt of any Reply by ALCOSAN; the Director of the Water Protection Division, EPA Region 3, the PADEP's Southwest Regional Director, and/or the Chief of ACHD's Water Pollution Control and Solid Waste Management Program (to the extent that each agency or department is involved in the dispute), shall issue a final decision resolving the dispute, and shall endeavor to coordinate their respective decisions in a joint response, no later than 90 days after the latter of: receipt of ALCOSAN's Statement of Position, or the deadline for ALCOSAN's Reply. The decision of EPA's Director of the Water Protection Division, PADEP's Southwest Regional Director, and/or the Chief of ACHD's Water Pollution Control and Solid Waste Management Program shall be binding on ALCOSAN unless, within 30 days of receipt of the decision, or if ALCOSAN fails to receive such a decision within 90 days after sending

ALCOSAN's Reply, ALCOSAN files with the Court and serves on the United States, the Commonwealth, and ACHD, a motion for judicial review of the decision setting forth the matter in dispute, the process undertaken by the Parties to resolve it, the relief requested, and the schedule, if any, within which the dispute should be resolved to ensure orderly implementation of the Consent Decree. The United States, the Commonwealth, and ACHD may file a response to ALCOSAN's motion.

145. Dispute Resolution Documentation. All documents required by this Section to be served upon another Party shall be served upon the addressees and in the manner identified in Section XVIII (Notices).

146. No Extension of Deadlines During Dispute Resolution. Submission of any matter to the Court for resolution shall not extend any of the deadlines set forth in this Consent Decree unless the Parties agree to such extension in writing or the Court grants an order extending such deadlines.

147. Accrual of Stipulated Penalties During Dispute Resolution. Stipulated penalties with respect to a disputed matter shall continue to accrue but payment thereof shall be stayed pending resolution of a dispute as provided in this Section; provided, however, that stipulated penalties shall not continue to accrue for any matter being addressed under the dispute resolution procedures of this Section (Dispute Resolution) when, and as long as, the United States, the Commonwealth and/or ACHD have provided irreconcilable positions (and not merely additional or more stringent positions) on the disputed matter in their respective Plaintiffs' Statements of Position. Notwithstanding the stay of payment, and subject to the foregoing exception, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that ALCOSAN does not prevail on the disputed issue, stipulated

penalties shall be assessed and paid as provided in Section XII (Stipulated Penalties). In the event that ALCOSAN prevails on the disputed issue, ALCOSAN shall not be liable for stipulated penalties for any violations of the Consent Decree arising from the disputed issue.

XV. RIGHT OF ENTRY

148. The United States, the Commonwealth, and ACHD and their authorized representatives and contractors shall have authority at all times, upon the presentation of credentials, to enter the premises of ALCOSAN to:

a. Monitor the progress of activities required by this Consent Decree;

b. Verify any data or information submitted to the United States, the Commonwealth, and ACHD;

c. Obtain samples, and, upon request, obtain a portion ("split") of any sample collected by ALCOSAN or its consultants and contractors;

d. Observe performance tests;

e. Inspect and evaluate any portion of the Conveyance and Treatment System; and

f. Inspect and review any record required to be kept under the terms and conditions of this Consent Decree, the NPDES Permit, and/or the Clean Water Act.

These inspection rights are in addition to, and in no way limit or otherwise affect, the statutory and regulatory authorities of the United States, the Commonwealth, or ACHD to conduct inspections, to require monitoring, and to obtain information from ALCOSAN as authorized by law. Upon request by ALCOSAN, the United States, the Commonwealth, and/or ACHD shall provide to ALCOSAN a split, if and where practicable, as well as the analytical laboratory

and/or field results and associated documentation, of any samples obtained from the Conveyance and Treatment System or on ALCOSAN's premises.

XVI. COMPLIANCE WITH LAW

149. ALCOSAN shall at all times comply with the Clean Water Act and the regulations promulgated thereunder.

150. This Consent Decree in no way affects or relieves ALCOSAN of any responsibility to comply with any federal, state, or local law or regulation.

151. ALCOSAN is responsible for achieving and maintaining compliance with all applicable federal and state laws, regulations, and permits, and compliance with this Consent Decree shall be no defense to any actions commenced by Plaintiffs pursuant to such laws, regulations, or permits, except as otherwise expressly specified in the Consent Decree.

152. This Consent Decree is not and shall not be construed as a permit issued pursuant to Section 402 of the Clean Water Act, 33 U.S.C. §1342, state law, or local law, or as a modification of any existing permit so issued.

153. This Consent Decree shall not in any way relieve ALCOSAN of: its obligation to comply with other applicable federal, state, or local law or regulation; its obligation to obtain a permit for the Conveyance and Treatment System or any portion thereof or any other facilities; or, subject to the provisions of Paragraph 21.c. of this Modified Consent Decree, of its obligation to comply with the requirements of any NPDES permit.

154. ALCOSAN shall comply with any new permit, or modification of existing permits in accordance with applicable federal and state laws and regulations.

155. The Plaintiffs do not warrant or aver in any manner that ALCOSAN's compliance with this Consent Decree will result in compliance with the provisions of the Clean Water Act, 33 U.S.C. §§1251 *et seq.*, the Clean Streams Law, 35 P.S. §§691.1 *et seq.*, the Local

Health Administration Law, Act 315 of August 24, 1951, P.L. 1304, as amended, 16 P.S. §12001, *et seq.,* and/or Rules and Regulations of the Allegheny County Health Department promulgated thereunder, or with the NPDES Permit.

156. Irrespective of EPA's, PADEP's, and ACHD's review or approval of any plans, reports, policies, or procedures formulated pursuant to this Consent Decree, ALCOSAN shall remain solely responsible for any noncompliance with the terms of this Consent Decree, all applicable permits, the Clean Water Act and the regulations promulgated under that Act.

XVII. RESERVATION OF RIGHTS

157. This Consent Decree does not limit or affect the rights of the Parties as against any third party.

158. The Parties reserve any and all legal and equitable remedies available to enforce the provisions of this Consent Decree.

159. Except for the civil claims resolved pursuant to Paragraph 109, this Consent Decree shall not limit any authority of the Plaintiffs under the Clean Water Act, Clean Streams Law or any applicable statute, law or regulation, including the authority to seek information from ALCOSAN or to seek access to the property of ALCOSAN.

160. Performance of the terms of this Consent Decree by ALCOSAN is not conditioned on the receipt of any federal, state or local funds. Application for construction grants, state revolving loan funds, or any other grants or loans, or delays caused by inadequate facility planning or plans and specifications on the part of ALCOSAN shall not be cause for extension of any required compliance date in this Consent Decree.

161. The Plaintiffs reserve all remedies available to them for violations of the Clean Water Act and Clean Streams Law by ALCOSAN which are not alleged in the Complaint and

for violations of the Clean Water Act, the Clean Streams Law and/or other similar statutes by ALCOSAN which occur after the Date of Lodging.

162. This Consent Decree does not resolve criminal liability, if any, that any person might have for violations of the Clean Water Act and the Clean Streams Law.

163. Nothing in this Consent Decree shall be construed to limit the authority of the United States, Commonwealth, and ACHD to undertake any action against any person, including ALCOSAN, in response to conditions that may present an imminent and substantial endangerment to the environment or to the public health or welfare.

XVIII. NOTICES

164. Unless otherwise specified, all reports, notices, or any other written communications required to be submitted under this Consent Decree shall be sent to the respective Parties at the following addresses:

For the United States:
Chief, Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
Post Office Box 7611 Ben Franklin Station
Washington, DC 20044-7611

Reference DOJ Case No. 90-5-1-1-4414

For EPA:
Office of Regional Counsel Yvette Roundtree (3RC-20)
United States Environmental Protection Agency Region III
1650 Arch Street
Philadelphia, PA 19103

Water Protection Division Branch Chief (3W3P1)
United States Environmental Protection Agency Region III
1650 Arch Street
Philadelphia, PA 19103

For PADEP:
Water Manager Southwest Region
Department of Environmental Protection 400 Waterfront Drive
Pittsburgh, PA 15222-4745

For ACHD:
Program Chief
Water Pollution Control and Solid Waste Management Program Allegheny County Health Department
3901 Penn Avenue, Building #5
Pittsburgh, PA 15224-1318

For ALCOSAN:
Director, Environmental Compliance Allegheny County Sanitary Authority
3300 Preble Avenue
Pittsburgh, PA 15233-1092

Notifications or communications under this Consent Decree shall be deemed submitted on the date they are received.

XIX. MODIFICATION

165. The Consent Decree may be modified by written consent of all of the Parties. With the exception of modifications pertaining to scheduling (which may include construction commencement dates) and other matters deemed minor by the Plaintiffs, any modification of this Consent Decree by the Parties shall be in writing and filed with the Court before it will be deemed effective.

165A. If ALCOSAN experiences significant adverse changes to its financial circumstances, it may request that the Plaintiffs agree to a modification of this Consent Decree to extend the implementation schedule for the Interim Measures by up to five years. ALCOSAN may make only one such request and shall make the request, if at all, no later than January 1, 2030. In any such request, ALCOSAN shall include in the request: (i) an updated financial capability assessment prepared in accordance with EPA guidance; (ii) a detailed description of the financial or technical circumstance that have led to the need for a modification; and (iii) a

detailed description of the proposed revised schedule for implementing the Interim Wet Weather Plan. The Plaintiffs may request that ALCOSAN provide additional documentation to support its request. Any modification of this consent decree under this Paragraph shall be in writing with the consent of the Parties. Such modification may require approval of the Court pursuant to Paragraph 165.

XX. TERMINATION

166. Subject to Section XIX (Modification), this Consent Decree shall be terminated when ALCOSAN has fulfilled all requirements of this Consent Decree, including the following:

a. ALCOSAN has completed the construction of all remedial controls and implemented the remedial activities required by its approved Wet Weather Plan, and ALCOSAN has conducted, for at least two years, the Post-Construction compliance monitoring program in the Wet Weather Plan, as approved by EPA and PADEP;

b. the remedial controls and remedial activities in the Wet Weather Plan, as built and/or as implemented, meet the design performance criteria for those controls and activities set forth in the Wet Weather Plan and/or the Consent Decree;

c. ALCOSAN has achieved and maintained satisfactory compliance with its then-effective NPDES Permit for a period of at least one year, unless the PADEP has notified ALCOSAN that the NPDES Permit should be modified or reissued in accordance with Section IV(B)(2)(g) of EPA's Combined Sewer Overflow Policy, in which case ALCOSAN must demonstrate that it has achieved and maintained continuous compliance for a period of at least one year with the permit that is modified or reissued in accordance with the notice from PADEP; provided, however, that for the purposes of satisfying the termination provisions of this Section only, ALCOSAN need not achieve and maintain compliance with a modified or reissued permit, and shall demonstrate that it has achieved and maintained compliance with its then-effective

permit, if the permit has been modified or reissued more than once since the completion of construction of the remedial controls and implementation of the remedial activities in the approved Wet Weather Plan; and ALCOSAN has provided to EPA information demonstrating compliance with the requirements of this Paragraph and has certified that the information is true, accurate, and complete in accordance with the certification requirements in Section VIII (Review and Approval of Submittals).

167. When the conditions of the preceding Paragraph are met, ALCOSAN may move the Court for termination of this Consent Decree. The United States, the Commonwealth, or ACHD may oppose such motion, in which case ALCOSAN shall have the burden of proof.

XXI. GENERAL PROVISIONS

168. Compliance with a requirement of this Consent Decree shall not by itself constitute compliance with any other federal, state, or local law or regulation.

169. In any subsequent administrative or judicial action initiated by United States, the Commonwealth, or ACHD for injunctive relief or civil penalties relating to the facilities covered by this Consent Decree, ALCOSAN shall not assert any defense or claim based upon principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim preclusion, claim splitting, or other defense based upon any contention that the claims raised by the Plaintiffs in the subsequent proceeding should have been brought in the Complaint.

170. Nothing in this Consent Decree, including the *force majeure* provisions set forth in Section XIII (Force Majeure), shall prohibit ALCOSAN from asserting, or shall affect ALCOSAN's assertion of the validity of, a defense to performance or to stipulated penalties under this Consent Decree based on the assertion that it is legally prohibited from raising or receiving funds and cannot comply with one or more of the requirements of this Consent Decree

based upon such prohibition. The Plaintiffs preserve their respective rights, however, to oppose any such defense asserted by ALCOSAN.

171. Each Party to this Consent Decree action shall bear its own costs and attorneys' fees, except as follows:

a. Should this Court determine that ALCOSAN has violated the terms of this Consent Decree, the Court may also determine that ALCOSAN shall be liable to the Plaintiffs for any costs and attorneys' fees incurred by the Plaintiffs in such actions against ALCOSAN for non-compliance with the requirements of this Consent Decree.

b. The Court may also determine that ALCOSAN's failure to timely pay the stipulated penalties required by this Consent Decree shall also render ALCOSAN liable for all charges, costs, fees, and penalties established by law for the benefit of a creditor, the United States, the Commonwealth, and/or ACHD in securing payment.

172. This Consent Decree constitutes the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Consent Decree, and supersedes all prior agreements and understandings among the Parties related to the subject matter herein. No document, representation, inducement, agreement, understanding, or promise, constitutes any part of this Consent Decree or the settlement it represents, nor shall they be used in construing the terms of this Consent Decree; provided, however, that the documents expressly referenced in this Consent Decree may be used to construe those provisions in which they are referenced or any other provisions to which they apply. The Appendices, as well as any submittal approved pursuant to Section VIII (Review and Approval of Submittals), are incorporated into, and considered part of, this Consent Decree.

173. The Effective Date of this Consent Decree shall be the Date of Entry of this Consent Decree.

174. The Parties agree and acknowledge that final approval by United States and entry of this Consent Decree is subject to the procedures of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and the right of the United States to withdraw or withhold consent if the comments disclose facts or considerations that indicate that the Consent Decree is inappropriate, improper, or inadequate. The Parties also recognize the right of the Commonwealth to withdraw or withhold consent if the comments disclose facts or considerations that indicate that the Consent Decree is inappropriate, improper, or inadequate.

175. ALCOSAN agrees not to oppose entry of this Consent Decree by this Court unless the United States, the Commonwealth, or ACHD have notified ALCOSAN in writing that the United States, the Commonwealth, or ACHD no longer support entry of the Consent Decree.

176. If a date by which ALCOSAN must meet an obligation of this Consent Decree falls on a holiday or week-end, the due date shall be the following day that business is conducted.

177. The Parties agree that the Section and Paragraph headings, titles and/or descriptions herein are for identification and organizational purposes only, and do not constitute obligations of this Consent Decree.

XXII. SIGNATORIES AND SERVICE

178. Each undersigned representative certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind that entity to this document.

179. This Consent Decree may be signed in counterparts, and such counterpart signature pages shall be given full force and effect.

180. ALCOSAN hereby agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree, and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. RETENTION OF JURISDICTION

181. This Court shall retain jurisdiction of this matter for the purposes of implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all disputes among the Parties that may arise under the provisions of this Consent Decree, to the extent that this Consent Decree provides for resolution of disputes by the Court.

XXIV. FINAL JUDGMENT

182. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between the United States, the Commonwealth, ACHD, and ALCOSAN.

SO ORDERED THIS 14th DAY OF May, 2020.

s/ J. Nicholas Ranjan
UNITED STATES DISTRICT JUDGE

THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR PLAINTIFF THE UNITED STATES OF AMERICA:

JEFFREY BOSSERT CLARK
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

May 13, 2019
Date

/s/ Daniel S. Smith
DANIEL S. SMITH
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
601 D Street NW
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THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR PLAINTIFF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

4/4/19
Date

MARK POLLINS
Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

4/4/19
Date

SUSHILA NANDA
Senior Attorney Advisor
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR PLAINTIFF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

3/18/2019
Date

COSMO SERVIDIO
Regional Administrator
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3/11/19
Date

MARY B. COE
Regional Counsel
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3/5/19
Date

YVETTE ROUNDTREE
Assistant Regional Counsel
Office of Regional Counsel
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR PLAINTIFF THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION:

May 29, 2019
Date

CHRISTOPHER KRILEY, P.E.
Program Manager, Clean Water Program
Commonwealth of Pennsylvania
Department of Environmental Protection

May 29, 2019
Date

BRUCE M. HERSCHLAG
Assistant Regional Counsel
Commonwealth of Pennsylvania
Department of Environmental Protection

THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR THE ALLEGHENY COUNTY HEALTH DEPARTMENT:

5-29-19
Date

KAREN HACKER
Director
Allegheny County Health Department

5-29-19
Date

MICHAEL PARKER
Solicitor
Allegheny County Health Department

THE UNDERSIGNED PARTIES enter into this Modified Consent Decree in the matter of *United States v. Allegheny County Sanitary Authority,* Civ. No. 2:07-cv-00737.

FOR THE ALLEGHENY COUNTY SANITARY AUTHORITY:

2/28/2019
Date

ARLETTA SCOTT WILLIAMS
Executive Director
Allegheny County Sanitary Authority

2/28/2019
Date

CHESTER R. BABST III
Babst Calland
Two Gateway Center
Pittsburgh, PA 15222
Phone: 412-394-5407
Fax: 412-586-1025
cbabst@babstcalland.com

APPENDIX A

Combined Sewer Outfalls				
Outfall ID	Location	Receiving Stream	Latitude	Longitude
A-01	Barbeau Street (COP)	Allegheny R.	40.44309	-80.00800
A-02	Fancourt Street (COP)	Allegheny R.	40.44341	-80.00678
A-03	Evans Way (COP)	Allegheny R.	40.44363	-80.00581
A-04	Stanwix Street (COP)	Allegheny R.	40.44384	-80.00485
A-05	Cecil Place (COP)	Allegheny R.	40.44402	-80.00385
A-06	Sixth Street (COP)	Allegheny R.	40.44418	-80.00339
A-07	Barkers Place (COP)	Allegheny R.	40.44455	-80.00195
A-08	Scott Place (COP)	Allegheny R.	40.44469	-80.00149
A-09	Seventh Street (COP)	Allegheny R.	40.44484	-80.00103
A-10	Eighth Street (COP)	Allegheny R.	40.44515	-80.00010
A-11	Ninth Street (COP)	Allegheny R.	40.44548	-79.99902
A-12	Garrison Place (COP)	Allegheny R.	40.44576	-79.99829
A-13	Tenth Street (COP)	Allegheny R.	40.44639	-79.99661
A-14	12th Street (COP)	Allegheny R.	40.44762	-79.99442
A14Z	11th Street and Smallman Street (COP)	Allegheny R.	40.44551	-79.99407
A-15	14th Street and R. bank (COP)	Allegheny R.	40.44916	-79.99194
A-16	17th Street (COP)	Allegheny R.	40.45160	-79.98830
A-17	20th Street (COP)	Allegheny R.	40.45293	-79.98641
A-18	24th Street (COP)	Allegheny R.	40.45530	-79.98306
A-18Z	22nd Street and Railroad Street (COP)	Allegheny R.	40.45414	-79.98307
A-18Y	23rd Street and Railroad Street (COP)	Allegheny R.	40.45528	-79.98142
A-18X	25th Street and Railroad Street (COP)	Allegheny R.	40.45348	-79.98381
A-19Z	26th Street and Railroad Street (COP)	Allegheny R.	40.45624	-79.98003
A-19Y	27th Street and Railroad Street (COP)	Allegheny R.	40.45721	-79.97866
A-19X	28th Street and Railroad Street (COP)	Allegheny R.	40.45819	-79.97717
A-20	30th Street (COP)	Allegheny R.	40.46104	-79.97575
A-20Z	29th Street (COP)	Allegheny R.	40.45910	-79.97576
A-21	31st Street (COP)	Allegheny R.	40.46228	-79.97440
A-22	32nd Street (COP)	Allegheny R.	40.46327	-79.97299
A-23	33rd Street (COP)	Allegheny R.	40.46409	-79.97183
A-25	36th Street (COP)	Allegheny R.	40.46915	-79.96727
A-26	38th Street (COP)	Allegheny R.	40.46696	-79.96925
A-27	40th Street (COP)	Allegheny R.	40.47151	-79.96592
A-27Z	40th Street	Allegheny R.	40.47218	-79.96656
A-28	43rd Street (COP)	Allegheny R.	40.47361	-79.96462
A-29	48th Street (COP)	Allegheny R.	40.47854	-79.96157
A-29Z	49th Street (COP)	Allegheny R.	40.47841	-79.95924
A-30	51st Street (COP)	Allegheny R.	40.48088	-79.95933
A-31	52nd Street (COP)	Allegheny R.	40.48280	-79.95743
A-32	McCandless Street (COP)	Allegheny R.	40.48377	-79.95573
A-33	54th Street (COP)	Allegheny R.	40.48487	-79.95380
A-34	55th Street (COP)	Allegheny R.	40.48540	-79.95233
A-35	57th Street and R. Crossing (COP)	Allegheny R.	40.48686	-79.94831
A-36	62nd Street (COP)	Allegheny R.	40.48969	-79.93810
A-37	Voltz Way (COP)	Allegheny R.	40.49013	-79.93577
A-37Z	120 ft Upstream of A-37 (COP)	Allegheny R.	40.49020	-79.93562
A-38	Gatewood Way (COP)	Allegheny R.	40.49014	-79.93038
A-40	Chislett Street (COP)	Allegheny R.	40.48911	-79.92315

A-41	Heths Avenue (COP)	Allegheny R.	40.48796	-79.91879
A-42	Negley Run (COP)	Allegheny R.	40.48257	-79.90849
A-47	Itasco Street (COP)	Allegheny R.	40.44575	-80.00705
A-48	Dasher Street (COP)	Allegheny R.	40.44609	-80.00535
A-49	Federal Street (COP)	Allegheny R.	40.44670	-80.00360
A-50	Sandusky Street (COP)	Allegheny R.	40.44716	-80.00202
A-51	Anderson Street (COP)	Allegheny R.	40.44753	-80.00057
A-55	Grantham Street (COP)	Allegheny R.	40.44829	-79.99846
A-56	Goodrich Street (COP)	Allegheny R.	40.44871	-79.99767
A-58	Madison Street (COP)	Allegheny R.	40.44978	-79.99530
A-59	Warfield Street (COP)	Allegheny R.	40.45094	-79.99354
A-59Z	Chestnut Street and Saw Mill Run Way (COP)	Allegheny R.	40.45279	-79.99244
A-60	Spring Garden Avenue (COP)	Allegheny R.	40.45385	-79.98996
A-61	Pindham Street (COP)	Allegheny R.	40.45600	-79.98729
A-62	McFadden Street (COP)	Allegheny R.	40.46028	-79.98208
A-63	Emma Street (COP)	Allegheny R.	40.46347	-79.97980
A-64	Rialto Street (COP)	Allegheny R.	40.46459	-79.97913
A-65	Heckelman Street (COP)	Allegheny R.	40.46760	-79.97673
A-67	Girty's Run (Millvale Borough)	Allegheny R.	40.47569	-79.96838
A-68	Pine Creek (Etna Borough)	Allegheny R.	40.48924	-79.95104
A-69	5th Street (Sharpsburg Borough)	Allegheny R.	40.49288	-79.93575
A-70	Davidson Street (Sharpsburg Borough)	Allegheny R.	40.49293	-79.93455
A-71	13th Street (Sharpsburg Borough)	Allegheny R.	40.49327	-79.92949
A-72	16th Street (Sharpsburg Borough)	Allegheny R.	40.49287	-79.92523
A-73	19th Street (Sharpsburg Borough)	Allegheny R.	40.49231	-79.91822
A-74	22nd Street (Sharpsburg Borough)	Allegheny R.	40.49184	-79.91570
A-75	Western Avenue (Aspinwall Borough)	Allegheny R.	40.48963	-79.90772
A-76	Center Avenue (Aspinwall Borough)	Allegheny R.	40.48919	-79.90604
A-77	Eastern Avenue (Aspinwall Borough)	Allegheny R.	40.48867	-79.90402
A-78	Brilliant Avenue (COP)	Allegheny R.	40.48842	-79.90126
C-03	Sloan Way (COP)	Chartiers Creek	40.46467	-80.05368
C-03A	C-03A Approx. 450 ft. above W Carson St.(McKees Rocks Borough); Outfall 006 aka (C-04-02-OF2) (IRO)	Chartiers Creek	40.46506	-80.05404
C-04	McKees Rock Redevelopment (McKees Rocks Borough)	Chartiers Creek	40.46494	-80.05420
C-05	Stafford Street at Elliot Warehouse (COP)	Chartiers Creek	40.46215	-80.05607
C-05A	Stafford Street (COP)	Chartiers Creek	40.46357	-80.05685
C-06	Linen Street (McKees Rocks Borough)	Chartiers Creek	40.46372	-80.05785
C-07	Ohio Conn. Ry Culvert (COP)	Chartiers Creek	40.46190	-80.06066
C-08	Left bank, rear of Singer Ice Co. (McKees Rocks Borough)	Chartiers Creek	40.46441	-80.06046
C-09	Federal Enameling & Stamping (McKees Rocks Borough)	Chartiers Creek	40.46444	-80.06084
C-10	Fort Pitt Malleable Co. (McKees Rocks Borough)	Chartiers Creek	40.46114	-80.06959
C-11	10 ft Arch Culvert (COP)	Chartiers Creek	40.46056	-80.07018
C-12	Railroad Yard (COP)	Chartiers Creek	40.46119	-80.07311
C-13	L.B. under PC&Y RR bridge (McKees Rocks Boro)	Chartiers Creek	40.46355	-80.07398
C-13A	Scully Railroad Yard (COP); Outfall 007 aka C-13A-IRO	Chartiers Creek	40.46001	-80.08770
C-15	Broadhead Fording Road (COP)	Chartiers Creek	40.44452	-80.08575
C-19	State Hwy. Bridge (COP)	Chartiers Creek	40.44028	-80.08133

C-20	Roswell Drive (Crafton Borough)	Chartiers Creek	40.44021	-80.08055
C-22	Crafton Borough Sewer (Crafton Borough)	Chartiers Creek	40.43575	-80.07486
C-23	RB 1550 ft U/S Crafton Sewer (Crafton Borough)	Chartiers Creek	40.43164	-80.07507
C-24	PCC & St. L. RR Bridge (COP); serves C-24 and C-25 structures	Chartiers Creek	40.42094	-80.08272
C-26A	Idlewild Road (COP)	Chartiers Creek	40.42087	-80.07482
C-27	Pringle Way (COP)	Chartiers Creek	40.41870	-80.07510
C-28	Moffat Way (COP)	Chartiers Creek	40.41797	-80.07549
C-29	Woodkirk Street (COP)	Chartiers Creek	40.41727	-80.07625
C-30	Whiskey Run, R.B. approx 120 ft U/S of PC&Y RR bridge (COP)	Chartiers Creek	40.41583	-80.07778
C-31	PA Parkway Bridge (Scott Township)	Chartiers Creek	40.41254	-80.08025
C-34	Elm Street (Carnegie Borough)	Chartiers Creek	40.41232	-80.08260
C-34A	Carnegie CSO (Carnegie Borough)	Chartiers Creek	40.41214	-80.8269
C-35	Chestnut Street Bridge (Carnegie Borough)	Chartiers Creek	40.41133	-80.08390
C-36	Walnut Street (Carnegie Borough)	Chartiers Creek	40.41053	-80.08598
C-37	Broadway Street (Carnegie Borough)	Chartiers Creek	40.41003	-80.08731
C-38	Pine Street (Carnegie Borough)	Chartiers Creek	40.40958	-80.08801
C-38A	Campbells Run (Carnegie Borough)	Chartiers Creek	40.40724	-80.08839
C-38B	Left Bank, at foot of Barrett Way (Carnegie Borough)	Chartiers Creek	40.40609	-80.08825
C-39	Third Avenue (Carnegie Borough)	Chartiers Creek	40.40563	-80.08806
C-41	PCC & St. L. Ry. Bridge (Carnegie Borough)	Chartiers Creek	40.40286	-80.08715
C-43	Carothers Street Bridge (Carnegie Borough)	Chartiers Creek	40.40237	-80.08882
C-44	Fourth Street (Carnegie Borough)	Chartiers Creek	40.40184	-80.08992
C-51	Right bank, at Sipes Paint Company (Scott Township)	Chartiers Creek	40.37556	-80.09694
M-01	Short Street (COP)	Monongahela R.	40.43884	-80.00779
M-02	Stanwix Street (COP)	Monongahela R.	40.43808	-80.00596
M-03	Wood Street (COP)	Monongahela R.	40.43686	-80.00292
M-04	Grant Street (COP)	Monongahela R.	40.43541	-79.99934
M-04Z	Cherry Way and Westbound Roadway (COP)	Monongahela R.	40.43636	-79.99994
M-05	Try Street (COP)	Monongahela R.	40.43427	-79.99712
M-06	S. First Street (COP)	Monongahela R.	40.43124	-79.99999
M-07	S. Fourth Street (COP)	Monongahela R.	40.43113	-79.99538
M-08	S. Sixth Street (COP)	Monongahela R.	40.43109	-79.99369
M-10	S. Eighth Street (COP)	Monongahela R.	40.43126	-79.99120
M-11	S. Tenth Street (COP)	Monongahela R.	40.43139	-79.98872
M-12	S. 13th Street (COP)	Monongahela R.	40.43180	-79.98543
M-12Z	S. 11th Street (COP)	Monongahela R.	40.43002	-79.98761
M-13	S. 15th Street (COP)	Monongahela R.	40.43205	-79.98339
M-14	S. 17th Street (COP)	Monongahela R.	40.43204	-79.98174
M-15	S. 19th Street (COP)	Monongahela R.	40.43235	-79.97881
M-15Z	S. 18th Street (COP)	Monongahela R.	40.43183	-79.98028
M-16	S. 20th Street (COP)	Monongahela R.	40.43238	-79.97722
M-17	S. 21st Street (COP)	Monongahela R.	40.43231	-79.97595
M-18	S. 22nd Street (COP)	Monongahela R.	40.43206	-79.97446
M-19	Brady Street and R. Crossing (COP)	Monongahela R.	40.43442	-79.97294
M-19A	Bates Street (COP)	Monongahela R.	40.43511	-79.96672
M-19B	Second Avenue and Maurice Street (COP)	Monongahela R.	40.43218	-79.95884
M-20	S. 23rd Street (COP)	Monongahela R.	40.43160	-79.97273
M-21	S. 24th Street (COP)	Monongahela R.	40.43102	-79.97038
M-22	S. 25th Street (COP)	Monongahela R.	40.43052	-79.96854

M-23	S. 26th Street (COP)	Monongahela R.	40.43017	-79.96717
M-24	Waterworks Way (COP)	Monongahela R.	40.42744	-79.96193
M-26	S. 30th Street (COP)	Monongahela R.	40.42687	-79.96124
M-27	S. 33rd Street (COP)	Monongahela R.	40.42410	-79.95831
M-28	S. 34th Street (COP)	Monongahela R.	40.42274	-79.95763
M-29	Four Mile Run (COP)	Monongahela R.	40.42463	-79.95297
M-31	Rutherglen Street (COP)	Monongahela R.	40.41882	-79.94886
M-31Z	Rutherglen Street (COP)	Monongahela R.	40.41883	-79.94876
M-33	Longworth Street (COP)	Monongahela R.	40.41125	-79.95143
M-34	Beck's Run (COP)	Monongahela R.	40.41121	-79.95474
M-35	Hazelwood Avenue (COP)	Monongahela R.	40.40969	-79.95098
M-36	Tecumseh Street (COP)	Monongahela R.	40.40702	-79.95042
M-37	Melancthon Street Ejector Station (COP)	Monongahela R.	40.40389	-79.94889
M-38	Vespucius Street (COP)	Monongahela R.	40.39901	-79.94312
M-39	Renova Street (COP)	Monongahela R.	40.39849	-79.94150
M-40	Alluvian Street (COP)	Monongahela R.	40.39870	-79.93644
M-42	Streets Run (COP)	Monongahela R.	40.39345	-79.93304
M-43	Mesta Street (West Homestead Borough)	Monongahela R.	40.40048	-79.92427
M-44	West Run (West Homestead Borough)	Monongahela R.	40.40513	-79.92120
M-45	Homestead (Homestead Borough)	Monongahela R.	40.40931	-79.91701
M-47	Nine Mile Run (COP)	Monongahela R.	40.41599	-79.91563
M-48	Swissvale (Swissvale Borough)	Monongahela R.	40.41679	-79.89437
M-49	Whitaker Run (Munhall Borough)	Monongahela R.	40.41031	-79.89234
M-50	Rankin-Swissvale (Rankin Borough)	Monongahela R.	40.41385	-79.88693
M-51	Rankin-Braddock (Braddock Borough)	Monongahela R.	40.40577	-79.87716
M-52	Second Street (Braddock Borough)	Monongahela R.	40.40444	-79.87550
M-53	Fourth Street (Braddock Borough)	Monongahela R.	40.40316	-79.87391
M-54	Fifth Street (Braddock Borough)	Monongahela R.	40.40257	-79.87311
M-55	Sixth Street (Braddock Borough)	Monongahela R.	40.40114	-79.87122
M-56	Seventh Street (Braddock Borough)	Monongahela R.	40.40003	-79.87025
M-57	Eighth Street (Braddock Borough)	Monongahela R.	40.39903	-79.86930
M-58	Ninth Street (Braddock Borough)	Monongahela R.	40.39723	-79.86758
M-59	11th Street Overflow (Braddock Borough); Outfall 005 (IRO)	Monongahela R.	40.39528	-79.86578
M-60	Eleventh Street (Braddock Borough)	Monongahela R.	40.39526	-79.86630
M-61	Thirteenth Street (North Braddock Borough)	Monongahela R.	40.39396	-79.86258
O-01	Cole Avenue & Island Avenue (Stowe Township)	Ohio R.	40.48921	-80.07999
O-02	Davis Alley (Stowe Township)	Ohio R.	40.48756	-80.07359
O-03	Orr Street (Stowe Township)	Ohio R.	40.48611	-80.07096
O-04	1000 ft D/S from R. Crossing (Stowe Township)	Ohio R.	40.48672	-80.06601
O-05	At R. Crossing (Stowe Township)	Ohio R.	40.48555	-80.06282
O-05A	D/S of Orchard Street (Stowe Township)	Ohio R.	40.48464	-80.06126
O-05B	U/S of Orchard Street (Stowe Township)	Ohio R.	40.48414	-80.06044
O-06	Shingiss Street (McKees Rocks Borough)	Ohio R.	40.47070	-80.05157
O-08	Tabor Street, Outlet U-2 (COP)	Ohio R.	40.46297	-80.05119
O-13	Cork's Run (COP)	Ohio R.	40.45397	-80.03984
O-14Z	Steuben St. and Saw Mill Run Blvd. (COP)	Saw Mill Run	40.44392	-80.02946
O-14E	W. Carson St. east side outfall (COP)	Ohio R.	40.44412	-80.02714
O-14W	W. Carson St. west side outfall (COP)	Ohio R.	40.44413	-80.02716
O-25	Jacks Run (COP)	Ohio R.	40.48566	-80.04970
O-26	Verner Avenue (COP)	Ohio R.	40.47789	-80.04608
O-27	Westhall Street (COP)	Ohio R.	40.47208	-80.04326

O-29	Superior Street (COP)	Ohio R.	40.46315	-80.03708
O-30	Island Avenue (COP)	Ohio R.	40.46129	-80.03585
O-31	Seymour Street (COP)	Ohio R.	40.45940	-80.03478
O-32	Branchport Street (COP)	Ohio R.	40.45865	-80.03465
O-33	Adams Street (COP)	Ohio R.	40.45738	-80.03450
O-34	Columbus Street (COP)	Ohio R.	40.45641	-80.03436
O-35	Franklin Street (COP)	Ohio R.	40.45449	-80.03400
O-36	Liverpool Street (COP)	Ohio R.	40.45365	-80.03342
O-37	Pennsylvania Avenue (COP)	Ohio R.	40.45256	-80.03268
O-38	North Avenue (COP)	Ohio R.	40.45139	-80.03151
O-39	Western Avenue (COP)	Ohio R.	40.44957	-80.02961
O-40	Chateau Street (COP)	Ohio R.	40.44797	-80.02630
O-41	Belmont Street (COP)	Ohio R.	40.44833	-80.02523
O-43	Walker Street (COP)	Ohio R.	40.44578	-80.01923
S-18	Maytide Street (COP)	Saw Mill Run	40.38556	-79.99444
S-23	Edgebrook Avenue East (COP)	Saw Mill Run	40.40229	-79.99938
S-24	Edgebrook Avenue West (COP)	Saw Mill Run	40.40164	-80.00264
S-28	Intervale at Saw Mill Run (COP)	Saw Mill Run	40.40801	-80.00415
S-29	Bausman at Saw Mill Run (COP)	Saw Mill Run	40.41098	-80.00620
S-30	125 Saw Mill Run (COP)	Saw Mill Run	40.41348	-80.00786
S-31	Buffington Avenue (COP)	Saw Mill Run	40.41481	-80.00963
S-32	Warrington at Saw Mill Run (COP)	Saw Mill Run	40.41489	-80.01209
S-33	Crane at Saw Mill Run (COP)	Saw Mill Run	40.41699	-80.01551
S-34	Weinman at Saw Mill Run (COP)	Saw Mill Run	40.41914	-80.01526
S-35	Soffel at Saw Mill Run (COP)	Saw Mill Run	40.42019	-80.01443
S-36	Spahgrove at Saw Mill Run (COP)	Saw Mill Run	40.42223	-80.01573
S-38	Woodruff Street (COP)	Saw Mill Run	40.42601	-80.01853
S-39	921 Saw Mill Run (COP)	Saw Mill Run	40.42725	-80.02163
S-01A	Woodruff St Interceptor Relief Overflow (COP)	Saw Mill Run	40.42601	-80.02078
S-40	Garage at Tunnel (COP)	Saw Mill Run	40.43084	-80.02719
S-41	Shaler at Wabash (COP)	Saw Mill Run	40.43279	-80.02968
S-02A	McKnight St Interceptor Relief Overflow (COP)	Saw Mill Run	40.43438	-80.03196
S-42A	Greentree at Woodville (COP)	Saw Mill Run	40.43542	-80.03390
S-42	Greentree at Woodville (COP)	Saw Mill Run	40.43541	-80.03389
S-46	Sanctus and Main (COP)	Saw Mill Run	40.44170	-80.03273
S-03A	Main Street Interceptor Relief Overflow (COP)	Saw Mill Run	40.44200	-80.03174
T-01	Docker Hollow (North Braddock Borough)	Turtle Creek	40.39525	-79.84721
T-02	Main Street (East Pittsburgh Borough)	Turtle Creek	40.39297	-79.83929
T-03	Braddock Avenue (East Pittsburgh Borough)	Turtle Creek	40.39369	-79.83656
T-04	R. B. Turtle Creek 30 E. Pitt Sewer (East Pittsburgh)	Turtle Creek	40.39634	-79.83246
T-07	R.B. D/S Thompson Run (Turtle Creek Borough)	Turtle Creek	40.40259	-79.82850
T-10	Grant Street and Turtle Creek (Turtle Creek Borough)	Turtle Creek	40.40426	-79.82649
T-11	Penn Avenue Highway Bridge (Turtle Creek Borough)	Turtle Creek	40.40348	-79.82444
T-12	Eleventh Street (Turtle Creek Borough)	Turtle Creek	40.40311	-79.82346
T-13	Ninth Street (Turtle Creek Borough)	Turtle Creek	40.40230	-79.82269
T-14	Line Alley (Turtle Creek Borough)	Turtle Creek	40.40089	-79.81931
T-15	4th St. and Airbrake Avenue (Wilmerding Borough)	Turtle Creek	40.39977	-79.81644
T-16	Left Bank Turtle Creek, 50 ft below RR Bridge (North Versailles Township)	Turtle Creek	40.39889	-79.81777

T-16A	Third Street (Wilmerding Borough)	Turtle Creek	40.39996	-79.81709
T-17	Second Street (Wilmerding Borough)	Turtle Creek	40.39949	-79.81604
T-19	Right Bank Under Viaduct (Wilmerding Borough)	Turtle Creek	40.39643	-79.81082
T-21	Right Bank Turtle Creek (Wilmerding Borough)	Turtle Creek	40.39562	-79.80770
T-22	L. B. Turtle Creek D/S Miller St. (Wilmerding Boro)	Turtle Creek	40.39505	-79.80723
T-23	Miller Street and Turtle Creek (Wilmerding Borough)	Turtle Creek	40.39492	-79.80655
T-24	Patton Street (Wilmerding Borough)	Turtle Creek	40.39458	-79.80483
T-26	D/S Bridge to Pitcairn RR Yards (Pitcairn Borough)	Turtle Creek	40.40106	-79.78223
TR-01	Turtle Creek Pump Station (Turtle Creek Borough)	Thompson Run	40.40461	-79.82768
TR-02	Church Street (Turtle Creek Borough)	Thompson Run	40.41219	-79.82432

APPENDIX B

Sanitary Sewer Outfalls				
Outfall ID	Location	Receiving Stream	Latitude	Longitude
A-45	Fairview Avenue (Verona Borough)	Allegheny R.	40.50071	-79.84673
A-82	First Street (Blawnox Borough)	Allegheny R.	40.48758	-79.86513
A-85	Powers Run (O'Hara Township)	Allegheny R.	40.50704	-79.85185
C-21	L.B., end of Thornburg Sewer opposite Crafton Borough Sewer (Thornburg Borough)	Chartiers Creek	40.43549	-80.07601
C-26	L.B. rear of Columbia Steel & Shafting Co, Foot of Arch St. ext (Rosslyn Farms Borough)	Chartiers Creek	40.42001	-80.07735
C-33	Vine Street (Carnegie Borough)	Chartiers Creek	40.41213	-80.08321
C-42	Right Bank, foot of Center Way (Scott Township)	Chartiers Creek	40.40207	-80.08848
C-45	RB, approximately 30 ft. U/S of West Main St. highway bridge (Scott Township)	Chartiers Creek	40.40015	-80.09690
C-45A	L.B., landward side of RR Culvert, approx 550 ft. U/S of highway bridge (Carnegie Borough)	Chartiers Creek	40.40053	-80.09850
C-46	Left Bank, end of Grant Avenue near RR Bridge (Heidelberg Borough)	Chartiers Creek	40.39364	-80.09900
C-47	R.B., across creek from American Steel Band Company (Scott Township)	Chartiers Creek	40.39517	-80.09207
C-48	R.B., approx 30 ft. D/S of East Railroad St. Highway Bridge (Scott Township)	Chartiers Creek	40.39482	-80.08749
C-49	R.B., approx 20 ft. D/S of Collier St. Highway Bridge (Scott Township)	Chartiers Creek	40.38715	-80.08893
C-50	L.B., approx 750 ft. D/S of Woodville Rd. Highway Bridge (Scott Township)	Chartiers Creek	40.38472	-80.09280
C-50A	R.B., approx 250 ft. D/S of Woodville Rd. Highway Bridge (Scott Township)	Chartiers Creek	40.38321	-80.09272
C-50B	R.B., approx 1400 ft. upstream of P.C.Y. RR Bridge (Scott Township)	Chartiers Creek	40.37774	-80.09441
C-52	L.B., approx 100 ft. D/S of P.C.C. & St. L. RR Bridge (Collier Township)	Chartiers Creek	40.37220	-80.09768
C-53	Approx 100 ft. D/S of mouth of Painters Run (Scott Township)	Chartiers Creek	40.36355	-80.09550
C-54	Right bank, mouth of McLaughlin's Run (Bridgeville Borough)	Chartiers Creek	40.36260	-80.10799
C-55	R.B., approx 120 ft. D/S of Pgh. W. Va. RR Bridge (Bridgeville Borough)	Chartiers Creek	40.35890	-80.12066
O-15	O-15 Outfall structure (Emsworth Borough)	Ohio R.	40.50633	-80.08850
O-16	Western Avenue (Ben Avon Borough)	Ohio R.	40.50608	-80.08784
O-17	Irwin Avenue (Ben Avon Borough)	Ohio R.	40.50404	-80.08247
O-18	Spruce Run (Ben Avon Borough)	Ohio R.	40.50323	-80.07926
O-18y	Cliff Street lateral (Ben Avon Borough)	Ohio R.	40.50212	-80.07797
O-18z	Ridge Ave. lateral (Ben Avon Borough)	Ohio R.	40.50256	-80.07922
O-19	Birmingham Avenue (Avalon Borough)	Ohio R.	40.49874	-80.07226
O-20	Elizabeth Avenue (Avalon Borough)	Ohio R.	40.49550	-80.06676
O-21	West Street (Avalon Borough)	Ohio R.	40.49294	-80.06419

O-22	Meade Avenue (Bellevue Borough)	Ohio R.	40.49141	-80.06242
O-23	South Fremont Avenue (Bellevue Borough)	Ohio R.	40.48890	-80.05905
O-24	Shiloh Avenue (Bellevue Borough)	Ohio R.	40.48753	-80.05684
SMR.CS-14	Interceptor Relief at Grove Road (Castle Shannon Borough)	Saw Mill Run	40.36802	-80.01399
SMR.CS-50	Interceptor Relief at Smith St. (Castle Shannon Borough)	Saw Mill Run	40.35690	-80.02913
SMR.CS-53	Interceptor Relief at Connor Rd. (Castle Shannon Borough)	Saw Mill Run	40.35591	-80.02882
T-08	L.B. Turtle Creek approx 300 ft. D/S from mouth of Thompson Run (North Versailles Township)	Turtle Creek	40.40272	-79.82777
T-18	Left bank under Viaduct (Wilmerding Borough)	Turtle Creek	40.39632	-79.81096
T-25	Left bank approx 400 ft. downstream of Wall Bridge (North Versailles Borough)	Turtle Creek	40.39430	-79.79954
T-26A	Moss Side Boulevard (Municipality of Monroeville)	Turtle Creek	40.39566	-79.77284
T-26B	S. Pitcairn connection for Monroeville Boro, just D/S of Bridge going to Pitcairn RR yards (Monroeville)	Turtle Creek	40.40127	-79.78030
T-27	Left bank under Pitcairn-Trafford Road Viaduct (Trafford Borough)	Turtle Creek	40.38674	-79.76409
T-29	Left bank approx 600 ft. D/S of Firth Sterling Company fence (Trafford Borough)	Turtle Creek	40.38951	-79.75582
T-29A	Left bank approx 200 ft. D/S of Firth Sterling Company fence (Trafford Borough)	Turtle Creek	40.38894	-79.75470
T-31	Right bank Brush Creek approx 250 ft. D/S from PA RR Bridge (Trafford Borough)	Turtle Creek	40.38434	-79.76619
T-32	Right bank Brush Creek approx 90 ft. upstream of PA RR Bridge (Trafford Borough)	Turtle Creek	40.38361	-79.76749
T-33	R.B. Brush Creek & Maple Street (Trafford Borough)	Turtle Creek	40.38225	-79.76889
TR-03	Larimar Ave. (Wilkins Township)	Thompson Run	40.41438	-79.82448
TR-04	Chalfant Run Culvert (Wilkins Township)	Thompson Run	40.42167	-79.81320
TR-05	Eastmont (Wilkins Township)	Thompson Run	40.43399	-79.80428
TR-06	Lick Run (Municipality of Monroeville)	Thompson Run	40.44330	-79.79725

APPENDIX C

Sensitive Areas (and Areas to be Treated as Sensitive Areas for Purposes of this Consent Decree Only)

Area Name	Mile Point	Descending Bank*	Description
ALLEGHENY RIVER			
Wilkinsburg-Penn Joint Water Authority	9.0	Left	Drinking Water Intake (DWI)
City of Pittsburgh	8.0	Right	DWI
Allegheny River Area No. 1	3.4 to 2.0	Right	Park and Marina
MONONGAHELA RIVER			
PA American Water Company	4.5	Left	DWI
Monongahela River Area No. 1	2.3	Left	Boat Ramp
Monongahela River Area No. 2	6.2	Left	Park
OHIO RIVER			
West View Water Authority	5.0	Upstream End of Neville Island	DWI
Municipal Authority of Robinson Township	8.6	Left; back channel of Emsworth Dam	DWI
Ohio River Area No. 1	0.0 to 1.0	Right	Parks

*Descending bank is referenced as moving downstream.

APPENDIX D

NPDES Permit

3800-PM-BPNPSM0012 Rev. 5/2014
Permit

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE REQUIREMENTS FOR PUBLICLY OWNED TREATMENT WORKS (POTWs)

NPDES PERMIT NO: PA0025984

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

Allegheny County Sanitary Authority
(ALCOSAN)
3300 Preble Avenue
Pittsburgh, PA 15233

is authorized to discharge from a facility known as **ALCOSAN Woods Run Wastewater Treatment Plant**, located in the **City of Pittsburgh, Allegheny County**, to the **Ohio River** in Watershed(s) **20-G** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON **JANUARY 1, 2019**

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON **DECEMBER 31, 2023**

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))

3. A complete application for renewal of this permit or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d))

   In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code 92a.7(b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED DECEMBER 11, 2018 **ISSUED BY** Chris Kriley

Christopher Kriley, P.E.
Clean Water Program Manager
Southwest Regional Office

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 28' 34.00" , **Longitude** 80° 2' 44.00" , **River Mile Index** 977.8 , **Stream Code** 32317

Receiving Waters: Ohio River

Type of Effluent: Treated Sewage and Industrial Wastewater

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst. Min	XXX	XXX	9.0	1/shift	Grab
Dissolved Oxygen	XXX	XXX	5.0 Inst. Min	5.5 Weekly Ave	XXX	XXX	1/shift	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.6	1/shift	Grab
CBOD5 May 1 - Oct 31	41,700	62,550	XXX	20	30 Wkly Avg	40	1/day	24-Hr Composite
CBOD5 Nov 1 - Apr 30	52,125	78,187	XXX	25	37.5 Wkly Avg	50	1/day	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	1/day	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	1/day	24-Hr Composite
Total Suspended Solids	62,550	93,825	XXX	30	45 Wkly Avg	60	1/day	24-Hr Composite
Ammonia-Nitrogen Jun 1 - Oct 31	18,765	28,147	XXX	9.0	13.5 Wkly Avg	18.0	1/day	24-Hr Composite
Ammonia-Nitrogen Nov 1 - May 31	52,125	78,187	XXX	25	37.5 Wkly Avg	50	1/day	24-Hr Composite

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Fecal Coliform (No./100 ml) Apr 1 - Oct 31	XXX	XXX	XXX	200 Geo Mean	XXX	400(3)	1/day	Grab
Fecal Coliform (No./100 ml) Nov 1 - Mar 31	XXX	XXX	XXX	2,000 Geo Mean	XXX	XXX	1/day	Grab
Nitrate-Nitrite as N	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Total Dissolved Solids	Report	Report Daily Max	XXX	Report	Report	XXX	1/week	24-Hr Composite
Chloride	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Bromide	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Sulfate	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
1,4-Dioxane	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. B IDENTIFICATION OF COMBINED SEWER OVERFLOW DISCHARGES

The outfalls identified below serve as combined sewer overflows necessitated by storm water entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Dry weather discharges from these outfalls are prohibited. Each discharge shall be monitored for cause, frequency, duration, and quantity of flow. The data must be recorded on the CSO Supplemental Reports (3800-FM-BPNPSM0441 and 0442) and shall be reported monthly as an attachment to the Discharge Monitoring Report (DMR) or as otherwise authorized in the permit.

Outfall	Local Outfall #	Name	Receiving Stream	Latitude/Longitude
005	M-59	11th Street 54" sewer overflow (M59) (Braddock Borough)	Monongahela River	40° 23' 41" / 79° 51' 48"
006	C-03A	54" sewer overflow (C-03A). Approximately 450 ft. upstream of West Carson Street (McKees Rocks)	Chartiers Creek	40° 27' 52" / 80° 03' 15"
007	108HC13A	24" sewer overflow (C-13A) Scully Railroad Yard (COP)	Chartiers Creek	40° 27' 34" / 80° 05' 19"
S-01A		Woodruff Street Interceptor Relief Overflow (COP)	Saw Mill Run	40° 25' 33" / 80° 01' 15"
S-02A	006NS42B	McKnight Street Interceptor Relief Overflow (COP)	Saw Mill Run	40° 26' 04" / 80° 01' 54"
S-03A		Main Street Interceptor Relief Overflow (COP)	Saw Mill Run	40° 26' 31" / 80° 01' 54"
S-18	095NS18	Maytide Street (COP)	Saw Mill Run	40° 23' 06" / 79° 59' 44"
S-23	061DS23	Edgebrook Avenue East (COP)	Saw Mill Run	40° 25' 08" / 79° 59' 56"
S-24	061DS24	Edgebrook Avenue (COP)	Saw Mill Run	40° 24' 30" / 80° 00' 07"
S-28	034LS28	Intervale at Saw Mill Run (COP)	Saw Mill Run	40° 24' 30" / 80° 00' 14"
S-29	034GS29	Bausman at Saw Mill Run (COP)	Saw Mill Run	40° 24' 40" / 80° 00' 21"
S-30	034BS30	125 Saw Mill Run (COP)	Saw Mill Run	40° 24' 51" / 80° 00' 27"

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR CSO OUTFALLS LISTED BELOW (CONTINUED):

Outfall	Local Outfall #	Name	Receiving Stream	Latitude/Longitude
S-31	015PS31	Buffington Avenue (COP)	Saw Mill Run	40° 24' 54" / 80° 00' 33"
S-32	015PS32	Warrington at Saw Mill Run (COP)	Saw Mill Run	40° 24' 55" / 80° 00' 43"
S-33	015JS33	Crane at Saw Mill Run (COP)	Saw Mill Run	40° 25' 00" / 80° 00' 55"
S-34	015JS34	Weinman at Saw Mill Run (COP)	Saw Mill Run	40° 25' 07" / 80° 00' 55"
S-35	015ES35	Soffel at Saw Mill Run (COP)	Saw Mill Run	40° 25' 13" / 80° 00' 52"
S-36	016DS36	Spahgrove at Saw Mill Run (COP)	Saw Mill Run	40° 25' 20" / 80° 00' 56"
S-38	005R001	Woodruff Street (COP)	Saw Mill Run	40° 25' 34" / 80° 01' 07"
S-39	005LS39	921 Saw Mill Run (COP)	Saw Mill Run	40° 25' 37" / 80° 01' 19"
S-40	005AS41	Garage at Tunnel (COP)	Saw Mill Run	40° 25' 37" / 80° 01' 37"
S-41	005AS41	Shaler at Wabash (COP)	Saw Mill Run	40° 25' 58" / 80° 01' 47"
S-42A	019M001	Greentree at Woodville (COP)	Saw Mill Run	40° 26' 07" / 80° 01' 03"
S-42	019MS42	Greentree at Woodville (COP)	Saw Mill Run	40° 26' 07" / 80° 01' 03"
S-46	006AS46	Sanctus and Main (COP)	Saw Mill Run	40° 26' 30" / 80° 01' 01"
A-01	008PA01	Barbeau Street (COP)	Allegheny River	40° 26' 34" / 80° 00' 29"
A-02	008RA02	Fancourt Street (COP)	Allegheny River	40° 26' 36" / 80° 00' 25"
A-03	008RA03	Evans Way (COP)	Allegheny River	40° 26' 36" / 80° 00' 21"

A-04	008RA04	Stanwix Street (COP)	Allegheny River	40° 26' 37" / 80° 00' 18"
A-05	008RA05	Cecil Place (COP)	Allegheny River	40° 26' 38" / 80° 00' 14"
A-06	008RA06	Sixth Street (COP)	Allegheny River	40° 26' 38" / 80° 00' 12"
A-07	008SA07	Barkers Place (COP)	Allegheny River	40° 26' 40" / 80° 00' 07"
A-08	008SA08	Scott Place (COP)	Allegheny River	40° 26' 40" / 80° 00' 06"
A-09	008SA09	Seventh Street (COP)	Allegheny River	40° 26' 41" / 80° 00' 04"
A-10	008SA10	Eighth Street (COP)	Allegheny River	40° 26' 42" / 80° 00' 01"
A-11	009JA11	Ninth Street (COP)	Allegheny River	40° 26' 43" / 79° 59' 57"
A-12	009JA12	Garrison Place (COP)	Allegheny River	40° 26' 44" / 79° 59' 54"
A-13	009JA13	Tenth Street (COP)	Allegheny River	40° 26' 46" / 79° 59' 48"
A-14	009KA14	12th Street (COP)	Allegheny River	40° 26' 51" / 79° 59' 40"
A-14Z	009JA13A	11th Street and Smallman Street (COP)	Allegheny River	40° 26' 50" / 79° 59' 43"
A-15	009FA15	Fourteenth Street and River Bank (COP)	Allegheny River	40° 26' 56" / 79° 59' 31"
A-16	009CA16	Seventeenth Street (COP)	Allegheny River	40° 27' 05" / 79° 59' 18"
A-17	024SA17	20th Street (COP)	Allegheny River	40° 27' 10" / 79° 59' 11"
A-18	024MA18	24th Street (COP)	Allegheny River	40° 27' 18" / 79° 58' 59"
A-18X	025JA18A	25th Street and Railroad Street (COP)	Allegheny River	40° 27' 22" / 79° 58' 55"
A-18Y	024SA17B	23rd Street and Railroad Street (COP)	Allegheny River	40° 27' 18" / 79° 59' 01"
A-18Z	024SA17A	22nd Street and Railroad Street (COP)	Allegheny River	40° 27' 16" / 79° 59' 04"

A-19X	025FA19A	28th Street and Railroad Street (COP)	Allegheny River	40° 27' 33" / 79° 58' 39"
A-19Y	025EA19	27th Street and Railroad Street (COP)	Allegheny River	40° 27' 27" / 79° 58' 46"
A-19Z	025JA18B	26th Street and Railroad Street (COP)	Allegheny River	40° 27' 25" / 79° 58' 50"
A-20	025BA20	30th Street (COP)	Allegheny River	40° 27' 39" / 79° 58' 33"
A-20Z	025BA19B	29th Street (COP)	Allegheny River	40° 27' 37" / 79° 58' 34"
A-21	048PA21	31st Street (COP)	Allegheny River	40° 27' 43" / 79° 58' 28"
A-22	048RA22	32nd Street (COP)	Allegheny River	40° 27' 47" / 79° 58' 23"
A-23	048LA23	33rd Street (COP)	Allegheny River	40° 27' 50" / 79° 58' 19"
A-25	048GA25	36th Street (COP)	Allegheny River	40° 28' 00" / 79° 58' 10"
A-26	048DA26	38th Street (COP)	Allegheny River	40° 28' 08" / 79° 58' 02"
A-27	048DA27	40th Street (COP)	Allegheny River	40° 28' 17" / 79° 57' 58"
A-27Z		40th Street	Allegheny River	40° 28' 19" / 79° 57' 59"
A-28	080NA28	43rd Street (COP)	Allegheny River	40° 28' 24" / 79° 57' 53"
A-29	080EA29	48th Street (COP)	Allegheny River	40° 28' 42" / 79° 57' 42"
A-29Z	080BA29A	49th Street (COP)	Allegheny River	40° 28' 47" / 79° 57' 35"
A-30	080BA30	51st Street (COP)	Allegheny River	40° 28' 50" / 79° 57' 34"
A-31	119RA31	52nd Street (COP)	Allegheny River	40° 28' 57" / 79° 57' 27"
A-32	119RA32	McCandless Street (COP)	Allegheny River	40° 29' 01" / 79° 57' 21"

A-33	119MA33	54th Street (COP)	Allegheny River	40° 29' 05" / 79° 57' 14"
A-34	119MA34	55th Street (COP)	Allegheny River	40° 29' 07" / 79° 57' 09"
A-35	120EA35	57th Street and River Crossing (COP)	Allegheny River	40° 29' 12" / 79° 56' 54"
A-36	120CA36	62nd Street (COP)	Allegheny River	40° 29' 22" / 79° 56' 17"
A-37	120DA37	Voltz Way (COP)	Allegheny River	40° 29' 24" / 79° 56' 09"
A-37Z	120DA37A	120 ft Upstream of A-37 (COP)	Allegheny River	40° 27' 56" / 79° 55' 58"
A-38	121AA38	Gatewood Way (COP)	Allegheny River	40° 29' 24" / 79° 55' 50"
A-40	121CA40	Chislett Street (COP)	Allegheny River	40° 29' 20" / 79° 55' 24"
A-41	121HA41	Heths Avenue (COP)	Allegheny River	40° 29' 16" / 79° 55' 08"
A-42	122EA42	Negley Run (COP)	Allegheny River	40° 28' 56" / 79° 54' 31"
A-47	008LA47	Itasco Street (COP)	Allegheny River	40° 26' 45" / 80° 00' 25"
A-48	008LA48	Dasher Street (COP)	Allegheny River	40° 26' 45" / 80° 00' 21"
A-49	008MA49	Federal Street (COP)	Allegheny River	40° 20' 49" / 80° 00' 14"
A-50	008NA50	Sandusky Street (COP)	Allegheny River	40° 26' 49" / 80° 00' 07"
A-51	008MA51	Anderson Street (COP)	Allegheny River	40° 26' 49" / 80° 00' 03"
A-55	008EA55	Grantham Street (COP)	Allegheny River	40° 26' 52" / 79° 59' 56"
A-56	009EA56	Goodrich Street (COP)	Allegheny River	40° 26' 55" / 79° 59' 52"
A-58	009EA58	Madison Street (COP)	Allegheny River	40° 26' 58" / 79° 59' 43"
A-59	009BA59	Warfield Street (COP)	Allegheny River	40° 27' 03" / 79° 59' 37"

A-59Z	009BA59A	Chestnut Street and Saw Mill Run Way (COP)	Allegheny River	40° 27' 08" / 79° 59' 30"
A-60	024RA60	Spring Garden Avenue (COP)	Allegheny River	40° 27' 13" / 79° 59' 24"
A-61	024LA61	Pindham Street (COP)	Allegheny River	40° 27' 21" / 79° 59' 01"
A-62	025AA62	McFadden Street (COP)	Allegheny River	40° 27' 36" / 79° 58' 56"
A-63	048NA63	Emma Street (COP)	Allegheny River	40° 27' 48" / 79° 58' 48"
A-64	048NA64	Rialto Street (COP)	Allegheny River	40° 27' 52" / 79° 58' 45"
A-65	048FA65	Heckelman Street (COP)	Allegheny River	40° 28' 03" / 79° 58' 37"
A-67		Girty's Run (Millvale)	Allegheny River	40° 28' 22" / 79° 59' 06"
A-68		Pinecreek (Etna Borough)	Allegheny River	40° 29' 14" / 79° 57' 03"
A-69		5th Street (Sharpsburg)	Allegheny River	40° 29' 34" / 79° 56' 09"
A-70		Davidson Street (Sharpsburg)	Allegheny River	40° 29' 34" / 79° 56' 06"
A-71		13th Street (Sharpsburg)	Allegheny River	40° 29' 34" / 79° 55' 48"
A-72		16th Street (Sharpsburg)	Allegheny River	49° 29' 34" / 79° 55' 29"
A-73		19th Street (Sharpsburg)	Allegheny River	40° 29' 31" / 79° 55' 04"
A-74		22nd Street (Sharpsburg)	Allegheny River	40° 29' 31" / 79° 54' 57"
A-75		Western Avenue (Aspinwall)	Allegheny River	40° 29' 24" / 79° 54' 28"
A-76		Center Avenue (Aspinwall)	Allegheny River	40° 29' 20" / 79° 54' 21"
A-77		Eastern Avenue (Aspinwall)	Allegheny River	40° 29' 20" / 79° 54' 14"
A-78		Brilliant Avenue (COP)	Allegheny River	40° 29' 16" / 79° 54' 03"
O-01		Cole Avenue & Island Avenue (Stowe Township)	Ohio River	40° 29' 20" / 80° 04' 47"

O-02		Davis Alley (Stowe Twp.)	Ohio River	40° 29' 09" / 80° 04' 15"
O-03		Orr Street (Stowe Twp.)	Ohio River	40° 29' 09" / 80° 04' 15"
O-04		1000 ft D/S from River Crossing (Stowe)	Ohio River	40° 29' 13" / 80° 03' 57"
O-05		At River Crossing (Stowe)	Ohio River	40° 29' 05" / 80° 03' 46"
O-05A		D/S of Orchard Street (Stowe)	Ohio River	40° 29' 05" / 80° 03' 39"
O-05B		U/S of Orchard Street (Stowe Twp.)	Ohio River	40° 29' 02" / 80° 03' 39"
O-06		Shingiss Street (McKees Rocks)	Ohio River	40° 28' 15" / 80° 03' 07"
O-08	043SO08	Tabor Street, Outlet U-2 (COP)	Ohio River	40° 27' 46" / 80° 03' 05"
O-13		Corliss Avenue (COP)	Ohio River	40° 27' 14" / 80° 02' 23"
O-14E	007PO14A	West Carson St. Eastside Outfall (COP)	Ohio River	40° 26' 38" / 80° 01' 37"
O-14W	007PO14	West Carson St. Westside Outfall (COP)	Ohio River	40° 26' 38" / 80° 01' 37"
O-14Z	007PO14B	Steuben St. and Saw Mill Run Blvd. (COP)	Saw Mill Run	40° 26' 38" / 80° 01' 37"
O-25		Jacks Run (COP)	Ohio River	40° 29' 02" / 80° 03' 03"
O-26	075AO26	Verner Avenue (COP)	Ohio River	40° 28' 46" / 80° 02' 49"
O-27	044BO27	Westhall Street (COP)	Ohio River	40° 28' 19" / 80° 02' 36"
O-29	044RO29	Superior Street (COP)	Ohio River	40° 28' 47" / 80° 02' 14"
O-30	021DO30	Island Avenue (COP)	Ohio River	40° 27' 40" / 80° 02' 09"
O-31	021HO31	Seymour Street (COP)	Ohio River	40° 27' 33" / 80° 02' 06"
O-32	021HO32	Branchport Street (COP)	Ohio River	40° 27' 30" / 80° 02' 05"

O-33	021MO33	Adams Street (COP)	Ohio River	40° 27' 26" / 80° 02' 04"
O-34	021MO34	Columbus Street (COP)	Ohio River	40° 27' 22" / 80° 02' 04"
O-35	021SO35	Franklin Street (COP)	Ohio River	40° 27' 15" / 80° 02' 03"
O-36	021SO36	Liverpool Street (COP)	Ohio River	40° 27' 12" / 80° 02' 01"
O-37	007AO37	Pennsylvania Avenue (COP)	Ohio River	40° 27' 07" / 80° 01' 58"
O-38	007AO38	North Avenue (COP)	Ohio River	40° 27' 03" / 80° 01' 55"
O-39	007EO39	Western Avenue (COP)	Ohio River	40° 26' 56" / 80° 01' 48"
O-40	007KO40	Chateau Street (COP)	Ohio River	40° 26' 52" / 80° 01' 37"
O-41	007KO41	Belmont Street (COP)	Ohio River	40° 26' 26" / 80° 01' 30"
O-43	007MO43	Walker Street (COP)	Ohio River	40° 26' 45" / 80° 01' 08"
M-01	001FM01	Short Street (COP)	Monongahela River	40° 26' 20" / 80° 00' 28"
M-02	001LM02	Stanwix Street (COP)	Monongahela River	40° 26' 16" / 80° 00' 21"
M-03	001MM03	Wood Street (COP)	Monongahela River	40° 26' 13" / 80° 00' 10"
M-04	001SM04	Grant Street (COP)	Monongahela River	40° 26' 06" / 80° 00' 00"
M-04Z		Cherry Way and Westbound Roadway	Monongahela River	40° 26' 06" / 80° 00' 03"
M-05	002NM05	Try Street (COP)	Monongahela River	40° 26' 03" / 79° 59' 58"
M-06	003AM06	S. First Street (COP)	Monongahela River	40° 25' 52" / 80° 00' 00"
M-07	003BM07	S. Fourth Street (COP)	Monongahela River	40° 25' 51" / 79° 59' 44"
M-08	003BM08	S. Sixth Street (COP)	Monongahela River	40° 25' 51" / 79° 59' 38"

M-10	003CM10	S. Eighth. Street (COP)	Monongahela River	40° 25' 52" / 79° 59' 29"
M-11	003CM11	S. Tenth Street (COP)	Monongahela River	40° 25' 52" / 79° 59' 20"
M-12	003DM12	S. 13th Street COP)	Monongahela River	40° 25' 54" / 79° 59' 08"
M-12Z	003CM11A	S. 11th Street (COP)	Monongahela River	40° 25' 54" / 79° 59' 17"
M-13	003DM13	S. 15th Street (COP)	Monongahela River	40° 25' 55" / 79° 59' 01"
M-14	012AM14	S. 17th Street (COP)	Monongahela River	40° 25' 55" / 79° 58' 55"
M-15	012AM15	S. 19th Street (COP)	Monongahela River	40° 25' 56" / 79° 58' 44"
M-15Z	012AM14A	S. 18th Street (COP)	Monongahela River	40° 25' 56" / 79° 58' 50"
M-16	012BM16	S. 20th Street (COP)	Monongahela River	40° 25' 56" / 79° 58' 38"
M-17	012BM17	S. 21st Street (COP)	Monongahela River	40° 25' 56" / 79° 58' 34"
M-18	012CM18	S. 22nd Street (COP)	Monongahela River	40° 25' 55" / 79° 58' 28"
M-19	011RM19	Brady Street and River Crossing (COP)	Monongahela River	40° 26' 03" / 79° 58' 23"
M-19A	029FM19A	Bates Street (COP)	Monongahela River	40° 25' 49" / 79° 57' 41"
M-19B	011SM19B	2nd Avenue and Maurice (COP)	Monongahela River	40° 26' 00" / 79° 58' 07"
M-20	012CM20	S. 23rd Street (COP)	Monongahela River	40° 25' 55" / 79° 58' 22"
M-21	012CM21	S. 24th Street (COP)	Monongahela River	40° 25' 51" / 79° 58' 15"
M-22	012DM22	S. 25th Street (COP)	Monongahela River	40° 25' 49" / 79° 58' 07"
M-23	012HM23	S. 26th Street (COP)	Monongahela River	40° 25' 48" / 79° 58' 02"
M-24	029KM24	Waterworks Way (COP)	Monongahela River	40° 25' 38" / 79° 57' 43"
M-26	029KM26	S. 30th Street (COP)	Monongahela River	40° 25' 36" / 79° 57' 41"

M-27	029PM27	S. 33rd Street (COP)	Monongahela River	40° 25' 26" / 79° 57' 30"
M-28	030CM28	S. 34th Street (COP)	Monongahela River	40° 25' 22" / 79° 57' 28"
M-29	029RM29	Four Mile Run (COP)	Monongahela River	40° 25' 28" / 79° 57' 11"
M-31	030MM31	Rutherglen Street (COP)	Monongahela River	40° 25' 08" / 79° 56' 56"
M-31Z	030MM31A	Rutherglen Street (COP)	Monongahela River	40° 25' 08" / 79° 56' 56"
M-33	031GM34	Longworth Street (COP)	Monongahela River	40° 24' 40" / 79° 57' 17"
M-34	031HM33	Beck's Run (COP)	Monongahela River	40° 24' 40" / 79° 57' 05"
M-35	031HM35	Hazelwood Avenue (COP)	Monongahela River	40° 24' 34" / 79° 57' 04"
M-36	031MM36	Tecumseh Street (COP)	Monongahela River	40° 24' 25" / 79° 57' 02"
M-37		Melancthon Street Ejector Station (COP)	Monongahela River	40° 24' 14" / 79° 56' 56"
M-38	057KM38	Vespucius Street (COP)	Monongahela River	40° 23' 56" / 79° 56' 36"
M-39	057KM39	Renova Street (COP)	Monongahela River	40° 23' 54" / 79° 56' 30"
M-40	057MM40	Alluvian Street (COP)	Monongahela River	40° 23' 55" / 79° 56' 11"
M-42	091AM42	Streets Run (COP)	Monongahela River	40° 23' 34" / 79° 55' 58"
M-43		Mesta Street (West Homestead Borough)	Monongahela River	40° 23' 59" / 79° 55' 26"
M-44		West Run (West Homestead Borough)	Monongahela River	40° 24' 18" / 79° 55' 15"
M-45		Homestead (Homestead Borough)	Monongahela River	40° 24' 32" / 79° 55' 01"
M-47	129NM47	Nine Mile Run (COP)	Monongahela River	40° 24' 57" / 79° 54' 57"
M-48		Swissvale (Swissvale Borough)	Monongahela River	40° 25' 01" / 79° 53' 41"

M-49		Whitaker Run (Munhall Borough)	Monongahela River	40° 24' 35" / 79° 53' 34"
M-50		Rankin-Swissvale (Rankin Borough)	Monongahela River	40° 24' 50" / 79° 53' 13"
M-51		Rankin-Braddock (Braddock Borough)	Monongahela River	40° 24' 21" / 79° 52' 37"
M-52	B-1	Second Street (Braddock Borough)	Monongahela River	40° 24' 14" / 79° 52' 33"
M-53	B-2	Fourth Street (Braddock Borough)	Monongahela River	40° 24' 10" / 79° 52' 26"
M-54	B-3	Fifth Street (Braddock Borough)	Monongahela River	40° 24' 07" / 79° 52' 22"
M-55	B-4	Sixth Street (Braddock Borough)	Monongahela River	40° 24' 03" / 79° 52' 15"
M-56	B-5	Seventh Street (Braddock Borough)	Monongahela River	40° 23' 59" / 79° 52' 12"
M-57	B-6	Eighth Street (Braddock Borough)	Monongahela River	40° 23' 56" / 79° 52' 12"
M-58	B-7	Ninth Street (Braddock Borough)	Monongahela River	40° 23' 49" / 79° 52' 04"
M-60		Eleventh Street (Braddock Borough)	Monongahela River	40° 23' 42" / 79° 52' 01"
M-61		Thirteenth Street (N. Braddock Borough)	Monongahela River	40° 23' 38" / 79° 51' 46"
C-03	043RC03	Sloan Way (COP)	Chartiers Creek	40° 27' 42" / 80° 03' 14"
C-04		McKees Rock Redevelopment (McKees Rocks)	Chartiers Creek	40° 27' 54" / 80° 03' 04"
C-05	043RC05	Stafford Street at Elliot Warehouse (COP)	Chartiers Creek	40° 27' 43" / 80° 03' 22"
C-05A	043RC05A	Stafford Street (COP)	Chartiers Creek	40° 27' 46" / 80° 03' 25"
C-06		Linden Street (McKees Rocks)	Chartiers Creek	40° 27' 50" / 80° 03' 28"
C-07	043PC07	Ohio Conn. Ry Culvert (COP)	Chartiers Creek	40° 27' 42" / 80° 03' 39"
C-08		Left Bank Rear Singer Ice Co. (McKees Rocks)	Chartiers Creek	40° 27' 51" / 80° 03' 37"

C-09		Federal Enameling & Stamping (McKees Rocks)	Chartiers Creek	40° 27' 50" / 80° 03' 39"
C-10		Fort Pitt Malleable Co. (McKees Rocks Borough)	Chartiers Creek	40° 27' 39" / 80° 11' 40"
C-11	071CC11	10 ft Arch Culvert (COP)	Chartiers Creek	40° 27' 37" / 80° 04' 13"
C-12	071CC12	Railroad Yard (COP)	Chartiers Creek	40° 27' 40" / 80° 04' 23"
C-13		L.B. Under PC&Y RR Bridge (McKees Rocks)	Chartiers Creek	40° 27' 46" / 80° 04' 26"
C-15	107SC15	Broadhead Fording Road (COP)	Chartiers Creek	40° 26' 40" / 80° 05' 09"
C-19	069EC19	State Hwy. Bridge (COP)	Chartiers Creek	40° 26' 23" / 80° 04' 55"
C-20	069EC19	Roswell Drive (Crafton)	Chartiers Creek	40° 26' 23" / 80° 04' 51"
C-22	C-22	Crafton Borough Sewer (Crafton)	Chartiers Creek	40° 26' 09" / 80° 04' 30"
C-23	C-23	RB 1550 ft UpstreamCrafton Sewer (Crafton)	Chartiers Creek	40° 25' 55" / 80° 04' 30"
C-24	104HC24 & 104HC25	PCC & St. L. RR Bridge (COP), serves C-24 & C-25 Structures	Chartiers Creek	40° 25' 15" / 80° 04' 58"
C-26A	067FC26A	Idlewild Road (COP)	Chartiers Creek	40° 25' 14" / 80° 04' 30"
C-27	067FC27	Pringle Way (COP)	Chartiers Creek	40° 25' 07" / 80° 04' 31"
C-28	067KC28	Moffat Way (COP)	Chartiers Creek	40° 25' 04" / 80° 04' 32"
C-29	067KC29	Woodkirk Street (COP)	Chartiers Creek	40° 25' 01" / 80° 04' 35"
C-30		Whiskey Run Sewer (COP)	Chartiers Creek	40° 24' 57" / 80° 04' 40"
C-31		PA Parkway Bridge (Scott)	Chartiers Creek	40° 24' 43" / 80° 04' 47"
C-34		Elm Street (Carnegie)	Chartiers Creek	40° 24' 43" / 80° 04' 58"
C-34A		Carnegie CSO (Carnegie)	Chartiers Creek	40° 24' 43.7 / 80° 04' 57.7"

C-35	Chestnut Street Bridge (Carnegie)	Chartiers Creek	40° 24' 39" / 80° 05' 02"
C-36	Walnut Street (Carnegie)	Chartiers Creek	40° 24' 35" / 80° 05' 09"
C-37	Broadway Street (Carnegie)	Chartiers Creek	40° 24' 35" / 80° 05' 16"
C-38	Pine Street (Carnegie)	Chartiers Creek	40° 24' 35" / 80° 05' 16"
C-38A	Campbells Run (Carnegie)	Chartiers Creek	40° 24' 25" / 80° 05' 20"
C-38B	Barrett Way (Carnegie)	Chartiers Creek	40.40609 / 80.08825
C-39	Third Avenue (Carnegie)	Chartiers Creek	40° 24' 21" / 80° 05' 16"
C-41	PCC & St. L. Ry. Bridge (Carnegie)	Chartiers Creek	40° 24' 10" / 80° 05' 13"
C-43	Carothers Street Bridge (Carnegie)	Chartiers Creek	40° 24' 07" / 80° 05' 20"
C-44	Fourth Street (Carnegie)	Chartiers Creek	40° 24' 07" / 80° 05' 20"
C-51	Right Bank at Sipes Paint Co. (Scott Twp.)	Chartiers Creek	40° 22' 32" / 80° 05' 49"
T-01	Docker Hollow (N. Braddock)	Turtle Creek	40° 23' 42" / 79° 50' 49"
T-02	Main Street (East Pittsburgh Borough)	Turtle Creek	40° 23' 34" / 79° 50' 24"
T-03	Braddock Avenue (East Pittsburgh Borough)	Turtle Creek	40° 23' 38" / 79° 50' 13"
T-04	R.B. Turtle Creek 30 East Pitt Sewer (E. Pgh.)	Turtle Creek	40° 23' 45" / 79° 49' 50"
T-07	R.B. D/S Thompson Run (Turtle Creek Boro)	Turtle Creek	40° 24' 10" / 79° 49' 44"
T-10	Grant St. and Turtle Creek (Turtle Creek Boro)	Turtle Creek	40° 24' 14" / 79° 49' 37"
T-11	Penn Avenue Highway Bridge (Turtle Creek Boro)	Brush Creek	40° 24' 10" / 79° 49' 30"
T-12	Eleventh Street (Turtle Creek Borough)	Brush Creek	40° 24' 10" / 79° 49' 26"

T-13	Ninth Street (Turtle Creek Borough)	Brush Creek	40° 24' 07" / 79° 49' 22"
T-14	Line Alley (Turtle Creek Borough)	Brush Creek	40° 24' 03" / 79° 49' 11"
T-15	4th Street & Airbrake Avenue (Wilmerding)	Turtle Creek	40° 23' 04" / 79° 46' 51"
T-16	L.B. Turtle Creek 50' Below R.R. Bridge (N. Versailles)	Turtle Creek	40° 23' 56" / 79° 49' 04"
T-16A	Third Street (Wilmerding Borough)	Turtle Creek	40° 23' 56"/ 79° 49' 01"
T-17	Second Street (Wilmerding Borough)	Turtle Creek	40° 23' 56" / 79° 48' 57"
T-19	Right Bank Under Viaduct (Wilmerding Borough)	Turtle Creek	40° 23' 45" / 79° 48' 39"
T-21	RB Turtle Creek (Wilmerding Borough)	Turtle Creek	40° 23' 45"/ 79° 48' 28"
T-22	L.B. Turtle Creek D/S Miller St. (Wilmerding Boro)	Turtle Creek	40° 23' 42" / 79° 48' 25"
T-23	Miller St. & Turtle Creek (Wilmerding Boro)	Turtle Creek	40° 23' 42" / 79° 48' 25"
T-24	Patton St. (Wilmerding Borough)	Turtle Creek	40° 23' 42" / 79° 48' 18"
T-26	D/S Bridge to Pitcairn RR Yards (Pitcairn Borough)	Turtle Creek	40° 24' 03" / 79° 46' 55"
TR-01	Turtle Creek Pump Station (Turtle Creek)	Thompson Run	40° 24' 18" / 79° 49' 40"
TR-02	Church Street (Turtle Creek Borough)	Thompson Run	40° 24' 43" / 79° 49' 30"

Monitoring in compliance with the requirements specified above shall be performed for each combined sewer overflow.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS (Continued)

Additional Requirements

1. The permittee may not discharge:

   a. Floating solids, scum, sheen or substances that result in observed deposits in the receiving water. (25 Pa Code 92a.41(c))

   b. Oil and grease in amounts that cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline, or that exceed 15 mg/l as a daily average or 30 mg/l at any time (or lesser amounts if specified in this permit). (25 Pa. Code 92a.47(a)(7) and 95.2(2))

   c. Substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (25 Pa Code 93.6(a))

   d. Foam or substances that produce an observed change in the color, taste, odor or turbidity of the receiving water, unless those conditions are otherwise controlled through effluent limitations or other requirements in this permit. For the purpose of determining compliance with this condition, DEP will compare conditions in the receiving water upstream of the discharge to conditions in the receiving water approximately 100 feet downstream of the discharge to determine if there is an observable change in the receiving water. (25 Pa Code § 92a.41(c))

2. The monthly average percent removal of BOD_5 or $CBOD_5$ and TSS must be at least 85% for POTW facilities on a concentration basis except where 25 Pa. Code 92a.47(g) and (h) are applicable to facilities with combined sewer overflows (CSOs) or as otherwise specified in this permit. (25 Pa. Code 92a.47(a)(3))

3. If the permit requires the reporting of average weekly statistical results, the maximum weekly average concentration and maximum weekly average mass loading shall be reported, regardless of whether the results are obtained for the same or different weeks.

4. The permittee shall monitor the sewage effluent discharge(s) for the effluent parameters identified in the Part A limitations table(s) during all bypass events at the facility, using the sample types that are specified in the limitations table(s). Where the required sample type is "composite", the permittee must commence sample collection within one hour of the start of the bypass, wherever possible. The results shall be reported on the Daily Effluent Monitoring supplemental form (3800-FM-BPNPSM0435) and be incorporated into the calculations used to report self-monitoring data on Discharge Monitoring Reports (DMRs).

Footnotes

(1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.

(2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

(3) Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration of fecal coliform organisms not greater than 400/100ml in more than 10 percent of the samples

Supplemental Information

(1) The hydraulic design capacity of 250 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.

(2) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 250 MGD.

(3) The organic design capacity of 287,010 lbs BOD_5 per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to determine whether an "organic overload" condition exists, as defined in 25 Pa. Code Chapter 94.

(4) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

II. DEFINITIONS

At Outfall (XXX) means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

Average refers to the use of an arithmetic mean, unless otherwise specified in this permit. (40 CFR 122.41(l)(4)(iii))

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollutant loading to surface waters of the Commonwealth. The term also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The term includes activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim, and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during and after earth disturbance activities. (25 Pa. Code 92a.2)

Bypass means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i))

Calendar Week is defined as the seven consecutive days from Sunday through Saturday, unless the permittee has been given permission by DEP to provide weekly data as Monday through Friday based on showing excellent performance of the facility and a history of compliance. In cases when the week falls in two separate months, the month with the most days in that week shall be the month for reporting.

Clean Water Act means the Federal Water Pollution Control Act, as amended (33 U.S.C.A. §§1251 to 1387).

Composite Sample (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. (EPA Form 2C)

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed. (EPA Form 2C)

Daily Average Temperature means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code 92a.2, 40 CFR 122.2)

Daily Maximum Discharge Limitation means the highest allowable "daily discharge."

Discharge Monitoring Report (DMR) means the DEP or EPA supplied form(s) for the reporting of self-monitoring results by the permittee. (25 Pa. Code 92a.2 and 40 CFR 122.2)

Estimated Flow means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

Geometric Mean means the average of a set of n sample results given by the n^{th} root of their product.

Grab Sample means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes. (EPA Form 2C)

Hauled-In Wastes means any waste that is introduced into a treatment facility through any method other than a direct connection to the sewage collection system. The term includes wastes transported to and disposed of within the treatment facility or other entry points within the collection system.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act. (40 CFR 122.2)

Immersion Stabilization (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

Indirect Discharger means a non-domestic discharger introducing pollutants to a Publicly Owned Treatment Works (POTW) or other treatment works. (25 Pa. Code 92a.2 and 40 CFR 122.2)

Industrial User means a source of Indirect Discharge. (40 CFR 403.3)

Instantaneous Maximum Effluent Limitation means the highest allowable discharge of a concentration or mass of a substance at any one time as measured by a grab sample. (25 Pa. Code 92a.2)

Measured Flow means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Monthly Average Discharge Limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (25 Pa. Code 92a.2)

Municipality means a city, town, borough, county, township, school district, institution, authority or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes. (25 Pa. Code 92a.2)

Municipal Waste Garbage, refuse, industrial lunchroom or office waste and other material, including solid, liquid, semisolid or contained gaseous material resulting from operation of residential, municipal, commercial or institutional establishments and from community activities; and sludge not meeting the definition of residual or hazardous waste under this section from a municipal, commercial or institutional water supply treatment plant, waste water treatment plant or air pollution control facility. (25 Pa. Code 271.1)

Publicly Owned Treatment Works (POTW) means a treatment works as defined by §212 of the Clean Water Act, owned by a state or municipality. The term includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. The term also includes sewers, pipes or other conveyances if they convey wastewater to a POTW providing treatment. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. (25 Pa Code 92a.2 and 40 CFR 122.2)

Residual Waste Garbage, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility, if it is not hazardous. The term does not include coal refuse as defined in the Coal Refuse Disposal Control Act. The term does not include treatment sludges from coal mine drainage treatment plants, disposal of which is being carried on under and in compliance with a valid permit issued under the Clean Streams Law. (25 Pa Code 287.1)

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii))

Stormwater means the runoff from precipitation, snow melt runoff, and surface runoff and drainage. (25 Pa. Code 92a.2)

Stormwater Associated With Industrial Activity means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, and as defined at 40 CFR §122.26(b)(14)(i) – (ix) and (xi) and 25 Pa. Code 92a.2.

Toxic Pollutant means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring. (25 Pa. Code 92a.2)

Weekly Average Discharge Limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

III. SELF-MONITORING, REPORTING AND RECORDKEEPING

A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48 and 25 Pa. Code § 92a.61)

2. Records Retention (40 CFR 122.41(j)(2))

   Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application, unless a longer retention period is required by the permit. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results (40 CFR 122.41(j)(3))

   For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

   a. The exact place, date and time of sampling or measurements.
   b. The person(s) who performed the sampling or measurements.
   c. The date(s) the analyses were performed.
   d. The person(s) who performed the analyses.
   e. The analytical techniques or methods used; and the associated detection level.
   f. The results of such analyses.

4. Test Procedures (40 CFR 122.41(j)(4))

   a. Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of Act 90 of 2002 (27 Pa. C.S. §§ 4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation.

   b. Test procedures (methods) for the analysis of pollutants or pollutant parameters shall be those approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, unless the method is specified in this permit or has been otherwise approved in writing by DEP. (40 CFR 122.41(j)(4), 122.44(i)(1)(iv))

   c. Test procedures (methods) for the analysis of pollutants or pollutant parameters shall be sufficiently sensitive. A method is sufficiently sensitive when 1) the method minimum level is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest minimum level of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, for the measured pollutant or pollutant parameter; or 3) the method is specified in this permit or has been otherwise approved in writing by DEP for the measured pollutant or pollutant parameter. Permittees have the option of providing matrix or sample-specific minimum levels rather than the published levels. (40 CFR 122.44(i)(1)(iv))

5. Quality/Assurance/Control

   In an effort to assure accurate self-monitoring analyses results:

   a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA. (40 CFR 122.41(e), 122.41(i)(3))

   b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR Part 136. (40 CFR 122.41(j)(4))

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit. (25 Pa. Code §§ 92a.3(c), 92a.41(a), 92a.44, 92a.61(i) and 40 CFR §§ 122.41(e), 122.44(i)(1))

2. The permittee shall use DEP's electronic Discharge Monitoring Report (eDMR) system to report the results of compliance monitoring under this permit (see www.dep.pa.gov/edmr). Permittees that are not using the eDMR system as of the effective date of this permit shall submit the necessary registration and trading partner agreement forms to DEP's Bureau of Clean Water (BCW) within 30 days of the effective date of this permit and begin using the eDMR system when notified by DEP BCW to do so. (25 Pa. Code §§ 92a.3(c), 92a.41(a), 92a.61(g) and 40 CFR § 122.41(l)(4))

3. Submission of a physical (paper) copy of a Discharge Monitoring Report (DMR) is acceptable under the following circumstances:

   a. For a permittee that is not yet using the eDMR system, the permittee shall submit a physical copy of a DMR to the DEP regional office that issued the permit during the interim period between the submission of registration and trading partner agreement forms to DEP and DEP's notification to begin using the eDMR system.

   b. For any permittee, as a contingency a physical DMR may be mailed to the DEP regional office that issued the permit if there are technological malfunction(s) that prevent the successful submission of a DMR through the eDMR system. In such situations, the permittee shall submit the DMR through the eDMR system within 5 days following remedy of the malfunction(s).

4. DMRs must be completed in accordance with DEP's published DMR instructions (3800-FM-BPNPSM0463). DMRs must be received by DEP no later than 28 days following the end of the monitoring period. DMRs are based on calendar reporting periods and must be received by DEP in accordance with the following schedule:

   - Monthly DMRs must be received within 28 days following the end of each calendar month.
   - Quarterly DMRs must be received within 28 days following the end of each calendar quarter, i.e., January 28, April 28, July 28, and October 28.
   - Semiannual DMRs must be received within 28 days following the end of each calendar semiannual period, i.e., January 28 and July 28.
   - Annual DMRs must be received by January 28, unless Part C of this permit requires otherwise.

5. The permittee shall complete all Supplemental Reporting forms (Supplemental DMRs) attached to this permit, or an approved equivalent, and submit the signed, completed forms as attachments to the DMR, through DEP's eDMR system. DEP's Supplemental Laboratory Accreditation Form (3800-FM-BPNPSM0189) must be completed and submitted to DEP with the first DMR following issuance of this permit, and anytime thereafter when changes to laboratories or methods occur. (25 Pa. Code §§ 92a.3(c), 92a.41(a), 92a.61(g) and 40 CFR § 122.41(l)(4))

6. The completed DMR Form shall be signed and certified by either of the following applicable persons, as defined in 25 Pa. Code § 92a.22:

   - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
   - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
   - For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

   If signed by a person other than the above and for co-permittees, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form. (40 CFR § 122.22(b))

6. If the permittee monitors any pollutant at monitoring points as designated by this permit, using analytical methods described in Part A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR. (40 CFR 122.41(l)(4)(ii))

C. Reporting and Notification Requirements

1. Planned Changes to Physical Facilities – The permittee shall give notice to DEP as soon as possible but no later than 30 days prior to planned physical alterations or additions to the permitted facility. A permit under 25 Pa. Code Chapter 91 may be required for these situations prior to implementing the planned changes. A permit application, or other written submission to DEP, can be used to satisfy the notification requirements of this section.

   Notice is required when:

   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b). (40 CFR 122.41(l)(1)(i))

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this permit. (40 CFR 122.41(l)(1)(ii))

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))

   d. The planned change may result in noncompliance with permit requirements. (40 CFR 122.41(l)(2))

2. Planned Changes to Waste Stream – Under the authority of 25 Pa. Code 92a.24(a) and 40 CFR 122.42(b), the permittee shall provide notice to DEP and EPA as soon as possible but no later than 45 days prior to any planned changes in the volume or pollutant concentration of its influent waste stream as a result of indirect discharges or hauled-in wastes, as specified in paragraphs 2.a. and 2.b., below. Notice shall be provided on the "Planned Changes to Waste Stream" Supplemental Report (3800-FM-BPNPSM0482), available on DEP's website. The permittee shall provide information on the quality and quantity of waste introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW (40 CFR 122.42(b)(3)). The Report shall be sent via Certified Mail or other means to confirm DEP's receipt of the notification. DEP will determine if the submission of a new application and receipt of a new or amended permit is required.

   a. Introduction of New Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(1))

      New pollutants are defined as parameters that meet one or more of the following criteria:

(i) Any pollutants that were not detected in the facilities' influent waste stream as reported in the permit application; and have not been approved to be included in the permittee's influent waste stream by DEP in writing.

(ii) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants (40 CFR 122.42(b)(1)).

The permittee shall provide notification of the introduction of new pollutants in accordance with paragraph 2 above. The permittee may not authorize the introduction of new pollutants until the permittee receives DEP's written approval.

b. Increased Loading of Approved Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(2))

Approved pollutants are defined as parameters that meet one or more of the following criteria:

(i) Were detected in the facilities' influent waste stream as reported in the permittee's permit application; or have been previously approved to be included in the permittee's influent waste stream by DEP in writing.

(ii) Have an effluent limitation or monitoring requirement in this permit.

The permittee shall provide notification of the introduction of increased influent loading (lbs/day) of approved pollutants in accordance with paragraph 2 above when (1) the cumulative increase in influent loading (lbs/day) exceeds 20% of the maximum loading reported in the permit application, or a loading previously approved by DEP and/or EPA, or (2) may cause an exceedance in the effluent of Effluent Limitation Guidelines (ELGs) or limitations in Part A of this permit, or (3) may cause interference or pass through at the POTW, or (4) may cause exceedances of the applicable water quality standards in the receiving stream. Unless specified otherwise in this permit, if DEP does not respond to the notification within 30 days of its receipt, the permittee may proceed with the increase in loading. The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations, may not result in a hydraulic or organic overload condition as defined in 25 Pa. Code 94.1, and may not cause exceedances of the applicable water quality standards in the receiving stream.

3. Reporting Requirements for Hauled-In Wastes

a. Receipt of Residual Waste

(i) The permittee shall document the receipt of all hauled-in residual wastes (including but not limited to wastewater from oil and gas wells, food processing waste, and landfill leachate), as defined at 25 Pa. Code § 287.1, that are received for processing at the treatment facility. The permittee shall report hauled-in residual wastes on a monthly basis to DEP on the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) as an attachment to the DMR. If no residual wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report. The information used to develop the Report shall be retained by the permittee for five years from the date of receipt and must be made available to DEP or EPA upon request.

(1) The dates that residual wastes were received.

(2) The volume (gallons) of wastes received.

(3) The license plate number of the vehicle transporting the waste to the treatment facility.

(4) The permit number(s) of the well(s) where residual wastes were generated, if applicable.

(5) The name and address of the generator of the residual wastes.

(6) The type of wastewater.

The transporter of residual waste must maintain these and other records as part of the daily operational record (25 Pa. Code § 299.219). If the transporter is unable to provide this information or the permittee has not otherwise received the information from the generator, the residual wastes shall not be accepted by the permittee until such time as the permittee receives such information from the transporter or generator.

(ii) The following conditions apply to the characterization of residual wastes received by the permittee:

(1) If the generator is required to complete a chemical analysis of residual wastes in accordance with 25 Pa. Code § 287.51, the permittee must receive and maintain on file a chemical analysis of the residual wastes it receives. The chemical analysis must conform to the Bureau of Waste Management's Form 26R except as noted in paragraph (2), below. Each load of residual waste received must be covered by a chemical analysis if the generator is required to complete it.

(2) For wastewater generated from hydraulic fracturing operations ("frac wastewater") within the first 30 production days of a well site, the chemical analysis may be a general frac wastewater characterization approved by DEP. Thereafter, the chemical analysis must be waste-specific and be reported on the Form 26R.

b. Receipt of Municipal Waste

(i) The permittee shall document the receipt of all hauled-in municipal wastes (including but not limited to septage and liquid sewage sludge), as defined at 25 Pa. Code § 271.1, that are received for processing at the treatment facility. The permittee shall report hauled-in municipal wastes on a monthly basis to DEP on the "Hauled In Municipal Wastes" Supplemental Report (3800-FM-BPNPSM0437) as an attachment to the DMR. If no municipal wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report:

(1) The dates that municipal wastes were received.

(2) The volume (gallons) of wastes received.

(3) The BOD_5 concentration (mg/l) and load (lbs) for the wastes received.

(4) The location(s) where wastes were disposed of within the treatment facility.

(ii) Sampling and analysis of hauled-in municipal wastes must be completed to characterize the organic strength of the wastes, unless composite sampling of influent wastewater is performed at a location downstream of the point of entry for the wastes. The influent BOD_5 characterization for the treatment facility, as reported in the annual Municipal Wasteload Management Report per 25 Pa. Code Chapter 94, must be representative of the hauled-in municipal wastes received.

4. Unanticipated Noncompliance or Potential Pollution Reporting

   a. Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code Sections 91.33 and 92a.41(b).

      (i) If, because of an accident, other activity or incident a toxic substance or another substance which would endanger users downstream from the discharge or would otherwise result in pollution or create a danger of pollution or would damage property, the permittee shall immediately notify DEP by telephone of the location and nature of the danger. Oral notification to the Department is required as soon as possible, but no later than 4 hours after the permittee becomes aware of the incident causing or threatening pollution.

      (ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.

      (iii) The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove the residual substances contained thereon or therein from the ground and from the affected waters of this Commonwealth to the extent required by applicable law.

   b. The permittee shall report any noncompliance which may endanger health or the environment in accordance with the requirements of 40 CFR 122.41(l)(6). These requirements include the following obligations:

      (i) 24 Hour Reporting - The permittee shall orally report any noncompliance with this permit which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):

         (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

         (2) Any upset which exceeds any effluent limitation in the permit; and

         (3) Violation of the maximum daily discharge limitation for any of the pollutants listed in the permit as being subject to the 24-hour reporting requirement.

      (ii) Written Report - A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance which may endanger health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

      (iii) Waiver of Written Report - DEP may waive the written report on a case-by-case basis if the associated oral report has been received within 24 hours from the time the permittee becomes aware of the circumstances which may endanger health or the environment. Unless such a waiver is expressly granted by DEP, the permittee shall submit a written report in accordance with this paragraph. (40 CFR 122.41(l)(6)(iii))

5. Other Noncompliance

   The permittee shall report all instances of noncompliance not reported under paragraph C.4 of this section or specific requirements of compliance schedules, at the time DMRs are submitted, on the Non-Compliance Reporting Form (3800-FM-BPNPSM0440). The reports shall contain the information listed in paragraph C.4.b.(ii) of this section. (40 CFR 122.41(l)(7))

PART B

I. MANAGEMENT REQUIREMENTS

A. Compliance

1. The permittee shall comply with all conditions of this permit. If a compliance schedule has been established in this permit, the permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit. (40 CFR 122.41(a)(1))

2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline. (25 Pa. Code § 92a.51(c), 40 CFR 122.47(a)(4))

B. Permit Modification, Termination, or Revocation and Reissuance

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code 92a.72 and 40 CFR 122.41(f).

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. (40 CFR 122.41(f))

3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions. (40 CFR 122.41(a)(1))

C. Duty to Provide Information

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. (40 CFR 122.41(h))

2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit. (40 CFR 122.41(h))

3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information. (40 CFR 122.41(l)(8))

4. The permittee shall provide the following information in the annual Municipal Wasteload Management Report, required under the provisions of Title 25 Pa. Code Chapter 94:

   a. The requirements identified in 25 Pa. Code 94.12.

   b. The identity of any indirect discharger(s) served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimated concentration of each pollutant discharged into the POTW by the indirect discharger.

   c. A "Solids Management Inventory" if specified in Part C of this permit.

   d. The total volume of hauled-in residual and municipal wastes received during the year, by source.

e. The Annual Report requirements for permittees required to implement an industrial pretreatment program listed in Part C, as applicable.

D. General Pretreatment Requirements

1. Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program unless specifically exempted by the Approval Authority. A POTW with a design flow of 5 MGD or less may be required to develop a POTW Pretreatment Program if the Approval Authority finds that the nature or volume of the industrial influent, treatment process upsets, violations of effluent limitations, contamination of sludge, or other circumstances warrant in order to prevent interference or pass through. (40 CFR 403.8)

2. Each POTW with an approved Pretreatment Program pursuant to 40 CFR 403.8 shall develop and enforce specific limits to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b) and shall continue to develop these limits as necessary and effectively enforce such limits. This condition applies, for example, when there are planned changes to the waste stream as identified in Part A III.C.2. If the permittee is required to develop or continue implementation of a Pretreatment Program, detailed requirements will be contained in Part C of this permit.

3. For all POTWs, where pollutants contributed by indirect dischargers result in interference or pass through, and a violation is likely to recur, the permittee shall develop and enforce specific limits for indirect dischargers and other users, as appropriate, that together with appropriate facility or operational changes, are necessary to ensure renewed or continued compliance with this permit or sludge use or disposal practices. Where POTWs do not have an approved Pretreatment Program, the permittee shall submit a copy of such limits to DEP when developed. (25 Pa. Code 92a.47(d))

E. Proper Operation and Maintenance

1. The permittee shall employ operators certified in compliance with the Water and Wastewater Systems Operators Certification Act (63 P.S. §§1001-1015.1).

2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))

F. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d))

G. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions in paragraphs two, three and four of this section. (40 CFR 122.41(m)(2))

2. Other Bypassing - In all other situations, bypassing is prohibited, and DEP may take enforcement action against the permittee for bypass unless:

a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage." (40 CFR 122.41(m)(4)(i)(A))

b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance. (40 CFR 122.41(m)(4)(i)(B))

c. The permittee submitted the necessary notice required in paragraph G.4 below. (40 CFR 122.41(m)(4)(i)(C))

3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in paragraph G.2 above. (40 CFR 122.41(m)(4)(ii))

4. Notice

a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass. (40 CFR 122.41(m)(3)(i))

b. Unanticipated Bypass – The permittee shall submit oral notice of any other unanticipated bypass within 24 hours, regardless of whether the bypass may endanger health or the environment or whether the bypass exceeds effluent limitations. The notice shall be in accordance with Part A III.C.4.b.

H. Sanitary Sewer Overflows (SSOs)

An SSO is an overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. SSOs are not authorized under this permit. The permittee shall immediately report any SSO to DEP in accordance with Part A III.C.4 of this permit.

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR §122.4l(a)(2).

Any person or municipality, who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

B. Falsifying Information

Any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or

- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance)

Shall, upon conviction, be punished by a fine and/or imprisonment as set forth in *18 Pa.C.S.A § 4904* and 40 CFR §122.41(j)(5) and (k)(2).

C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. 40 CFR 122.41(c)

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92a and 40 CFR §122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (40 CFR 122.41(i)(1))

2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (40 CFR 122.41(i)(2))

3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and (40 CFR 122.41(i)(3))

4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location. (40 CFR 122.41(i)(4))

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (40 CFR 122.61(a))

2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section; (40 CFR 122.61(b)(1))

   b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and (40 CFR 122.61(b)(2))

   c. DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section. (40 CFR 122.61(b)(3))

   d. The new permittee is in compliance with existing DEP issued permits, regulations, orders and schedules of compliance, or has demonstrated that any noncompliance with the existing permits

has been resolved by an appropriate compliance action or by the terms and conditions of the permit (including compliance schedules set forth in the permit), consistent with 25 Pa. Code 92a.51 (relating to schedules of compliance) and other appropriate Department regulations. (25 Pa. Code 92a.71)

3. In the event DEP does not approve transfer of this permit, the new owner or operator must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR 122.41(g))

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit. (40 CFR 122.41(b))

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

IV. ANNUAL FEE

Permittees shall pay an annual fee in accordance with 25 Pa. Code § 92a.62. Annual fee amounts are specified in the following schedule and are due on each anniversary of the effective date of the most recent new or reissued permit. All flows identified in the schedule are annual average design flows. (25 Pa. Code 92a.62)

Small Flow Treatment Facility (SRSTP and SFTF)	$0
Minor Sewage Facility < 0.05 MGD (million gallons per day)	$250
Minor Sewage Facility ≥ 0.05 and < 1 MGD	$500
Minor Sewage Facility with CSO (Combined Sewer Overflow)	$750
Major Sewage Facility ≥ 1 and < 5 MGD	$1,250
Major Sewage Facility ≥ 5 MGD	$2,500
Major Sewage Facility with CSO	$5,000

As of the effective date of this permit, the facility covered by the permit is classified in the following fee category: **Major Sewage Facility with CSO**.

Invoices for annual fees will be mailed to permittees approximately three months prior to the due date. If an invoice is not received the permittee is nonetheless responsible for payment. Throughout a five-year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage. Permittees may contact the DEP at 717-787-6744 with questions related to annual fees. The fees identified above are subject to change in accordance with 25 Pa. Code 92a.62(e).

Payment for annual fees shall be remitted to DEP at the address below by the anniversary date. Checks should be made payable to the Commonwealth of Pennsylvania.

PA Department of Environmental Protection
Bureau of Point and Non-Point Source Management
Re: Chapter 92a Annual Fee
P.O. Box 8466
Harrisburg, PA 17105-8466

PART C

I. OTHER REQUIREMENTS

A. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance or replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress and regress.

B. Collected screenings, slurries, sludges, and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 271, 273, 275, 283, and 285 (related to permits and requirements for landfilling, land application, incineration, and storage of sewage sludge), Federal Regulation 40 CFR 257, Pennsylvania Clean Streams Law, Pennsylvania Solid Waste Management Act of 1980, and the Federal Clean Water Act and its amendments. The permittee is responsible to obtain or assure that contracted agents have all necessary permits and approvals for the handling, storage, transport, and disposal of solid waste materials generated as a result of wastewater treatment.

C. The permittee shall optimize chlorine dosages used for disinfection or other purposes to minimize the concentration of Total Residual Chlorine (TRC) in the effluent, meet applicable effluent limitations, and reduce the possibility of adversely affecting the receiving waters. Optimization efforts may include an evaluation of wastewater characteristics, mixing characteristics, and contact times, adjustments to process controls, and maintenance of the disinfection facilities. If DEP determines that effluent TRC is causing adverse water quality impacts, DEP may reopen this permit to apply new or more stringent effluent limitations and/or require implementation of control measures or operational practices to eliminate such impacts.

   Where the permittee does not use chlorine for primary or backup disinfection but proposes the use of chlorine for cleaning or other purposes, the permittee shall notify DEP prior to initiating use of chlorine and monitor TRC concentrations in the effluent on each day in which chlorine is used. The results shall be submitted as an attachment to the DMR.

D. In accordance with ORSANCO's Pollution Control Standards, the permittee shall post and maintain a permanent marker at the establishment under permit as follows:

   1. A marker shall be posted on the stream bank at each and every outfall discharging directly to the Ohio River

   2. The marker shall consist of, at a minimum, the name of the establishment to which the permit was issued, the permit number, and the outfall number. The information shall be printed in letters not less than two inches in height.

   3. The marker shall be a minimum of two feet by two feet and shall be a minimum of three feet above ground level.

E. The permittee shall not accept hauled-in wastes at the treatment facility under the following conditions, unless otherwise approved by DEP in writing:

   - When acceptance of hauled-in wastes would cause a hydraulic or organic overload as defined in Chapter 94.1 of the DEP's regulations.

   - When the treatment facility is considered to be in an existing hydraulic or organic overload condition, as determined by the permittee or DEP, as defined in Chapter 94.1 of the DEP's regulations.

   - When the hauled-in waste will not receive full treatment

II. COMBINED SEWER OVERFLOWS

A. Management and Control of Combined Sewer Overflows

1. Combined sewer overflows (CSOs) are allowed to discharge only in compliance with this permit when flows in combined sewer systems exceed the design capacity of the conveyance or treatment facilities of the system during or immediately after wet weather periods. Overflows that occur without an accompanying precipitation event or snow-melt are termed "dry weather overflows" and are prohibited. CSOs are point source discharges that must be provided with control measures in accordance with the Federal Clean Water Act and the 1994 National CSO Policy.

2. The point source discharge locations (outfalls) specifically identified in the application submitted by the permittee serve as known combined sewer overflow locations on the permittee sewer system.

B. Continued Implementation of Technology-Based Nine Minimum Controls

1. Upon issuance of this permit, the permittee shall continue the implementation of the NMCs, demonstrate system wide compliance with the NMCs and submit required monitoring reports and annual reports to the Department with appropriate documentation. The NMCs are listed as follows:

a. NMC 1: Conduct Proper Operation and Maintenance Programs.

i. At a minimum, following wet weather discharges the permittee shall inspect and maintain all CSO structures, inflow prevention devices, and pump/ejector stations to ensure that they are in good working condition, that any maintenance problems are identified, documented, and appropriate corrective measures are enacted. At a minimum, the permittee shall:

- Inspect all pump and ejector stations once per week and within 72 hours of a rain event sufficient to cause the wet well to rise above 685 feet NGVD to ensure that they are functioning properly. All pump and ejector stations will be monitored remotely with a Supervisory Control and Data Acquisition (SCADA) system.
- During dry weather conditions, preventative maintenance activities will be conducted on CSO diversion structures at least twice annually.
- Within 72 hours after wet weather events, when CSO diversion structures have been active, or the wet well elevation exceeds 685 feet NGVD, conduct wet weather maintenance activities to ensure that the flow regulators are operating correctly, that overflows are identified, that wet-weather induced blockages are identified and safely corrected, that its solids and floatables control devices are maintained, and that inflow prevention devices are protecting the interceptor system from receiving water inflow.

ii. The permittee shall maintain a current GIS mapping database and expand its GIS map database as new facilities are acquired

iii. The permittee shall conduct its internal inspection of its collection system under Operations and Maintenance of the Conveyance & Treatment System

iv. The permittee shall continue to utilize closed circuit television (CCTV) and other best management practices to support sewer system inspection, repair, and rehabilitation activities.

v. The permittee shall continue to manage its operations and maintenance activities through its automated operation and maintenance (O&M) system that plans, schedules, and documents its field maintenance activities.

vi. The permittee shall monitor its inspection findings and increase inspection, and O&M practices on sewage facilities requiring more frequent maintenance.

vii. The permittee shall continue to train supervisors on its O&M management system to enhance operational performance and planning.

viii. The permittee shall update its O&M protocols and provide additional O&M personnel training as new and re-designed facilities are placed into service

b. NMC 2: Maximize the use of the Collection System for storage.

i. The permittee shall continue to operate and maintain a network of flow monitoring instruments to provide data to support system capacity analyses and fulfill Discharge Monitoring Reporting (DMR) requirements.

ii. The permittee will inspect regulator structures on a weekly basis and perform any required corrective actions that could limit available capacity.

iii. The permittee shall complete maintenance operations on its receiving water inflow prevention devices at a minimum of three times per year.

iv. The permittee shall implement best management practices to maximize wet weather flow to the POTW for treatment

c. NMC 3: Review and Modification of Pretreatment Program Requirements.

i. The permittee shall continue to maintain an inventory of industrial dischargers to the Regional Collection System.

ii. The permittee shall continue to assess the significance of the non-domestic dischargers to the Conveyance and Treatment System.

iii. The permittee shall continue to implement a pretreatment program to regulate the discharge of industrial stormwater and wastewater to the Regional Collection System.

iv. The permittee shall utilize sewer discharge permit conditions to minimize the presence of non-domestic discharges to the Regional Collection System during wet weather events.

v. The permittee shall monitor for fats, oils and grease (FOG) deposition, attempt to locate the source of any excess deposits and utilize its pretreatment program permitting program to minimize FOG discharges.

d. NMC 4: Maximization of Flow to the POTW for Treatment.

i. The permittee shall continue to analyze and implement steps to maximize the wet weather flow to the POTW. The permittee will continue to utilize best management practices as it inspects, maintains and rehabilitate its shallow-cut interceptors.

ii. The permittee will continue to utilize best management practices during inspection, corrective maintenance, and preventative maintenance of its deep tunnel interceptor system and river crossings.

iii. The permittee will continue to search for new and innovative technologies for cleaning deep tunnel interceptors.

iv. During dry weather periods, the permittee shall conduct regular Conveyance and Treatment System Hydraulic Grade Line (HGL) drawdowns to scour solids deposition and to maintain or improve system storage and conveyance capacity.

v. The permittee shall evaluate, maintain and modify its Conveyance and Treatment System regulator structures in accordance with its Regulator Capacity Evaluation and Modification Program.

vi. The permittee shall evaluate and adjust its Conveyance and Treatment System components and facilities to increase wet weather flow treatment as additional conveyance, storage or treatment facilities are placed into operation.

e. NMC 5: Elimination of Combined Sewer Overflow Discharges during dry weather.

i. The permittee shall continue to conduct once weekly inspections to facilitate servicing of the CSO regulator structures and associated inflow prevention devices and shall maintain these devices as necessary to prevent conditions that result in dry weather discharges from the combined sewer system.

ii. The permittee shall continue to perform regular inspections and cleanout of grit accumulations in the permittee's CSO structures.

iii. The permittee shall implement its Dry Weather Discharge Elimination Plan to eliminate dry weather flow discharges.

f. NMC 6: Control of Solid and Floatable Materials.

i. The permittee will continue to coordinate with municipal NMC 6 activities and at least annually, will report to the Department the following information provided by its combined sewer Customer Municipalities:

- Catch basin cleaning
- Street sweeping
- Community awareness programs
- Storm Drain Stenciling Program

ii. The permittee shall continue to evaluate structural modifications to regulator controls within its Collection System utilizing best industry practices where applicable to control solids and floatables from entering receiving waters.

iii. The permittee will continue to operate and maintain existing solids and floatable devices at regulator structures. The permittee will continue to regularly clean and maintain the bar screens upstream of the pump wet wells at each of its wastewater pump stations and ejector station.

iv. The permittee will continue to implement its program to track, identify, evaluate and minimize fats, oils and grease (FOG) deposition within the Regional Collection System. Where regular deposition is determined to occur, the permittee will investigate the source and refer the discharger to its pretreatment program staff for remedial action designed to eliminate or minimize FOG discharges.

v. The permittee shall identify Fat, Oil and Grease (FOG) deposits within the Conveyance and Treatment System, track FOG deposition in its GIS-based system map and remove deposits as discovered.

vi. The permittee will continue to implement its Non- Structural Controls, Joint ALCOSAN & Municipal Non-Structural Controls and its Structural Modifications to Controls to minimize solids and floatables discharges.

g. NMC 7: Pollution Prevention Program.

i. The permittee will continue to implement, coordinate, support, and/or assist with the following public and municipal pollution prevention activities:

- River Sweep – Ohio River Sanitary Commission (ORSANCO) sponsored annual litter collection effort
- Storm Drain Stenciling Program – storm drain marking to educate about the potential for storm drain contamination and the pollution of local waterways
- Open House – annual event at the permittee's facility that includes exhibits about protecting area watersheds, wet weather problems and solutions, litter control, and pollution prevention activities
- Household Hazardous Waste Collections – bi-annual collection of household hazardous wastes by Southwestern Pennsylvania Household Hazardous Waste Task Force
- Summer Science Camp – annual summer camp for students in grades 4-8 that includes key messages on the effects of pollution on eco-systems, pollution prevention, storm drain stenciling, and anti-littering.
- Other Outreach – pollution prevention messages disseminated throughout a variety of yearly outreach events such as the Pittsburgh Boat Show, Three Rivers Regatta, and Allegheny League of Municipalities (ALOM) conference.
- P^2 Pollution Prevention program - to reduce pollutant loadings to the Collection System.

h. NMC 8: Public Notification of Overflow Occurrences and their Impacts

i. The permittee will continue to notify the public of CSO discharges.

- Sewer Overflow Advisory Key (SOAK) – web-based program that alerts the public when overflows in the permittee's system are impacting area waterways.
- CSO Flag Alerts – orange CSO flags that are raised at designated points along area waterways warning the public of possible combined sewer overflows.

- CSO Outfall Signage – maintain signage at each of the permittee's combined sewer overflow that provides notice of the potential for combined sewer discharges relative to that structure.

- CSO Email/Text Notification - notifications of sewer overflows and changes in system status via text message and/or email.

i. NMC 9: Monitoring to Characterize CSO impacts and the Efficacy of Controls.

The permittee shall report on the status and effectiveness of each type of the NMCs in the permittee's annual CSO Status Report. This annual report shall include information about operation and maintenance program implementation as well as results of combined sewer system monitoring and modeling, including CSO discharge frequency and volume.

3. The Department will use the EPA guidance document entitled "Guidance for Nine Minimum Controls" (EPA 832-B-95-003), dated May 1995, and specific comments provided during review of the NMC documentation reports to determine continued compliance with the CSO permit requirements.

C. Implementation of Water Quality-Based Long-Term Control Plan (LTCP)

1. The CSO discharge(s) shall comply with the performance standards of the selected CSO controls and shall comply with the water quality standards found in Chapter 93. When additional CSO-related information and data becomes available to revise water quality-based effluent limitations, the permit should be revised, as appropriate, to reflect the new effluent limitations.

2. The permittee shall implement, inspect, monitor and effectively operate and maintain the CSO controls identified in the LTCP and submit the Annual CSO Status Report referenced in paragraph E.2 below.

3. The LTCP, at a minimum, shall incorporate the following requirements:

   a. Continued implementation of the nine minimum controls;

   b. Protection of sensitive areas (recreation areas, public water supply, unique ecological habitat, etc.);

   c. Characterization, monitoring and modeling of overflows and assessment of water quality impacts;

   d. Evaluation and selection of control alternative - presumptive or demonstrative approach;

   e. Public participation in LTCP plan development and implementation;

   f. Implementation schedule and financing plan for selected control options;

   g. Maximizing treatment at the existing POTW treatment plant;

   h. The selected CSO controls should include a post-construction monitoring program plan adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls. This water quality compliance monitoring program should include a plan to be approved by the Department that details the monitoring protocols to be followed; and,

   i. CSO System Operational Plan.

4. The LTCP should be consistent with the EPA's guidance document entitled "Guidance for Long Term Control Plan" (EPA 832-B-95-002), dated September 1995. Using a compliance monitoring program, the permittee shall periodically review the effectiveness of the LTCP and propose any changes or revisions to the LTCP to the Department for review and approval before its implementation.

D. CSO Water Quality-Based Effluent Limit

The permittee shall implement, inspect, monitor and effectively operate and maintain the CSO controls identified in the LTCP to achieve the following performance standards:

a. The permittee shall eliminate or capture for treatment, or storage and subsequent treatment, not less than 85% percent of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions.

(or)

b. The permittee shall eliminate or remove no less than the mass of the pollutants identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling efforts and receiving stream characterization.

E. Monitoring and Reporting Requirements

1. Discharge Monitoring Report (DMR) Supplemental Reports for Combined Sewer Overflows:

The permittee shall record data on CSO discharges in the format specified in DEP's DMR Supplemental Reports for CSOs attached to this permit. The data shall be submitted to the appropriate regional office of the Department within 28 days of the end of the month. For CSOs that are part of a permitted POTW, the DMR Supplemental Reports for CSOs must be submitted with the permittee's regular DMR. Copies of the DMR Supplemental Reports for CSOs must be retained at the Sewage Treatment Plant (STP) site for at least three (3) years.

2. Annual CSO Status Report

On March 31 of each year, an Annual CSO Status Report shall be submitted to the Department with the annual "Municipal Wasteload Management Report" required by 25 Pa. Code Chapter 94, Section 94.12. For a satellite CSO system, a copy of the annual report shall also be provided to the POTW providing treatment for its wastewater. DEP's Annual CSO Status Report template (3800-PM-BPNPSM0076e) shall be used.

a. The Annual CSO Status Report shall:

(1) Provide a summary of the frequency, duration and volume of the CSO discharges for the past calendar year;

(2) Provide the operational status of overflow points;

(3) Provide an identification of known in-stream water quality impacts, their causes, and their effects on downstream water uses;

(4) Summarize all actions taken to implement the NMCs and the LTCP and their effectiveness; and,

(5) Evaluate and provide a progress report on implementing and necessary revisions to the NMC and LTCP.

b. Specifically, the following CSO-related information shall be included in the report:

(1) Rain gauge data - total inches (to the nearest 0.01 inch) that caused each CSO discharge being reported in the supplemental DMR Supplemental Reports for CSOs.

(2) Inspections and maintenance.

- Total number of permittee/owner inspections conducted during the period of the report (reported by drainage system).

- A list of blockages (if any) corrected or other interceptor maintenance performed, including location, date and time discovered, date and time corrected, and any discharges to the stream observed and/or suspected to have occurred.

(3) Dry weather overflows

Dry weather CSO discharges are prohibited. Immediate telephone notification to DEP of such discharge is required in accordance with 25 Pa. Code, Section 91.33. Indicate location, date and time discovered, date and time corrected/ceased, and action(s) taken to prevent their reoccurrence. A plan to correct this condition and schedule to implement the plan must be submitted with the DMR Supplemental Reports for CSOs.

(4) Wet weather overflows

- For all locations that have automatic level monitoring of the regulators, report all exceedances of the overflow level during the period of the report, including location, date, time, and duration of wet weather overflows.

- For all locations at which flows in the interceptors can be controlled by throttling and/or pumping, report all instances when the overflow level was reached or the gates were lowered. For each instance, provide the location, date, time, and duration of the overflow.

3. Post Construction Compliance Monitoring

The permittee shall implement, once approved, the Post Construction Compliance Monitoring Plan (PCCM), which includes monitoring and collection of information necessary to demonstrate compliance with water quality standards and protection of designated uses, and to determine the effectiveness of the LTCP CSO controls. The PCCM shall be implemented in accordance with the PCCM's approved schedule.

F. Area-Wide Planning/Participation Requirement

Where applicable, the permittee shall cooperate with and participate in any interconnected CSO system's NMCs and LTCP activities being developed and/or carried out by the operator(s) of these systems, and shall participate in implementing applicable portions of the approved NMC and LTCP for these systems.

G. Permit Reopener Clause

The Department reserves the right to modify, revoke and reissue this permit as provided pursuant to 40 CFR 122.62 and 124.5 and for the following reasons:

1. To include new or revised conditions developed to comply with any State or Federal law or regulation that addresses CSOs and that is adopted or promulgated subsequent to the effective date of this permit.

2. To include new or revised conditions if new information indicates that CSO controls imposed under the permit have failed to ensure the attainment of State Water Quality Standards or protect designated uses.

3. To include new or revised conditions based on new information resulting from implementation of the LTCP or other plans or data.

H. Combined Sewer Overflow Deliverable Schedule

The permittee shall complete the above CSO activities in accordance with the following schedule:

Schedule Activity Description	**Due Date**
Continue Implementation of the NMCs	Permit effective date

Continue Implementation of the LTCP	Permit effective date
Submit Annual CSO Status Report to Department with Chapter 94 Report	March 31 of each year
Submit DMR Supplemental Reports for CSOs	Within 28 days of the end of a month

I. The final implementation of the LTCP shall be consistent with the approved LTCP or where applicable the Modified Consent Decree entered on January 23, 2008, by the U.S. District Court for the Western District of Pennsylvania under Civil Action 07-CV-0737 and any modifications thereto..

III. POTW PRETREATMENT PROGRAM IMPLEMENTATION

A. General Requirement – The permittee shall operate and implement a POTW pretreatment program in accordance with the federal Clean Water Act, the Pennsylvania Clean Streams Law, and the federal General Pretreatment Regulations at 40 CFR Part 403. The program shall also be implemented in accordance with the permittee's approved pretreatment program and any modifications thereto submitted by the permittee and approved by the Approval Authority.

B. Annual Report and Other Requirements – The permittee shall submit a Pretreatment Annual Report by March 31 of each year to EPA that describes the permittee's pretreatment activities for the previous calendar year. The Pretreatment Annual Report shall include a description of pretreatment activities in all municipalities from which wastewater is received at the permittee's POTW. The Pretreatment Annual Report shall include the following information, at minimum:

1. Industrial Listing – The Annual Report shall contain an updated industrial listing providing the names and addresses of all current Significant Industrial Users (SIUs) and Non-Significant Categorical Industrial Users (NSCIUs), as defined in 40 CFR 403.3, and the categorical standard, if any, applicable to each. The listing must: (1) identify any users that are subject to reduced reporting requirements under 40 CFR 403.12(e)(3); (2) identify which users are NSCIUs; (3) identify any users that have been granted a monitoring waiver in accordance with 40 CFR 403.12(e)(2) as well as the pollutants for which the waiver was granted and the date of the last POTW sampling event for each pollutant; and (4) identify any categorical industrial users that have been given mass-based limits in place of concentration-based categorical limits in accordance with 40 CFR 403.6(c)(5) or concentration-based limits in place of mass-based categorical limits in accordance with 40 CFR 403.6(c)(6).

   In addition, the Annual Report shall contain a summary of any hauled-in wastes accepted at the POTW including the source of the wastes (domestic, commercial or industrial) and the receiving location for acceptance of the wastes. For each industrial source (whether or not classified as an SIU), the report shall indicate (1) the name and address of the industrial source; (2) the average daily amount of wastewater received; (3) a brief description of the type of process operations conducted at the industrial facility; (4) whether the source facility is a categorical industrial user (including NSCIU), significant industrial users, or non-significant industrial user; and (5) any controls imposed on the user.

2. Control Mechanism Issuance – The Annual Report shall contain a summary of SIU control mechanism issuance, including a list of issuances, effective, and expiration dates for each SIU control mechanism. For each general control mechanism issued, provide the names of all SIUs covered by the general control mechanism and an explanation of how the users meet the criteria of 40 CFR 403.8(f)(1)(iii)(A) for issuance of a general control mechanism.

3. Sampling and Inspection – The Annual Report shall contain a summary of the number and types of inspections and sampling events of SIUs by the permittee, including a list of all SIUs either not sampled or not inspected, and the reason that the sampling and/or inspection was not conducted. For any user subject to reduced reporting under 40 CFR 403.12(e)(3), the list shall include the date of the last POTW sampling event and the date of the last POTW inspection of the user. In addition, the report shall include a summary of the number of self-monitoring events conducted by each SIU and the

number required to be conducted, including a list of all SIUs that did not submit the required number of reports and the reason why the reports were not submitted. For NSCIUs, the report shall provide the date of the compliance certification required under 40 CFR 403.12(q).

4. Industrial User Compliance and POTW Enforcement – The Annual Report shall contain a summary of the number and type of violations of pretreatment standards and requirements, including local limits, and the actions taken by the permittee to obtain compliance, including compliance schedules, penalty assessments and actions for injunctive relief. The report shall state whether each SIU was in significant noncompliance, as that term is defined in 40 CFR Section 403.8(f)(2)(viii), and include the parameter(s) in violation, the period of violation, the actions taken by the POTW in response to the violations, and the compliance status at the end of the reporting period. A copy of the publication of users meeting the significant noncompliance criteria shall be included. In addition, the report shall provide a list of users previously designated as NSCIUs that have violated (to any extent) any pretreatment standard or requirement during the year and the date and description of the violation(s).

5. Summary of POTW Operations – The Annual Report shall contain a summary of any interference, pass-through, or permit violations by the POTW and indicate the following: (1) which, if any, permit violations may be attributed to industrial users; (2) which IU(s) are responsible for such violations; and (3) the actions taken to address these events. The report shall also include all sampling and analysis of POTW treatment plant influent, effluent, and sludge conducted during the year for local limit and priority pollutants identified pursuant to Section 303(d) of the Clean Water Act, 33 U.S.C. 1313(d).

6. Pretreatment Program Changes – The Annual Report shall contain a summary of any changes made or proposed to the approved program during the period covered by the report and the date of submission to the Approval Authority.

A summary of pretreatment activities shall be incorporated into the permittee's Annual Municipal Wasteload Management Report required by 25 Pa. Code Chapter 94 and referenced in Part B I.C.4 of this permit.

C. Routine Monitoring – The permittee shall conduct monitoring at its treatment plant that, at a minimum, includes quarterly influent, effluent, and sludge analysis for all pollutants for which local limits have been established, and an annual priority pollutant scan for influent and sludge.

D. Notification of Pass Through or Interference – The permittee shall notify EPA and DEP, in writing, of any instance of pass through or interference, as defined at 40 CFR 403.3(p) and (k), respectively, known or suspected to be related to a discharge from an IU into the POTW. The notification shall be attached to the DMR submitted to EPA and DEP and shall describe the incident, including the date, time, length, cause (including responsible user if known), and the steps taken by the permittee and IU (if identified) to address the incident. A copy of the notification shall also be sent to the EPA at the address provided below.

E. Headworks Analysis – The permittee shall submit to EPA a reevaluation of its local limits based on a headworks analysis of its treatment plant within one (1) year of permit issuance, and provide a revised submission within three (3) months of receipt of comments from EPA or DEP unless a longer period of time is granted in writing by EPA or DEP. In order to ensure that the permittee's discharge complies with water quality standards, the reevaluation of local limits shall consider, at a minimum, all water quality standards under 25 Pa. Code Chapter 93 applicable to the pollutants included in the reevaluation, unless the POTW is subject to an effluent limitation for the pollutant in Part A of this permit. The list of pollutants to be evaluated, as well as a sampling plan for collection of necessary data, shall be submitted to EPA within three (3) months of permit issuance. Unless otherwise approved in writing, the list of pollutants shall include arsenic, cadmium, chromium, copper, cyanide, lead, mercury, molybdenum, nickel, selenium, silver, zinc, BOD_5, TSS, ammonia, any pollutants for which a local limit currently exists, any pollutant limited in this permit, as well as any other pollutants that have been identified in the POTW through monitoring or the receipt of indirect discharges and hauled-in wastes in quantities that have the potential to cause pass through and/or interference. For example, facilities receiving residual waste from oil and gas operations should include pollutants such as Total Dissolved Solids (TDS), specific ions such as chlorides and sulfates, specific radionuclides, metals such as barium and strontium, and other pollutants that could reasonably be expected to be present. Within four (4) months of acceptance of the headworks analysis by the Approval Authority, the permittee shall adopt the revised local limits and, if necessary to ensure that the

limits are enforceable throughout the service area, notify all contributing municipalities of the need to adopt the revised local limits.

F. Changes to Pretreatment Program – EPA and DEP may require the permittee to submit for approval changes to its pretreatment program if any one or more of the following conditions is present:

1. The program is not implemented in accordance with 40 CFR Part 403;

2. Problems such as interference, pass through or sludge contamination develop or continue;

3. The POTW proposes to introduce new pollutants or an increased loading of approved pollutants as described in Part A III.C.2 of this permit;

4. Federal, State, or local requirements change;

5. Changes are needed to assure protection of waters of the Commonwealth.

Program modification is necessary whenever there is a significant change in the operation of the pretreatment program that differs from the information contained in the permittee's submission, as approved under 40 CFR 403.11.

G. Procedure for Pretreatment Program Changes – Upon submittal by the permittee, and written notice of approval by the Approval Authority to the permittee of any changes to the permittee's approved pretreatment program, such changes are effective and binding upon the permittee unless the permittee objects within 30 days of receipt of the written notice of approval. Any objection must be submitted in writing to EPA and DEP.

H. Correspondence – The Approval Authority shall be EPA at the following address:

Pretreatment Coordinator (3WP41)
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

IV. SOLIDS MANAGEMENT

A. The permittee shall manage and properly dispose of sewage sludge and/or biosolids by performing sludge wasting that maintains an appropriate mass balance of solids within the treatment system. The wasting rate must be developed and implemented considering the specific treatment process type, system loadings, and seasonal variation while maintaining compliance with effluent limitations. Holding excess sludge within clarifiers or in the disinfection process is not permissible

B. The permittee shall submit the Supplemental Reports entitled, "Supplemental Report – Sewage Sludge/Biosolids Production and Disposal" (Form No. 3800-FM-BPNPSM0438) and "Supplemental Report – Influent & Process Control" (Form No. 3800-FM-BPNPSM0436), as attachments to the DMR on a monthly basis. When applicable, the permittee shall submit the Supplemental Reports entitled, "Supplemental Report – Hauled In Municipal Wastes" (Form No. 3800-FM-BPNPSM0437) and "Supplemental Report – Hauled In Residual Wastes" (Form No. 3800-FM-BPNPSM0450), as attachments to the DMR

C. By March 31 of each year, the permittee shall submit a "Sewage Sludge Management Inventory" that summarizes the amount of sewage sludge and/or biosolids produced and wasted during the calendar year from the system. The "Sewage Sludge Management Inventory" may be submitted with the Municipal Wasteload Management Report required by Chapter 94. This summary shall include the expected sewage sludge production (estimated on past sludge production), compared with the actual amount disposed during the year. Sludge quantities shall be expressed as dry weight in addition to gallons or other appropriate units.

V. WHOLE EFFLUENT TOXICITY (WET)

A. General Requirements

1. The permittee shall conduct Chronic WET tests as specified in this section. The permittee shall collect discharge samples and perform WET tests to generate chronic survival and reproduction data for the cladoceran, *Ceriodaphnia dubia* and chronic survival and growth data for the fathead minnow, *Pimephales promelas.*

2. Samples shall be collected at Outfall 001 in accordance with paragraph E.

3. The permittee shall perform testing using the following dilution series: 3%, 7%, 30%, 60%, and 100% effluent, with a control, where 7% is the facility-specific Target In-Stream Waste Concentration (TIWC).

4. The determination of whether a test endpoint passes or fails shall be made using DEP's WET Analysis Spreadsheet (available at www.depweb.state.pa.us/wett) by comparing replicate data for the control with replicate data for the TIWC dilution or any dilution greater than the TIWC.

5. The permittee shall submit only valid WET test results to DEP.

B. Test Frequency and Reporting

1. WET testing shall be conducted annually, at a minimum, during the period January 1 – December 31. Annual WET tests must be completed at least 6 months apart and shall start in the year the permit becomes effective if the permit effective date is prior to October 1.

2. A complete WET test report shall be submitted to the DEP regional office that issued the permit within 45 days of test completion. A complete WET test report submission shall include the information contained in paragraph H, below. The permittee shall continue annual WET monitoring, at a minimum, during the permit renewal review period and during any period of administrative extension of this permit.

3. If a test failure is determined for any endpoint during annual monitoring, the permittee shall initiate a re-test for the species with the failure within 45 days of test completion. All endpoints for the species shall be evaluated in the re-test. The results of the re-test shall be submitted to the DEP regional office that issued the permit.

4. If a passing result is determined for all endpoints in a re-test, the permittee may resume annual monitoring.

5. If there is a failure for one or more endpoints in a re-test, the permittee shall initiate or continue quarterly WET testing for both species until there are four consecutive passing results for all endpoints. The results of all tests shall be submitted to the DEP regional office that issued the permit. In addition, the permittee shall initiate a Phase I Toxicity Reduction Evaluation (TRE) as specified in paragraph C, below.

6. The permittee shall attach the WET Analysis Spreadsheet for the latest four consecutive WET tests to the NPDES permit renewal application that is submitted to DEP at least 180 days prior to the permit expiration date.

C. Phase I Toxicity Reduction Evaluation (TRE)

1. The Phase I TRE trigger is one WET endpoint failure followed by a re-test that confirms the failure for the same species. When the TRE process is triggered, quarterly WET testing shall be initiated for both species until there are four consecutive passing results for all endpoints. The Phase I TRE may include a Toxicity Identification Evaluation (TIE) if the permittee cannot immediately identify the possible causes of the effluent toxicity and the possible sources of the causative agents.

2. The permittee shall, within one year following the Phase I TRE trigger, submit a Phase I TRE report to the DEP regional office that issued the permit. The Phase I TRE shall be conducted in accordance with EPA's guidance, "Toxicity Reduction Evaluation for Municipal Wastewater Treatment Plants"

(EPA/833B-99/002), "Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations" (EPA/600/2-88/070), and other relevant EPA guidance, as applicable. If a TIE is conducted as part of the Phase I TRE, it shall conform to EPA's guidance, "Methods for Aquatic Toxicity Identification Evaluations Phase I" (EPA/600/6-91/003), "Phase II" (EPA/600/R-92/080), "Phase III" (EPA/600/R-92/081) and other relevant EPA guidance. The Phase I TRE report shall be submitted with the fourth quarterly WET test report that is completed following the Phase I TRE trigger. The TRE shall include all activities undertaken to identify the cause(s) and source(s) of toxicity and any control efforts.

3. If all four quarterly WET tests produce passing results for all endpoints during the Phase I TRE process, performance of a Phase II TRE is not required, and annual WET testing in accordance with paragraph B.1 may resume.

4. If the four WET tests produce at least one failing result during the Phase I TRE process, the permittee shall continue quarterly WETT monitoring for both species and initiate a Phase II TRE in accordance with paragraph D. In this case, the Phase I TRE must include a schedule for completion of the Phase II TRE. The schedule must include interim milestones and a final completion date not to exceed two years from the initiation of the Phase II TRE. The permittee shall implement the Phase II TRE in accordance with the schedule unless DEP issues written approval to modify the schedule or cease performance of the Phase II TRE.

5. Re-tests during the TRE process are required for invalid tests but are optional and at the discretion of the permittee for valid tests. The results of all re-tests must be submitted to the DEP regional office that issued the permit along with the required elements in paragraph H.

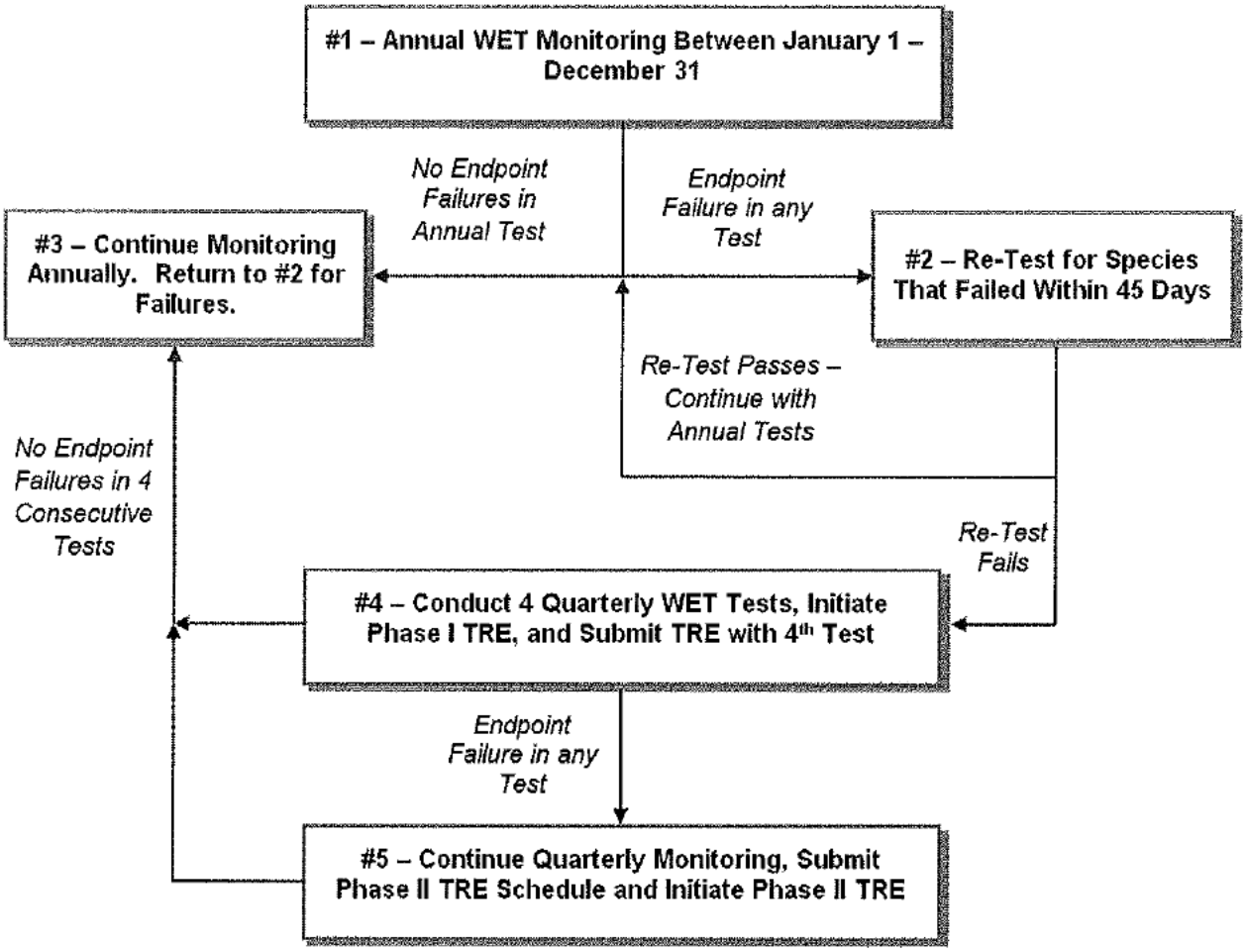
D. Phase II Toxicity Reduction Evaluation (TRE)

1. The Phase II TRE trigger is one WET endpoint failure during performance of the Phase I TRE. A Phase II TRE, if required, shall conform to EPA's guidance, "Toxicity Reduction Evaluation for Municipal Wastewater Treatment Plants" (EPA/833B-99/002), "Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations" (EPA/600/2-88/070), and other relevant EPA guidance, as applicable. A Phase II TRE evaluates the possible control options to reduce or eliminate the effluent toxicity and the implementation of controls.

2. Once initiated, the Phase II TRE must continue until the source(s) of toxicity are controlled as evidenced by four consecutive WET test passing results for all endpoints, and a final TRE report must be submitted on or before the date specified in the schedule, unless otherwise approved by DEP in writing.

3. If four consecutive quarterly WET tests produce passing results for all endpoints during the Phase II TRE process, annual WET testing in accordance with paragraph B.1 may be initiated or resume.

An overview of the process described in paragraphs B, C and D is presented in the flow chart below:



E. Sample Collection

For each acute testing event, a 24-hour flow-proportioned composite sample shall be collected. For each chronic testing event, three 24-hour flow-proportioned, composite samples shall be collected over a seven-day exposure period. The samples must be collected at a frequency of not greater than every two hours and must be flow-proportioned. The samples must be collected at the permit compliance sampling location. Samples must be analyzed within 36 hours from the end of the compositing period and must be placed on ice and held at ≤ 6°C. Refer to the sample handling and preservation regulations set forth in 40 CFR 136, 25 Pa. Code Chapter 252, The NELAC Institute (TNI) Standard, and the appropriate EPA methods.

F. Test Conditions and Methods

Laboratories must be accredited by the DEP Laboratory Accreditation Program in order to perform and report WET tests for NPDES permit compliance. Laboratories must be either State or NELAP accredited.

1. Acute tests shall be completed in accordance with EPA's "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA-821-R-02-012, latest edition). Forty-eight (48) hour static non-renewal tests shall be used.

2. Chronic tests shall be completed in accordance with EPA's "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (EPA-821-R-02-013, latest edition). Seven (7) day tests shall be used with renewal every 24 hours.

3. The quality assurance and control (QA/QC) requirements and test acceptability standards specified in EPA's test methods and the requirements set forth in 25 Pa Code Chapter 252 or the TNI Standard must be followed.

4. If the permittee or its accredited laboratory determines that QA/QC requirements and/or test acceptability standards have not been met, a re-test shall be initiated within 45 days. Original test data must be maintained by the laboratory and be submitted to DEP upon request. The justification for a re-test must be clearly documented and kept on file with the sample results.

G. Chemical Analyses

Chemical analyses must follow the requirements of the EPA methods and applicable State and/or Federal regulations.

1. Chemical analysis on effluent samples shall include pH, Conductivity, Total Alkalinity, Total Hardness, Total Residual Chlorine, Total Ammonia (Unionized Ammonia), Dissolved Oxygen and temperature. Chemical analyses as described in the EPA Methods (above) shall be performed for each sampling event, including each new batch of dilution water and each testing event.

2. In addition to the chemical analyses required above, those parameters listed in Part A of the NPDES permit for the outfall(s) tested shall be analyzed concurrently with the WET test by using the method(s) specified in the permit.

H. WET Report Elements

WET test reports that are submitted to DEP must include the requirements identified in 25 Pa. Code § 252.401(j)(1) – (15) or in the TNI Standard, or equivalent, as well as the following information:

1. A general test description, including the origin and age of test organisms, dates and results of reference toxicant tests, light and temperature regimes, and other documentation that QA and test acceptability criteria as specified in EPA's methods and DEP's QA Summaries have been met.

2. A description of sample collection procedures and sampling location.

3. Name(s) of individual(s) collecting and transporting samples, including sample renewals, and the date(s) and time(s) of sample collection.

4. All chemical and physical data including laboratory quantitation limits and observations made on the species. The hardness shall be reported for each test condition.

5. Copies of raw data sheets and/or bench sheets with data entries and signatures.

6. When effluents are dechlorinated, dechlorination procedures must be described and if applicable a thiosulfate control used in addition to the normal dilution water control. If the thiosulfate control results are significantly different from the normal control, as determined using DEP's WET Analysis Spreadsheet, the thiosulfate control shall be used in the spreadsheet for comparison with the TIWC condition. The WET report must specify which control was used to determine whether the test result is pass or fail.

7. A description of all observations or test conditions that may have affected the test outcome.

8. Control charts for the species tested regarding age, temperature test range, mortality data and all reference toxicant tests.

9. A completed WET test summary report (3800-FM-BPNPSM0485).

10. A DEP WET Analysis Spreadsheet printout that provides control and TIWC replicate data and displays the outcome of the test (pass or fail) for each endpoint tested.

WETT reports shall be submitted to the DEP regional office that issued the permit and, for discharges to the Delaware River basin, the Delaware River Basin Commission (DRBC).

VI. REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

A. The permittee is authorized to discharge non-polluting stormwater from its site, alone or in combination with other wastewaters, through the following outfalls:

Outfall No.	Latitude	Longitude	Description
SW1	40° 28' 38.42"N	80° 09' 38.40"W	EW700
SW2	40° 28' 39.56"N	80° 09' 40.38"W	HW310
SW3	40° 28'37.81"N	80° 09' 38.27"W	HW300
SW4	40° 28 41.28"N	80° 09' 44.13"W	North of Sodium Hypochlorite Building
SW5	40° 28' 31.61"N	80° 09' 33.36"W	Effluent Flushing Water Bldg.

Monitoring requirements and effluent limitations for these outfalls are specified in Part A of this permit, if applicable.

B. Preparedness, Prevention and Contingency (PPC) Plan

1. The permittee shall develop and implement a PPC Plan in accordance with 25 Pa. Code § 91.34 following the guidance contained in DEP's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans" (DEP ID 400-2200-001), its NPDES-specific addendum and the minimum requirements below.

   a. The PPC Plan must identify all potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the facility.

   b. The PPC Plan must describe preventative measures and BMPs that will be implemented to reduce or eliminate pollutants from coming into contact with stormwater resulting from routine site activities and spills.

   c. The PPC Plan must address actions that will be taken in response to on-site spills or other pollution incidents.

   d. The PPC Plan must identify areas which, due to topography or other factors, have a high potential for soil erosion, and identify measures to limit erosion. Where necessary, erosion and sediment control measures must be developed and implemented in accordance with 25 Pa. Code Chapter 102 and DEP's "Erosion and Sediment Pollution Control Manual" (DEP ID 363-2134-008).

   e. The PPC Plan must address security measures to prevent accidental or intentional entry which could result in an unintentional discharge of pollutants.

   f. The PPC Plan must include a plan for training employees and contractors on pollution prevention, BMPs, and emergency response measures.

   g. If the facility is subject to SARA Title III, Section 313, the PPC Plan must identify releases of "Water Priority Chemicals" within the previous three years. Water Priority Chemicals are those identified in EPA's "Guidance for the Determination of Appropriate Methods for the Detection of Section 313 Water Priority Chemicals" (EPA 833-B-94-001, April 1994). The Plan must include an evaluation of all activities that may result in the stormwater discharge of Water Priority Chemicals.

   h. Spill Prevention Control and Countermeasure (SPCC) plans may be used to meet the requirements of this section if the minimum requirements are addressed.

2. The permittee shall review and if necessary update the PPC Plan on an annual basis, at a minimum, and when one or more of the following occur:

   a. Applicable DEP or federal regulations are revised, or this permit is revised.

b. The PPC Plan fails in an emergency.

c. The facility's design, industrial process, operation, maintenance, or other circumstances change in a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency.

d. The list of emergency coordinators or equipment changes.

e. When notified in writing by DEP.

The permittee shall maintain all PPC Plan updates on-site, make the updates available to DEP upon request.

C. Minimum Required BMPs

In addition to BMPs identified in the PPC Plan, the permittee shall implement the following minimum BMPs relating to stormwater pollution prevention:

1. If applicable, post-construction stormwater BMPs that are required under 25 Pa. Code Chapter 102 must be maintained.

2. Manage sludge in accordance with all applicable permit requirements.

3. Store chemicals in secure and covered areas on impervious surfaces away from storm drains.

4. For new facilities and upgrades, design wastewater treatment facilities to avoid, to the maximum extent practicable, stormwater commingling with sanitary wastewater, sewage sludge, and biosolids.

5. Efficiently use herbicides for weed control. Where practicable, use the least toxic herbicide that will achieve pest management objectives. Do not apply during windy conditions.

6. Do not wash parts or equipment over impervious surfaces that wash into storm drains.

7. Implement infiltration techniques, including infiltration basins, trenches, dry wells, porous pavement, etc., wherever practicable

D. Routine Inspections

Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. BMPs in the PPC Plan and required by this permit shall be inspected on a semiannual basis, at a minimum, to determine whether they are adequate and properly implemented in accordance with the terms of this permit or whether additional control measures are needed. Documentation of inspections shall be maintained on-site and be made available to DEP upon request

E. Stormwater Sampling Requirements

If stormwater sampling is required in Part A of this permit, the following requirements apply:

1. All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1-inch rainfall) storm event. The 72-hour storm interval is waived when the preceding storm did not yield a measurable discharge, or if the permittee is able to document that a less than 72-hour interval is representative for local storm events during the sample period.

2. Grab samples shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is not possible, a grab sample can be taken during the first hour of the discharge, in which case the discharger shall provide an explanation of why a grab sample during the first 30 minutes was not possible.

APPENDIX E

Regulator Capacity Evaluation and Modification

1. No later than one month from Date of Entry, ALCOSAN shall determine, based on design specifications, field surveys, and/or flow monitoring data, (a) the throughput flow rate capacity of each Regulator within the Conveyance and Treatment System and (b) the Peak Dry Weather Flow rate conveyed to that Regulator in a typical year based on historical flow monitoring data, or based on estimates, where flow monitoring data are not available.

2. Within 90 days of identifying any Regulator within the Conveyance and Treatment System having insufficient flow rate capacity to convey the equivalent of 1.5 times the Peak Dry Weather Flow rate, ALCOSAN shall identify all such Regulators to the Plaintiffs, in writing, and shall adjust such Regulators until each has sufficient capacity to convey 1.5 times the Peak Dry Weather Flow rate; provided, however, that if ALCOSAN demonstrates that such adjustment is technically infeasible, then ALCOSAN shall, within 12 months (or 18 months if ALCOSAN cannot obtain timely access to the Regulator) of identifying the Regulator as having insufficient capacity, either: (a) replace the Regulator with a new device having sufficient capacity to convey 1.5 times the Peak Dry Weather Flow rate; (b) modify the existing Regulator such that it has sufficient capacity to convey 1.5 times the Peak Dry Weather Flow rate; or (c) reduce the Peak Dry Weather Flow rate to a level that is at least 33% below the throughput flow rate capacity of the Regulator by removing sources of Inflow and Infiltration in the Regional Collection System through a cooperative effort with Customer Municipalities. Notwithstanding the foregoing, ALCOSAN may utilize a flow rate capacity of 1.25 times the Peak Dry Weather Flow rate for a given Regulator if ALCOSAN demonstrates in writing to the Plaintiffs that it is infeasible to replace, modify, or adjust that Regulator to convey 1.5 times the Peak Dry Weather Flow rate.

3. ALCOSAN shall propose, as part of its Wet Weather Plan and the Hydrologic and Hydraulic Model, an average flow rate capacity of no less than 1.5 times the Peak Dry Weather Flow rate for all of the Regulators in the Conveyance and Treatment System, although, as provided in the preceding Paragraph, ALCOSAN may utilize a flow rate capacity of 1.25 times the Peak Dry Weather Flow rate for a given Regulator if ALCOSAN demonstrates in writing to the Plaintiffs that it is infeasible to replace, modify, or adjust that Regulator to convey 1.5 times the Peak Dry Weather Flow rate.

4. As soon as practicable after completion of Hydrologic and Hydraulic Model, ALCOSAN shall adjust, as necessary, the settings for Regulators within the Conveyance and Treatment System, and shall repeat these adjustments, as necessary, to maximize capture of Pollutants from the Regional Collection System, consistent with the Wet Weather Plan requirements in Paragraphs 16 through 18 of the Consent Decree. Such adjustments shall be made based upon then-current flow data and modeling information.

APPENDIX F

Reduction of Water Quality Impacts from Industrial Users

1. Within 180 days of the Date of Entry, ALCOSAN shall, for each Industrial User served by the Regional Collection System, submit the following information to the Plaintiffs:

a. the location of the nearest downstream Combined Sewer Outfall and Sanitary Sewer Outfall (identified in Appendices A and B) through which the Industrial User's wastewater has the potential to discharge;

b. the wastewater storage capacity available to that Industrial User, the maximum length of time that such amount can be stored by the Industrial User, and the extent to which the Industrial User maximizes such storage during wet weather (or if not known, measures proposed by ALCOSAN to obtain such information);

c. for each Industrial User determine:

i. the likelihood that its Discharge will reach waters of the United States through a Combined Sewer Outfall and/or Sanitary Sewer Outfall;

ii. the volume (or estimated volume if not known) of the Industrial User's Discharge;

iii. the potential environmental impact of the Industrial User's Discharge on receiving waters based on the characteristics of the Discharge, including but not limited to toxicity, pH, chemical oxygen demand, color, suspended solids, polychlorinated biphenyls ("PCBs"), and dissolved oxygen content; and

d. the Combined Sewer Outfalls at which ALCOSAN will sample Discharges, in accordance with the Combined Sewer Overflow Pollutant Monitoring Plan required under Appendix O (Combined Sewer Overflow Pollutant Monitoring), to determine the extent to which

untreated Industrial User wastewater discharged from Combined Sewer Outfalls impacts receiving waters.

2. Within 12 months after the submission of the information required pursuant to Paragraph 1 of this Appendix, and continuing annually thereafter, ALCOSAN shall (a) conduct an Industrial User survey and shall add to or delete from its approved pretreatment program all Industrial Users that have commenced or ceased to contribute industrial wastewater flows to the Regional Collection System within the prior year and (b) provide the Plaintiffs with annual updates of the information required pursuant to Paragraph 1 of this Appendix.

3. Within 240 days of the Date of Entry, ALCOSAN shall, for each Industrial User for which its industrial wastewater Discharges potentially reach waters of the United States untreated through a Combined Sewer Outfall or a Sanitary Sewer Outfall during wet weather, and for which storage of such industrial wastewater Discharge by the Industrial User is technically feasible, (a) revise that Industrial User's pretreatment permit to incorporate a requirement to store such industrial wastewater Discharge to the maximum extent possible during wet weather events and (b) notify the Industrial User of such pretreatment program revisions.

4. At least once during each Industrial User permit cycle, ALCOSAN shall inspect, during wet weather, the storage and other pretreatment facilities required to implement each Industrial User's pretreatment permit, including any additional storage or wet weather controls required pursuant to Paragraph 3 of this Appendix. During each such inspection, ALCOSAN shall also collect production information, control process parameters, and other data necessary to verify that the storage and wet weather controls are being implemented by the Industrial User and are effective in meeting each Industrial User's pretreatment permit requirements.

5. ALCOSAN shall promote the use of Storm Water best management practices and Storm Water pollution prevention programs by conducting outreach to entities served by Combined Sewer Systems that would be regulated under PADEP industrial Storm Water regulations if they were instead served by separate storm sewer systems. ALCOSAN shall develop and submit draft guidance designed to assist such entities in the implementation of such Storm Water best management practices and Storm Water pollution prevention plans. ALCOSAN shall submit such guidance to EPA and PADEP for review and approval, and to ACHD for review and comment, pursuant to Section VIII (Review and Approval of Submittals) within six months from the Date of Entry, along with a list of entities targeted for this outreach effort. In the guidance, ALCOSAN shall address Storm Water best management practices, soil erosion prevention and sediment control, comprehensive site compliance evaluations, record keeping, employee training, and containment and diversion capabilities in areas where SARA Title III, Section 313 water priority chemicals are transferred, processed, handled, or stored. Within 45 days after approval by EPA and PADEP, ALCOSAN shall distribute the Storm Water guidance to all targeted entities.

Investigation and Elimination of PCB discharges

6. Within one year after the Date of Entry, ALCOSAN shall develop a plan for characterizing discharges, if any, of PCBs to the Conveyance and Treatment System. In its plan, ALCOSAN shall include provisions for:

a. collecting samples of wastewater within interceptors and wastewater influent at the Sewage Treatment Plant;

b. collecting samples of Combined Sewer Outfall Discharges as described in Appendix O (Combined Sewer Overflow Pollutant Monitoring);

c. analyzing the samples to determine the concentration of PCBs in each wastewater sample;

d. identifying, to the extent feasible, which portions of the Conveyance and Treatment System, if any, convey discharges of PCBs to the Sewage Treatment Plant;

e. identifying, to the extent feasible, which Customer Municipalities and Industrial Users, if any, route flow containing PCBs to the Conveyance and Treatment System; and

f. identifying, to the extent feasible, which trunk lines and/or Customer Municipality service areas, if any, convey discharges of PCBs to the Conveyance and Treatment System.

ALCOSAN shall submit its plan to EPA in accordance with Section VIII (Review and Approval of Submittals). Upon approval by EPA, ALCOSAN shall implement the plan in accordance with the schedule and requirements set forth therein.

APPENDIX G

Control of Solids and Floatables

1. ALCOSAN shall implement the following plan to control solids and floatables at its CSO discharges ("Solids and Floatables Control Plan"):

a. In accordance with best management practices, the Revised Nine Minimum Control Plan, as approved, and the Appendix I operations and maintenance protocols, ALCOSAN shall continue to operate and maintain the solids and floatables control devices at the Combined Sewer Outfalls identified in Table G-1 and the submerged flap gates identified in Table G-2.

b. On or before30 days after the date of entry of this Modified Consent Decree, ALCOSAN shall submit in accordance with Section VIII (Review and Approval of Submittals) proposals to install solids and floatables control screening devices within each flow control structure or discharge manhole that discharges to the Combined Sewer Outfalls identified in Table G-3.

c. ALCOSAN shall investigate the installation of bar screens, and install them, if feasible, at the Combined Sewer Outfalls described in Table G-4.

d. ALCOSAN shall submit a proposal in accordance with Section VIII (Review and Approval of Submittals), for the installation of additional solids and floatables control devices, if that installation is feasible:

i. When ALCOSAN rebuilds a regulator structure; and

ii. When ALCOSAN builds or constructs consolidation sewers.

e. ALCOSAN shall update applicable submissions, databases and procedures developed and implemented in accordance with the Revised Nine Minimum Control Plan, as approved, and as required by Appendix I (Operations and Maintenance of the Conveyance and

Treatment System). These updates shall reflect best management practices and revised operation and maintenance protocols for approved solids and floatables control facilities and appurtenances.

2. As part of the annual progress reports required pursuant to Section VII (Reporting and Recordkeeping), ALCOSAN shall provide information on each solids and floatable control facility installed in the Conveyance and Treatment System, the Regionalized Intermunicipal Trunk Sewers and Associated Facilities, or the Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities within the past year, including the permit authorization number of each, the type of facility, the location of each facility and the date the facility was placed in operation.

3. On an annual basis, ALCOSAN will conduct a survey of its combined sewered communities. ALCOSAN shall provide the Plaintiffs, in the progress reports required pursuant to Section VII (Reporting and Recordkeeping), a summary of the following information received from surveyed Customer Municipalities:

a. catch basin cleaning practices;

b. street sweeping practices;

c. community awareness programs; and

d. storm drain stenciling programs.

4. ALCOSAN will continue to regularly clean and maintain the bar screens upstream of the pump wet wells at each of its wastewater pump stations.

5. ALCOSAN shall provide, on an annual basis, in the progress reports required pursuant to Section VII (Reporting and Recordkeeping), the volume of solids and floatables captured at the Sewage Treatment Plant.

Table G-1

List of ALCOSAN CSOs with existing solids and floatable control devices

C-04; C-05; C-15; C-29; M-22; M-44; O-25A; S-39; and T-07

Table G-2

Table of ALCOSAN CSOs with submerged flapgates

A-02	A-03	A-04	A-05	A-06	A-07	A-08	A-09	A-10	A-11
A-12	A-13	A-14	A-17	A-18	A-20	A-21	A-33	A-37	A-47
A-48	A-49	A-50	A-51	A-55	A-56	A-58	A-59	A-60	A-61
A-68	C-08	C-09	M-01	M-02	M-03	M-05	M-07	M-10	M-11
M-12	M-13	M-14	M-20	M-26	O-06	O-13	O-14W	O-14E	O-27
O-29	O-32	O-34	O-36	O-37	O-38	O-39	O-40	O-43	

Table G-3

Specific Outfalls Requiring Discharge Screening Controls

Sensitive Area	Outfall ID	Outfall Name
West View Water Authority DWI	O-05	At Ohio River Crossing
Allegheny River Area No. 1	A-62	McFadden Street
Allegheny River Area No. 1	A-64	Rialto Street
Monongahela River Area No. 1	M-18	South 22nd Street
Monongahela River Area No. 2	M-43	Mesta Street

Table G-4

Outfalls for Which ALCOSAN Will Consider Installing Bar Screens

A-16	A-25	A-27	O-35

APPENDIX H

Elimination of Dry Weather Discharges

1. Within nine months after the Date of Entry, ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, in accordance with Section VIII (Review and Approval of Submittals), a plan to eliminate all Dry Weather Discharges from the Combined Sewer Outfalls. ALCOSAN shall include the following in this "Dry Weather Discharge Elimination Plan:"

a. an identification of Regulators within the Conveyance and Treatment System that do not allow conveyance of the equivalent of 1.5 times the Peak Dry Weather Flow rate in accordance with the requirements of Appendix E (Regulator Capacity Evaluation and Modification);

b. for each such Regulator, a requirement that ALCOSAN shall modify, adjust or replace the Regulator in accordance with and subject to Appendix E (Regulator Capacity Evaluation and Modification);

c. provisions for monitoring Dry Weather Discharges from the Combined Sewer Outfalls in accordance with the monitoring program required under Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring);

d. provisions for identifying each Dry Weather Discharge from the Combined Sewer Outfalls that may occur due to a blockage and the probable source of each blockage that caused or contributed to such Dry Weather Discharge within two days of discovering such Dry Weather Discharge;

e. descriptions of preventive maintenance (*e.g.* inspection, cleaning, application of enzymes) and/or source control measures (*e.g.* grease control equipment requirements) to be undertaken to minimize the future occurrence of such blockages; and

f. a provision providing that, in the event that the source of the blockage to the Conveyance and Treatment System is identified to be from a Municipal Collection System, ALCOSAN shall provide notification of the blockage to each municipal source, to PADEP, and to ACHD within 24 hours so that corrective action can be implemented by the Municipality in accordance with applicable federal, state, and county laws, regulations and orders for correction.

Upon approval by EPA and PADEP, ALCOSAN shall implement the requirements of the Dry Weather Discharge Elimination Plan in accordance with the schedule and provisions set forth therein.

2. If, after two years of implementation of ALCOSAN's approved Dry Weather Discharge Elimination Plan, ALCOSAN has not eliminated Dry Weather Discharges from the Combined Sewer Outfalls, then ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, in accordance with Section VIII (Review and Approval of Submittals), a revised Dry Weather Discharge Elimination Plan setting forth additional controls and measures that ALCOSAN proposes to undertake to eliminate all such remaining Dry Weather Discharges. ALCOSAN shall also request in writing from any Municipality contributing to such Dry Weather Discharges that the Municipality reduce Peak Dry Weather Flows entering the Conveyance and Treatment System in order to achieve a Peak Dry Weather Flow rate at the applicable Point of Connection that is at least 33% below the throughput capacity of the Regulator at the Point of Connection.

3. As set forth in Section VI, Subsection A (Compliance Requirements) and Subsection F (Operation and Maintenance of the Conveyance and Treatment System), ALCOSAN shall eliminate all Dry Weather Discharges from the Combined Sewer Outfalls by no later than six years after the Date of Entry.

4. ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, in accordance with Section VIII (Review and Approval of Submittals), a plan to eliminate all Dry Weather Discharges from the Combined Sewer Outfalls included in the Regionalized Intermunicipal Trunk Sewers and Associated Facilities on or before July 31, 2021.

5. ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, in accordance with Section VIII (Review and Approval of Submittals), a separate plan or an update to its existing plan to eliminate all Dry Weather Discharges from the Combined Sewer Outfalls included in the Additional Regionalized Intermunicipal Trunk Sewers and Associated Facilities within eighteen (18) months of acquisition.

6. ALCOSAN shall include the following in the plan or plans required in paragraphs 4. and 5., above:

a. an identification of Regulators within the Conveyance and Treatment System that do not allow conveyance of the equivalent of 1.5 times the Peak Dry Weather Flow rate in accordance with the requirements of Appendix E (Regulator Capacity Evaluation and Modification);

b. for each such Regulator, a requirement that ALCOSAN shall modify, adjust or replace the Regulator in accordance with and subject to Appendix E (Regulator Capacity Evaluation and Modification) and sufficient to convey the design wet weather flow specified in the applicable PADEP Water Quality Management Permit;

c. provisions for monitoring Dry Weather Discharges from the Combined Sewer Outfalls in accordance with the monitoring program required under Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring);

d. provisions for identifying each Dry Weather Discharge from the Combined Sewer Outfalls that may occur due to a blockage and the probable source of each blockage that caused or contributed to such Dry Weather Discharge within two days of discovering such Dry Weather Discharge;

e. descriptions of preventive maintenance (*e.g.* inspection, cleaning, application of enzymes) and/or source control measures (*e.g.* grease control equipment requirements) to be undertaken to minimize the future occurrence of such blockages; and

f. a provision providing that, in the event that the source of the blockage to the Conveyance and Treatment System is identified to be from a Municipal Collection System, ALCOSAN shall provide notification of the blockage to each municipal source, to PADEP, and to ACHD within 24 hours so that corrective action can be implemented by the Municipality in accordance with applicable federal, state, and county laws, regulations and orders for correction.

Upon approval by EPA and PADEP, ALCOSAN shall implement the requirements of the plans required in paragraphs 4. and 5. above in accordance with the schedule and provisions set forth therein.

APPENDIX I

Operation and Maintenance of the Conveyance and Treatment System

1. Within six months of the Date of Entry, ALCOSAN shall update its inventory of "Sewer System Components" in the Conveyance and Treatment System, excluding the Sewage Treatment Plant. For purposes of this Appendix, a "Sewer System Component" shall include: ALCOSAN Sewer Pipes; deep tunnel interceptors; river crossings; Pump Stations, and the Pump Station pumps, motors, bar screens, and sensors; Regulators; and except if a component of such a Regulator: valves, pipe segments, siphons, inflow prevention devices, manholes and other access structures. ALCOSAN shall use a computerized database for storing inventory information on the Sewer System Components, and such database shall include a record for each Sewer System Component containing the following information, where available:

a. the specific identification number;

b. the capacity of the component (e.g., maximum flow rate);

c. the date of installation;

d. the location (address and state plane coordinates);

e. the inspection, maintenance, and repair history from January 1, 2003 to the present; and

f. the make and model and/or specifications.

ALCOSAN shall revise and update its inventory of Sewer System Components within 90 days of receiving new information regarding an existing Sewer System Component or placement in service of a new or modified Sewer System Component, including (a) any addition, removal, relocation, rehabilitation, or upgrade of an existing Sewer System Component, or (b) any new information obtained through the inspections required pursuant to

Paragraph 3(c) of this Appendix and Appendix E (Regulator Capacity Evaluation and Modification).

Mapping

2. By December 31, 2008, ALCOSAN shall create a computerized map using geographic information system- ("GIS"-) based software that illustrates the configuration and physical attributes of the Conveyance and Treatment System, as well as the configuration and physical attributes of portions of the Regional Collection System that significantly impact the Conveyance and Treatment System.

a. In developing this map, ALCOSAN shall utilize the information provided to ALCOSAN by the Customer Municipalities pursuant to their respective Administrative Consent Orders or Consent Order and Agreements issued by ACHD or PADEP, respectively.

b. ALCOSAN shall include with the map overlays of the following components of the Regional Collection System: rain gauges; Industrial Users; known Outfalls; Sensitive Areas; results (either an average, complete listing or electronic cross-reference) from the receiving water quality monitoring activities undertaken pursuant to Appendix Q (Receiving Water Quality Monitoring) within the Conveyance and Treatment System; continuously flowing streams that are known to enter the Regional Collection System; and the Sewage Treatment Plant.

c. ALCOSAN shall provide this map and any overlays to any Customer Municipality, either in hard copy or electronically through a secure web site, consistent with Section VI, Subsection N (Coordination with Customer Municipalities).

System Inspections

3. Beginning within 90 days of the Date of Entry, ALCOSAN shall commence inspections of the Conveyance and Treatment System as follows:

a. Regulators and Inflow Prevention Devices - ALCOSAN shall inspect the Regulators associated with the Combined Sewer Outfalls and each inflow prevention device within 72 hours after every precipitation event sufficient to cause the wet well at the Sewage Treatment Plant to rise to an elevation of 685 feet national geodetic vertical datum ("NGVD") or when CSO diversion structures have been active. If however, such a Regulator or inflow prevention device is temporarily inaccessible by land or boat, ALCOSAN shall inspect the Regulator and/or device as soon as possible after physical conditions allow such inspections and after river conditions allow safe navigation;

b. Pump Stations - ALCOSAN shall inspect each Conveyance and Treatment System Pump Station at least once weekly and once within 72 hours of every precipitation event sufficient to cause the wet well at the Sewage Treatment Plant to rise to an elevation of 685 feet NGVD;

c. External Inspection of ALCOSAN Sewer Pipes - By February 28, 2008 or 60 days after the Date of Entry, whichever is later, ALCOSAN shall conduct an external inspection of the visible ALCOSAN Sewer Pipes. As part of this inspection, ALCOSAN shall record, at a minimum, defects related to structural stability, defects that allow Inflow and/or Infiltration, evidence of excessive present or prior surcharging, evidence of present or prior Discharges, the locations from which Sanitary Sewer Overflows from the Conveyance and Treatment System and Combined Sewer Overflows occur, other visible hydraulic restrictions, and any other visible condition that compromises and/or diminishes the design capacity of the ALCOSAN Sewer Pipes. ALCOSAN may use previous inspection data to satisfy the requirements of this Subparagraph if such inspection data were collected on or after January 1, 2001, and the following conditions are met:

i. The inspection indicated that the ALCOSAN Sewer Pipe had no defects causing a restriction in flow and conditions allowing excessive Infiltration or Inflow and/or significant root intrusions into the ALCOSAN Sewer Pipe;

ii. ALCOSAN provides to EPA, PADEP and ACHD the documentation for the inspection, which shall include a visual record of observations and a written summary of findings and conclusions; and

iii. There is no recent history of unaddressed basement backups along the sewer line segment (a contiguous manhole-to-manhole section of sewer pipe) in question.

d. Internal Inspection of ALCOSAN Sewer Pipes - By February 28, 2010, ALCOSAN shall internally inspect the ALCOSAN Sewer Pipes by using television, SONAR, or other widely accepted technology. As part of this inspection, ALCOSAN shall record, both in writing and by audio video, where feasible: all observable structural defects that may allow the entrance of Inflow and/or Infiltration into the ALCOSAN Sewer Pipes; all observable defects that significantly compromise and/or diminish the carrying capacity of the ALCOSAN Sewer Pipe; and all significant defects in siphons. ALCOSAN may use previous inspection data to satisfy the requirements of this Subparagraph if such inspection data were collected on or after January 1, 1997, and the following conditions are met:

i. The inspection indicated that the ALCOSAN Sewer Pipe had no defects causing a restriction in flow and conditions allowing excessive Inflow and/or Infiltration and/or significant root intrusions into the ALCOSAN Sewer Pipe;

ii. ALCOSAN provides to EPA, PADEP and ACHD the documentation for the inspection, which shall include a visual record of observations, a written summary and/or conclusions;

iii. There is no recent history of unaddressed basement backups along the sewer line segment (a contiguous manhole-to-manhole section of sewer pipe) in question; and

iv. ALCOSAN did not observe sediment accumulation or other obstruction of more than 25% of the pipe volume in any portion of that segment of the ALCOSAN Sewer Pipe.

By March 31, 2019, ALCOSAN shall propose to the Plaintiffs a schedule for re-inspection, in accordance with Section VIII (Review and Approval of Submittals), of those portions of the ALCOSAN Sewer Pipes where such re-inspection is warranted based on the initial inspection.

e. Deep Tunnels and River Crossings - by February 28, 2010, ALCOSAN shall conduct an internal inspection of the entire length of the deep tunnel interceptors and river crossings for the Conveyance and Treatment System using closed circuit television, SONAR, and/or other widely accepted practices for the inspection of such systems; provided, however, that ALCOSAN need not conduct an internal inspection of those portions of the deep tunnel interceptors and river crossings where it demonstrates in writing to the Plaintiffs that it is infeasible to conduct such an inspection. Also, ALCOSAN may use previous closed circuit television, sonar, and/or other such data for any segment of the deep tunnel interceptors and river crossings to meet the requirements of this Subparagraph if the following conditions are met:

i. The inspection indicated that the deep tunnel interceptors and river crossings had no structural defects causing a restriction in flow and did not have conditions allowing excessive Inflow and/or Infiltration into the deep tunnel interceptors and river crossings;

ii. ALCOSAN provides to EPA, PADEP and ACHD the documentation of such prior inspection work, including a visual record of observations, a written summary, and conclusions;

iii. A prior inspection for which ALCOSAN collected such data between January 1, 1997 and January 1, 2004, indicates that there was then sediment accumulation of less than 30% of the diameter of that segment of the deep tunnel interceptors and/or river crossings; or

iv. A prior inspection for which ALCOSAN collected such data between January 1, 1997 and January 1, 2004, indicates that there was then sediment accumulation of between 30% and 50% of the diameter of that segment of the deep tunnel interceptors and/or river crossings, provided that ALCOSAN submits to the Plaintiffs for review and approval, and the Plaintiffs approve, a demonstration that such accumulation is not increasing over time and that such accumulation will not restrict the capacity of the Conveyance and Treatment System; or

v. A prior inspection in which ALCOSAN collected such data after January 1, 2004, indicates that there was then sediment accumulation of less than 40% of the diameter of that segment of the deep tunnel interceptors and/or river crossings; or

vi. A prior inspection for which ALCOSAN collected such data after January 1, 2004, indicates that there was then sediment accumulation of between 40% and 50% of the diameter of that segment of the deep tunnel interceptors and/or river crossings, provided that ALCOSAN submits to the Plaintiffs for review and approval, and the Plaintiffs approve, a demonstration that such accumulation is not increasing over time and that such accumulation will not restrict the capacity of the Conveyance and Treatment System.

As part of this inspection, ALCOSAN shall record, both in writing and by audio video, where feasible, all observable defects that significantly compromise and/or diminish the carrying capacity of the deep tunnel interceptor or river crossing. By March 31, 2019, ALCOSAN shall propose to the Plaintiffs, in accordance with Section VIII (Review and Approval of Submittals), a schedule for re-inspection of those portions of the deep tunnel interceptors and river crossings where such re- inspection is warranted based upon the results of the initial inspection and prior inspection data, including consideration of the amount of observed accumulated sediment and the observed condition of the system components.

f. Manholes and Access Shafts - Within two years from the Date of Entry, and at least every five years thereafter, ALCOSAN shall inspect each Conveyance and Treatment System manhole. At least every two years thereafter, ALCOSAN shall inspect each other access shaft or structure. To the extent that each manhole can be located, ALCOSAN shall perform the inspection on both the interior and exposed exterior, and of each ALCOSAN Sewer Pipe connection into or exiting each ALCOSAN manhole. As part of these inspections, ALCOSAN shall record any defects related to structural stability, defects that allow Inflow and/or Infiltration, evidence of excessive present or prior surcharging, evidence of present or prior Discharges, the locations from which such Discharges occur, hydraulic restrictions, and any other condition that may compromise and/or diminish the future capacity of the ALCOSAN Sewer Pipes. The survey/inspection shall note all manholes that cannot be located, visually or with metal detectors, and areas where additional manholes need to be constructed. Previous physical survey data may be used to meet the requirements of this Paragraph if the work was completed on or after January 1, 1998, and if it meets the requirements of this Subparagraph.

g. Drop Shafts - Within 10 years from the Date of Entry, and at least every 10 years thereafter, ALCOSAN shall inspect the Conveyance and Treatment System drop shafts where the average daily Dry Weather Flow is less than 0.5 MGD using closed circuit television, SONAR, and/or other widely accepted practices for the inspection of such shafts.

Corrective Maintenance

4. Beginning within 90 days of the Date of Entry, ALCOSAN shall perform the following corrective maintenance for the Conveyance and Treatment System:

a. Shallow Cut Interceptors - Upon discovering accumulated sediment, debris, or other materials that restrict the hydraulic capacity within a shallow cut interceptor by greater than 25 percent, ALCOSAN shall clean and/or remove such material from that interceptor within 365 days.

b. Deep Tunnel Interceptors - Upon discovering accumulated sediment or debris that restrict the hydraulic capacity within a deep tunnel interceptor by greater than 50 percent, ALCOSAN shall, as technically feasible, clean and/or remove such material from that interceptor within 730 days.

c. Regulators and Inflow Prevention Devices - Upon discovering needed maintenance in a Regulator within the Conveyance and Treatment System or inflow prevention device, ALCOSAN shall initiate corrective measures or maintenance within 24 hours and complete such corrective measures or maintenance as expeditiously as possible but by no later than 60 days after such discovery.

d. Manholes and Access Shafts - ALCOSAN shall complete the necessary repair of all manholes and access shafts as expeditiously as possible, but no later than nine months of discovering the need for such repairs.

e. Pump Stations - Upon determining that corrective maintenance of a Conveyance and Treatment System Pump Station is required, ALCOSAN shall initiate such corrective maintenance within 24 hours and complete such corrective maintenance as expeditiously as possible but by no later than 90 days after such determination.

f. ALCOSAN Sewer Pipes - ALCOSAN shall initiate the repairs of all significant structural defects in the ALCOSAN Sewer Pipes such as sewer lines with collapsed sections, sections with crown and/or invert missing, dirt pipe (missing pipe), void in backfill, and any other defect that an overseeing professional engineer determines to need immediate attention, within 60 days of the discovery of such defects. ALCOSAN shall complete the repairs to significant structural defects within six months of discovery; provided, however, that if ALCOSAN establishes that it is not feasible for ALCOSAN to repair the defect or condition within these timeframes, then ALCOSAN shall, within 15 days of discovery of the defect or condition, notify EPA, PADEP, and ACHD, in writing and provide a plan and the most practicable schedule for repair or remedial action of the defect or condition for EPA and PADEP review and approval.

g. ALCOSAN Sewer Pipe Blockages - ALCOSAN shall repair any defect or rectify any condition in the ALCOSAN Sewer Pipes that cause a complete Sewage flow blockage resulting in a Combined Sewer Overflow or Sanitary Sewer Overflow, basement flooding or public health nuisance within 30 days of discovery of such defect or condition; provided however, that if ALCOSAN establishes that it is not feasible for ALCOSAN to repair such ALCOSAN Sewer Pipe defect or condition within these timeframes, then ALCOSAN shall, within 15 days of discovery of the defect or condition, notify EPA, PADEP, and ACHD, in writing and provide a plan and the most practicable schedule for repair or remedial action of the defect or condition for EPA and PADEP review and approval.

i. ALCOSAN shall use best efforts to commence pumping and/or capture of any Discharge that occurs as a result of conditions described in this Subparagraph within 24 hours after ALCOSAN becomes aware of the Discharge.

ii. If, however, commencement of pumping and/or capture of any such Discharge cannot occur within 48 hours of ALCOSAN becoming aware of the Discharge, then ALCOSAN shall request from EPA, PADEP, and ACHD, in writing, within such 48 hours, an extension of time and shall include in the request a detailed explanation of the actions to be taken to expedite the commencement of pumping and/or capture.

h. Corrective Maintenance Based on Overflow Response Plan - ALCOSAN shall also undertake all actions necessary to comply with the requirements and schedule in its approved Overflow Response Plan, as referenced in Section VI, Subsection P (Overflow Response) of this Consent Decree.

Additional Corrective Maintenance

5. ALCOSAN may identify and implement corrective maintenance activities in addition to, or, with the concurrence of the Plaintiffs, in alternative to the activities required in the preceding Paragraph, for the proper operation of the Conveyance and Treatment System.

Preventive Maintenance

6. ALCOSAN shall implement a preventive maintenance program for the Conveyance and Treatment System to provide for the proper operation and maintenance of equipment while minimizing failures, malfunctions, and line blockage due to the lack of adequate preventive care. Beginning on the Date of Entry, ALCOSAN shall:

a. perform preventive maintenance at each Pump Station in the Conveyance and Treatment System in accordance with procedures and schedules established by ALCOSAN and the manufacturer's recommendations for the Pump Station equipment;

b. seal (where appropriate) and maintain manholes to prevent and/or reduce excessive Infiltration;

c. implement a grease control program that, at a minimum, (i) maps identified grease blockages, (ii) notifies pretreatment staff of recurring grease blockages, (iii) requests the installation of grease traps and/or the implementation of a trap cleaning and inspection program and provides notice to ACHD of the request, and (iv) includes scheduled inspection of known problem areas;

d. implement a root control program to inspect the ALCOSAN Sewer Pipes and remove roots from such pipes;

e. commence the identification of all known locations where ALCOSAN does not have ready physical and legal access to any portion of the Conveyance and Treatment System, the reasons for the lack of access, and ALCOSAN's proposed strategy for obtaining and maintaining access to such location to perform the corrective and preventative maintenance required by this Appendix, which identification shall be completed within six months from the Date of Entry.

f. draw down the wet well during dry weather to remove accumulations of debris from the deep tunnel interceptors and to clean grease deposits from deep tunnel access shafts and float wells as follows:

i. ALCOSAN shall, as technically feasible, draw down the wet well for four to six continuous hours to allow for removing accumulations of debris from the deep

tunnels at least twice per week in the Summer season, and in other seasons, during each period of dry weather sufficient to allow draw downs for four to six continuous hours; and

ii. ALCOSAN shall clean, as necessary, based on the inspections performed pursuant to Subparagraph 3(f) of this Appendix, the following access shafts in the Conveyance and Treatment System, unless an access shaft is prone to grease accumulation, in which case ALCOSAN shall inspect and clean it twice a year: A-54 Mendota Street; A-24 36th Street; M-09 South 8th Street; M-30 Four Mile Run; M-41 Glenwood; M-46 Nine Mile Run; M-59 11th Street; O-07 Chartiers-Ohio Junction; and O-42 Belmont Street;

g. document all complaints, inspections, work orders, maintenance, and replacements of Sewer System Components, consistent with the requirements in Paragraph 1 (System Inventory) of this Appendix, maintain these records for a period of five years, and make these records available to EPA and/or PADEP upon request;

h. use and, as necessary, enhance a computerized maintenance tracking system: (i) to establish and track preventive maintenance standard operating procedures and schedules; (ii) to store preventive maintenance schedules and maintenance activity history, including completed tasks; and (iii) to automatically issue work orders for preventive maintenance in accordance with established schedules;

i. perform cleaning and other preventive maintenance at each Combined Sewer Outfall, Regulator within the Conveyance and Treatment System, and inflow prevention device at least two times per year;

j. clean and flush the Conveyance and Treatment System Z–structure connector lines at least two times per year;

k. inspect and as necessary clean at least twice per year ALCOSAN Sewer Pipes with known problems of excessive sediment and grit accumulation;

l. inspect and, as necessary based on the inspection, clean inverted siphons at least once every four years;

m. establish procedures to be followed in the event of discovering various types of emergencies that might be encountered in the operation of the Conveyance and Treatment System, including corrective actions, appropriate notifications to the public or other affected parties, and the use of emergency equipment, and available personnel; and

n. train staff to perform proper operation and maintenance of the Conveyance and Treatment System, in accordance with all federal, state, and local requirements for training and/or certification of such persons.

Operation and Maintenance Manuals and Other Documentation

7. On or before December 31, 2018, ALCOSAN shall update and consolidate its existing operation and maintenance manuals for the Conveyance and Treatment System ("O&M Plan") to reflect the requirements of this modified appendix. At any time after December 31, 2018, but no more often than once every 12 months, ALCOSAN may submit for review and approval pursuant to Section VIII (Review and Approval of Submittals), a revision of the O&M Plan. A proposed revised O&M Plan does not need to meet the requirements of Paragraph 1–6 of this Appendix if it reflects best practices based on historic maintenance records. ALCOSAN shall ensure that the revised manuals include, at a minimum, the following information:

a. an identification of the various Conveyance and Treatment System components requiring routine inspection and maintenance, as well as the types of maintenance activities applicable to each component;

b. a schedule for the systematic inspection of all Sewer System Components;

c. a description of the chain of responsibility within ALCOSAN for operation of the Conveyance and Treatment System, and the names and contact information of those responsible for its operation and maintenance;

d. sample forms for documenting inspection and maintenance activities; and

e. a description of training required for staff that operate and/or maintain the Conveyance and Treatment System in accordance with the training procedures developed pursuant to this Appendix.

ALCOSAN shall maintain copies of all O&M Plans at the Sewage Treatment Plant and wherever else ALCOSAN deems appropriate.

Operation and Maintenance Documentation and Databases

8. Beginning 120 days after the Date of Entry, ALCOSAN shall keep at the Sewage Treatment Plant, and provide to the Plaintiffs upon request, the following additional documentation of its operation and maintenance program for the Conveyance and Treatment System:

a. all operation and maintenance manuals, with Pump Station operation and maintenance manuals kept at both the Sewage Treatment Plant and at each respective Pump Station;

b. a set of maps, prepared in accordance with Paragraph 2 of this Appendix, which ALCOSAN shall make available to its work crews;

c. a description of the resources (equipment, spare parts, manpower, and training) necessary for operation and maintenance of the Conveyance and Treatment System;

d. an organizational chart illustrating the chain of responsibility for operation and maintenance of the Conveyance and Treatment System, including the administrative positions responsible for such activities;

e. a description of procedures for documenting operation, inspection, and maintenance activities, and for retaining such documentation in hard copy or electronically in ALCOSAN's database;

f. a description of procedures for reviewing and revising the operation and maintenance procedures and corresponding operation and maintenance manuals; and

g. gall requests and authorizations for expenditures for maintenance for the Conveyance and Treatment System generated within the last five years;

9. ALCOSAN shall, within 90 days after developing the inspection and maintenance forms required pursuant to Subparagraph 7(d), above, either place the forms on ALCOSAN's secure web site or provide a copy of such forms to each Customer Municipality for their possible use in municipal inspection and maintenance programs.

10. Beginning 90 days after the Date of Entry, ALCOSAN shall include all documented operation and maintenance information about the Conveyance and Treatment System in a computerized operations and maintenance management and database program. Such operations and maintenance management program and database shall include all of the information referenced in Paragraph 8 of this Appendix, as well as the following information:

a. the system inventory information described in Paragraph 1 of this Appendix;

b. schematic diagrams (if available) of the inventoried components;

c. maintenance schedule and pending work orders; and

d. operation and maintenance procedures and forms for the various components.

Wasteload Management Reports

11. ALCOSAN shall provide to PADEP in its Annual Wasteload Management Report, a summary of sewer inspection activities that ALCOSAN conducts for the Conveyance and Treatment System. ALCOSAN shall also make a copy of its Annual Wasteload Management Report available on ALCOSAN's secure web site to each Customer Municipality within 30 days of its submission to PADEP.

APPENDIX J

Supplemental Environmental Projects

Pursuant to Section XI (Supplemental Environmental Projects), ALCOSAN shall submit to EPA and PADEP a proposal to perform stream restoration activities at one or more of the following locations:

a. Woods Run Valley (near Combined Sewer Outfall O-27);

b. Pine Hollow (near Combined Sewer Outfall C-09);

c. Panther Hollow / Four Mile Run (near Combined Sewer Outfall M-29);

d. Spring Garden (near Combined Sewer Outfall A-60);

e. Freid & Reineman (near Combined Sewer Outfall A-66);

f. Orr St.;

g. Tassey Hollow;

h. Carnegie Park;

i. Sharpsburg (same as Ravine Street);

j. Delafield Ave. (Fox Chapel, O'Hara and Sharpsburg); and/or

k. Sheraden Park

APPENDIX K

Public Notification and Outreach

1. Within 12 months from the Date of Entry, ALCOSAN shall post a sign adjacent to each of the Combined Sewer Outfalls identified in Appendix A, and shall include the following language on each sign:

> "These waters receive sewage from sewer overflows as a result of rain, snowmelt, and other events. Please limit contact with these waters at these times. For more information please call ALCOSAN at (phone # to be provided). Please report the observation of any discharge occurring during dry weather to that number."

The sign shall (a) be in compliance with applicable local ordinances; (b) be legible from a distance of at least 15 feet; (c) be positioned so that its lettering is visible from the adjacent waterway; and (d) where the public accesses the area around the Combined Sewer Outfall (as evidenced by informal walking paths, swimming areas, etc.), have identical lettering on both sides so that it can be seen from the land side of the sign as well. Posted signs that meet requirements of the administrative orders or agreements issued by PADEP to the Customer Municipalities shall be considered acceptable to meet the requirements of this Paragraph. ALCOSAN shall provide a sample of such sign to EPA, PADEP, and ACHD for review and approval prior to posting.

2. Within 12 months from the Date of Entry, ALCOSAN shall post a sign adjacent to each of the Sanitary Sewer Outfalls identified in Appendix B and shall include the following language on each sign:

> "These waters receive sewage from sewer overflows as a result of rain, snowmelt, and other events. Please limit contact with these waters at this time. Discharges to receiving waters from this structure, identified as [insert structure ID], are prohibited by law. Please report the observation of such discharges by calling ALCOSAN at (_phone # to be provided)."

The sign shall (a) be in compliance with applicable local ordinances; (b) be legible from a distance of at least 15 feet; (c) be positioned so that its lettering is visible from the adjacent waterway; and (d) where the public accesses the area around the Sanitary Sewer Outfall (as evidenced by informal walking paths, swimming areas, etc.), have identical lettering on both sides so that it can be seen from the land side of the sign as well. ALCOSAN shall provide a sample of such sign to EPA, PADEP, and ACHD for review and approval prior to posting.

3. Beginning within six months of the Date of Entry, ALCOSAN shall establish and update on a quarterly basis on its publicly-accessible web site the following information:

a. a map identifying the different sewersheds;

b. maps of all Sanitary Sewer Outfalls and all Combined Sewer Outfalls in the Conveyance and Treatment System and Outfalls in the Regional Collection System reported by Customer Municipalities;

c. a map of all locations where there are public advisory notices, such as warning flags and/or signs;

d. a map of all continuous flowing streams and rivers within the sewersheds, identified by known, existing use and highlighted when listed as impaired by PADEP pursuant to Section 303 of the Clean Water Act and all streams and rivers with Combined Sewer Outfalls and/or Sanitary Sewer Outfalls;

e. a map of major recreational areas;

f. a record of the number of public advisories, on a seasonal basis, for the most recent three years, beginning with the Date of Entry, known to ALCOSAN, issued as a result of Discharges from the Conveyance and Treatment System, or a link to the ACHD Internet site containing such information;

g. data for each location monitored pursuant to Appendix Q (Receiving Water Quality Monitoring), showing fecal coliform levels within the last 24 months for the Sensitive Areas;

h. a description of ALCOSAN's methods for notifying the public of the impacts of Discharges on receiving waters, including use of the signs required by Paragraphs 1 and 2 of this Appendix and notices issued by ALCOSAN to ACHD, marinas, and other organizations, and a description of the flag system for notification used by marinas to alert the public of such Discharges; and

i. contact information for reporting Dry Weather Discharges from the Conveyance and Treatment System and Sanitary Sewer Overflows from the Conveyance and Treatment System, and solids and floatables accumulation. ALCOSAN shall update this information on its publicly- accessible web site within 30 days after the last day of each calendar quarter.

4. Following the Date of Entry, ALCOSAN shall conduct regional municipal meetings in coordination with local government authorities, 3 Rivers Wet Weather Demonstration Program ("3RWWDP"), or other appropriate organizations at least three times annually. At such meetings, ALCOSAN shall communicate the status of activities associated with the Consent Decree.

5. Commencing on the Date of Entry, during the recreation season from April 1st to October 31st, ALCOSAN shall implement the CSO Overflow Alert or Sewer Overflow Advisory Key program, which notifies the public of possible CSOs by raising orange flags at designated points along the area's rivers, through a telephonic hotline, through information posted on its website, and through a text/email subscriber-based notification service.

6. ALCOSAN shall make available Combined Sewer Overflow Fact Sheet Bulletins through its Public Relations Office.

APPENDIX L

Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring

1. Within 180 days of the Date of Entry, ALCOSAN shall commence implementation of a program for monitoring each Discharge from the Conveyance and Treatment System. At a minimum, ALCOSAN shall:

a. identify and document the (i) location, (ii) cause, (iii) duration, (iv) date, and (v) volume, of each Discharge from the Conveyance and Treatment System, as well as (vi) any corrective action taken for each such Discharge. ALCOSAN shall obtain this information from the inspection program required pursuant to Appendix I (Operation and Maintenance of the Conveyance and Treatment System), the depth of flow monitoring devices (using depth measurement and a hydraulic rating curve) and notification devices required pursuant to Subparagraphs 1(b) and (c) of this Appendix, and other sources. ALCOSAN shall supplement this information with estimated Discharge frequencies and volumes based upon application of the model required pursuant to Appendix P (Hydrologic and Hydraulic Model).

b. install, calibrate, and operate the depth of flow monitoring devices (using depth measurement and a hydraulic rating curve) and notification devices at or in the vicinity of the Regulators associated with the following Combined Sewer Outfalls: M-47; M-37; A-35; C-05; C-07; C-25; M15z; M-42; O-39; and T-16. ALCOSAN shall submit to the Plaintiffs for review and approval an annual update to this list of Combined Sewer Outfalls. ALCOSAN shall maintain and operate such devices prior to its Validation of the model required pursuant to Appendix P (Hydrologic and Hydraulic Model).

c. install, calibrate, and operate depth of flow monitoring devices (using depth measurement and a hydraulic rating curve) and notification devices, as and where feasible, at or in the vicinity of the Regulators associated with the Sanitary Sewer Outfalls listed in Appendix B

(Sanitary Sewer Outfalls). ALCOSAN shall maintain and operate such devices prior to Validation of the model required pursuant to Appendix P (Hydrologic and Hydraulic Model). ALCOSAN shall continue to maintain and operate the depth of flow monitoring devices for 12 months after Validation of the model required pursuant to Appendix P (Hydrologic and Hydraulic Model), and shall continue to maintain and operate the notification devices until Sanitary Sewer Overflows from the Sanitary Sewer Outfalls are eliminated.

d. on a monthly basis, enter the parameters in Subparagraph (a), above, into a computerized database.

e. determine, for each Combined Sewer Overflow, whether or not the Discharge was caused by precipitation alone (*i.e.,* whether such Combined Sewer Overflow is a Wet Weather Discharge).

2. On a semi-annual basis, ALCOSAN shall also analyze Discharge occurrence data for the Conveyance and Treatment System and develop trends to determine if the occurrence and/or total volume of such Discharges are declining. ALCOSAN shall make this determination for each Outfall within the Conveyance and Treatment System and over all Outfalls within the Conveyance and Treatment System, for each of the following types of Discharges:

a. Combined Sewer Overflows caused by equipment failures;

b. Sanitary Sewer Overflows from the Conveyance and Treatment System;

c. Discharges from the Conveyance and Treatment System that are exempted from the definition of Dry Weather Discharges and occur during dry weather; and

d. Dry Weather Discharges from the Conveyance and Treatment System that are the result of insufficient capacity in the Conveyance and Treatment System.

3. On an annual basis, ALCOSAN shall evaluate the efficacy of the measures implemented under its Revised Nine Minimum Control Plan, as well as other measures required pursuant to this Consent Decree, in reducing the impacts of Combined Sewer Overflows on receiving waters.

4. ALCOSAN shall provide to the Plaintiffs the information required by the preceding Subparagraphs within 90 days of a request from one or more of the Plaintiffs.

5. ALCOSAN shall perform all overflow monitoring required under this Appendix in accordance with the procedures set forth in Appendix M (Flow Monitoring), as applicable.

APPENDIX M

Flow Monitoring

Flow Monitoring Plan

1. Flow Monitoring Plan.

a. ALCOSAN shall, within 30 days from the Date of Entry, submit to the Plaintiffs for review and approval in accordance with Section VIII (Review and Approval of Submittals) a flow monitoring plan for the Regional Collection System ("RCS Flow Monitoring Plan"), consistent with the requirements of this Consent Decree and this Appendix M, to enable ALCOSAN to develop its Wet Weather Plan and to enable ALCOSAN to conduct flow monitoring in the Participating Municipalities sufficient for the Participating Municipalities to complete the feasibility studies required by the Administrative Consent Orders first issued by ACHD and the Consent Orders and Agreements first issued by PADEP to the Participating Municipalities in or about October 2003 regarding Phase 1 Assessments of sewer systems, wet weather obligations and long term control plan responsibilities, and any subsequent orders and/or agreements issued to the Participating Municipalities containing identical or substantially similar obligations.

b. In preparing the RCS Flow Monitoring Plan, ALCOSAN shall utilize the draft "Regional Flow Monitoring Plan," dated June 1, 2006, submitted on behalf of the Participating Municipalities, and a February 5, 2007 letter from the 3 Rivers Wet Weather Demonstration project to DEP and ACHD regarding the draft Regional Flow Monitoring Plan (collectively, the "Draft Plan") to allow it to effectively monitor and quantify average daily Dry Weather Flows, peak Dry Weather Flows and peak Wet Weather flows within the Regional Collection System. The Plaintiffs shall utilize the Draft Plan in their review of ALCOSAN's proposed RCS Flow Monitoring Plan.

c. In its submission of the RCS Flow Monitoring Plan ALCOSAN shall include provisions for the inspection of 524 proposed flow meter locations, as set forth in the February 5, 2007 Revised Table 3-7 of the Draft Plan, and for the inspection of 13 Pump Station Meter locations, as set forth in Table M-1 of this Appendix. If upon inspection of such a proposed flow meter location, such location is physically feasible and technically suitable for the installation and operation of a flow meter, ALCOSAN shall utilize such location and install and operate the appropriate type of flow meter as defined in Table M-2, subject to proposals by ALCOSAN in the RCS Flow Monitoring Plan to: (i) reduce the number of flow meters based on past flow monitoring efforts by or on behalf of only ALCOSAN (excluding any prior flow monitoring efforts by Municipalities), that meet the requirements of Paragraph 36 of this Consent Decree and (ii) change the location to more effectively and efficiently collect flow monitoring data. Notwithstanding any provision of this Appendix M and this Consent Decree to the contrary, ALCOSAN shall receive credit for past flow monitoring for the 14 meters listed in Table M-3 provided the data meet the requirements of Paragraph 36 of this Consent Decree.

d. For purposes of this Appendix, ALCOSAN shall refer to the following meters listed in Table M-2, collectively, as "ALCOSAN Flow Meters:" ALCOSAN Point of Connection Meters; CSO/SSO Structure Meters; and Pump Station Meters.

e. For purposes of this Appendix, ALCOSAN shall refer to the following meters listed in Table M-2, collectively as "Municipal Flow Meters:" Multi-Municipal Conveyance Sewer Meters; Internal Municipal Overflow Meters; Municipal Boundary Meters; and Internal Municipal Sub-Area Meters.

2. ALCOSAN shall utilize the approved RCS Flow Monitoring Plan to, among other things:

a. measure flow rates at ALCOSAN Point of Connection Meter locations, as and where feasible, as close in proximity as possible to each Point of Connection (unless ALCOSAN demonstrates in writing, that it is not feasible to monitor flow at or near a given Point of Connection), prior to any diversion structure that allows relief of excess flow at the Point of Connection. Where it is not feasible to conduct such flow monitoring, or to obtain actual flow monitoring data, ALCOSAN shall utilize other methodologies to characterize flow rates for such Point of Connection;

b. provide for the ALCOSAN Point of Connection Meters, an estimate of the population of the area that is tributary to each Point of Connection at the time the plan is submitted;

c. determine, in gallons per day per inch mile of sewer (or, if it is not possible to determine the flow in these terms, in gallons per day) the contribution of flow to the Conveyance and Treatment System from each Point of Connection;

d. Validate the model used to determine the frequency and volume of Combined Sewer Overflows and Sanitary Sewer Overflows to receiving waters in accordance with Appendix L (Combined Sewer Overflow and Sanitary Sewer Overflow Monitoring) and Appendix P (Hydrologic and Hydraulic Model);

e. provide sufficient data to enable ALCOSAN to characterize flows for the Hydrologic and Hydraulic Model required by this Consent Decree;

f. provide accurate and reliable data for joint use by ALCOSAN and the Customer Municipalities in developing a wet weather plan with a range of remedial control measures; and

g. obtain accurate and reliable data to develop and Validate the Hydrologic and Hydraulic Model required pursuant to the Consent Decree and Appendix P (Hydrologic and

Hydraulic Model), using a flow monitoring network that provides representative, accurate, and reliable data with sufficient spatial and temporal coverage.

3. ALCOSAN shall include in the RCS Flow Monitoring Plan:

a. a list of locations, consistent with the provisions of Subparagraph 1.c. of this Appendix, for the installation of flow meters to measure average daily Dry Weather Flows, peak Dry Weather Flows, and peak Wet Weather Flows for each monitored rainfall event, and to Validate the Hydrologic and Hydraulic Model used to quantify and characterize the total overflow volumes during each rainfall event, with readings taken in 15-minute intervals;

b. provisions for commencing flow monitoring of ALCOSAN Point of Connection Meters, SSO Structure Meters, Pump Station Meters, Long-Term Municipal Boundary Meters, Multi-Municipal Conveyance Sewer Meters, and Long-Term Internal Municipal Sub-Area Meters by February 1, 2008, or within 90 days after receiving Plaintiffs' written approval of the RCS Flow Monitoring Plan, whichever date is later, for a minimum duration of one year during which (i) total annual precipitation volume is no less than 30.9 inches (water equivalent) and (ii) at least two specific rainfall events occur, excluding snow melt, equal to or exceeding one inch of rainfall in a 24 hour period; provided, however, that if during that one year period two such events do not occur, or if the total annual precipitation volume does not equal or exceed 30.9 inches (water equivalent), monitoring shall be extended for an additional nine months or until such conditions are met, whichever occurs first; the conditions that must be met before ALCOSAN can cease the extended monitoring are (A) two specific rainfall events, excluding snow melt, equal to or exceeding one inch of rainfall in a 24-hour period that occur anytime from the commencement of flow monitoring and (B) a total annual precipitation of at least 30.9 inches (water equivalent) as measured during any 12 calendar months from the commencement of flow monitoring until it

ceases. Provided further, that in no event shall ALCOSAN be required to monitor for more than a total of 21 months under this Subparagraph;

c. provisions for commencing flow monitoring of Municipal CSO Structure Meters by March 15, 2008, or within 135 days after receiving the Plaintiffs' written approval of the RCS Flow Monitoring Plan, whichever date is later, for a minimum duration of six months during which period the total rainfall volume is no less than 15.5 inches and at least one specific rainfall event occurs, excluding snow melt, equal to or exceeding one inch of rainfall in a 24-hour period; provided, however, that if, during that six month period, these conditions are not met, monitoring shall be extended for an additional three months or until such conditions are met, whichever occurs first; the events that must occur before ALCOSAN can cease the extended monitoring are (i) at least one specific rainfall event, excluding snow melt, equal to or exceeding one inch of rainfall in a 24-hour period that occurs anytime from the commencement of flow monitoring, and (ii) a total rainfall volume no less than 15.5 inches as measured from the commencement of flow monitoring. Provided further that in no event shall ALCOSAN be required to monitor for longer than a total of nine months under this Subparagraph;

d. provisions for commencing flow monitoring of Short-Term Internal Municipal Sub-Area Meters, Short-Term Municipal Boundary Meters and Internal Municipal Overflow Meters by March 15, 2008, or within 135 days after receiving Plaintiffs' written approval of the RCS Flow Monitoring Plan, whichever date is later, for a minimum duration of three months during which period the total rainfall volume is no less than 7.50 inches and at least ten specific rainfall events equal to or exceeding 0.20 inches of rainfall in a 24-hour period, occur; provided, however, that if, during that three month period, these conditions are not met, monitoring shall be extended for an additional three months or until such conditions are met, whichever occurs

first; the conditions that must be met before ALCOSAN can cease the extended three month monitoring period are (i) ten specific rainfall events, excluding snow melt, equal to or exceeding 0.20 inches of rainfall that occur anytime from the commencement of flow monitoring and (ii) a total rainfall volume no less than 7.50 inches as measured from the commencement of flow monitoring. Provided further that in no event shall ALCOSAN be required to monitor longer than a total of six months under this Subparagraph;

e. provisions for monitoring at the Points of Connection, except to the extent ALCOSAN asserts that it is infeasible to monitor flow at a given Point of Connection to provide accurate and reliable data, ALCOSAN shall include in its RCS Flow Monitoring Plan a proposal to Plaintiffs for either monitoring as close as possible to a given Point of Connection or otherwise ascertaining how the flow monitoring data will be accurately determined or estimated;

f. provisions for dimensioned sketches, profile selections and plan views of each monitoring manhole, the configurations of flow monitoring equipment to be installed, and sewer GIS maps illustrating the flow monitoring location, the adjacent upstream and downstream manholes and connection pipes and the Outfall, if any;

g. provisions for inspecting, maintaining, and calibrating the flow meters;

h. a quality assurance and quality control plan to ensure that the flow monitoring network provides representative, accurate, and reliable data, and provides sufficient quality for use in the development and Validation of the Hydrologic and Hydraulic Model required under the Consent Decree.

i. provisions for coordinating flow monitoring activities so that flows are measured with meters that are capable of comparable accuracy and are similarly calibrated;

j. in accordance with the schedule set forth in Appendix X (Reporting Schedule), provisions for reporting to EPA, PADEP, and ACHD, all flow monitoring data for the ALCOSAN Point of Connection Meters;

k. provisions for sharing with the Participating Municipalities all raw flow monitoring data from the Municipal Flow Meters, CSO/SSO Structure Meters and Municipal Pump Station Meters on a monthly basis;

l. provisions for sharing with the Participating Municipalities quality reviewed flow monitoring data from the ALCOSAN Point of Connection Meters on a bi-monthly basis, and from the CSO/SSO Structure Meters and ALCOSAN Pump Station Meters on a quarterly basis;

m. provisions for developing a GIS map showing the location of all proposed flow monitoring sites;

n. provisions for delineating the boundaries of the tributary sewershed area for each flow meter;

o. a description of the flow monitoring technique(s) to be employed;

p. provisions for identifying the flow monitoring technology to be used at each location, and for ensuring that the flow monitoring will be performed in accordance with manufacturer's specifications for the monitoring equipment utilized;

q. provisions for describing the methods to be used in approximating overflow volume, frequency and duration, where it is not feasible to obtain accurate and reliable flow monitoring data;

r. provisions for ensuring that ALCOSAN's flow monitoring crew is properly trained in conducting flow monitoring;

s. provisions for conducting field investigations of its flow monitoring sites to (i) ensure that designated monitoring sites can provide representative, accurate, and reliable data, (ii) ensure that monitoring sites conform with the provisions of its approved RCS Flow Monitoring Plan and (iii) verify that hydraulic, site access, safety, and maintenance conditions are suitable for successful flow monitoring;.

t. provisions for using redundant level sensors, where feasible, at each CSO/SSO Structure Meter; and, where such redundancy is feasible, using different technologies where feasible; and,

u. provisions for monitoring the flow at the Municipal Pump Stations listed in Table M-1 by either: (i) monitoring all flows going into each Municipal Pump Station or (ii) monitoring the Discharge at each Municipal Pump Station.

Implementation of Approved Flow Monitoring Plan

4. On February 1, 2008 or within 90 days after receiving Plaintiffs' written approval of the RCS Flow Monitoring Plan, whichever date is later, ALCOSAN shall commence implementation of the approved RCS Flow Monitoring Plan in accordance with the requirements and schedule set forth therein.

5. ALCOSAN shall employ the services of a Professional Engineer to oversee its flow monitoring program and certify the accuracy of all flow monitoring data. Other flow monitoring performed by ALCOSAN or by a third party may be acceptable as long as it meets the standards set forth in this Appendix.

6. In conducting flow monitoring field investigations under the approved RCS Flow Monitoring Plan, ALCOSAN shall record flow regime conditions such as surface turbulence and backwater interference from downstream pipes and structures and document observed site conditions using standardized forms. If the field investigation reveals that the selected site or

alternate site, if any, is not suitable for successful flow monitoring, ALCOSAN shall utilize other established methodologies to characterize the flow rate for such flow monitoring site.

7. ALCOSAN shall record flow monitoring site set-up information, including measured sensor offsets, site name, manhole number, pipe size, meter number, pre-installation calibration information providing the initial calibration and calibrator's name, dates of calibration and installation, and an explanation of any variance from manufacturer-recommended procedures. ALCOSAN shall maintain such records and shall provide such records to EPA, PADEP, ACHD, and the Customer Municipalities upon request.

8. ALCOSAN shall interrogate the meter at each flow monitoring point every five business days following the start of monitoring until the equipment is performing properly, unless such interrogation is infeasible at a particular time, in which case ALCOSAN shall interrogate the meter in question as soon thereafter as feasible. Thereafter, interrogation shall be performed as appropriate to the approach employed and in accordance with the RCS Flow Monitoring Plan, but in no event less than every other week, unless such interrogation is infeasible at a particular time. ALCOSAN shall also physically inspect the flow meters every time the meters are interrogated. ALCOSAN shall also assess the monitoring results on a monthly basis thereafter, and shall document the findings of each evaluation in the progress reports required pursuant to Paragraph 94 of Section VII (Reporting and Recordkeeping).

9. ALCOSAN shall perform bench and field calibration of flow monitoring devices in accordance with the manufacturer's instructions and the data quality assurance and control provisions of its approved RCS Flow Monitoring Plan. ALCOSAN shall document calibration measurements and adjustments and record dates and times that such measurements are made on field sheets.

10. If any monitoring device is moved, or if there are any other substantive changes to meter installations or adherence to ALCOSAN's data quality assurance and control provisions of its approved RCS Flow Monitoring Plan, ALCOSAN shall notify Plaintiffs of such change within 30 days of such occurrence, and within 45 days of such occurrence ALCOSAN shall submit a proposed amendment to the RCS Flow Monitoring Plan to Plaintiffs, in accordance with Section VIII (Review and Approval of Submittals).

11. ALCOSAN shall program the memory modules for obtaining and storing readings at 15-minute intervals at the quarter hour (e.g. 2:00, 2:15, or 2:30 and not 2:03, 2:18, or 2:33). To match flow data with rainfall data, ALCOSAN shall ensure that the clocks in all of the meters are synchronized and that no data are lost by checking the manufacturer's manual to determine the maximum period of record before new data wraps over previous memory module data.

12. ALCOSAN shall calculate and record flows in million gallons per day (MGD), or gallons per day (GPD), as appropriate, and not cubic feet per second (CFS), and shall report data to three significant figures. ALCOSAN shall record levels in inches and velocity in feet per second.

13. Except when access is infeasible, ALCOSAN shall measure depth of flow and obtain other field measurements such as depth and/or velocity readings, as appropriate, whenever data interrogation is conducted and recorded to verify that the equipment is properly calibrated and providing reliable results. ALCOSAN shall schedule data interrogations at differing times of day and weather conditions to obtain field data points over a wide range of flow depths. ALCOSAN shall employ appropriate methods for the pipe or channel of interest: use of a calibrated direct read weir, the 0.9 times U-max or the 0.2, 0.4, or 0.8 methods shall be employed for low flow conditions in smaller pipes; and the 2-D method shall be used for higher flows in larger pipes.

ALCOSAN shall also collect additional velocity measurements, as necessary, to obtain a representative range of field data points to ensure proper calibration.

14. ALCOSAN shall maintain flow monitoring devices to perform in accordance with manufacturers' specifications and applicable recommendations. ALCOSAN shall also remove sediment and gravel from or immediately adjacent to a flow monitoring device when such material interferes with proper operation of such flow monitoring device, and shall ensure that the sensor surfaces remain clean and in good condition.

Recording and Reporting Flow Monitoring Data

15. ALCOSAN shall maintain field logs (including calibration points) of all flow monitoring measurements and interrogations and shall provide such field logs to EPA, PADEP, and ACHD upon request.

16. ALCOSAN shall adopt file naming conventions and shall cross-reference these file-naming conventions with the file-naming conventions established by the Draft Plan.

17. In accordance with the schedule in Appendix X (Reporting Schedule), ALCOSAN shall submit to the Plaintiffs the following information:

a. digital flow monitoring data, in the format specified in the RCS Flow Monitoring Plan for ALCOSAN Point of Connection Meters, which preserves the raw monitoring data and incorporates separate columns for the QA/QC-reviewed and finalized monitoring data;

b. superimposed flow/level/rainfall versus time plots covering one-month intervals, beginning with the first day of the month; ALCOSAN shall prepare monthly flow, level and rainfall (vertical axis) versus time (horizontal axis) plots on a quarterly basis;

c. quality control documentation such as _scatter plots_ (flow versus level or velocity versus level) covering the entire monthly reporting period, using consistent, user-selected vertical axis scales, as opposed to varying computer selected axis scales; and

d. field measurement information, which ALCOSAN shall submit in a consistent format.

18. In accordance with the schedule in Paragraph 3(k), ALCOSAN shall provide to the Participating Municipalities through its secure website the following information for all of the Municipal Flow Meters, the Municipal Pump Station Meters, and the CSO/SSO Structure Meters:

a. the comma delineated ASC II files of the digital flow monitoring data with a naming convention consistent with the requirements of Paragraph 16 of this Appendix; and

b. an electronic PDF file for the field logs, including calibration points described in Paragraph 15 of this Appendix, with a naming convention consistent with the requirements of Paragraph 16 of this Appendix.

19. Notwithstanding any other provision of this Consent Decree and this Appendix to the contrary, ALCOSAN shall not be required to perform quality assurance and quality control procedures on raw data collected from the Municipal Flow Meters. ALCOSAN shall, however, be required to take all reasonable measures included in the RCS Flow Monitoring Plan to assure that such raw data can be subject to quality assurance and quality control procedures.

TABLE M-1

List of Pump Station Locations

Municipality / Authority	Monitor Name	Descriptive Location
ALCOSAN	A42A00_-APS-L-___	Sandy Creek
ALCOSAN	A8100__-APS-L-___	Squaw Run
ALCOSAN	A4400__-APS-L-___	Verona (Arch Street)
ALCOSAN	A8400__-APS-L-___	Montrose
McKees Rocks Borough	O0600__-MPS-L-___	Ella Street
McKees Rocks Borough	O0600__-MPS-L-___	Robb Street
Kennedy Township	C0900__-MPS-L-___	Porter Hollow
O'Hara Township	A74A00_-MPS-L-___	Fox Hall 1, Brownshill Road
O'Hara Township	A74A00_-MPS-L-___	Fox Hall 2, Village Drive
City of Pittsburgh	M4700__-MPS-L-___	Browns Hill Road
City of Pittsburgh	A5800__-MPS-L-___	Evergreen and Ivory
City of Pittsburgh	M4200__-MPS-L-___	Rogers and Mohrbach
Robinson Township	C2002__-MPS-L-___	Chartiers Creek Pump Station

TABLE M-2

Categories of Flow Meters for the Regional Flow Monitoring Plan

For purposes of this Appendix M the flow monitor types listed in Table M-1 below shall have the following meanings:

"ALCOSAN Point of Connection Meters" shall mean flow meters that measure flow at the Points of Connection as that term is defined by the Consent Decree.

"CSO/SSO Structure Meters" shall mean flow meters that measure flow from municipal combined sewer outfalls and municipal sanitary sewer outfalls.

"Pump Station Meters" shall mean flow meters that measure flow from Pump Station overflow pipes.

"ALCOSAN Pump Station Meters" shall mean flow meters in or as close as feasible to a pump station owned and/or operated by ALCOSAN.

"Municipal Pump Station Meters" shall mean flow meters in or as close as feasible to pump stations owned and/or operated by a Customer Municipality.

"Multi-Municipal Conveyance Sewer Meters" shall mean flow meters located on a trunk sewer that collect and convey flow from more than one Municipality.

"Internal Municipal Overflow Meters" shall mean flow meters that measure Discharges that occur from the Municipal Collection System that have experienced basement flooding or surcharging manholes.

"Municipal Boundary Meters" shall mean flow meters at or close to a municipal boundary that monitor flow into or out of a given Municipality.

"Short-Term Municipal Boundary Meters" shall mean Municipal Boundary Meters metered for the duration specified in Paragraph 3.d of this Appendix.

"Long-Term Municipal Boundary Meters" shall mean Municipal Boundary Meters metered for the duration specified in Paragraph 3.b. of this Appendix.

"Internal Municipal Sub-Area Meters" shall mean flow meters that are located within internal municipal sewer systems used to collect information to support characterization of the sub-areas' responses to rainfall and to support capacity evaluations.

"Short-Term Internal Municipal Sub-Area Meters" shall mean Internal Municipal Sub-Area Meters metered for the duration specified in Paragraph 3.d. of this Appendix.

"Long-Term Internal Municipal Sub-Area Meters" shall mean Internal Municipal Sub-Area Meters metered for the duration specified in Paragraph 3.b. of this Appendix.

Table M-3

Supplanted Monitor Locations with Prior Municipal Data

Municipality Name	Supplanted Meter Type[1]	Municipal Location ID
Bethel Park	MB	1D95
Millvale Borough	IM	Friday Rd.
Ross Township	IM	ROS 1452
Ross Township	IM	ROS 1476
Ross Township	IM	ROS 226
Ross Township	IM	ROS 559
Ross Township	IM	ROS 643
Shaler Township	IM	SHA 226
Mount Lebanon	IM	MTL 8
Scott Township	MB	H-10
M.A. of South Fayette	IM	HN-1009
M.A. of South Fayette	IM	IN-2220
M.A. of South Fayette	IM	IO-2218
West View Borough	OSC	Cresson Ave. CSO

[1] MB – Municipal Boundary Meter

IM – Internal Municipal Sub-Area Meter

OSC – Municipal CSO Structure Meter

APPENDIX N

Rainfall Monitoring

1. Beginning on the Date of Entry and continuing thereafter, ALCOSAN shall monitor rainfall within the Regional Collection System using a network of rain gauge stations and Doppler radar. ALCOSAN shall use a network of rain gauge stations with a minimum coverage of one rain gauge station per 60 square kilometers, as well as data compiled by Doppler radar utilizing a minimum resolution of one pixel per square kilometer, on or after April, 2000. ALCOSAN may substitute rainfall monitoring work completed by a third party or by ALCOSAN from 1997 until the present, using the available rain gauge station coverage so long as it: (a) was compiled by Doppler radar utilizing a minimum resolution of one pixel per 16 square kilometers; (b) meets the standards set forth in Paragraphs 2 through 5 of this Appendix; and (c) was of sufficient coverage to provide representative, accurate, and reliable rainfall monitoring data.

2. ALCOSAN shall obtain measurements using this network to: (a) provide representative, accurate, and reliable data over a range of wet weather events for at least 90 percent of the scheduled operating time for the aggregate of all rain gauge stations installed, (b) correlate various precipitation events with Wet Weather Flows within the Regional Collection System, and (c) use in development and Validation of the Hydrologic and Hydraulic Model.

3. Monitoring equipment calibration, maintenance, and data quality assurance checks shall be performed and/or verified such that monitoring accuracy is optimized, and is in conformance with the equipment manufacturers' recommendations and good engineering practices.

4. On an annual basis, or as recommended by the rain gauge manufacturer's specifications, whichever is more frequent, ALCOSAN shall use best efforts to obtain field calibration results for each gauge, along with an evaluation of the accuracy for each rain gauge.

ALCOSAN shall also maintain this information and provide this calibration information to EPA, PADEP and/or ACHD upon request.

5. Beginning within six months of the Date of Entry, ALCOSAN shall establish and update on a quarterly basis on its publicly accessible web site rainfall monitoring data that have been verified through a quality assurance process.

APPENDIX O

Combined Sewer Overflow Pollutant Monitoring

Combined Sewer Overflow Pollutant Monitoring Plan

1. Within four months after the Date of Entry, ALCOSAN shall submit to the Plaintiffs a proposed methodology for determining the concentrations of Pollutants in Discharges from the Combined Sewer Outfalls. This proposal shall be referred to as the "Combined Sewer Overflow Pollutant Monitoring Plan."

2. ALCOSAN shall utilize the information obtained through implementation of its Combined Sewer Overflow Pollutant Monitoring Plan, along with the Hydrologic and Hydraulic Model, required pursuant to Paragraph 39 of the Consent Decree, and Appendix P (Hydrologic and Hydraulic Model), to develop:

a. the Wet Weather Plan required pursuant to Section VI (Clean Water Act Remedial Controls and Activities); and

b. a Receiving Water Quality Model, if ALCOSAN is required to develop a Receiving Water Quality Model pursuant to Paragraphs 43, 52, and 56 of the Consent Decree.

3. Upon approval by EPA and PADEP in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall commence implementation of its Combined Sewer Overflow Pollutant Monitoring Plan in accordance with the schedule and requirements set forth therein. That schedule shall require complete implementation of the plan such that the resulting information can be submitted with the information required pursuant to Paragraph 41 of the Consent Decree (Receiving Water Quality Monitoring) and utilized in the development of ALCOSAN's Wet Weather Plan.

4. In implementing its Combined Sewer Overflow Pollutant Monitoring Plan, ALCOSAN shall utilize one of the following two methods for determining the concentrations of Pollutants in Discharges from the Combined Sewer Outfalls:

a. ALCOSAN shall collect a series of composite and discrete samples of Combined Sewer Overflows from a representative sample of the Combined Sewer Outfalls (which shall include no less than 10% of all the Combined Sewer Outfalls) during each of at least six wet weather events (having two in each of three regional rainfall seasons, as well as an appropriate range of characteristics such as rainfall greater than one quarter of one inch but less than three inches, and duration greater than one hour) while simultaneously measuring the flow of Sewage to determine the volume of Discharge from the diversion chambers to their respective Outfalls. ALCOSAN shall then apply these data to calculate either:

i. a single, average volume-weighted event mean concentration value for each of the Pollutants identified in Paragraphs 8 and 9 below ("Combined Sewer Overflow Pollutant"), or

ii. a series (based on total event rainfall or other appropriate factor(s)) of average volume-weighted event mean concentration values for each Combined Sewer Overflow Pollutant; or

b. ALCOSAN shall collect at least three samples of Dry Weather Flow: (i) from locations that are upstream of a representative sample of the Combined Sewer Outfalls (which shall include such samples for no less than 10% of all the Combined Sewer Outfalls); and (ii) that are representative of the quality of Dry Weather Flow contributed to the Regulators for these Combined Sewer Outfalls. ALCOSAN shall then calculate Outfall-specific, event-specific, Combined Sewer Overflow Pollutant concentrations for each model simulation using this sampling

data, the Hydrologic and Hydraulic Model required by Appendix P (Hydrologic and Hydraulic Model), and the Event Mean Concentrations developed from a comprehensive analysis of available Storm Water quality data. The Storm Water quality data shall include:

i. values from the National Urban Runoff Program ("NURP") study;

ii. data provided to PADEP by Customer Municipalities as part of their Storm Water NPDES permit applications;

iii. representative Discharge data from the Industrial Users identified in Appendix F (Reduction of Water Quality Impacts from Industrial Users) discharging to the Regional Collection System; and

iv. other appropriate Storm Water quality data.

5. If ALCOSAN elects to utilize the methodology set forth in Paragraph 4(b) of this Appendix in its Combined Sewer Overflow Pollutant Monitoring Plan, then ALCOSAN shall also: (a) collect a series of composite and/or discrete samples of Combined Sewer Overflows from a representative sample of the Combined Sewer Outfalls (which shall include no less than 10% of all Combined Sewer Outfalls), during each of at least three wet weather events having an appropriate range of characteristics such as total rainfall, duration, and peak intensity; (b) simultaneously measure the flow of Sewage to determine the volume of Discharge from the diversion chambers to their respective Combined Sewer Outfalls; and (c) compare the Combined Sewer Overflow data generated by such sampling to the Combined Sewer Overflow Pollutant concentration values generated using the methodology described in Paragraph 4(b) of this Appendix. ALCOSAN shall submit the results of this comparison to EPA, PADEP, and ACHD. If EPA and PADEP determine, based on this comparison, that one or more of the Combined Sewer Overflow Pollutant concentrations generated using this methodology are not representative, then EPA and PADEP

may require ALCOSAN to investigate the causes of the discrepancies and, if appropriate, refine these Combined Sewer Overflow Pollutant concentration values by utilizing the data collected as described herein.

6. The data generated from sampling conducted pursuant to Paragraphs 4(a) and 5 of this Appendix shall reflect changes in Pollutant concentrations over time during a range of wet weather events appropriate to the development of the Wet Weather Plan pursuant to Section VI (Clean Water Act Remedial Controls and Activities). All wet weather sampling required by said Paragraphs shall be carried out in storms of sufficient duration and having sufficient rainfall intensities so as to result in significant Discharges from the Combined Sewer Outfalls and in significant and representative Storm Water contributions to Combined Sewer Overflow Pollutant loads.

7. ALCOSAN shall perform all sampling and analyses under this Appendix in accordance with the methodologies in 40 CFR Part 136 and EPA's 1999 "Combined Sewer Overflows: Guidance for Monitoring and Modeling," and any amendments thereto.

8. Based on the results of the sampling performed pursuant to Paragraph 4, above, ALCOSAN shall develop Combined Sewer Overflow Pollutant concentrations for the following Sewage Parameters or Pollutants for each Combined Sewer Outfall:

a. biochemical oxygen demand;

b. fecal coliform;

c. total suspended solids;

d. PCBs;

e. E-coli;

f. dissolved oxygen;

g. ammonia; and

h. nitrite plus nitrate.

9. For each of the locations identified in Appendix F (Reduction of Water Quality Impacts from Industrial Users), ALCOSAN also shall develop Combined Sewer Overflow Pollutant concentrations for the following Sewage Parameters or Pollutants that, based on the evaluation required pursuant to Appendix F, may be present or altered in Combined Sewer Overflows as a result of Discharges to the Conveyance and Treatment System from Industrial Users:

a. chemical oxygen demand;

b. cadmium;

c. chromium;

d. copper;

e. iron;

f. lead;

g. PCBs;

h. nickel;

i. silver;

j. pH; and

k. zinc.

10. ALCOSAN may petition EPA and PADEP for a reduction of the requirements of this Appendix by certifying that sufficient data have been collected to develop reliable inputs for the Receiving Water Quality Model.

Revised Combined Sewer Overflow Pollutant Monitoring Plan

11. Within 180 days after ALCOSAN completes its implementation of the approved Wet Weather Plan, ALCOSAN shall submit to the Plaintiffs, in accordance with Section VIII (Review and Approval of Submittals), a revised plan for monitoring Pollutants in Combined Sewer Overflows ("Revised Combined Sewer Overflow Pollutant Monitoring Plan").

12. Upon approval by EPA and PADEP, ALCOSAN shall commence implementation of its Revised Combined Sewer Overflow Pollutant Monitoring Plan in accordance with the schedule and requirements set forth therein. That schedule shall require complete implementation of the plan such that the results of that evaluation can be utilized in the implementation of the Post-Construction Receiving Water Quality Monitoring Plan required by Appendix Q (Receiving Water Quality Monitoring), and the development of a Receiving Water Quality Model, if ALCOSAN is required to develop a Receiving Water Quality Model pursuant to Paragraphs 43, 52, and 56 of the Consent Decree.

13. Once approved by the Plaintiffs in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall utilize its Revised Combined Sewer Overflow Pollutant Monitoring Plan, along with the Hydrologic and Hydraulic Model described in Appendix P (Hydrologic and Hydraulic Model), and the receiving water quality monitoring data obtained pursuant to Appendix Q (Receiving Water Quality Monitoring), to develop the Post-Construction Receiving Water Quality Model required pursuant to Paragraphs 43, 52, and 56.

14. In implementing its Revised Combined Sewer Overflow Pollutant Monitoring Plan, ALCOSAN shall utilize the methods for determining Combined Sewer Overflow Discharge Pollutant concentrations set forth in Paragraphs 4 through 6 of this Appendix and shall also comply with the other requirements applicable to its original Combined Sewer Overflow Pollutant Monitoring Plan set forth in Paragraphs 7 through 9 of this Appendix.

APPENDIX P

Hydrologic and Hydraulic Model

Hydrologic and Hydraulic Model Plan

1. Within nine months after the Date of Entry, ALCOSAN shall submit to EPA and PADEP for review and approval, and to ACHD for review and comment, pursuant to Section VIII (Review and Approval of Submittals), a plan ("Hydrologic and Hydraulic Model Plan") for the development of a model to simulate the hydrology and hydraulics of flows, as set forth in this Appendix, in the Regional Collection System. The model shall be referred to as the "Hydrologic and Hydraulic Model."

2. The Hydrologic and Hydraulic Model shall include the entire Conveyance and Treatment System, as well as critical portions of the Municipal Collection Systems. For purposes of this Appendix, "Critical Portions of the Municipal Collection Systems" shall include all Outfalls in the Municipal Collection Systems (except for such Outfalls that would not, or are not planned to, route flow to the Conveyance and Treatment System), the portions of the Municipal Collection Systems downstream of those Outfalls, and any other portions of the Region Collection System for which inclusion is necessary for the model to simulate and predict the parameters in Paragraph 6 of this Appendix.

3. The Hydrologic and Hydraulic Model shall be developed so as to:

   a. achieve adequate model performance and accuracy;

   b. satisfy the requirements of Paragraph 6 of this Appendix; and

   c. support the development of the Wet Weather Plan that adequately addresses all identified Municipal Collection System sanitary sewer overflows, the elimination of which would result in increased flow to the Conveyance and Treatment System; and

d. support the development of the Wet Weather Plan that adequately addresses all identified Municipal Collection System combined sewer overflows, the elimination or reduction of which would result in increased flow to the Conveyance and Treatment System.

4. ALCOSAN shall ensure that the Hydrologic and Hydraulic Model is developed and Validated such that it can provide an accurate and reliable characterization of the volume and frequency of Discharges from the Conveyance and Treatment System for use in the development of the Wet Weather Plan. In its Hydrologic and Hydraulic Model Plan, ALCOSAN shall provide information regarding the model it proposes to utilize to satisfy the requirements of this Appendix, including the following information:

a. the name and type of the Hydrologic and Hydraulic Model;

b. whether or not the model is developed and approved by EPA, is publicly available, and is widely accepted and used by municipalities to model combined sewer systems;

c. if the proposed model has not been approved by EPA and is not widely accepted and used by municipalities to model combined sewer systems, the model's specific attributes, characteristics, limitations, and base algorithms for each major computational function;

d. all input parameters, constants, assumed values and expected outputs;

e. the computer hardware required to run the model;

f. digital maps and schematics that identify and characterize the portions of the Regional Collection System to be included in the proposed model;

g. how the model will be applied to simulate and predict wastewater flows through, and Discharges from, the Regional Collection System, both to develop information that will be submitted to support a request for a Preliminary Determination regarding use of the

Presumption Approach (pursuant to Paragraphs 45-48), and to support development of the Wet Weather Plan. This information shall include:

i. how attribute data accuracy and representativeness will be assured;

ii. the configuration of the proposed model;

iii. procedures and protocols for the performance of sensitivity analyses (i.e., how the proposed model responds to changes in input parameters and variables);

iv. procedures (including measures to assure that calibration parameters such as pipe friction factors, are kept within acceptable ranges), using actual system data (e.g., precipitation and flow data), for validating the proposed model's ability to predict accurate and representative (A) hydraulic grade lines and flow rates within the Conveyance and Treatment System, (B) hydraulic grade lines and flow rates of the Municipal Collection Systems at the points of connection to the Conveyance and Treatment System, (C) hydraulic grade lines and flow rates within Critical Portions of the Municipal Collection Systems, (D) flow values for Discharges from the Conveyance and Treatment System, and (E) flow rates and volumes for Discharges from Critical Portions of the Municipal Collection Systems included to achieve adequate Model performance and accuracy;

v. procedures and methodologies to account for the range of wet weather hydrographs and Sewage Parameters for each Combined Sewer System and Sanitary Sewer System, and for each sewershed in its entirety within the Regional Collection System; and

vi. procedures for developing the model in two phases, first to support the development of a request for Preliminary Determination regarding use of the Presumption Approach (pursuant to Paragraphs 45-48 of the Consent Decree), and then, once additional data

is available as a result of ongoing monitoring efforts, to refine the model using that additional data, to support development of the Wet Weather Plan.

5. Upon approval by EPA and PADEP in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall implement the Hydrologic and Hydraulic Model Plan in accordance with the schedules and requirements set forth therein.

Hydrologic and Hydraulic Model Capabilities and Parameters

6. In developing the Hydrologic and Hydraulic Model in accordance with the approved Hydrologic and Hydraulic Model Plan, ALCOSAN shall utilize, among other information, the information collected pursuant to Appendices M (Flow Monitoring), R (Rainfall Monitoring), and O (Combined Sewer Overflow Pollutant Monitoring), and shall ensure that the Hydrologic and Hydraulic Model is capable of simulating and predicting the following parameters:

a. the peak flow capacity at all points within the Conveyance and Treatment System, at each Point of Connection and in Critical Portions of the Municipal Collection Systems;

b. the contribution of Storm Water to flows: (i) to each point within the Conveyance and Treatment System, (ii) at each Point of Connection and (iii) in Critical Portions of the Municipal Collection Systems;

c. the temporal variation in Storm Water flows at all of the locations identified in subparagraph 6(b), above;

d. the contribution of groundwater: (i) to each point within the Conveyance and Treatment System, (ii) at Points of Connection, and (iii) in Critical Portions of the Municipal Collection Systems,

e. the temporal variation in flows related to seasonal variation in groundwater levels at all of the locations identified in subparagraph 6(d), above;

f. the hydraulic grade line profiles, and the temporal variation in hydraulic grade line profiles, of wastewater during both dry weather and wet weather conditions (including, at a minimum, those rainfall conditions described in Paragraph 7, below) within the sewer pipes and sewer structures of the Conveyance and Treatment System, at each Point of Connection, and in Critical Portions of the Municipal Collection Systems;

g. the peak flow capacity of each Pump Station in the Conveyance and Treatment System and the peak flow capacity of each Pump Station within the Municipal Collection Systems for which information has been provided to ALCOSAN and that is relevant to the operation of the Conveyance and Treatment System;

h. for both wet weather (at a minimum, including those wet weather events described in Paragraph 7, below) and dry weather conditions, the temporal variation in flow (including the peak flow) for each Pump Station, interceptor, gravity sewer line, and force main within the Conveyance and Treatment System, at each Point of Connection, and in Critical Portions of the Municipal Collection Systems;

i. the wet weather hydrographs for each Combined Sewer System and Sanitary Sewer System sub-basin, and for each sewershed in its entirety within the Regional Collection System, including baseline wastewater flow that is routed through gravity sewer lines, Pump Stations, force mains, Regulators, and interceptors;

j. the location, duration, temporal variation in flow, and volume of all Sanitary Sewer Overflows and all combined sewer overflows from the Critical Portions of the Municipal Collection Systems;

k. the reduction of Sanitary Sewer System flow and/or other modifications that must be effected to eliminate Sanitary Sewer Overflows from the Sanitary Sewer Outfalls listed in Appendix B;

l. the impact of Inflow and Infiltration rehabilitation projects and stream removal projects on flows within, and Discharges from, the Conveyance and Treatment System, and on flows from the Municipal Collection Systems at their respective Points of Connection to the Conveyance and Treatment System, and on flows for Discharges from Critical Portions of the Municipal Collection Systems;

m. the impacts on flow and water quality within the Conveyance and Treatment System due to modifications planned by Customer Municipalities in the Regional Collection System for the purpose of eliminating Sanitary Sewer Overflows and eliminating or reducing combined sewer overflows;

n. for each of the various remedial control measures considered for the development of the Wet Weather Plan, the location, duration, temporal variation in flow and volume of all Sanitary Sewer Overflows and all Combined Sewer Overflows from the Outfalls listed in Appendices A and B, respectively, and:

i. the extent to which such Sanitary Sewer Overflows will be eliminated from the Conveyance and Treatment System, and;

ii. the annual average percent capture of Combined Sewer System flow generated in the Combined Sewer Systems on both a Combined Sewer System basin and system-wide basis; and

o. based on the information gathered and developed pursuant to Appendix O (Combined Sewer Overflow Pollutant Monitoring), the estimated Pollutant loads discharged from the Combined Sewer Outfalls listed in Appendix A.

7. ALCOSAN shall also ensure that the Hydrologic and Hydraulic Model is capable of simulating and predicting numerical values for each of the parameters identified above in Paragraph 6 of this Appendix for both baseline conditions (with the baseline year contemporaneous to the year or years upon which the "typical year" or "average year" is based), and conditions projected 20 years subsequent to completion of construction of the remedial controls, and implementation of the remedial activities, required under the approved Wet Weather Plan. Furthermore, the Hydrologic and Hydraulic Model shall be capable of continuous simulation of these values at each point of Discharge from the Regional Collection System, included in the Model under a range of Wet Weather Flow and Dry Weather Flow conditions. These conditions shall include, at a minimum:

a. continuous simulation of a "typical year" and/or "average year," based on the recorded rainfall volume and frequency of storms in the geographic area encompassing the Regional Collection System ("ALCOSAN Region");

b. continuous simulation, with statistical significance, of storms of 3-month-return intervals based on actual monitored temporal rainfall distribution data appropriate to the ALCOSAN Region; and

c. continuous simulation, with statistical significance, of storms of varying duration and intensity, including a 10-year return interval, 24-hour duration storm and a two-year return interval, 24-hour duration storm, based on actual monitored temporal rainfall distribution data appropriate to the ALCOSAN Region.

8. In its Hydrologic and Hydraulic Model, ALCOSAN shall take into account other relevant variables including, but not limited to: the age and condition of sewer system components; soil-type and porosity (where applicable); seasonally-varying groundwater Infiltration; amount of drainage area; service area size; impervious area; historic rainfall and flow data; historic Inflow and Infiltration data; and current and projected population, river elevation; and seasonal population patterns, if applicable.

9. ALCOSAN shall configure the Hydrologic and Hydraulic Model based on representative, accurate, and verified data attributable to the Conveyance and Treatment System (e.g., pipe sizes and invert elevations, manhole rim elevations) and Critical Portions of the Municipal Collection Systems. ALCOSAN shall also Validate the Hydrologic and Hydraulic Model according to accepted engineering practices using independent sets of spatially and temporally representative flow and rainfall data obtained or used under this Consent Decree. ALCOSAN shall, in configuring Critical Portions of the Municipal Collection Systems and Validating its Hydrologic and Hydraulic Model, utilize, respectively, all relevant available Municipal Collection System attribute data and flow data generated by and/or for the Customer Municipalities.

APPENDIX Q

Receiving Water Quality Monitoring

General Requirements

1. ALCOSAN shall monitor the water quality of receiving waters pursuant to Paragraph 41 of this Consent Decree to evaluate whether and to what extent these waters are in attainment with all applicable Water Quality Standards. Pursuant to Paragraph 42 of the Consent Decree, ALCOSAN shall also monitor the water quality of receiving waters to support the development and Validation of the Receiving Water Quality Model required under Paragraphs 43, 52, and 56 of this Consent Decree. In accordance with Paragraphs 41 and 42 of the Consent Decree and the requirements of this Appendix, ALCOSAN shall submit to the Plaintiffs for review and comment pursuant to Section VIII (Review and Approval of Submittals) a plan for monitoring receiving waters to evaluate water quality ("Receiving Water Quality Monitoring Plan") and, as applicable, a plan for monitoring receiving waters to support the development and Validation of the Receiving Water Quality Model ("Receiving Water Quality Model Validation Monitoring Plan").

2. Upon approval by EPA and PADEP, ALCOSAN shall implement the Receiving Water Quality Monitoring Plan and the Receiving Water Quality Model Validation Plan in accordance with the schedule and requirements therein.

3. ALCOSAN may, in lieu of some or all of the monitoring required to satisfy the requirements of this Appendix, utilize the data that was collected and/or used by a third party within that same time period, so long as all such receiving water quality data collected to evaluate attainment with all applicable Water Quality Standards meet the spatial, temporal, and analytical requirements of Paragraph 6(e) of this Appendix and those monitoring data used to support the Receiving Water Quality Model are collected within an appropriate time period and are of

adequate quality to support the development and Validation of the Receiving Water Quality Model required by Appendix R (Receiving Water Quality Model).

4. ALCOSAN shall include in the periodic progress reports required pursuant to Section VII (Reporting and Recordkeeping) the results for receiving water quality samples collected during each reporting period.

Receiving Water Quality Monitoring For Determining Attainment with Water Quality Standards

5. Within one year after the Date of Entry, ALCOSAN shall submit to the Plaintiffs, pursuant to Section VIII (Review and Approval of Submittals), a Receiving Water Quality Monitoring Plan for sampling the receiving waters to characterize the impacts of Combined Sewer Overflows on water quality and to determine whether and to what extent there is attainment of relevant and all applicable Water Quality Standards (a) prior to the submission of the Wet Weather Plan, (b) during the implementation of the Wet Weather Plan, and (c) during the Post-Construction monitoring period.

6. ALCOSAN shall include in its Receiving Water Quality Monitoring Plan provisions for:

a. collecting samples during an appropriate and representative range of dry and wet weather conditions;

b. collecting sufficient water quality samples to characterize, for all Sensitive Areas, water quality in receiving waters immediately adjacent to Combined Sewer Outfalls and in the locations downstream of Combined Sewer Outfalls that are likely to be impacted by Discharges from these Combined Sewer Outfalls;

c. selecting individual sampling locations, and establishing spatial distributions of those sampling locations, that are appropriate to the particular receiving waters;

d. sampling for the Sewage Parameters and Pollutants listed in Paragraphs 8 and 9 of Appendix O (Combined Sewer Overflow Pollutant Monitoring), with the exception of those parameters and pollutants that are expected to be present due to the contribution of Industrial Users and where no such Industrial Users' contributions are likely to exceed applicable Water Quality Standards for such parameters and pollutants;

e. sufficient sampling to evaluate attainment with all applicable Water Quality Standards (e.g., if five samples within a 30 day period are required to assess attainment of such Water Quality Standards, then ALCOSAN shall collect five samples within a 30 day period);

f. sampling and analysis in accordance with EPA's 1999 "Combined Sewer Overflows: Guidance for Monitoring and Modeling" and 40 C.F.R. Part 136; and

g. giving highest priority to the evaluation of attainment in Sensitive Areas.

7. ALCOSAN shall also provide in its Receiving Water Quality Monitoring Plan provisions for receiving water sampling in accordance with the schedule in such plan through the Post-Construction monitoring period, and shall tailor the receiving water sampling, as appropriate, to ensure that it achieves the requirements of this Appendix. The plan may require fewer numbers of receiving water sampling events prior to the request for Preliminary Determination and during implementation of the Wet Weather Plan, while specifying a more frequent number of receiving water sampling events to evaluate the effectiveness of Combined Sewer Overflow controls during implementation of the approved Wet Weather Plan, as remedial control measures are constructed and as remedial control measures are implemented in those portions of the Conveyance and Treatment System, and during the Post-Construction monitoring period. ALCOSAN shall also include in its Receiving Water Quality Monitoring Plan a schedule identifying which monitoring activities will be completed prior to (a) the submission of any request for a Preliminary

Determination, (b) the submission of a Wet Weather Plan based on the Presumption Approach, and (c) the submission of a Wet Weather Plan based on the Demonstration Approach. This schedule shall also ensure that ALCOSAN completes receiving water sampling to evaluate attainment with all applicable Water Quality Standards for bacteria in at least one location in each Sensitive Area prior to submission of a request for a Preliminary Determination pursuant to Paragraphs 45 through 47 of this Consent Decree.

8. If the Wet Weather Plan identifies dates for implementing combined sewer overflow remedial control measures likely to achieve interim improvements in water quality, the Receiving Water Quality Monitoring Plan should include a receiving water sampling schedule to evaluate the effectiveness of such measures.

9. ALCOSAN shall submit a revised Receiving Water Quality Monitoring Plan in the following circumstances:

a. EPA and/or PADEP determine that the receiving water quality data obtained as a result of ALCOSAN's implementation of its approved Receiving Water Quality Monitoring Plan are not sufficient to support the remedial control measures proposed by ALCOSAN as part of its Wet Weather Plan, and additional receiving water quality monitoring is necessary to support the measures ALCOSAN is proposing;

b. EPA and/or PADEP determine that the Receiving Water Quality Monitoring Plan does not otherwise meet the requirements of this Appendix;

c. it is two years prior to the estimated completion of construction of the remedial controls and implementation of the remedial activities required in the approved Wet Weather Plan, as set forth in Paragraph 10 of this Appendix

d. ALCOSAN submits a revised Wet Weather Plan in accordance with Paragraph 67 of this Consent Decree; and/or

e. ALCOSAN submits a proposed modification to its Receiving Water Quality Monitoring Plan.

10. The provisions of ALCOSAN's Receiving Water Quality Monitoring Plan governing Post-Construction monitoring shall be considered preliminary. Two years prior to the estimated completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan, ALCOSAN shall submit, if appropriate, to the Plaintiffs for review and approval, in accordance with Section VIII (Review and Approval of Submittals), proposed modifications to the Post-Construction monitoring provisions of its Receiving Water Quality Monitoring Plan.

11. To ensure that the Post-Construction receiving water quality monitoring is sufficient to determine Post-Construction attainment with all applicable Water Quality Standards, ALCOSAN shall extend sampling periods, if necessary, to ensure representation of sufficient wet weather events during the proposed sampling period(s).

Receiving Water Quality Monitoring For Developing and Validating the Receiving Water Quality Model

12. If ALCOSAN develops a Receiving Water Quality Model pursuant to this Consent Decree, then ALCOSAN shall submit the Receiving Water Quality Model Validation Monitoring Plan. ALCOSAN shall submit the Receiving Water Quality Model Validation Monitoring Plan in accordance with Section VIII (Review and Approval of Submittals) on or before the date the ALCOSAN submits its Receiving Water Quality Model Plan.

13. ALCOSAN shall include in its Receiving Water Quality Model Validation Monitoring Plan procedures for collecting adequate water quality sampling data to support the

development and Validation of the Receiving Water Quality Model and water quality assessment tools required by Appendix R (Receiving Water Quality Model) such that the model is capable of characterizing:

a. the water quality in the receiving waters, as defined in Appendix R (Receiving Water Quality Model), during a range of wet and dry weather conditions, including the water quality response of such "receiving waters" to a range of wet and dry weather conditions;

b. the impacts of Discharges from the Conveyance and Treatment System, including those that may include Discharges from Industrial Users (in accordance with Appendix F,) on the water quality of such receiving waters during a range of dry and wet weather conditions; and

c. the impacts of Discharges from the Regional Collection System on the water quality of such receiving waters during a range of dry and wet weather conditions.

14. ALCOSAN shall include in its Receiving Water Quality Model Validation Monitoring Plan provisions for:

a. collecting samples during an appropriate range of dry and wet weather conditions to support the purposes identified in Paragraph 13 of this Appendix;

b. collecting samples in receiving waters at locations to allow for the characterization of:

i. the extent to which various Pollutant load sources contribute to adverse impacts on receiving water quality, including Pollutants discharged from Separate and Combined Sewer Systems;

ii. water quality throughout all receiving waters impacted by Combined Sewer Overflows from the Conveyance and Treatment System; and

iii. water quality in areas downstream of the Combined Sewer Outfalls that are likely to be impacted by Discharges from these Combined Sewer Outfalls.

c. ensuring that the individual sampling locations and the spatial distribution of those sampling locations is appropriate to the receiving water, that sampling on the three largest rivers will involve a combination of both centerline samples and series of transects at appropriate spacing (as well as a series of centerline samples on smaller rivers and streams), and that, as appropriate, sampling in the three large rivers will involve sampling at multiple depths.

d. conducting sampling for the Sewage Parameters and Pollutants listed in Paragraphs 8 and 9 of Appendix O (Combined Sewer Overflow Pollutant Monitoring), except, however, that ALCOSAN need not sample for those Sewage Parameters and Pollutants that are expected to be present due to the contribution of Industrial Users where no such Industrial Users are likely to contribute to an exceedance of all applicable Water Quality Standards;

e. conducting sampling during a sufficient number and an appropriate range of magnitude of storms to support the purposes identified in Paragraph 13 of this Appendix; and

f. conducting sampling and analysis in accordance with EPA's Combined Sewer Overflow Policy and 40 C.F.R. Part 136.

When characterizing impacts to water quality for small tributaries upstream of Combined Sewer Outfalls, ALCOSAN may limit sampling to locations immediately upstream of the confluence of such streams with the Allegheny, Ohio, or Monongahela Rivers.

15. ALCOSAN shall include in its Receiving Water Quality Model Validation Monitoring Plan a schedule of sampling activities, including extended sampling periods should insufficient wet weather events occur during the proposed sampling period(s), to ensure that

ALCOSAN's Receiving Water Model Validation Monitoring Plan is consistent with the requirements of this Appendix.

APPENDIX R

Receiving Water Quality Model

1. ALCOSAN shall develop a water quality model to characterize impacts on receiving waters from Combined Sewer Overflows (a) if ALCOSAN selects the Demonstration Approach as set forth in Paragraph 53 of this Consent Decree, or (b) if EPA and PADEP provide ALCOSAN with a determination of nonattainment based on Post Construction water quality monitoring (as provided in Paragraphs 43, 52, and/or 56 of this Consent Decree).

2. Not later than one year prior to the date of submission of the Wet Weather Plan based on the Demonstration Approach, ALCOSAN shall submit to the Plaintiffs, pursuant to Section VIII (Review and Approval of Submittals), a "Receiving Water Quality Model Plan" for the development of one or more model(s) and other receiving water assessment tools to characterize the effects of Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System, if any, on water quality in the receiving waters. For purposes of this Appendix, the "receiving waters" shall mean the following water bodies: Ohio River, Monongahela River, Allegheny River, Turtle Creek, Chartiers Creek and Sawmill Run.

3. ALCOSAN shall utilize the water quality model(s) and/or assessment tools to characterize these effects under conditions existing at the time of development of the Wet Weather Plan (if such modeling is required in accordance with the Consent Decree) both with and without the implementation of remedial control measures. In addition, should Post-Construction water quality monitoring performed in accordance with this Consent Decree not demonstrate to the satisfaction of EPA, PADEP and ACHD that the receiving waters are in attainment with the all applicable Water Quality Standards for the Sewage Parameters and Pollutants (except for PCBs) set forth in Paragraphs 8 and 9 of Appendix O (Combined Sewer Overflow Pollutant Monitoring), then ALCOSAN shall also utilize the model(s) and/or assessment tools to characterize the effects

of Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System, on receiving water quality under the conditions existing at the time of completion of construction of the remedial controls, and implementation of the remedial activities required under the approved Wet Weather Plan, and 20 years thereafter.

4. In its Receiving Water Quality Model Plan, ALCOSAN shall propose one or more appropriate computer model(s) to assess flow and water quality in the receiving waters. In the remaining receiving streams within ALCOSAN's service area, ALCOSAN shall utilize either the same models and /or assessment tools that it is utilizing for the receiving waters or other appropriate models and/or appropriate assessment tools, described in EPA's 1999 "Combined Sewer Overflow Guidance for Modeling and Monitoring." ALCOSAN shall select appropriate water quality assessments tools that are appropriate for the hydraulic characteristics of each of the smaller streams, and that provide an accurate and representative assessment of water quality impacts.

5. In its Receiving Water Quality Model Plan, ALCOSAN shall provide the following information regarding each of the specific model(s) it proposes to use on each of the receiving waters and, except as provided herein, on each receiving stream for which ALCOSAN proposes a model in its Receiving Water Quality Model Plan:

a. a description of the water quality model(s);

b. a determination of whether or not the model has been developed and approved by EPA, whether it is publicly available, rather than proprietary, and whether or not the model has been widely accepted by the technical community;

c. if the proposed model has not been approved by EPA, is not publicly available, or not widely accepted by the technical community, the model's specific attributes, characteristics, limitations, and base algorithms for each major computational function;

d. how ALCOSAN shall configure that water quality model based on representative, accurate, and verified data so to as to achieve adequate model performance and accuracy;

e. all input parameters, constants, assumed values and expected outputs;

f. the computer hardware required to run the model;

g. for any model of receiving waters, a digital map that illustrates the portions of each of the receiving waters to be included in the proposed model, and that illustrates how each will be broken down into segments; and

h. for any model of receiving waters, a description of how the model will be applied to simulate and predict stream flow and water quality, including:

i. how data accuracy and representativeness will be assured;

ii. the configuration of the proposed model;

iii. procedures and protocols for the performance of sensitivity analyses (i.e., how the proposed model responds to changes in the technical input parameters and variables); and

iv. procedures for Validating the proposed model's ability to adequately predict accurate and representative stream flows and water quality, using independent sets of spatially and temporally representative flow and rainfall data obtained or used pursuant to this Consent Decree, including measures to assure that calibration variables are kept within acceptable ranges.

6. In its Receiving Water Quality Model Plan, ALCOSAN shall also provide the following information regarding each of the water quality assessment tool(s) it proposes to use on a receiving stream or a receiving water:

a. a description of the water quality assessment tool and a justification for its use on each stream for which it is proposed;

b. if the proposed tool is not recommended by EPA for use in the development of wet weather plans (or long term control plans), a summary of relevant technical references (with those references appended thereto) demonstrating the tool's applicability to the proposed usage;

c. all input parameters, constants, assumed values, and expected outputs;

d. a map that illustrates the portions of each of the receiving waters and streams to be included in the proposed assessment tool, and that illustrates how, if appropriate, each will be broken down into segments for analysis; and

e. a description of how it will be applied to simulate and predict water quality, including procedures for verifying the proposed water quality assessment tool's ability to adequately predict accurate and representative water quality, by comparing the tools outputs to actual water quality data.

7. In developing the Receiving Water Quality Models and assessment tools in accordance with the approved Receiving Water Quality Model Plan, ALCOSAN shall utilize, among other information, the information collected pursuant to Appendices M (Flow Monitoring), N (Rainfall Monitoring), O (Combined Sewer Overflow Pollutant Monitoring), P (Hydrologic and Hydraulic Model) and Q (Receiving Water Quality Monitoring) and shall ensure that the Receiving Water Quality Models and assessment tools are capable of simulating and predicting the following:

a. the effect of Discharges from the Conveyance and Treatment System on receiving water quality in the receiving waters for both individual storm events and for long term (i.e., "typical year") simulations, including, if ALCOSAN submits a Wet Weather Plan based on the Demonstration Approach, whether the remedial controls and activities identified in any such proposed plan will be sufficient to bring ALCOSAN into compliance with Paragraphs 16 through 18 of the Consent Decree and, regardless of the wet weather approach utilized, whether the remedial controls and activities actually implemented by ALCOSAN under this Consent Decree have been sufficient to bring ALCOSAN into compliance with Paragraphs 16 through 18 of the Consent Decree;

b. the effect of Discharges from the Conveyance and Treatment System and Critical Portions of the Municipal Collection Systems (as defined in Appendix P (Hydrologic and Hydraulic Model)) on receiving water quality in the receiving waters under current conditions and under conditions existing after the implementation of the approved Wet Weather Plan and for 20 years thereafter, for both individual storm events and for long term (i.e., "typical year") simulations;

c. the effect that Pollutants contributed by sources other than the Regional Collection System have upon receiving water quality in the receiving waters under current conditions and under conditions existing after the implementation of the approved Wet Weather Plan and for twenty years thereafter, for both individual storm events and for long term (i.e., "typical year") simulations;

d. spatial and temporal changes in concentrations for Pollutants of concern;

e. the duration of exceedance of all applicable Water Quality Standards at any specified point in the receiving waters during individual storms and long term simulations, and the

effect of Discharges from the Conveyance and Treatment System upon the duration, frequency, magnitude, and spatial extent of any such exceedances;

f. the contribution and effects of different river conditions on the temporal and spatial extent of exceedances of all applicable Water Quality Standards during individual storm simulations and during long term wet weather simulations;

g. resuspension of bacteria from sediment sources; and

h. sediment oxygen demand and algal effects.

8. ALCOSAN shall also ensure that all Receiving Water Quality Models and water quality assessment tools used are capable of simulating and predicting numerical values for each of the Sewage Parameters or Pollutants (except for PCBs) set forth in Paragraphs 8 and 9 of Appendix O (Combined Sewer Overflow Pollutant Monitoring) for both current conditions and for conditions projected upon completion of construction of the remedial controls and implementation of the remedial activities required under the approved Wet Weather Plan and 20 years thereafter. Furthermore, the models shall be capable of continuous simulation of these values in the receiving waters under a range of Wet Weather Flow and Dry Weather Flow conditions that shall include, at a minimum:

a. continuous simulation of a "typical year" and/or "average year," which shall be based on the recorded rainfall volume and frequency of storms in the ALCOSAN region;

b. continuous simulation, with statistical significance, of storms of sufficient duration and having sufficient rainfall intensities so as to result in significant activation of the Combined Sewer Outfalls and in representative Storm Water contribution to Combined Sewer Overflow Pollutant loads, based on actual monitored temporal rainfall distribution data appropriate to the ALCOSAN region; and

c. continuous simulation, with statistical significance, of storms of varying duration and intensity, including: (i) a 10-year return interval, 24-hour duration storm and (ii) a two-year return interval, 24-hour duration storm, based on actual monitored temporal rainfall distribution data appropriate to the Regional Collection System.

9. In its Receiving Water Quality Model Plan, ALCOSAN shall also propose a schedule for the development of each model and water quality assessment tool, consistent with the schedules set forth in the Consent Decree for implementation of the Receiving Water Quality Monitoring Plan and the Wet Weather Plan.

10. Upon approval of the Receiving Water Quality Model Plan in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall implement the plan in accordance with the approved schedule and terms set forth therein.

APPENDIX S

Wet Weather Plan Requirements for Presumption Approach

1. ALCOSAN shall evaluate a range of remedial controls and remedial activities predicted to accomplish the requirements of Paragraphs 16, 17, 18(b), and 18(c) of the Consent Decree. In its evaluation of each potential remedial control and activities, ALCOSAN shall use the Hydrologic and Hydraulic Model to simulate:

a. conditions as they exist at the time of submission, flows generated within the existing Regional Collection System, flows from the Regional Collection System to the Conveyance and Treatment System, and Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System to receiving waters; and

b. conditions as they are expected to exist after construction and operation of the range of remedial controls and the implementation of the remedial measures identified by ALCOSAN pursuant to this Paragraph, flows generated within the existing Regional Collection System, flows from the Regional Collection System to the Conveyance and Treatment System, and Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System to receiving waters.

Such flows shall be simulated for the conditions identified in Paragraph 7 of Appendix P (Hydrologic and Hydraulic Model).

2. ALCOSAN shall evaluate the effectiveness (in terms of Pollutant loading reductions for Discharges from the Conveyance and Treatment System) and water quality benefits of constructing and implementing various remedial controls and remedial activities and combinations of such controls and activities, which shall include, but not be limited to:

a. construction of sewage treatment plant(s) in addition to the Sewage Treatment Plant;

b. storage of Wet Weather Flows;

c. construction of facilities (such as high rate treatment or ballasted flocculation facilities) for providing, at minimum, Primary Treatment to captured Combined Sewer Overflows;

d. construction of facilities for providing disinfection (and dechlorination if necessary) of Combined Sewer Overflows;

e. construction of facilities for removing solids and floatables from Combined Sewer Overflows;

f. construction of relief sewers;

g. relocation of Combined Sewer Outfalls;

h. implementation of pretreatment measures to reduce flows and/or Pollutants discharged into the Regional Collection System from Industrial Users; and

i. construction and/or implementation of combinations of the above remedial control measures.

ALCOSAN shall first consider the practical and technical feasibility of each remedial control and each remedial activity. It shall then analyze the costs and benefits of each option found to be practically or technically feasible in accordance with Appendix U (Cost Analysis for Combined Sewer Overflow Remedial Controls and Remedial Activities).

3. ALCOSAN shall include, with input from each Customer Municipality pursuant to Section VI, Subsection N (Coordination with Customer Municipalities):

a. the total service population for the area that is tributary to each Point of Connection, and the forecasts of total flow (in gallons per day and, if available, in gallons-per-day-

per-inch-mile of sewer line) that each Point of Connection will contribute to the Conveyance and Treatment System upon implementation of the Wet Weather Plan;

b. a determination of the flows from both the contributing Combined Sewer System and/or the Sanitary Sewer System at each Point of Connection, a description of how each such determination was made, and a description of how such flows will be managed and/or maintained at each Point of Connection; and

c. a program for managing contributions from the Customer Municipalities so that such contributions to the Conveyance and Treatment System do not either result in exceedances of system capacity or preclude attainment of all applicable Water Quality Standards.

4. Based on the evaluations required by this Appendix and Section VI of the Consent Decree (Clean Water Act Remedial Controls and Activities), ALCOSAN shall propose to EPA and PADEP for review and approval, and to ACHD for comment, in accordance with Section VIII (Review and Approval of Submittals), remedial controls and remedial activities that will best achieve the requirements of Paragraphs 16 through 18 of the Consent Decree. With this proposal, ALCOSAN shall identify which of these remedial controls and remedial activities it proposes to construct and implement, and shall detail the design criteria and quantifiable performance criteria for those controls and activities. These design criteria and performance measures shall include, but not be limited to:

a. pumping capacities of Pump Stations;

b. design capacity of storage facilities;

c. percentage removal of specified Pollutants by treatment facilities; and

d. concentration and/or mass loadings for specified Pollutants.

5. ALCOSAN shall describe in its Wet Weather Plan a phased program for constructing the remedial controls and for implementing the proposed remedial activities, including, at a minimum, a schedule and budget for the following phases of construction and implementation for the Conveyance and Treatment System:

a. preliminary design;

b. final design;

c. bidding and bid review, if any;

d. initiation of construction and/or implementation;

e. initiation of operation for constructed remedial controls; and

f. performance testing.

6. After completing construction of the remedial controls and implementation of the remedial activities pursuant to the approved Wet Weather Plan, ALCOSAN shall, on an annual basis, submit to EPA and PADEP for review and approval proposed best management practices for the operation and maintenance of each remedial control and each remedial activity implemented for the first time in the year in question. Upon approval by EPA and PADEP in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall incorporate the best management practices into its Operation and Maintenance Manuals.

APPENDIX T

Bypass Demonstration

1. If ALCOSAN wishes to propose as part of the Wet Weather Plan referred to in this Consent Decree that it be allowed to bypass all or any portion of the primary or secondary treatment process at the Sewage Treatment Plant, ALCOSAN shall demonstrate, to EPA's and PADEP's satisfaction, at a minimum, the following:

a. that the proposed bypass is unavoidable to prevent severe property damage;

b. that it is either technically or financially infeasible to provide full treatment for the Wet Weather Flow that ALCOSAN proposes to bypass. For the purposes of this Section "Full Treatment" shall mean that flow shall not be routed around any treatment unit or process within the Sewage Treatment Plant. This demonstration shall include:

i. consideration of enhanced treatment (e.g., chemical addition) in the primary clarifiers and use of non-biological technologies in the secondary treatment units;

ii. justification for the cut-off point at which the flow shall be diverted from the primary or secondary treatment process at the Sewage Treatment Plant;

iii. a demonstration that conveyance of Wet Weather Flow to the Sewage Treatment Plant for partial treatment is more appropriate than other remedial control measures (such as storage and pump back for secondary treatment, satellite treatment, etc.); and

iv. a demonstration that the secondary treatment portion of the Sewage Treatment Plant in its current form is properly operated and maintained and that the Sewage Treatment Plant is designed to meet secondary limits for flows greater than the Peak Dry Weather Flow plus an amount of Wet Weather Flow equal to 25% of Peak Dry Weather Flow;

c. that the character (including chemical composition) of the material entering the Sewage Treatment Plant for treatment renders it appropriate for less than Full Treatment;

d. that the final effluent discharged from the Sewage Treatment Plant shall not cause or contribute to a violation of all applicable Water Quality Standards;

e. that all flow entering the Sewage Treatment Plant shall receive at least Primary Treatment, solids and floatables removal and disinfection;

f. a discussion of what additional treatment with respect to the existing Sewage Treatment Plant processes, such as chemically-assisted clarification, ballasted flocculation, lamella clarification, micro filtration, and dissolved air flotation, may be reasonably provided; and

g. that Core Flow, as defined below, will receive Secondary Treatment. For purposes of this Subparagraph, "Core Flow" shall mean:

i. peak flow that is generated in Sanitary Sewer Systems (regardless of whether such flow is Wet Weather Flow or Dry Weather Flow) and routed to the Conveyance and Treatment System; and

ii. 125% of Peak Dry Weather Flow that is generated in the Combined Sewer System and routed to the Conveyance and Treatment System.

2. If ALCOSAN satisfactorily demonstrates the above, then, in so bypassing at the Sewage Treatment Plant, ALCOSAN shall:

a. optimize operation of all treatment units and processes at the Sewage Treatment Plant, particularly during periods of high flow, so that all flow, no matter how routed through the Sewage Treatment Plant, receives as much treatment as feasible, consistent with maintaining optimum treatment and effluent quality;

b. when flows into the Sewage Treatment Plant do not exceed Plant Secondary Capacity, ensure that any Discharge from the Sewage Treatment Plant shall meet all permit limits, i.e., both technology-based and water quality-based limits;

c. achieve Secondary Treatment for any flow that is not routed around any treatment unit at the Sewage Treatment Plant;

d. ensure that all Core Flow achieves Secondary Treatment, regardless of whether the Core Flow exceeds Plant Secondary Capacity;

e. sample every day any flow that receives less than Full Treatment;

f. demonstrate that the average of all daily samples taken pursuant to Subparagraph 2(e), above, achieves a percent reduction in carbonaceous biochemical oxygen demand and total suspended solids that the Plaintiffs have approved in writing for such bypassed flow during the event;

g. ensure that all Discharges from the Sewage Treatment Plant meet water quality-based permit limits at all times, except that Discharges from any permitted Outfall at the Sewage Treatment Plant during periods of preauthorized bypass, as described above, need not meet the technology- based effluent limits required by 40 C.F.R. Part 133 for the time period that flows into the Sewage Treatment Plant are being bypassed;

h. on each day during a month with preauthorized bypass, collect analytical data on the monthly technology-based limits under 40 C.F.R. Part 133 (such as the 85% removal requirement), and report the analytical data to the entities designated in the NPDES Permit to receive such data; and

i. not use analytical data that was gathered on days during which bypassing occurred to calculate the average of any monthly, weekly or daily technology-based effluent limitation for the applicable time period.

APPENDIX U

Cost Analysis for Combined Sewer Overflow Remedial Controls and Remedial Activities

1. ALCOSAN shall distinguish between those controls and activities evaluated and/or proposed under the Wet Weather Plan that are for eliminating Sanitary Sewer Overflows from the Conveyance and Treatment System and those that are for controlling Combined Sewer Overflows. ALCOSAN's evaluation of remedial controls and remedial activities for Combined Sewer Overflows shall be consistent with the guidance provided in Chapter 3 of the Combined Sewer Overflows: Guidance for Long-Term Control Plan, Office of Water EPA 832-B-95-002, September, 1995 ("LTCP Guidance"). In particular, ALCOSAN shall include in its evaluation of such remedial controls and remedial activities:

a. an assessment of a range of "sizes" of each remedial control and activity considered ("size" may be defined based on the percentage of untreated Combined Sewer Overflow (e.g., 0-5%, 6-10%, 11-15% and 16-20%));

b. an evaluation of the "Project Costs," as that term is described on pages 3-49 through 3-51 of the LTCP Guidance, for each remedial control and each remedial activity, or mix of remedial and control activities, which ALCOSAN has evaluated. The evaluation of Project Costs shall include:

i. the total project costs for each remedial control and remedial activity or mix of remedial controls and activities, and a break down of the capital costs, annual operation and maintenance costs, and life cycle costs which went into calculating the total project costs for each remedial control and each remedial activity or mix of remedial controls and activities; and

ii. the project costs for each separate component of each remedial control and each remedial activity or mix of remedial controls and activities, and a break down

of the capital costs, annual operation and maintenance costs, and life cycle costs which went into calculating the project costs for each separate component of each remedial control and each remedial activity , or mix of remedial controls and activities. The terms “project costs,” “capital costs,” “annual operation and maintenance costs” and “life cycle costs” shall have the meaning ascribed to them on pages 3-49 and 3-51 of the LTCP Guidance;

c. an evaluation of ALCOSAN’s financial capability to fund all remedial controls and remedial activities for Combined Sewer Overflows that have been considered. This evaluation shall include an evaluation of factors such as:

i. Median household income/total project cost per household;

ii. Per capita debt as a percent of full market property value;

iii. Property tax revenues as a percent of full market property value;

iv. Property tax collection rate;

v. Unemployment;

vi. Bond rating;

vii. Grant and loan availability;

viii. Current and projected residential, commercial and Industrial User fees;

ix. Other viable funding mechanisms and sources of financing; and

x. Other factors which ALCOSAN believes are important for this financial evaluation;

d. “knee of the curve” cost-performance analyses of the range of options that are being considered that will allow for the comparison of the costs per unit of measure (in mass) of Pollutants removed from the Discharges for each of the remedial controls and each of the

remedial activities that is being considered; The knee of the curve analysis compares the benefit of a particular project to the cost with a point on the graph (the knee of the curve) where the ratio of cost to benefit increases dramatically. An assessment of costs and financial capability on a regional basis, i.e., accounting for the overall costs and economic feasibility of implementation of combined sewer overflow controls and measures for ALCOSAN and all Customer Municipalities that operate Combined Sewer Systems. In performing this assessment, ALCOSAN shall consider the controls and measures proposed in any and all long term control plans developed by the Customer Municipalities and obtained by ALCOSAN pursuant to Section VI, Subsection N (Coordination with Customer Municipalities) of the Consent Decree; and

e. an assessment of total Wet Weather Plan costs.

APPENDIX V

Wet Weather Plan Requirements for Demonstration Approach

1. ALCOSAN shall use, inter alia, the Hydrologic and Hydraulic Model and Water Quality Model to determine what reductions in Pollutant loads from the Combined Sewer Overflows in the Conveyance and Treatment System are necessary to achieve the requirements of Paragraphs 16, 17, and 18(a) of the Consent Decree.

2. ALCOSAN shall evaluate a range of remedial controls and remedial measures predicted to accomplish the requirements identified in Paragraphs 16, 17, and 18(a) of the Consent Decree.

3. At a minimum, ALCOSAN shall include in its evaluation:

a. using the Hydrologic and Hydraulic Model to simulate conditions as they exist at the time of submission:

i. flows generated within the existing Regional Collection System,

ii. flows generated from the Municipal Collection Systems to the Conveyance and Treatment System, and

iii. using the Receiving Water Quality Model, Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System to receiving waters, including how those Discharges cause or contribute to exceedances of all applicable Water Quality Standards; and

b. using the Hydrologic and Hydraulic Model and the Receiving Water Quality Model to simulate conditions as they are expected to exist after construction of such remedial controls and implementation of such remedial activities:

i. flows generated within the existing Regional Collection System,

ii. flows from the Municipal Collection Systems to the Conveyance and Treatment System, and

iii. using the Receiving Water Quality Model, the Combined Sewer Overflows and Sanitary Sewer Overflows from the Conveyance and Treatment System to receiving waters, including how those Discharges are predicted to cause or contribute to an exceedance of an applicable Water Quality Standard.

ALCOSAN shall simulate for each such flow, for the conditions identified in Paragraph 7 of Appendix P (Hydrologic and Hydraulic Model).

4. ALCOSAN shall evaluate the effectiveness (in terms of Pollutant loading reductions for Discharges from the Conveyance and Treatment System) and the water quality benefits of constructing various remedial controls and implementing various remedial activities, and combinations of controls and activities, which shall include, but not be limited to:

a. construction of sewage treatment plant(s) in addition to the Sewage Treatment Plant;

b. storage of Wet Weather Flows;

c. construction of remedial controls (such as high rate treatment or ballasted flocculation facilities) to address captured Combined Sewer Overflows;

d. construction of facilities for providing disinfection (and dechlorination if necessary) of Combined Sewer Overflows;

e. construction of facilities for removing solids and floatables from Combined Sewer Overflows;

f. construction of conveyance lines or parallel interceptors;

g. relocation of Combined Sewer Outfalls;

h. implementation of pretreatment measures to reduce flows and/or Pollutants discharged into the Regional Collection System from Industrial Users;

i. construction and/or implementation of combinations of the above remedial controls and activities.

ALCOSAN shall first consider the practical and technical feasibility of each remedial control and each remedial activity. It shall then analyze the costs and benefits of each option not found to be practically or technically infeasible in accordance with Appendix U (Cost Analysis for Combined Sewer Overflow Remedial Controls and Remedial Activities).

5. ALCOSAN's evaluation shall include an estimate of the probability of the occurrence of exceedances of all applicable Water Quality Standards resulting from Combined Sewer Overflows from the Conveyance and Treatment System under each of the remedial controls and each of the remedial activities considered. In performing the evaluation of remedial controls and remedial activities required by Paragraph 2 of this Appendix, ALCOSAN shall determine for each of the remedial controls and each of the remedial activities considered:

a. the predicted capacity of the Regional Collection System for each proposed remedial controls and each remedial activity to convey flow to the Sewage Treatment Plant;

b. the predicted amount of flow that the Conveyance and Treatment System will discharge to receiving waters through Combined Sewer Overflows in a range of storm events, and the predicted frequencies and volumes of Combined Sewer Overflows from each Combined Sewer Outfall;

c. the predicted amount of Pollutant loadings from Combined Sewer Outfalls;

d. the identity of each physical modification that will be made to the Regional Collection System and a description of the modification providing:

i. the additional conveyance capacity (in MGD) in the Regional Collection System that will result from the modification;

ii. the reduction in Combined Sewer Overflow Pollutant load(s) to be achieved by the modification;

iii. all flow limits, including anticipated flow volumes at each Point of Connection, upon which the proposed modification relies; and

iv. best management practices upon which satisfactory performance of the modification relies; and

e. the impact of the remedial controls and remedial activities on the protection of Sensitive Areas.

6. ALCOSAN shall include, with input from each Customer Municipality pursuant to Section VI, Subsection N (Coordination with Customer Municipalities):

a. the total population forecasts for the area that is tributary to each Point of Connection, and the estimated amount of total gallons per day and, if available, in gallons per-day-per-inch-mile of sewer line, that each Point of Connection will contribute to the Conveyance and Treatment System, upon implementation of the Wet Weather Plan;

b. a determination of the flows from both the contributing Combined Sewer System and/or the Sanitary Sewer System at each Point of Connection, a description of how each such determination was made, and a description of how such flows will be managed and/or maintained at each Point of Connection; and

c. a program for managing contributions from each Customer Municipality so that such contributions to the Conveyance and Treatment System do not result in exceedances of system capacity and do not preclude attainment with all applicable Water Quality Standards.

7. Based on the evaluations required by this Appendix and Section VI (Clean Water Act Remedial Controls and Remedial Activities), ALCOSAN shall submit a proposal to EPA and PADEP for review and approval, and to ACHD for review and comment, in accordance with Section VIII (Review and Approval of Submittals), identifying those remedial controls and remedial activities will best achieve the requirements of Paragraphs 16 through 18 of the Consent Decree. Within this proposal, ALCOSAN shall identify which of these remedial controls it proposes to construct and which of these remedial activities it proposes to implement and shall detail the design criteria and quantifiable performance criteria for those controls and activities. These design criteria and performance criteria shall include, but not be limited to:

a. pumping capacities of Pump Stations;

b. design capacity of storage facilities; and

c. percent removal of specified Pollutants by treatment.

8. ALCOSAN shall describe in its Wet Weather Plan a phased program for constructing the remedial controls and for implementing the proposed remedial activities, including, at a minimum, a schedule and budget for the following phases of construction and implementation for the Conveyance and Treatment System:

a. preliminary design;

b. final design;

c. bidding and bid review, if any;

d. initiation of construction or implementation;

e. initiation of operation for remedial controls; and

f. performance testing.

9. After completing construction of the remedial controls and implementation of the remedial controls and remedial activities pursuant to the approved Wet Weather Plan, ALCOSAN shall, on an annual basis, submit to EPA and PADEP for review and approval proposed best management practices for the operation and maintenance of each remedial control and each remedial activity implemented for the first time in the year in question. Upon approval by EPA and PADEP in accordance with Section VIII (Review and Approval of Submittals), ALCOSAN shall incorporate the best management practices into its Operation and Maintenance Manuals.

APPENDIX W

Reporting Form

ALCOSAN DRY WEATHER DISCHARGE FACSIMILE REPORTING FORM

DATE OF DISCOVERY BEGIN END	TIME OF DISCOVERY BEGIN END
LOCATION OF OVERFLOW (street address, diversion structure ID):	
ANY PREVIOUS OVERFLOWS AT THIS LOCATION? ☐ YES ☐ NO	ESTIMATED DURATION OF OVERFLOW: HOURS ESTIMATED TOTAL VOLUME RELEASED:_____ GALLONS
	DESTINATION OF OVERFLOW (e.g. building, basement, ground, storm sewer to stream, directly to stream):
SPECIFIC RECEIVING WATERS AFFECTED:	
SEWER SYSTEM COMPONENT FROM WHICH OVERFLOW OCCURRED (M = manhole; P = pipe; C = constructed overflow; PS = Pump Station; O = other)	
CAUSE OF OVERFLOW G = grease problem; R = roots; S = sediment; B = other blockages; D = deterioration of line due to aging system or lack of repair; F 1= equipment failure, structural failure or power failure; 3 = 3rd party action including vandalism; O = other, please describe)	SPECIFIC DESCRIPTION OF CAUSE:
STEPS/ACTION TAKEN TO MINIMIZE/ELIMINATE OVERFLOW (where appropriate):	
STEPS/ACTION TAKEN FOR CLEAN-UP (where appropriate):	
DESCRIBE IMPACTS OF OVERFLOW ON WATER QUALITY:	
REPORT MADE TO PADEP (check permit for reporting requirements) DATE TIME	
PERSON COMPLETING FORM NAME TITLE	
CONTACT PERSON NAME PHONE NUMBER	

APPENDIX X

ALCOSAN Reporting Schedule

Month Report is Due >	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**
Interceptor Inspection Reports	December	January	February	March	April	May	June	July	August	September	October	November	December
Modeling Reports		Q4			Q1			Q2			Q3		
ALCOSAN Flow Monitoring Reports													
Lower Ohio		Oct-Dec			Jan -Mar			Apr-Jun			Jul-Sep		
Lower Chartiers Creek		Oct-Dec			Jan -Mar			Apr-Jun			Jul-Sep		
Upper Chartiers Creek		Oct-Dec			Jan -Mar			Apr-Jun			Jul-Sep		
Main Rivers - Upper Ohio		Oct-Dec			Jan -Mar			Apr-Jun			Jul-Sep		
Main Rivers - Lower Mon			Nov-Jan			Feb-Apr			May-Jul			Aug-Oct	
Shallow Cut Mon			Nov-Jan			Feb-Apr			May-Jul			Aug - Oct	
Main Rivers - Upper Mon			Nov-Jan			Feb-Apr			May-Jul			Aug - Oct	
Thompson -Turtle			Nov-Jan			Feb-Apr			May-Jul			Aug - Oct	
Main Rivers - Lower Allegheny	Sep-Nov			Dec-Feb			Mar-May			Jun-Aug			
Upper Allegheny	Sep-Nov			Dec-Feb			Mar-May			Jun-Aug			
Main Rivers - Pine Creek	Sep-Nov			Dec-Feb			Mar-May			Jun-Aug			
Saw Mill Run	Sep-Nov			Dec-Feb			Mar-May			Jun-Aug			

Note: All deliverables will be provided to the Parties by the 28th day of each month

APPENDIX Y

Schedule for Agency Review of Submittals

Consent Decree Cross Reference	Appendix Cross Reference	Submittal	Plaintiffs' Review Period
Presumption: Paragraphs 47, 49-51 Demonstration: Paragraphs 53-55	Appendix S - Presumption Appendix V - Demonstration	Wet Weather Plan	12 months
Paragraphs 62-63	None	Wet Weather Routing Plan	6 months
Paragraphs 45-47	None	Preliminary Determination	6 months
Paragraph 31	Appendix G Paragraph 2	Solids and Floatables Control Plan	6 months
Paragraph 39	Appendix P	Hydrologic and Hydraulic Model Plan	6 months
Paragraph 40	Appendix O	Combined Sewer Overflow Pollutant Monitoring Plan	6 months
Paragraph 42	Appendix Q	Receiving Water Quality Monitoring Plan	6 months
Paragraphs 43	Appendix R	Receiving Water Quality Model Plan	6 months
Paragraph 77	None	Public Participation Plan	6 months
Paragraph 92	None	The Revised Nine Minimum Control Plan	6 months
Paragraph 30	Appendix F	Industrial User Assessment	3 months
None	Appendix F: Paragraph 6	PCB Characterization Plan	3 months
Paragraphs 36	Appendix M	RCS Flow Monitoring Plan	3 months
Paragraph 66.c	None	Transfer/Issuance of Discharge Permits or Other Authorizations to transfer at least 200 miles of Intermunicipal Trunk Sewers and Associated Facilities	6 months

Paragraph 67 and 165A	None	Changes to Interim Wet Weather Plan or Wet Weather Plan	6 months
None	Appendix Z	Preliminary Basis of Design Report	6 months
Paragraph 17	None	Proposed Exclusions of municipal flows	3 months

APPENDIX Z

Construction Projects and Activities Included in the Interim Measures

The Interim Measures is divided into three phases designed to support the adaptive management framework. Table 1 summarizes ALCOSAN's approach for phasing expansion of the plant's treatment capacities through Phase 3 of the Interim Measures. Additional details on the expansion of the treatment plant and construction projects to be completed during each Phase of the Interim Measures are included below.

Table 1: Phasing the Woods Run Wastewater Treatment Plant (WWTP) Expansion

Phase	Primary Treatment Capacity (MGD)	Secondary Treatment Capacity and Disinfection (MGD)	Total Wet Weather Treatment Capacity (MGD)
Interim Measures Phase 1	480		480
Interim Measures Phase 2	600		600
Interim Measures Phase 3		295	

Interim Measures PHASE 1

1. **Preliminary Planning**

The Preliminary Planning will determine the means of obtaining 600 MGD of sustained wet weather treatment capacity at the WWTP from the sewer collection system. ALCOSAN shall include in the Preliminary Planning:

- a geotechnical investigation and assessment,
- property evaluation and assessment,
- a hydraulic and surge analysis,
- the development of flow management and operational strategies,
- new and existing tunnel O&M and dual tunnel system optimization strategies,
- a geotechnical data report,
- a basis of design report, and
- a consolidation sewer and tunnel project schedule,
- the locations and capacities of any needed tunnel cross-connections,
- cost effective improvements to optimize the existing tunnel storage and conveyance, and
- proposals for solids and floatables controls at consolidation sewer CSO outfall locations.

During Preliminary Planning, ALCOSAN shall take into consideration the flow reduction plans submitted by the Customer Municipalities to determine whether the proposed tunnel system

could be eliminated or reduced in size. ALCOSAN shall submit any proposed adjustments to the tunnel specifications and schedule for review and approval in accordance with Paragraph 67 of the Consent Decree.

ALCOSAN shall comply with the following deadlines.

a. On or before August 30, 2017, Procure a Preliminary Planner

b. On or before October 1, 2020, request copies of any source reduction studies and any other relevant information regarding flow reduction from Customer Municipalities for Preliminary Planning and development of the Preliminary Basis of Design Report.

c. On or before October 1, 2020, request from all Customer Municipalities all flow monitoring data collected by the Customer Municipalities since 2010 for use in the Preliminary Planning and development of the Preliminary Basis of Design Report.

d. On or before March 1, 2020, request from the Customer Municipalities all mapping updates available for Preliminary Planning and for development of the Preliminary Basis of Design Report.

e. Completion of Preliminary Planning and submission of a Preliminary Basis of Design Report, including tunnel and consolidation sewer construction schedule for review and approval: October 1, 2020

f. On an annual basis from 2019 through 2025, request information from the Customer Municipalities from the previous 12 months on any newly collected flow data or mapping changes regarding Municipal Source Reduction Measures. By December 31st of each year, ALCOSAN shall submit an analysis of the information to determine if the Municipal Source Reduction Measures are reducing the volume or rate of flow to the Conveyance and Treatment System.

g. ALCOSAN shall make available to all the Customer Municipalities all information or a compilation of all information collected under Paragraphs 1.a through 1.f, above, on an annual basis for the years 2021 through 2025. ALCOSAN shall make this information or compilation available by July 1 of the year following the reporting year: July 1, 2022 through July 1, 2025.

2. Woods Run Wastewater Treatment Plant Expansion

Description: Phase 1 of the Interim Measures includes initially expanding wet weather treatment capacity to 480 million gallons per day (MGD) and wet weather headworks and disinfection capacity to 600 MGD. Achieving up to 600 MGD in primary and wet weather treatment capacity via a conventional bypass of secondary treatment will be evaluated as a part of Preliminary Planning. The WWTP process unit expansion includes the following projects:

Main Pumping Station - Replacement of the six raw sewage pumps shall provide a minimum sustained pumping capacity of 480 MGD. This work is complete. ALCOSAN has:

a. Submitted a Complete Water Quality Management (WQM) Permit Application(s): March 29, 2011

b. Began Construction: July 1, 2012

c. Placed in Operation: December 31, 2016

Wet Weather Headworks - Expand the headworks capacity, including screenings and grit removal process equipment, to provide a wet weather preliminary treatment sustained capacity of up to 600 MGD. The proposed process units shall provide greater redundancy and operational flexibility to handle peak flows of up to 600 MGD between the existing headworks and expanded wet weather headworks at the completion of the Interim Measures. ALCOSAN shall:

a. Submit a Complete Water Quality Management (WQM) Permit Application(s): July 1, 2018

b. Begin Construction: January 1, 2021

c. Place in Operation: June 30, 2025

Disinfection - New secondary effluent disinfection facilities shall provide a sustained peak treatment capacity of 295 MGD. The disinfection facilities will be followed by post-aeration and discharge via a new plant outfall. Ultraviolet disinfection is being considered as an alternative to continuing chlorine disinfection. ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): July 1, 2018

b. Begin Construction: January 1, 2021

c. Place in Operation: January 1, 2024

Wet Weather Disinfection – Upon completion of Phase II of the Interim Measures, primary treated effluent flows exceeding secondary treatment capacity will be routed to the existing chlorine contact tanks which will be modified for wet weather disinfection. The existing chlorination/dechlorination processes shall be modified to provide up to 305 MGD capacity for wet weather flows, followed by post aeration and discharge at a new outfall. The existing disinfection and wet weather disinfection systems together shall provide a sustained peak disinfection capacity of 600 MGD. ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): April 1, 2023

b. Begin Construction: January 1, 2024

c. Place in Operation: December 30, 2025

3. Existing Infrastructure Inspection/Rehabilitation

Description: ALCOSAN shall evaluate its past inspections of its deep tunnels, shallow cut interceptors, river crossings and sewer pipes and provide an assessment of the flow and storage capacity of each as well as submit a schedule for future inspections, maintenance and rehabilitation to maximize flow capacity.

a. By March 31, 2019, ALCOSAN shall submit to the Plaintiffs an Infrastructure Assessment Update that includes the following:

1. A description of the conditions of each deep tunnel and a summary of the design and estimate of current flow conveyance and storage capacity of each deep tunnel conveyance as of December 31, 2016.

2. A description of the conditions of each shallow cut interceptor and a summary of the design and estimate of current flow conveyance and storage capacity of each shallow cut interceptor as of December 31, 2016.

3. A description of the conditions of each river crossing and a summary of the design and estimate of current flow conveyance and storage capacity of each river crossing as of December 31, 2016.

b. By March 31, 2019, ALCOSAN shall submit for review and approval in accordance with Section VIII (Review and Approval of Submittals) a revised schedule for additional inspections, maintenance and rehabilitation of the deep tunnel interceptors, shallow cut interceptors and river crossings to maximize the flow conveyance and flow storage of all.

Interim Measures PHASE 2

1. Woods Run Wastewater Treatment Plant Expansion

Description: Phase 2 of the Interim Measures includes increasing the Primary Treatment and total sustained wet weather pumping capacity to 600 MGD via the construction of additional primary sedimentation basins and a wet weather pump station as follows:

Wet Weather Pump Station - The construction of a new Wet Weather Pump Station will increase the total raw wastewater pumping capacity to facilitate the ultimate sustained wet weather treatment capacity of 600 MGD. The new pump station shall pump from the existing or new regional tunnel so that combined with the Main Pumping Station upgrade the total influent pumping capacity can achieve the planned sustained capacity of 600 MGD.

If the pumping concept is a dewatering pump station for the new regional tunnel, ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): January 1, 2022

b. Begin Construction: March 1, 2023

c. Place in Operation: December 31, 2027

If ALCOSAN wishes to propose any other pumping concept, it shall submit a proposed revision to the Wet Weather Plan in accordance with Paragraph 67 of the Consent Decree, including a schedule for design, construction and placing in operation of the new pump station with the Preliminary Planning Basis of Design Report: October 1, 2020.

Primary Treatment Sedimentation Basins – Two primary sedimentation tanks will be added to the existing nine tanks to provide a sustained peak flow capacity of 600 MGD with 10 of the 11 tanks in service.

a. Submit a Complete WQM Permit Application(s): January 1, 2022

b. Begin Construction: March 1, 2023

c. Place in Operation: December 31, 2027

2. Ohio River Tunnel Segments

Description: Table 2 summarizes the preliminary regional tunnel characteristics for the Ohio River tunnel segments. Based upon its review of any source reduction studies and any other technically reliable information received from the Customer Municipalities on December 1, 2017, ALCOSAN may propose eliminating or changing the design of the regional tunnels during its Preliminary Planning phase in accordance with Paragraph 67 of the Consent Decree. ALCOSAN shall include any proposed revisions to Regional Tunnel System characteristics in the Preliminary Planning, "Preliminary Basis of Design" report due October 1, 2020. Preliminary Planning and tunnel segment design will be based on 2046 flow projections.

Table 2: Preliminary Ohio River Tunnel Characteristics

Tunnel Segment	Diameter (feet)	Length (miles)	Volume (MG)
Ohio	14	1.9	12
River Crossing to Chartiers Creek Basin	14	0.8	5
River Crossing to Saw Mill Run Basin	14	0.3	2

Ohio River/Chartiers/Saw Mill Tunnel Segments

ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): January 1, 2022

b. Begin Construction: March 1, 2023

c. Place Facilities in Operation: December 31, 2027

d. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submissions and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

3. Ohio River Tunnel Segments Consolidation Sewers/Conveyance Improvements

Description: The "Existing Sewer Consolidation/ Conveyance Improvement" projects consist of new consolidation/connector sewers and new regulators required to convey flow to new Ohio River tunnel segment drop shafts, as well as modifications to existing sewers and regulators. The scope and general locations for these projects shall be included in the regional tunnel Preliminary Basis of Design report and shall include proposals for solids and floatables controls at consolidation sewer CSO outfall locations. ALCOSAN shall:

a. Submittal of the Preliminary Basis of Design Report: October 1, 2020

1. Submit "Existing Sewer Consolidation/Conveyance System Improvement" report for review and approval: October 1, 2020

b. Submit a Complete WQM Permit Application(s): January 1, 2023

c. Begin Construction: March 1, 2025

d. Complete Construction and Place Facilities in Operation: December 31, 2027

e. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submissions and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

Interim Measures PHASE 3

1. Woods Run Wastewater Treatment Plant Expansion

Description: Phase 3 of the Interim Measures will include expanding secondary treatment capacity to 295 MGD as follows:

Secondary Treatment - Two final settling tanks including plant conveyance modifications and a new return activated sludge (RAS) pumping station shall provide a sustained secondary treatment capacity of 295 MGD. ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): July 1, 2022

b. Begin Construction: July 1, 2023

c. Place in Operation: December 31, 2025

2. Regional Tunnels

Description: Table 3 summarizes the preliminary regional tunnel characteristics for the Allegheny and Monongahela Rivers. ALCOSAN may propose eliminating or changing the design of the regional tunnels during its Preliminary Planning phase in accordance with Paragraph 67 of the Consent Decree.

Table 3: Preliminary Allegheny and Monongahela Tunnel Characteristics

Tunnel Segment	Diameter (feet)	Length (miles)	Volume (MG)
Allegheny	14	7.9	48
Monongahela	14	4.5	28

Allegheny River Tunnel Segment

ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): November 1, 2026

b. Begin Construction: January 1, 2028

c. Place Facilities in Operation: December 31, 2034

d. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submissions and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

Monongahela River Tunnel Segment

ALCOSAN shall:

a. Submit a Complete WQM Permit Application(s): November 1, 2030

b. Begin Construction: January 1, 2032

c. Place Facilities in Operation: December 31, 2036

d. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submissions and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

3. Allegheny/Monongahela River Tunnel Segments Consolidation Sewers/Conveyance Improvements

Description: The "Existing Sewer Consolidation/ Conveyance Improvement" projects consist of new consolidation/connector sewers and new regulators required to convey flow to new regional tunnel drop shafts, as well as modifications to existing sewers and regulators. The scope and general locations for these projects shall be included in the regional tunnel Basis of Design report and shall include discussions and proposals for solids and floatables controls at consolidation sewer CSO outfall locations. ALCOSAN shall:

a. Submit the Preliminary Basis of Design Report and an "Existing Sewer Consolidation/Conveyance System Improvement" report for review and approval: October 1, 2020

b. Submit a Complete WQM Permit Application(s): January 1, 2032

c. Begin Construction: March 1, 2033

d. Complete Construction and Place Facilities in Operation: December 31, 2036

e. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submissions and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

4. Upper Monongahela Retention Treatment Basin

Description: The Upper Monongahela Retention Treatment Basin (RTB) project includes a consolidation sewer and retention treatment basin sized to control the M-42, M-43 and M-44 CSOs ("Preliminary Sizing"). It may also be sized to accommodate future control of the M-45 and M-49 CSOs via an extension of the consolidation sewer beyond M-44.

The RTB will provide screening, settling, floatables control via fixed baffles, and disinfection of combined sewage. Coarse screens located upstream of the influent pumps for the storage basin will remove the larger solids and debris from the flow stream. ALCOSAN shall provide a preliminary basis of design for this structure as part of the preliminary basis of design report due October 1, 2020.

For small storm events which do not fill the RTB, captured flow and solids which remain in the RTB after the event shall be pumped back to the existing interceptor when the basin is dewatered. For larger storm events that fill the RTB, the basin shall begin operating in a flow through treatment mode and will discharge treated effluent to the Monongahela River through a new outfall. As with smaller events, captured flow and solids which remain in the RTB after the event shall be pumped back to the existing interceptor after the event.

The Preliminary Sizing described above assumes all upstream Municipal Source Reduction Measures are not constructed. The need for this project and its sizing may change significantly before proceeding with preliminary design depending on municipal flow reduction efforts and regionalization.

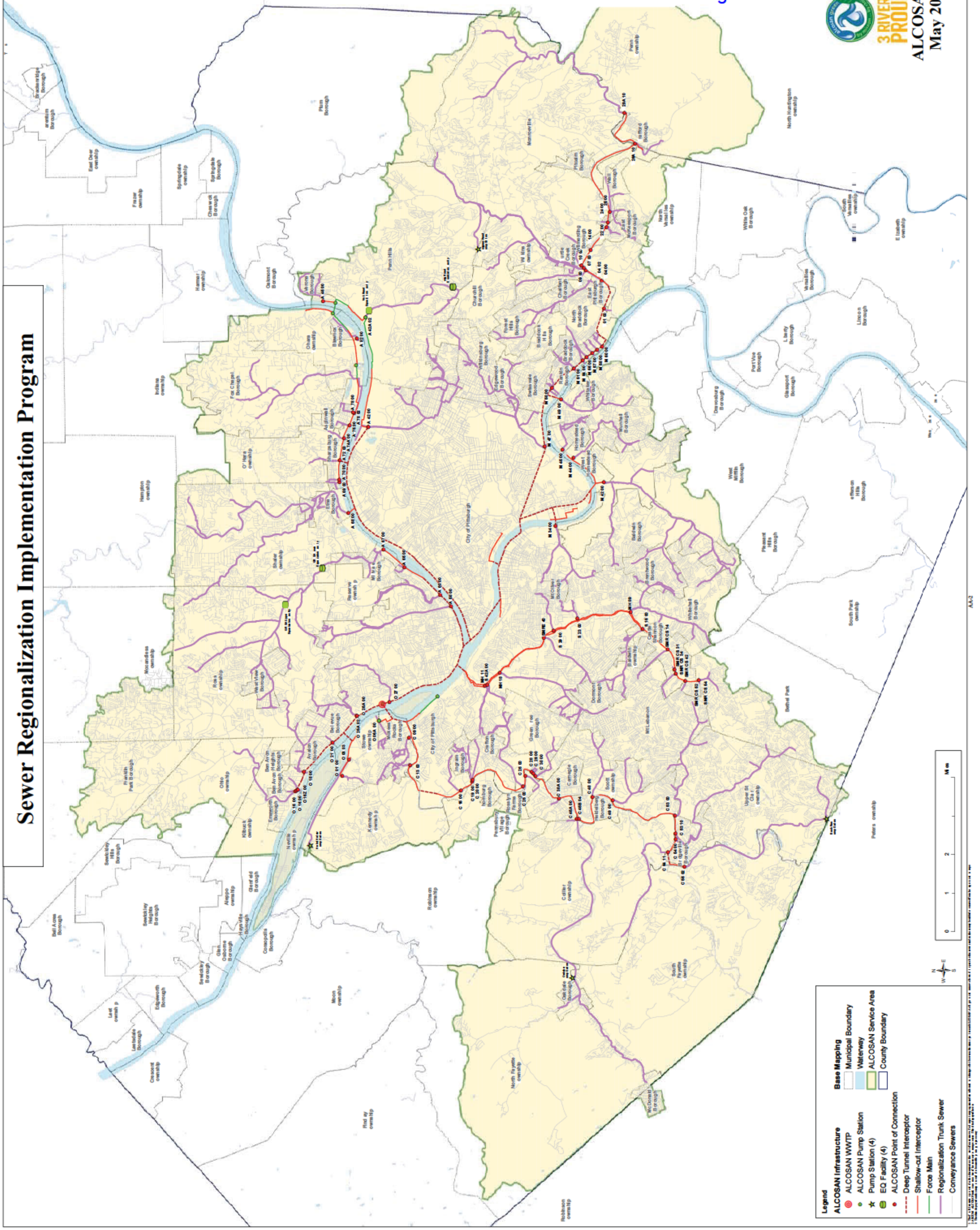
a. ALCOSAN shall provide its recommendations for construction and final design in

accordance with Paragraph 67 of the Consent Decree and:

b. Submit a Complete WQM Permit Application(s): January 1, 2027
c. Award Contract for Construction & Begin Construction: March 1, 2028
d. Place in Operation: December 31, 2031
e. Within six (6) months after placing the facilities into operation, ALCOSAN shall amend all applicable portions of submission and databases required by the Appendices referenced in Section VI.F of the Amended Consent Decree to reflect substitutions or additions to the construction, operation and maintenance of the facilities.

APPENDIX AA

The map on the following page depicts the "Intermunicipal Trunk Sewers and Associated Facilities" as described in Paragraph 15 of the Modified Consent Decree.


Sewer Regionalization Implementation Program
3 RIVERS PROUD
ALCOSAN
May 2018
Legend
ALCOSAN Infrastructure
ALCOSAN WWTP
ALCOSAN Pump Station
Pump Station (4)
EQ Facility (4)
ALCOSAN Point of Connection
Deep Tunnel Interceptor
Shallow-cut Interceptor
Force Main
Regionalization Trunk Sewer
Conveyance Sewers
Base Mapping
Municipal Boundary
Waterway
ALCOSAN Service Area
County Boundary
City of Pittsburgh
Miles