

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

UNITED STATES OF AMERICA

Plaintiff,

v.

D.G. YUENGLING AND SON, INC.

Defendant.

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) Civil Action No. _____
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CONSENT DECREE

FILED
HARRISBURG, PA
JUN 23 2016

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I. BACKGROUND

A. Plaintiff United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), has filed a complaint in this action concurrently with this Consent Decree alleging that Defendant D.G. Yuengling and Son, Inc., violated Sections 307 and 402 of the Clean Water Act (“CWA”), 33 U.S.C. §§ 1317 and 1342.

B. The Complaint alleges that Defendant has discharged pollutants to a Publically Owned Treatment Works (“POTW”) in violation of the conditions and limitations of pretreatment industrial user permit nos. 1-7 and 1-8 (“IU Permits”) issued to Defendant by the Greater Pottsville Area Sewer Authority (“GPASA”) pursuant to Section 307 of the CWA, 33 U.S.C. § 1317. The Complaint further alleges that Defendant failed to comply with requirements of the IU Permits to monitor, sample, and provide certain reports and results to the POTW. The specific alleged violations are identified in Exhibit A to the Complaint.

C. Defendant is a Pennsylvania corporation primarily engaged in the business of brewing and distributing beer with its principle place of business located in Pottsville, Pennsylvania.

D. Defendant owns and operates two breweries located in the vicinity of Pottsville, Pennsylvania, which are the subjects of the Complaint and this Consent Decree. The Old Brewery Facility, which has been in operations since 1829, is located at 501 Mahantongo Street, Pottsville, Pennsylvania. The New Brewery Facility, which has been in operation since 2001, is located at 310 Mill Creek Avenue, Pottsville, Pennsylvania.

E. Plaintiff's investigations, including analysis of responses to CWA information requests and the review of submissions made by Defendant to GPASA and annual reports submitted by GPASA, identified the violations resolved by this Consent Decree.

F. Defendant does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

G. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

II. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties.

2. Venue lies in this District pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b) and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in, and Defendant conducts business in, this judicial district.

3. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court's jurisdiction over this Decree and any such action and over Defendant and consents to venue in this judicial district.

4. For purposes of this Decree, Defendant agrees that the Complaint states claims upon which relief may be granted pursuant to Sections 309 and 402 of the CWA, 33 U.S.C. §§ 1319 and 1342.

III. APPLICABILITY

5. The obligations of this Consent Decree apply to and are binding upon the United States, and upon Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

6. Defendant hereby agrees that it shall be bound to perform duties scheduled to occur by this Consent Decree prior to the Effective Date. In the event the Plaintiff withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter this Consent Decree, then the preceding requirement to perform duties scheduled to occur before the Effective Date shall terminate.

7. No transfer of ownership or operation of any Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Decree are implemented. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region III, the United States Attorney for the Middle District of Pennsylvania, and the United States Department of Justice, in accordance with Section XV (Notices). Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Decree.

8. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

9. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

IV. DEFINITIONS

10. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. "Complaint" shall mean the complaint filed by the United States in this action;
- b. "Consent Decree" or "Decree" shall mean this Decree and all appendices attached hereto (listed in Section XXIV);
- c. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;
- d. "Diagnostic Sampling" shall mean sampling to determine necessary treatment measures and to evaluate the effectiveness of response actions taken. Such sampling of discharges need not occur at the location designated for required sampling pursuant to the respective permit or be taken in accordance with approved test procedures under 40 C.F.R. Part 136;
- e. "Discharge Limit Violation" shall mean (i) any exceedance of a Monthly Average discharge limitation for any parameters set forth in applicable IU Permits, including

parameters identified in Section B.1 of Defendant's IU Permits, as determined by sampling required by the IU Permits, or (ii) any failure to attain the required discharge limitation for any parameter that is otherwise required to be measured, including pH, as set forth in Defendant's IU Permits, as determined by an IU Sample.

f. "Defendant" shall mean D.G. Yuengling and Son, Inc.;

g. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

h. "Effective Date" shall be the date upon which this Consent Decree is entered by the Court or a motion to enter this Consent Decree is granted, whichever occurs first, as recorded by the Court's docket;

i. "EMS" or "Environmental Management System" shall mean a management system providing the structure by which specific activities related to environmental protection and compliance can be effectively and efficiently carried out by the Defendant. A compliance-based EMS shall be developed for Defendant by the EMS Consultant pursuant to Paragraphs 25-32 of this Consent Decree and shall meet the requirements set forth in Appendix A;

j. "EMS Audit" shall mean the audit conducted by the EMS Auditor pursuant to Paragraph 35 of this Consent Decree;

k. "EMS Auditor" shall mean the independent third-party meeting the requirements of Paragraph 34 who is approved by EPA and contracted by the Defendants to perform the duties set forth in Paragraph 35, including an evaluation of the adequacy of the EMS implementation relative to the EMS Manual;

l. "EMS Audit Findings" shall mean a written summary of all instances of

noncompliance with the EMS Manual noted during the EMS Audit, and all areas of concern identified during the course of that audit which, in the EMS Auditor's judgment, merit further review or evaluation for potential EMS, environmental, or regulatory impacts;

m. "EMS Audit Report" shall mean a report setting forth the EMS Audit Findings resulting from the EMS Audit, which meets all of the requirements of Paragraph 35;

n. "EMS Audit Response and Action Plan" shall mean a comprehensive plan for bringing the Facilities into compliance with the EMS Manual and fully addressing all EMS Audit Findings identified in the EMS Audit Report;

o. "EMS Consultant" shall mean the independent third-party meeting the requirements of Paragraph 27, who is approved by EPA pursuant to Paragraph 28, and contracted by the Defendant to perform the duties set forth in Paragraphs 25, 26, and 30, including the development of an EMS and EMS Manual;

p. "EMS Manual" shall mean the document created by the EMS Consultant and approved by EPA pursuant to this Consent Decree, which describes and documents the compliance-based EMS developed for the Defendant and contains an EMS implementation schedule;

q. "Environmental Audit" shall mean an audit conducted at each Facility by an independent third-party pursuant to the requirements of Paragraphs 38 and 39 of this Consent Decree and shall include the evaluation of the adequacy of the New Brewery Facility and Old Brewery Facility, including all pretreatment systems and the collection and conveyance systems, to ensure and maintain environmental compliance, including compliance with all applicable IU Permits;

r. "Environmental Auditor" shall mean an independent third-party meeting

the requirements of Paragraphs 40 and 41, that is approved by EPA pursuant to Paragraphs 42 and 43, and contracted by the Defendant to perform the duties set forth in Paragraphs 38, 39, and 44, including Environmental Audits;

s. “Facilities” shall mean Defendant’s Old Brewery Facility and New Brewery Facility;

t. “Initial Review and Evaluation” shall mean an evaluation of Defendant’s existing environmental management practices and documents to identify where existing systems or subsystems have not been adequately developed or implemented, or need to be enhanced, or new management systems or subsystems need to be developed to adequately address the elements set forth in Paragraph 26 and Appendix A;

u. “IU Permits” shall mean GPASA issued Industrial User Permit No. 1-7, for the Old Brewery, and Industrial User Permit No. 1-8, for the New Brewery;

v. “IU Permit Sample” or “IU Sample” shall mean a sample required to be taken under any IU Permit or any sample that is taken in accordance with approved test procedures under 40 C.F.R. Part 136;

w. “Monitoring Point” shall mean the location at each Facility where IU Permit Samples are required under the applicable IU Permit.

x. “New Brewery Facility” or “New Brewery” shall mean Defendant’s brewery located at 310 Mill Creek Avenue, Pottsville, PA 17901.

y. “New Brewery Enhancements” shall mean the treatment system improvements at the New Brewery implemented pursuant to Paragraphs 54-56 of this Decree, as further described in Exhibit C to this Decree.

z. “New Brewery Permit” or “NB Permit” or “IU Permit 1-8” shall refer to

GPASA issued Industrial User Permit No. 1-8.

- aa. “Old Brewery Facility” or “Old Brewery” shall mean Defendant’s brewery located at 501 Mahantongo Street, Pottsville, PA, 17901;
- bb. “Old Brewery Permit” or “OB Permit” or “IU Permit 1-7” shall refer to GPASA issued Industrial User Permit No. 1-7;
- cc. “Old Brewery Pretreatment System” shall mean the Anaerobic Fluidized Bed Digester system to be installed at the Old Brewery pursuant to Paragraphs 50-52 of this Decree, as further described in Exhibit B to this Decree;
- dd. “Paragraph” shall mean a portion of this Decree identified by an arabic numeral;
- ee. “Parties” shall mean the United States, EPA and Defendant;
- ff. “Persistent Noncompliance Issues” shall mean three (3) or more Discharge Limit Violations of a given parameter at any Facility within any 12-month period;
- gg. “Root Cause Analysis” or “RCA” shall mean the process for identifying the underlying cause of any non-compliance with an applicable environmental law or requirement and subsequent steps to be taken to address such non-compliance. It includes the identification of precipitating events, analysis procedures, emergency response plans that describe how the cause of non-compliance will be identified, key processes will be repaired or replaced in the event of a failure, and regulatory reporting will be undertaken. It will also identify corrective and preventive actions to be taken;
- hh. “Supplemental Inspection” shall mean the field evaluation of conditions at each Facility conducted pursuant to the requirements of this Consent Decree;
- ii. “Section” shall mean a portion of this Decree identified by a roman

numeral; and

jj. “United States” shall mean the United States of America, acting on behalf of EPA.

V. CIVIL PENALTY

11. Within 30 Days after the Effective Date of this Consent Decree, Defendant shall pay the sum of \$2,800,000.00 as a civil penalty, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the date of lodging.

12. Defendant shall pay the civil penalty due by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Defendant, following entry of the Consent Decree, by the Financial Litigation Unit (“FLU”) of the U.S. Attorney’s Office for the Middle District of Pennsylvania. The payment instructions provided by the FLU will include a Consolidated Debt Collection System (“CDCS”) number, which Defendant shall use to identify all payments required to be made in accordance with the Consent Decree. The FLU will provide the payment instructions to:

Wendy Yuengling
310 Mill Creek Avenue
Pottsville, PA 17901
(570) 622-0153 ext. 1118
wvbaker@yuengling.com

on behalf of the Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and EPA in accordance with Section XV (Notices). At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at acctsreceivable.cinwd@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 Martin Luther King Drive, Cincinnati, Ohio 45268,

and (ii) to the United States via email or regular mail in accordance with Section XV (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in U.S. v. D.G. Yuengling and Son, Inc. and shall reference the civil action number, CDCS Number, and DOJ case number 90-5-1-1-10971.

13. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section IX (Stipulated Penalties) in calculating its federal income tax.

VI. GENERAL COMPLIANCE REQUIREMENTS

14. This Consent Decree in no way affects or relieves Defendant of its responsibility to comply with applicable federal, state, and local laws, regulations, and permits, including the IU Permits.

15. At all times, Defendant shall operate the Facilities to achieve compliance with all applicable federal and state environmental laws, including, without limitation, the CWA, applicable National Pollutant Discharge Elimination System permits and IU Permits, and other permits, approvals, regulations or requirements.

16. Defendant shall perform the work required by this Consent Decree in compliance with the requirements of all applicable federal, state, and local laws, regulations, and permits. This Consent Decree is not a permit issued pursuant to any federal, state, or local statute or regulation.

17. Approval of Deliverables. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission.

18. If the submission is approved pursuant to Paragraph 17(a), above,

Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part, pursuant to Paragraph 17(b) or (c), Defendant shall, upon written direction from EPA, take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XI (Dispute Resolution).

19. If the submission is disapproved in whole or in part pursuant to Paragraph 17(c) or (d), Defendant shall, within 45 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

20. Any stipulated penalties applicable to the original submission, as provided in Section IX of this Decree, shall accrue during the 45-Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

21. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, subject to Defendant's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties as provided in the preceding

Paragraphs.

22. Permits. Where any compliance obligation under this Section requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section X (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

23. Consultants. Third-party consultants, including the EMS Consultant, EMS Auditor, and Environmental Auditor, selected by Defendant to perform the duties set forth in Section VII of this Consent Decree shall have no direct financial stake in the outcome of the audit(s), inspection(s), or evaluation(s) conducted under the terms of this Consent Decree.

24. Contractors Protocol. Within 30 Days of the Effective Date, Defendant shall provide a copy of the Decree to all contractors with responsibilities under this Decree. Within 45 Days of the Effective Date, Defendant shall make changes to all existing contractor protocols to ensure that all contractors with responsibilities under this Decree comply with the terms of this Decree. Within 30 Days of the approval of the EMS Manual pursuant to Paragraph 30.c., Defendant shall refine all existing contractor protocols to ensure that all contractors with responsibilities under the EMS Manual comply with the terms of the EMS Manual. Contractors with responsibilities under the EMS Manual include, among others, wastewater treatment system operators or inspectors, water system operators or inspectors, environmental compliance personnel, environmental information personnel (e.g., sample takers, system operators, etc.) and

related contractors, and may be specifically identified in the EMS manual.

VII. INJUNCTIVE RELIEF

Environmental Management System

25. In accordance with the procedure set forth in Paragraphs 27-29, Defendant shall hire an EMS Consultant to complete an Initial Review and Evaluation and develop a compliance-based Environmental Management System for the Facilities. Defendant shall bear all costs associated with the EMS Consultant, cooperate fully with the EMS Consultant, and provide the EMS Consultant with access to all records, employees, contractors, and Facilities that the EMS Consultant deems reasonably necessary to effectively perform the duties described in Paragraph 30.

26. The EMS shall be prepared in accordance with Appendix A, and shall include, but shall not be limited to, the following:

a. A Root Cause Analysis procedure for each Facility, including but not limited to, a specific RCA process for heavy loading events that may affect the wastewater pretreatment systems at each Facility, including but not limited to disposal or discharge of off specification product, high volume production intervals, and any events resulting in malfunction of the respective Facility's pretreatment system;

b. An environmental record keeping procedure for each Facility, that includes, but is not limited to:

(i) An organization chart by job title identifying all personnel, whether employed or voluntary, with any responsibility or role related to environmental compliance at each Facility, including a statement of such roles and responsibility;

(ii) Map(s) and system diagram(s) either existing or created as a result

of this Consent Decree identifying as built drawings of all facilities, including collection and conveyance systems, and pretreatment;

- (iii) All records required to be maintained pursuant to the CWA;
- (iv) All maintenance records;
- (v) All reports and records required by this Consent Decree;
- (vi) All records of corrective actions taken at each Facility to ensure

compliance; and

- (vii) Standard operating procedures and operating maintenance

manuals.

c. A procedure for amending and updating maps and Facility diagrams, as necessary;

d. A list identifying all past and current contractors with environmental compliance related responsibilities;

e. A procedure to ensure sampling protocols required by applicable environmental laws, including the CWA and all IU Permits, are up-to-date and properly implemented;

f. A procedure to ensure contractor compliance, including a statement in all contracts that the contractor “must comply with all applicable local, State and Federal environmental laws, rules, regulations, and permit conditions.”

g. A procedure for timely internal communication between production and environmental compliance personnel prior to heavy loading events or other actions that may affect the wastewater pretreatment systems at each Facility.

27. Selection of EMS Consultant. No later than 10 Days after the lodging of

this Consent Decree, Defendant shall submit to EPA a list of two or more proposed consultants to serve as EMS Consultant, along with the name, affiliation, and address of the proposed consultants; information demonstrating how each proposed consultant has experience in developing and implementing an EMS; information demonstrating that the proposed consultant's team tasked to conduct the Initial Review and Evaluation, in composite, has a working process knowledge of the Facilities or similar operations, and has a working knowledge of federal and state environmental requirements that apply to each Facility; and descriptions of any previous work, contracts, or financial relationships of the proposed consultant with Defendant. If qualified under this Paragraph and Paragraph 40-41, the EMS Consultant may be the same as the Environmental Auditor.

28. EPA shall notify Defendant as to whether it approves any consultant(s) on the list. If EPA does not approve any of the proposed consultants on Defendant's list, then Defendant shall submit another list of proposed consultants to EPA within 30 Days of receipt of EPA's written notice. If after Defendant has submitted a third list of consultants, which must be submitted within 30 Days of receipt of written notice that EPA has not approved any of the consultants on Defendant's second list, the Parties are unable to agree on an EMS Consultant, the Parties agree to resolve the selection of the EMS Consultant through the Dispute Resolution process in Section XI.

29. Within 10 Days after receipt of EPA's approval, Defendant shall select one consultant from those approved by EPA and shall enter into a contract with the consultant to perform all duties described in Paragraph 30. In the event the consultant(s) approved by EPA are no longer available or willing to accept the work described in Paragraph 30 when notified of their selection by Defendant, then Defendant shall select another consultant approved by EPA

pursuant to Paragraph 28 and enter into the contract to perform all duties described in Paragraph 30 within 30 Days.

30. Duties of the EMS Consultant. Defendant's contract with the EMS Consultant shall require the EMS Consultant to perform the following duties, consistent with Paragraphs 25 and 26:

a. Conduct and complete an Initial Review and Evaluation for Defendant's Facilities, prepare a report of the results, and concurrently provide such report to Defendant and EPA within 90 Days of the EMS Consultant contract. All drafts, data, analysis and work product created in preparation of the report shall also be provided to EPA upon request;

b. Based on the Initial Review and Evaluation results, the requirements of this Consent Decree, and any other relevant information, develop a new compliance-based EMS for the Defendant that includes, but is not limited to, the 12 key elements in Appendix A;

c. Within 9 months of the date of the EMS Consultant contract, draft and submit to EPA for review and approval, an EMS Manual that describes and documents the compliance-based EMS developed for Defendant pursuant to Paragraph 30.b. The EMS Manual shall: (i) contain an implementation schedule, including final deadlines, for each of the described systems and subsystems not already fully implemented; (ii) describe or contain, as appropriate, overarching policies, procedures, and programs that comprise the EMS framework, and respective management systems, subsystems, and tasks for the 12 elements listed in Appendix A; and (iii) describe specific procedures for implementing the requirements of this Consent Decree.

31. Upon Defendant's receipt of EPA's approval of the EMS Manual, Defendant shall commence implementation of the EMS in accordance with the schedule contained in the EMS Manual and shall ensure that a copy of the EMS Manual is made available

to all employees, contractors, and consultants, including anyone responsible for environmental compliance at each of the Facilities. Managers responsible for environmental compliance at each Facility shall thereafter include a certification of compliance with the approved EMS Manual in Quarterly Reports submitted pursuant to Section VIII (Reporting Requirements), or, for any noncompliance, shall submit in the quarterly certification an explanation of the cause of the noncompliance, remedial steps to be taken, and a date for achieving compliance.

32. Revisions of the EMS Manual. Any revisions to the EMS Manual subsequent to its initial approval must be submitted to EPA for review. Material revisions must be approved by EPA. EPA will notify Defendant following its receipt of the proposed revisions whether the proposed revisions are material, and therefore approval of those revisions will be required.

EMS Audits

33. In accordance with the procedures set forth in Paragraph 34, Defendant shall hire an EMS Auditor to conduct an EMS Audit pursuant to Paragraph 35. Defendant shall bear all costs associated with the EMS Auditor, cooperate fully with the EMS Auditor, and provide the EMS Auditor with access to all records, employees, contractors, and Facilities that the EMS Auditor deems reasonably necessary to effectively perform the duties described in Paragraph 35.

34. Selection of the EMS Auditor. Within 1 year of EPA's approval of the EMS Manual, Defendant shall propose to EPA for approval of the selection of two or more proposed EMS Auditors, along with the name, affiliation, and address of the proposed auditor; certification that the individual was not involved in the Initial Review and Evaluation to develop the integrated EMS; information demonstrating expertise and competence in the relevant

regulatory programs under federal and state environmental laws; and a description of any previous work, contracts, or financial relationships with Defendant.

a. EPA shall notify Defendant as to whether it approves any auditor(s) on the list. If EPA does not approve any of the proposed EMS Auditors on Defendant's list, then Defendant shall submit another list of proposed EMS Auditors to EPA within 30 Days of receipt of EPA's written notice. If after Defendant has submitted a third list of proposed EMS Auditors, which must be submitted within 30 Days of receipt of written notice that EPA has not approved any of the auditors on Defendant's second list, the Parties are unable to agree on an EMS Auditor, the Parties agree to resolve the selection of the EMS Auditor through the Dispute Resolution process in Section XI.

b. Within 10 Days of the date that EPA notifies Defendant of the approval of the proposed EMS Auditor(s), Defendants shall select one auditor from those approved by EPA and shall enter into a contract with the auditor to perform all the duties described in Paragraph 35. In the event the auditor(s) approved by EPA are no longer available or willing to accept the work described in Paragraph 35 when notified of their selection by Defendant, Defendant shall, within 30 Days after receipt of EPA's approval pursuant to Paragraph 34.a., select another auditor approved by EPA and enter into the contract to perform all duties described in Paragraph 35.

35. Duties of the EMS Auditor. Defendant's contract with the EMS Auditor shall require the EMS Auditor to perform the following duties:

a. Within 90 Days of the date of its contract with Defendant, the EMS Auditor shall perform an audit of Defendant's EMS. The EMS Audit shall evaluate the adequacy of EMS implementation relative to the EMS Manual and identify areas of concern, from top

management down, throughout each major organizational unit with responsibilities under the EMS Manual. The EMS Audit shall determine the following:

(i) Whether there is a defined system, subsystem, program, or planned task for the respective EMS element;

(ii) To what extent the system, subsystem, program, or task has been implemented, and is being maintained;

(iii) The adequacy of each Facility's internal self-assessment procedures for programs and tasks composing the EMS;

(iv) Whether Defendant is effectively communicating environmental requirements to affected parts of the organization, or those working on behalf of the organization;

(v) Whether further improvements should be made to the EMS and EMS Manual; and

(vi) Whether there are deviations from Defendant's written requirements or procedures.

b. Within 30 Days following the completion of the EMS Audit, the EMS Auditor shall develop and concurrently submit an EMS Audit Report to Defendant and EPA. The EMS Audit Report shall contain: (i) a summary of the audit process, including any obstacles encountered; (ii) detailed Audit Findings, including the basis for each finding and each area of concern identified; (iii) identification of any Audit Findings corrected or areas of concern addressed during the audit; (iv) recommendations for resolving any area of concern or otherwise achieving full implementation of the EMS Manual; and (v) certification that the EMS Audit was conducted in accordance with the provisions of this Decree.

36. Follow-Up Corrective Measures. Within 60 Days of receiving the EMS Audit Report, Defendant shall submit to EPA for review and approval a report responding to the Audit Findings and areas of concerns identified in the EMS Audit Report and providing an action plan for expeditiously coming into full conformance with the provisions in the EMS Manual (the "EMS Audit Response and Action Plan"). The EMS Audit Response and Action Plan shall include the result of any Root Cause Analysis, specific deliverables, responsibility assignments, and an implementation schedule for the identified actions and measures, including those that may have already been completed.

a. EPA will provide comments on the EMS Audit Response and Action Plan and Defendant shall, within 30 Days of receipt of EPA's comments on the EMS Audit Response and Action Plan, submit to EPA a final EMS Audit Response and Action Plan responding to and addressing EPA's comments.

37. After making any necessary modifications to the EMS Audit Response and Action Plan based on EPA comments, if any, Defendant shall implement the final EMS Audit Response and Action Plan in accordance with the schedules set forth therein

Environmental Audits and Inspections

38. Environmental Audits. Defendant shall hire an Environmental Auditor to conduct an Environmental Audit of the Facilities, including all pretreatment systems and the collection and conveyance systems, to evaluate whether the systems in place are adequate to ensure and maintain environmental compliance, including compliance with all applicable IU Permits. Environmental Audits under this Paragraph shall also evaluate compliance with this Consent Decree and the following statutes: Clean Air Act, Clean Water Act, Comprehensive Environmental Response, Compensation, and Liability Act, Emergency Planning and

Community Right to Know Act, and the Resource Conservation and Recovery Act, Toxic Substances Control Act. Defendant may hire more than one Environmental Auditor to complete the Environmental Audits of the Facilities.

39. Consistent with Paragraphs 42 and 43, Environmental Audits shall be completed within 90 Days of Defendant's contract with the Environmental Auditor. Defendant shall cooperate fully with the Environmental Auditor and provide access to all records, employees, contractors, and Facilities that the Environmental Auditor deems reasonably necessary to effectively perform the Environmental Audits. All reports and recommendations must be signed by a professional engineer. Defendant shall bear all costs associated with the Environmental Audits and fees of the Environmental Auditor.

40. Environmental Auditor. The Environmental Auditor must have expertise and competence in the relevant regulatory programs under federal and state environmental laws, and at least five (5) years of experience with the requirements of pretreatment permits, including pretreatment compliance and with pretreatment systems for and control of relevant effluent parameters in Defendant's IU Permits for the Facilities. If Defendant hires more than one Environmental Auditor to complete the Environmental Audit of the Facilities, then the Environmental Auditors may collectively meet the expertise and competence qualifications of this Paragraph. However, each Environmental Auditor must separately meet the years of experience equipment.

41. The Environmental Auditor(s) must be a Certified Professional Environmental Auditor issued through the Board of Environmental Health and Safety Auditor Certifications or similar accredited environmental professional certification board or organization. If qualified under Paragraphs 27, 40, and 41, the Environmental Auditor may be

the same as the EMS Consultant.

42. Within 10 Days of the lodging of the Consent Decree, Defendant shall propose to EPA for approval at least two qualified auditors to serve as the Environmental Auditor, along with the name, affiliation, and address of the proposed consultant; information demonstrating how each proposed consultant has the requisite expertise and competence in the regulatory programs under federal and state environmental laws; and a description of any previous work, contracts, or financial relationships with Defendant.

43. EPA shall notify Defendant as to whether it approves any auditor(s) on the list. Within 10 Days after receipt of EPA's approval, Defendant shall select one auditor from those approved by EPA and shall enter into a contract with the auditor to perform all duties described in Paragraph 38. In the event the auditor(s) approved by EPA are no longer available or willing to accept the work described in Paragraph 38 when notified of their selection by Defendant, then Defendant shall select another auditor approved by EPA pursuant to this Paragraph and enter into the contract to perform all duties described in Paragraph 38 within 30 Days. If EPA does not approve any of the proposed Environmental Auditors on Defendant's list, then Defendant shall submit another list of proposed Environmental Auditors to EPA within 30 Days of receipt of EPA's written notice. If after Defendant has submitted a third list of proposed Environmental Auditors, which must be submitted within 30 Days of receipt of written notice that EPA has not approved any of the auditors on Defendant's second list, the Parties are unable to agree on a Environmental Auditor, the Parties agree to resolve the selection of the Environmental Auditor through the Dispute Resolution process in Section XI.

44. Environmental Audit Report. Within 30 Days of completion of the Environmental Audit for each Facility, the Environmental Auditor shall prepare and concurrently

submit an Environmental Audit Report (“EA Report”) to Defendant and EPA. The EA Report shall identify for each Facility any production changes, alterations, maintenance, equipment replacement, upgrade, modification, change, improvement, or other measures to the associated Facilities, including, pretreatment systems, collection and conveyance system, or other systems, that should be taken to achieve and maintain environmental compliance, including compliance with all requirements of the IU Permits (the “Corrective Measures”). For the Old Brewery Facility, the EA Report shall assess the Old Brewery Pretreatment System, and include any modifications or additions that should be required to ensure compliance with IU Permit 1-7. For the New Brewery Facility, the EA Report shall assess the New Brewery Pretreatment Enhancements, and include any modifications or additions that should be required to ensure compliance with IU Permit 1-8. The EA Report shall also include an expeditious schedule for completing any Corrective Measures within 1 year of the required submission date for the EA Report. Defendant may submit comments to EPA in response to the EA Report no later than 15 Days from the receipt of the report. If Defendant disputes the Corrective Measures to be implemented in accordance with the EA Report, the Parties agree to resolve the disputed Correct Measures through the Dispute Resolution process in Section XI. Defendant shall implement and complete all undisputed Corrective Measures consistent with the schedule contained in the EA Report and the schedule attached to this Consent Decree, as applicable, unless an extension of time is requested by Defendant at least 60 Days before the completion date and such extension is granted by EPA. Defendant may request a period of time greater than 1 year to complete Corrective Measures if an EA Report indicates that such schedule is as expeditious as practicable and required for the corrective measures identified.

45. Defendant shall include in Quarterly Reports a status report to EPA on all

EA Report submissions and Corrective Measures. Such status report shall include the status of implementation of the Corrective Measures consistent with the schedule in the EA Report, and shall certify implementation of all such measures completed to date pursuant to Section VIII.

46. Supplemental Inspections. Starting after the completion of the first EA Report for the New Brewery Facility and the first full calendar month after the completion of the Corrective Measures for the Old Brewery Facility, Defendant shall conduct supplemental inspections at least once a month of each pretreatment system and associated operations (“Supplemental Inspection”). Supplemental Inspections shall be conducted pursuant to a Supplemental Inspection Checklist created by the Environmental Auditor and Defendant, subject to review and approval by EPA, which shall include, but is not limited to, entries for whether: (a) the pretreatment system is in good repair; (b) the pretreatment system is being properly maintained and operated; (c) any unauthorized modifications to operations have been made; (d) all required paperwork has been compiled and notifications have been made; (e) there are any visual indications of violations or poor maintenance; (f) there is any indication of damage to the pretreatment system; (g) all required monitoring and sampling has been conducted; (h) any discharge limit or action level has been exceeded; (i) facilities are being operated by properly certified and trained operators; and (j) any corrective action was taken at either Facility, and a full description of what that correction action was and why. The Supplemental Inspection Checklist shall be completed at the time of each Supplemental Inspection, signed by the individual completing the inspection, and submitted to EPA quarterly, beginning at the end of the first calendar quarter in which the first Supplemental Inspection required by this Decree is conducted. Supplemental Inspections required by this Section may be conducted by the Environmental Auditor, EMS Consultant or a designated Facility representative with a minimum

of 40 hours of training in the implementation of environmental management systems.

Supplemental Inspections required by this Section may also fulfill any identical inspection requirement that may be included in the EMS Manual, as applicable.

47. At the Defendant's own expense, Defendant shall provide all documents, including any electronic communications, related to the EMS, Environmental Audits, and Supplemental Inspections to EPA, upon request. Such documents include, without limitation, those in the possession of the EMS Consultant or Environmental Auditor or any other party retained by Defendant in connection with this matter. Defendant may assert that certain documents, records or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law.

Communication and Notification Plan

48. Defendant shall develop and submit to EPA for approval, a Communication and Notification Plan with GPASA within 30 Days of the lodging of the Consent Decree. The Communication and Notification Plan shall apply to each of the Facilities so that GPASA is notified immediately upon Defendant's knowledge, including the knowledge of any consultant retained by Defendant with regard to this matter, or within 24 hours, of any changes to the New Brewery Facility and Old Brewery Facility wastewater stream sent to the GPASA POTW that may lead to bypass or interference. The Communication and Notification Plan must identify appropriate contacts at each Facility and include procedures for notification by Defendant to GPASA of any Discharge Limit Violation as required by the respective Facility's IU Permits. Upon approval by EPA, Defendant shall implement and maintain the Communication and Notification Plan. The Communication and Notification plan shall be updated, as needed, on an annual basis to reflect personnel, process, and any other pertinent changes the Facilities. The

annually updated Communication and Notification Plan must be submitted to EPA.

Old Brewery Pretreatment System

49. The proposed Old Brewery Pretreatment System, Exhibit B to this Decree, incorporated by reference, is intended to eliminate discharge limit violations of IU Permit 1-7.

50. Pursuant to Paragraph 44 the Old Brewery Pretreatment System may be amended or enhanced by the Corrective Measures identified in the EA Report for the Old Brewery.

51. Subject to changes to the Old Brewery Pretreatment System pursuant to Paragraph 51, above, the Pretreatment Narrative Report for the Old Brewery Pretreatment System was submitted to EPA on January 15, 2016 and the Old Brewery Treatment System must be in full operation within one year after lodging of this Consent Decree.

52. Defendant may request an extension of time to comply with any milestone identified in Paragraph 52, above, by submitting a written request with supporting information justifying the extension to EPA at least 60 Days before the milestone date. EPA may, in its sole discretion, grant or deny such extension based on the information provided.

New Brewery Enhancements

53. The New Brewery Enhancements, Exhibit C to this Decree, incorporated by reference, are intended to eliminate discharge limit violations of IU Permit 1-8.

54. Pursuant to Paragraph 44 the New Brewery Enhancements, may be amended or enhanced by the Corrective Measures identified in the EA Report for the New Brewery.

55. Subject to changes to the New Brewery Enhancements pursuant to Paragraph 55, above, the New Brewery Enhancements shall be designed, constructed and in full operation within one year of lodging of this Consent Decree.

56. Defendant may request an extension of time to comply with any milestone identified in Paragraph 56, above, only by submitting a written request with supporting information justifying the extension to EPA at least 60 Days before the milestone date. EPA may, in its sole discretion, grant or deny and such extension based on the information provided.

Certified Wastewater Operator

57. Defendant has retained two Wastewater Operators (“WWO”) for the Facilities. Within one (1) year of lodging of the Consent Decree, Defendant’s WWOs must be certified under an appropriate WWO certification program applicable to the relevant Facility’s operational specifications. Defendant must maintain a certified WWO for the Facilities.

Electronic Notification of Violations

58. Within 60 Days of the Effective Date, Defendant shall implement a system that provides for electronic notification within 24 hours of all IU Sample results to the manager responsible for environmental compliance at the related Facility as well as any person in any way responsible for day-to-day operation, monitoring or maintenance of IU Permitted operations. The electronic notification of IU Sample results shall include all pollutants that are regulated under effluent limits contained in Defendant’s IU permits, and shall indicate where laboratory results show a Discharge Limit Violation, identifying the location and date when the violation occurred.

Discharge Limit Violation Response

59. Within 30 Days of lodging of the Consent Decree, Defendant shall submit to EPA for approval a response plan for Discharge Limit Violations. Upon the Effective Date, Defendant shall implement the approved response plan for Discharge Limit Violations.

60. The response plan for Discharge Limit Violations shall provide for

investigation of Discharge Limit Violations and implementation of actions necessary to achieve compliance with the applicable IU Permit discharge limits. This response plan shall provide for the following response actions at all Facilities:

a. Category 1 Discharge Limit Violation. Upon notification of a Discharge Limit Violation at any Facility (“Category 1 Violation”), Defendant shall immediately begin daily monitoring of conditions at the Facility, Diagnostic Sampling, Root Cause Analysis, and, as needed, supplemental pretreatment of the wastewater. Defendant shall continue daily monitoring, Diagnostic Sampling, and supplemental treatment until two (2) consecutive compliant IU Permit Sample results for that parameter are achieved at the Monitoring Point.

b. Category 2 Discharge Limit Violation. Upon notification of the second and any subsequent Discharge Limit Violation of the same parameter at the same Facility within 90 Days of a previous discharge limit violations (“Category 2 Violation”), Defendant shall continue daily monitoring of conditions at the Monitoring Point, Diagnostic Sampling, and supplemental pretreatment of wastewater until three (3) consecutive compliant IU Permit Sample results for that parameter are achieved at the Monitoring Point. Defendant shall also consult with a third-party individual with substantial expertise in Clean Water Act compliance and in pretreatment systems for and control of relevant effluent parameters in Defendant’s IU Permits, who shall conduct a Root Cause Analysis investigation of the violations and identify measure(s) to address the violations. Defendant shall implement the measures recommended by that individual. This individual can be the Environmental Auditor or EMS Consultant.

61. If a Facility has three (3) or more Discharge Limit Violations for the same pollutant parameter within any 12-month period and is not otherwise subject to the requirements

of Paragraph 61.b, above, then Defendant shall conduct the response actions identified in Paragraph 61.b.

Training

62. Defendant shall provide and require annual training for all individuals with environmental responsibilities at either the Old Brewery Facility or New Brewery Facility including, but not limited to: (a) CWA compliance, including all applicable IU Permits; (b) pretreatment training; (c) requirements in the EMS Manual; and (d) obligations in this Consent Decree.

63. Defendant shall provide and require annual training for all contractors and laboratory personnel on applicable requirements under this Consent Decree and any applicable requirements in the EMS Manual.

64. All training under Paragraphs 63 and 64 shall be documented with the date of training, signatures of attendees, a summary of training topics, and copies of training materials. Such documentation shall be submitted to EPA in the quarterly reports due under Section VIII.

VIII. REPORTING REQUIREMENTS

65. Within 30 Days after the end of each calendar-year quarter (i.e., by April 30, July 30, October 30, and January 30) after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XIX, Defendant shall submit a quarterly report for the preceding quarter that shall include a list of any violations of applicable IU Permits; status of compliance with the New Brewery Enhancements requirements, Paragraphs 54-57; status of compliance with the Old Brewery Pretreatment System requirements, Paragraphs 50-53; status of EA Report submissions and Compliance Measures; Certification of EMS Manual compliance, or

for any noncompliance, an explanation of the cause of the non-compliance, remedial steps to be taken, and date for achieving compliance; a list of stipulated penalties owed and documentation of payment; and required documentation of training pursuant to Paragraph 65. Unless otherwise provided, reports or other submittals required pursuant to Section VII (Injunctive Relief) may be submitted in the quarterly reports.

66. The report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States of such violation and its likely duration, in writing, within 10 Days of the Day Defendant first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to eliminate such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section X of this Consent Decree (Force Majeure).

67. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Decree, or the performance of its Facilities, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event.

This procedure is in addition to the requirements set forth in the preceding Paragraph.

68. All reports shall be submitted to the persons designated in Section XV (Notices) of this Consent Decree.

69. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, 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.

70. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

71. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Clean Water Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

72. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

IX. STIPULATED PENALTIES

73. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section X (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all

applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

74. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section V of this Decree (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$1500 per Day for each Day that the payment is late, in addition to interest on the portion of the civil penalty not paid.

75. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

76. Except as provided in Paragraph 82, Defendant shall pay any stipulated penalty within 30 Days of receiving the United States' written demand.

77. Non-Compliance with Consent Decree. The following stipulated penalties shall accrue per violation per Day for each violation of any requirement of this Consent Decree, except for the Reporting Requirements of Section VIII (Reporting Requirements):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500 per Day or portion thereof	1st through 14th Day
\$1,500 per Day or portion thereof	15th through 30th Day
\$3,500 per Day or portion thereof	31st Day and beyond

78. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the Reporting Requirements of Section VIII of this Consent Decree :

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 250 per Day or portion thereof	1st through 14th Day
\$ 500 per Day or portion thereof	15th through 30th Day
\$ 750 per Day or portion thereof	31st Day and beyond

79. Discharge Limit Violations. The following stipulated penalties shall accrue for each Discharge Limit Violation of an IU Permit at any of Defendant's Facilities after the Effective Date of this Consent Decree:

<u>Per Violation</u>	<u>Category of Noncompliance</u>
\$ 2,500	Category 1 Discharge Limit Violation
\$ 5,000	Category 2 Discharge Limit Violation

80. Non-Discharge Limit Violation of IU Permit. The following stipulated penalties shall accrue for each Non-Discharge Limit Violation of any IU Permit requirement at any of Defendant's Facilities after the Effective Date of this Consent Decree. Non-Discharge Limit Violations of IU Permits only include: (1) failure to resample after a discharge limit violation; (2) failure to submit monitoring reports; (3) failure to comply with monitoring requirements; (4) and, failure to report or to timely report discharge limit violations to the GPASA. Stipulated penalties are:

<u>Per Day of Violation</u>	<u>Period of Noncompliance</u>
\$ 500 per Day or portion thereof	1st through 14th Day
\$ 750 per Day or portion thereof	15th through 30th Day
\$ 1,000 per Day or portion thereof	31st Day and beyond

81. Defendant shall pay any stipulated penalties due under Paragraphs 80 or 81 at the end of the month following the end of each quarter (i.e., by April 30, July 31, October 31, and January 31).

82. The United States may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

83. Stipulated penalties shall continue to accrue as provided in Paragraph 76, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement of the Parties or by a decision of EPA that is not appealed to the Court, Defendant shall pay accrued stipulated penalties determined to be owing, together with interest, to the United States within 30 Days of the Effective Date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Defendant shall pay all accrued stipulated penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in Subparagraph c, below.

c. If any Party appeals the Court's decision, Defendant shall pay all accrued stipulated penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

84. Upon the Effective Date of this Consent Decree, the stipulated penalty provisions of this Decree shall be retroactively enforceable with regard to any and all violations of Paragraphs 27, 42, 49, 51, 55, 58 and 60 that have occurred after lodging and prior to the Effective Date of the Consent Decree, provided that stipulated penalties that may have accrued prior to the Effective Date may not be collected unless and until this Consent Decree is entered by the Court.

85. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 12, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

86. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in

28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

87. Subject to the provisions of Section XIII of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Defendant's violation of this Consent Decree or applicable law.

X. FORCE MAJEURE

88. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

89. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice by electronic or facsimile transmission to (215) 814-2318, within 72 hours of when Defendant first knew that the event might cause a delay. Within 10 Days thereafter, Defendant shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or

minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

90. If EPA agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

91. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

92. If Defendant elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than 15 Days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the

circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 89 and 90, above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

93. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Decree.

94. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 20 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

95. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion

supporting Defendant's position and any supporting documentation relied upon by Defendant.

96. The United States shall serve its Statement of Position within 45 Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

97. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XV of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 10 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

98. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

99. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 95 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; the adequacy of the

performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 95, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

100. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 84. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

XII. INFORMATION COLLECTION AND RETENTION

101. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by

Defendant or its representatives, contractors, or consultants;

- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

102. Upon request, Defendant shall provide EPA or its authorized representative(s) splits of any samples taken by Defendant. Upon request, EPA shall provide Defendant splits of any samples taken by EPA.

103. Until five (5) years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

104. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Defendant shall deliver any such documents, records, or other information to EPA. Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the

following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

105. Defendant may also assert that information required to be provided under this Consent Decree is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

106. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

107. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action through the date of lodging.

108. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 107. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CWA or implementing regulations, or under other federal laws, regulations, or permit conditions, except as expressly specified in Paragraph 107.

109. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Facilities or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 107 of this Section.

110. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with the CWA or with any other provisions of federal, state, or local laws, regulations, or permits.

111. This Consent Decree does not limit or affect the rights of Defendant or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

112. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XIV. COSTS

113. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XV. NOTICES

114. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-10824

and

NPDES Enforcement Branch Chief
U.S. EPA Region III
1650 Arch Street, 3WP42
Philadelphia, PA 19103

To EPA:

NPDES Enforcement Branch Chief
U.S. EPA Region III
1650 Arch Street, 3WP42
Philadelphia, PA 19103

To Defendant:

Robert Seaman, Plant Manager

D.G. Yuengling & Sons
310 Mill Creek Avenue
Pottsville, PA 17901

Edward A. Hogan
Norris McLaughlin & Marcus, P.A.
515 West Hamilton Street
Suite 502
Allentown, PA 18101

115. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

116. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVI. EFFECTIVE DATE

117. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Defendant hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirement to perform duties scheduled to occur before the Effective Date shall terminate.

XVII. RETENTION OF JURISDICTION

118. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XI (Dispute Resolution) and XVIII (Modification), or effectuating or enforcing compliance with the terms of this Decree.

XVIII. MODIFICATION

119. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court. Modifications to dates of deliverables are not considered a material change.

120. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XI of this Decree (Dispute Resolution), provided, however, that instead of the burden of proof provided by Paragraph 99, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XIX. TERMINATION

121. After Defendant has completed the requirements of Section VI (General Compliance Requirements) of this Decree, has thereafter maintained continuous satisfactory compliance with this Consent Decree and Defendant's IU Permits for a period of four (4) years and has complied with all other requirements of this Consent Decree, including those relating to Injunctive Relief required by Section VII and Appendices B and C of this Decree, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

122. Following receipt by the United States of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree

may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

123. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XI of this Decree. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 95 of Section XI, until 90 Days after service of its Request for Termination.

XX. PUBLIC PARTICIPATION

124. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

XXI. SIGNATORIES/SERVICE

125. Each undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice 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 the Party he or she represents to this document.

126. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant 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 Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXII. INTEGRATION

127. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXIII. FINAL JUDGMENT

128. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXIV. APPENDICES

129. The following Appendices are attached to and part of this Consent Decree:

“Appendix A” is the EPA Compliance-Focused Environmental Management System Elements.

“Appendix B” is the proposed Old Brewery Pretreatment System.

“Appendix C” are the New Brewery Enhancements.

Dated and entered this _____ day of _____, 2016

UNITED STATES DISTRICT JUDGE

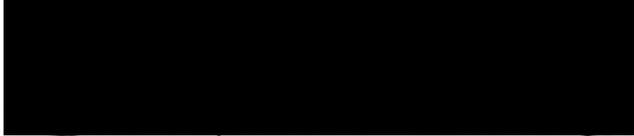
THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. D.G. Yuengling and Son, Inc.:

FOR THE UNITED STATES OF AMERICA:

Date: 6/22/16



JOHN C. CRUDEN
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice



STACY D. COLEMAN
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
999 18th Street, Suite 370, South Terrace
Denver, Colorado 80202
(303) 844-7240 (phone)
(303) 844-1350 (fax)
Stacy.Coleman@usdoj.gov

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. D.G. Yuengling and Son, Inc.:

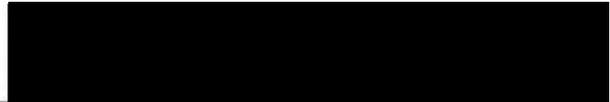
FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: 4/10/2016



SHAWN M. GARVIN
Regional Administrator
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 1903-2029

Date: 4/2/16



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

Date: 3/21/16



DOUGLAS FRANKENTHALER
Assistant Regional Counsel
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. D.G. Yuengling and Son, Inc.:

FOR DEFENDANT D.G. YUENGLING AND SON, INC:

Date: 18 March 2016



RICHARD L. YUENGLING
President
310 Mill Creek Avenue
Pottsville, PA 17901

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. D.G. Yuengling and Son, Inc.:

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: _____

5/13/16


CYNTHIA J. GILES
Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
William J. Clinton Building, South
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

5/13/16


SUSAN SHINKMAN
Director, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
William J. Clinton Building, South
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

5/2/16


MARK POLLINS
Director, Water Enforcement Division
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
William J. Clinton Building, South
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

4/12/2016


ROBERT D. FENTRESS
Attorney-Advisor, Water Enforcement Division
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
William J. Clinton Building, South
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

APPENDIX A

**COMPLIANCE-FOCUSED
ENVIRONMENTAL MANAGEMENT SYSTEM ELEMENTS**

United States v. D.G. Yuengling and Son, Inc.

1. Environmental Policy

- a. This policy, upon which the EMS is based, must clearly communicate management commitment to achieving compliance with applicable federal, state, and local environmental statutes, regulations, enforceable agreements, and permits (hereafter, "environmental requirements"), minimizing risks to the environment from unplanned or unauthorized releases of hazardous or harmful contaminants, and continual improvement in environmental performance. The policy should also state management's intent to provide adequate personnel and other resources for the EMS.

2. Organization, Personnel, and Oversight of EMS

- a. Identifies and defines specific duties, roles, responsibilities, and authorities of key environmental staff in implementing and sustaining the EMS (e.g., could include position descriptions and/or performance standards for all environmental department personnel, and excerpts from others having specific environmental duties, and regulatory compliance responsibilities).
- b. Includes organization charts that identify units, line management, and other individuals having environmental duties and regulatory compliance responsibilities.
- c. Includes ongoing means of communicating environmental issues and information among the various levels and functions of the organization, to include all persons working for or on behalf of the organization (e.g. on-site service providers and contractors who function as de facto employees), and for receiving and addressing their concerns.

3. Accountability and Responsibility

- a. Specifies accountability and environmental responsibilities of organization's managers, and managers of other organizations acting on its behalf for environmental protection and risk reduction measures, assuring compliance, required reporting to regulatory agencies, and corrective actions implemented in their area(s) of responsibility.
- b. Describes incentive programs for managers and employees to perform in accordance with compliance policies, standards, and procedures.

- c. Describes potential consequences for departure from specific operating procedures, including liability for civil/administrative penalties imposed as a result of noncompliance.

4. Environmental Requirements

- a. Describes process for identifying potentially applicable environmental requirements; interpreting their applicability to specific operations, emissions, and waste streams; and effectively communicating those applicable environmental requirements to affected persons working for or on behalf of the organization.
- b. Describes a process for developing, implementing and maintaining ongoing internal compliance monitoring to ensure that facility activities conform to applicable environmental requirements. Compliance monitoring shall include inspections and measurements, as appropriate.
- c. Describes procedures for prospectively identifying and obtaining information about changes and proposed changes in environmental requirements, and incorporating those changes into the EMS (i.e., regulatory “change management”).
- d. Describes a procedure for communicating with regulatory agencies regarding environmental requirements and regulatory compliance.

5. Assessment, Preventions, and Control

- a. Identifies an ongoing process for assessing operations, for the purposes of preventing, controlling, or minimizing reasonably foreseeable releases, environmental process hazards, and risks of noncompliance with environmental requirements. This process shall include identifying operations and waste streams where equipment malfunctions and deterioration, and/or operator errors or deliberate malfeasance, are causing, or have the potential to cause: (1) unplanned or unauthorized releases of hazardous or harmful contaminants to the environment, (2) a threat to human health or the environment, or (3) noncompliance with environmental requirements.
- b. Describes process for identifying operations and activities where documented operating criteria, such as a standard operating procedures (SOPs), are needed to prevent noncompliance or unplanned/unauthorized releases of hazardous or harmful contaminants, and defines a uniform process for developing, approving and implementing the documented operating criteria.
- c. Describes a system for conducting and documenting routine, objective, self-inspections by department supervisors and trained staff, especially at locations identified by the process described in (a) above, to check for malfunctions,

deterioration, worker adherence to operating criteria, unusual situations, and unauthorized or unplanned releases.

- d. Describes a “management of change” process to ensure identification and consideration of environmental requirements, the environmental aspects/impacts, and potential operator errors or deliberate malfeasance during planning, design, and operation of ongoing, new, and/or changing buildings, processes, equipment, maintenance activities, and products.

6. Environmental Incident and Non-Compliance Investigations

- a. Describes standard procedures and requirements for internal and external reporting of environmental incidents and noncompliance with environmental requirements.
- b. Establishes procedures for investigation, and prompt and appropriate correction of noncompliance. The investigation process includes root-cause analysis of identified problems to aid in developing the corrective actions.
- c. Describes a system for development, tracking, and effectiveness verification of corrective and preventative actions.

7. Environmental Training, Awareness, and Competence

- a. Identifies specific education and training required for organization personnel or those acting on its behalf, as well as process for documenting training provided.
- b. Describes program to ensure that organization employees or those acting on its behalf are aware of its environmental policies and procedures, environmental requirements, and their roles and responsibilities within the environmental management system.
- c. Describes program for ensuring that personnel responsible for meeting and maintaining compliance with environmental requirements are competent on the basis of appropriate education, training, and/or experience.
- d. Identifies training on how to recognize operations and waste streams where equipment malfunctions and deterioration, and/or operator errors or deliberate malfeasance, are causing, or have the potential to cause: (1) unplanned or unauthorized releases of hazardous or harmful contaminants to the environment, (2) a threat to human health or the environment, or (3) noncompliance with environmental requirements.

8. Environmental Planning and Organizational Decision-Making

- a. Describes how environmental planning will be integrated into organizational decision-making, including plans and decisions on capital improvements, product and process design, training programs, and maintenance activities.
- b. Requires establishing, on an annual basis, written targets, objectives, and action plans for improving environmental performance, by at least each operating organizational subunit with environmental responsibilities, as appropriate, including those for contractor operations conducted at the facility, and how specified actions will be tracked and progress reported. Targets and objectives must include actions that reduce the risk of noncompliance with environmental requirements and minimize the potential for unplanned or unauthorized releases of hazardous or harmful contaminants.

9. Maintenance of Records and Documentation

- a. Identifies the types of records developed in support of the EMS (including audits and reviews), who maintains them and, where appropriate, security measures to prevent their unauthorized disclosures, and protocols for responding to inquiries and requests for release of information.
- b. Specifies the data management systems for any internal waste tracking, environmental data, and hazardous waste determinations.
- c. Specifies document control procedures.

10. Pollution Prevention

- a. Describes an internal process or procedures for preventing, reducing, recycling, reusing, and minimizing waste and emissions, including incentives to encourage material substitutions. Also includes mechanisms for identifying candidate materials to be addressed by the pollution prevention program and tracking progress.

11. Continuing Program Evaluation and Improvement

- a. Describes program for periodic (at least annually) evaluation of the EMS, which specifies a process for translating assessment results into EMS improvements. The program shall include communicating findings and action plans to affected organization employees or those acting on its behalf.
- b. Describes a program for periodic audits (at least annually) of facility compliance with environmental requirements by an independent auditor(s). Audit results are reported to upper management and instances of noncompliance are addressed through the process described in element 6 above.

12. Public Involvement/Community Outreach

- a. Describes a program for ongoing community education and involvement in the environmental aspects of the organization's operations and general environmental awareness.

APPENDIX B



PRETREATMENT NARRATIVE

FOR

D.G. YUENGLING & SONS

POTTSVILLE BREWERY

JANUARY 2016

Prepared by: Systems Design Engineering, Inc.

A handwritten signature in blue ink, appearing to read 'Gregory T. Unger', is written in a cursive style.

Gregory T. Unger, PE
President



1.0 INTRODUCTION

D.G. Yuengling & Sons, Inc. (Yuengling) owns and operates America's oldest brewery located at 501 Mahantongo Street, Pottsville, PA 17901 (the Brewery). Over the past few years, the Brewery has been facing increased regulatory compliance requirements and sewer surcharges relating to its wastewater discharge to the Greater Pottsville Area Sewer Authority (GPASA) sewer system. As a result, Yuengling is planning to install an onsite anaerobic wastewater pre-treatment system.

In April 2014, Yuengling retained EMG International, LLC (EMG) to analyze its facility wastewater and create a Brewery Wastewater Pre-Treatment and Energy Generation System Overview for the Brewery in order for development of a wastewater pre-treatment system to handle process-related wastewater generated by the Brewery, which would discharge the treated effluent into the GPASA sewer system under Yuengling's existing sewer discharge permit.

Yuengling's objectives for the pre-treatment system are:

- a) Install a reliable and robust wastewater pre-treatment system that will greatly improve compliance with the existing GPASA permit limits;
- b) Promote Yuengling's environmental stewardship policy by reducing waste discharge and energy consumption, and improve the Brewery's standing in the surrounding community;
- c) Maximize the potential for renewable energy recovery from the Brewery's wastewater stream; and
- d) Select a pre-treatment technology that is easily expandable in order to allow the Brewery to handle future changes and demands in wastewater management.

This document provides the following information relating to the Brewery's wastewater pre-treatment system:

- A description of the EMG wastewater characterization study;
- A description of the anaerobic treatment process;
- A description of the Brewery Anaerobic Digester wastewater pre-treatment system and its components;
- Schematic system layout drawings

2.0 DESCRIPTION OF THE ON-GOING WASTEWATER CHARACTERIZATION STUDY

EMG conducted a detailed review of the brewing process and Clean-In-Place (CIP) systems as they relate to wastewater generation. EMG set up one (1) sampling station to collect and analyze wastewater generated by the Brewery. Wastewater samples were collected using an automatic sampler placed into service at the discharge point in the Brewery prior to the GPASA sewer system. Samples were collected using a composite auto sampler that collected the samples over a 24 hour period. Samples were collected daily for an eight (8) week period (on a 5-day per week basis) and were analyzed for the following parameters:

Parameter	Units	Sampling Method	Frequency	Lead
Wastewater Flow	Gallons Per Day	24-Hour Composite Sampler (flow based)	Daily	Hawk Mountain Labs
Temperature	°F	Data Logger	Continuous	EMG
Total Chemical Oxygen Demand (TCOD)	mg/L	24-Hour Composite	Daily	EMG Laboratory
Soluble Chemical Oxygen Demand (SCOD)	mg/L	24-Hour Composite	Daily	EMG Laboratory
Five-Day Biochemical Oxygen Demand (BOD ₅)	mg/L	24-Hour Composite	Daily	Hawk Mountain Labs
Ammonia-Nitrogen (NH ₃ -N)	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Nitrate-Nitrogen (NO ₃ -N)	mg/L	24-Hour Composite	Twice per Week	EMG Laboratory
Total Phosphorus	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Ortho Phosphate (PO ₄)	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Total Sulfates (SO ₄)	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Total and Free Chlorine	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Volatile Acids	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Total Alkalinity	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory

Parameter	Units	Sampling Method	Frequency	Lead
Total Suspended Solids (TSS)	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Volatile Suspended Solids (VSS)	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory
Total Solids	mg/L	24-Hour Composite	Three times per Week	EMG Laboratory

3.0 DESCRIPTION OF THE ANAEROBIC TREATMENT PROCESS

Anaerobic digestion has been used for over a century in the treatment of a variety of wastewaters (e.g., McCarty, 1982; Shieh and Li, 1989; Iza *et al.*, 1991; Noike *et al.*, 1985; Sundstrom and Klei, 1979; Metcalf and Eddy, 1991; and Huang *et al.*, 1989). Anaerobic biological treatment offers several significant advantages over the more commonly applied aerobic treatment processes. Anaerobic treatment is an energy producer rather than an energy consumer. Methane gas is a profitable end-product, which can be readily used for energy co-generation onsite (Hayes *et al.*, 1990; Prasad, 1992; and Daryapurkar and Kaul, 1991). Another advantage is that anaerobic systems produce only about 10% as much sludge as their aerobic counterparts, greatly reducing sludge disposal costs. The lower biomass production is likely due to the formation of more complicated protein polymers in anaerobic bacteria as compared to aerobic bacteria, in which proteins are mostly composed of more easily formed carbohydrates (Morgan *et al.*, 1990). The lower sludge production also entails less nutrient supplements, which is important in the treatment of nutrient-deficient wastewaters.

Recent research interest in anaerobic digestion has led to the advent of reactor configurations that overcome traditional disadvantages such as slow bacterial growth rates and process instability. In particular, anaerobic immobilized-cell reactors were found to be more effective for treating wastewater streams. Anaerobic immobilized-cell (AIC) wastewater treatment provides many advantages over conventional suspended growth anaerobic waste digestion. The latter has had limited application because of slow bacterial growth rates, relatively low organic removal efficiencies, high hydraulic retention time (HRT) requirements, and sensitivity of the microorganisms to toxic materials, temperature and pH (Schraa and Jewell, 1984). Conversely, AIC treatment systems are more effective in handling wastewater. Attached growth systems provide better protection against cell washout problems as compared to suspended growth systems. Also, immobilization and retention of biomass allows for characteristically long mean cell residence time (MCRT) and a highly active bacterial population. Fluidization of growth support media further increases the cell retention capacity by increasing the available surface area for colonization. This is especially important

for methanogenic bacteria which tend to have slow growth rates. In addition to biodegrading wastes effectively, high anaerobic biomass populations enhance process stability, and system recovery from adverse operating conditions, such as hydraulic and organic overloading.

Anaerobic fermentation is a complex, multi-step biological process. This process converts the biodegradable portion of the wastewater into bacterial cells, carbon dioxide, methane gas, and water. There are three basic stages involved in anaerobic fermentation: 1) hydrolysis, liquefaction, and fermentation; 2) hydrogen and acetic acid formation; and 3) methane formation. The three stages of anaerobic digestion, involving possibly five groups of bacteria, are shown in Figure 1 below.

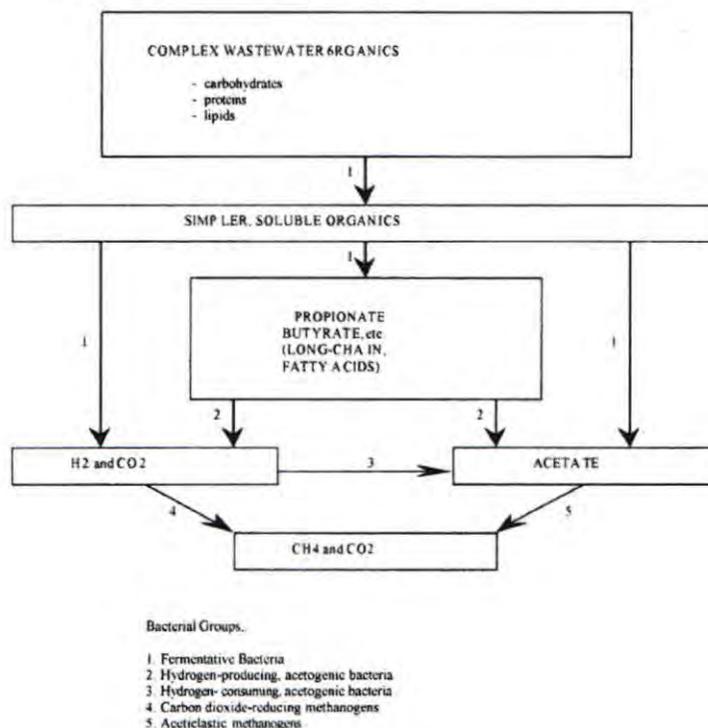


Figure 1. Methane Formation in Anaerobic Digestion (after Parkin and Owen, 1986)

3.1 Hydrolysis, Liquefaction, and Fermentation

Hydrolysis and liquefaction are necessary to convert complex organics that may be insoluble to a size and form that is readily usable by the bacteria as energy or nutrient sources. This is accomplished mainly by bacterial-exerted enzymes that promote the solubility of organic waste matter. No waste stabilization takes place during this step,

this is merely a change in the form of the BOD₅ or organic carbon, with the total BOD₅ or total organic carbon (TOC) remaining unchanged. A properly functioning hydrolysis and liquefaction step is essential for subsequent waste stabilization, since particle size of the influent waste stream may affect the overall digestion efficiency.

Hydrolyzed complex organic waste is fermented to long-chain organic acids, sugars, amino acids and volatile organic acids (VOAs) (Parkin and Owen, 1986). Fermentative acid-forming bacteria may be inhibited by the presence of anaerobic digestion by-products such as hydrogen (Hickey *et al.*, 1987; and Labib *et al.*, 1992). Thus, sufficient system assimilation capacity for hydrogen removal must be maintained to ensure continuous acid production. Stable, co-existing species of fermentative bacteria were found in mixed-culture experiments with carbon sources such as glucose, cellulose and whey (Thiele, 1991). Rapid growth and metabolism of fermentative bacteria could lead to the accumulation of organic acids which can reduce pH levels. Low pH levels can result in a "sour digester". Though such an environment has little effect on acids production, it can severely inhibit methane formation.

3.2 Hydrogen and Acetic Acid Formation

Hydrogen can be produced by fermentative and acetogenic bacteria. Acetic acid is also produced by these groups, as well as by hydrogen-consuming acetogenic bacteria. Hydrogen has been shown to play a key role in the production of methane gas. Parkin and Owen (1986) suggest that hydrogen partial pressures above 0.1 atm may inhibit methane production and cause VOA accumulation. Thus, in order to maintain efficient digestion, a stable population of CO₂-reducing methanogenic bacteria is necessary to ensure sufficient assimilation of hydrogen.

Organic acids that may accumulate during anaerobic digestion of easily hydrolysable or fermentable substrates include acetate, propionate and butyrate (Costello *et al.*, 1991b; Matsui *et al.*, 1993; Chynoweth, 1969; and Jeris and McCarty, 1965). Thus, a stable population of acetogenic bacteria is also necessary to maintain an effective anaerobic digestion, since accumulation of these acids would also inhibit the digestion process.

Acetogenic bacteria are often termed "syntrophic" since they are believed to metabolize and grow only in the presence of metabolically active hydrogen- and/or formate-consuming bacteria (Thiele, 1991). It is important to note that acetate is also an inhibitory by-product of anaerobic digestion; thus, the rate of acetate removal by methanogenic bacteria directly affects the metabolic rate of acetogenic bacteria. In fact, high organic acids levels may be used as an indicator of stressful operation of the digester. Martin, et al. (1993) noted that acetate concentrations above 800 mg/L

indicated impending failure of an anaerobic digestion system for swine manure. The same authors reported a ratio of 1.4 between propionic and acetic acid concentrations as a digester failure criterion.

3.3 Methane Formation

Final waste stabilization (BOD₅ or TOC removal) occurs when acid-utilizing and CO₂-reducing methanogens produce methane and carbon dioxide. Methane has a very low solubility in water and is readily separated and collected from the system. Carbon dioxide, on the other hand, is soluble in water (CO₂ solubility is affected by many factors including partial pressure, pH, and temperature). The produced carbon dioxide either leaves the system as a gas or is converted to bicarbonate alkalinity in water. Thus, a carbon mass balance based on methane production would provide a better measure of the system's conversion efficiency than a balance based on CO₂.

Methanogenic bacteria can only utilize a specific group of substrates as an energy source. This group includes formic acid, acetic acid, methanol, hydrogen, and carbon dioxide (Parkin and Owen, 1986; and Zeikus *et al.*, 1985). Jeris and McCarty (1965) employed tracer studies to evaluate the direct contribution of acetate to methane production for anaerobic digestion of various substrates. They estimated that 67-100% of the methane production from fatty substrates is directly due to acetate cleavage. Carbohydrates, which are easier to digest than fats, showed 67% methane production from acetate. Proteins and sewage sludge had approximately 70% of their methane production directly attributable to acetic acid.

The remainder of produced methane is a result of carbon dioxide reduction using hydrogen as an energy source. A schematic of the pathways for methane production from complex wastes is presented in Figure 2.

Several researchers have attempted to outline the reactions involved in the anaerobic digestion process (Matsui *et al.*, 1993; Heinrichs *et al.*, 1990; McCarty, 1975; Ryhiner *et al.*, 1993; Thiele, 1991; Lawrence and McCarty, 1969; Karhadkar *et al.*, 1987; Hilton and Oleszkiewicz, 1988; Labib *et al.*, 1992; Maillacheravu *et al.*, 1993; Costello *et al.*, 1991a, b; and Takashima, 1987). In general, diatomic hydrogen (H₂) is formed as a result of the hydrolysis and fermentation of proteins and carbohydrates. An efficient anaerobic digestion process requires a symbiotic existence between acetogenic and methanogenic bacteria. Acetogens convert hydrolyzed complex waste and long-chain

organic acids to acetate and hydrogen. Finally, hydrogen utilization rates must be sufficiently rapid to prevent accumulation and, consequently, inhibition of the methane production process.

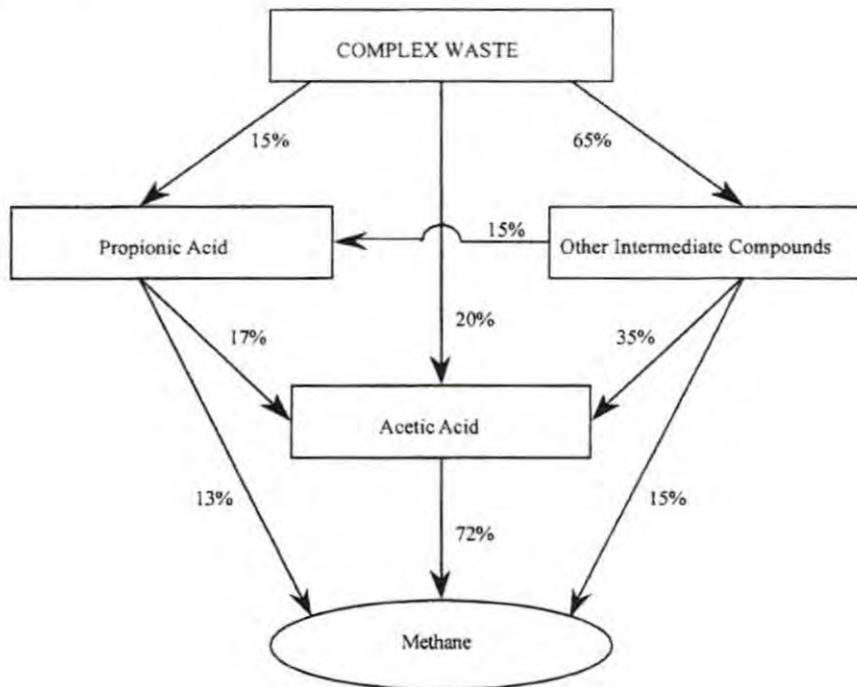


Figure 2. Pathways in Methane Fermentation of Complex Wastes. Percentages Represent Conversion of TOC by Various Routes. (McCarty and Smith, 1986)

4.0 CONSTRUCTION AND DESIGN PROCESS

D.G. Yuengling and Sons, Inc. retained Systems Design Engineering, Inc. (SDE) to review the EMG report and create a procurement document for a design build project to install a pretreatment system in the Yuengling Creamery building immediately adjacent to the Brewery at Fifth & Mahantongo Streets.

Systems Design Engineering, Inc. created a procurement document to purchase the equipment, process design and technical expertise from selected vendors. Bids were received from the following vendors:

1. EMG International, LLC
2. Veolia Water Solutions and Technologies NA, Inc.

Veolia was selected based on their Biothane anaerobic process, a similar version being used at the Yuengling Mill Creek brewery. Section 5.0 is an excerpt from the SDE document used for the procurement of the process equipment discussed above.

5.0 SPECIFICATION AND BIDDING DOCUMENT FOR PROCESS AND PROCESS DESIGN

Veolia quoted the total plant design and supply of all equipment, valves, instrumentation process, control and startup/operations using the component documents provided in this specification. Their Work includes all engineering and design, procurement, delivery and start-up services for a completely functional process system. Key components include the following:

- Anaerobic Digester reactors, complete with pulsing valves, internal piping, internal standpipe and settler
- Dual static screens
- Influent Lift Station; concrete basin by owner; submersible pumps, guiderails, valves, instrumentation and controls by Contractor
- Screened Influent Lift Station; concrete basin by owner; submersible pumps, guiderails, valves, instrumentation and controls by Contractor
- Supply of anaerobic instrumentation package with control panel and computer to allow automated, independent operation of the digester, automated digester feed control valves, and recycle level control valve(s)
- DAF system for reduction of suspended solids in effluent
- Rapid Mix Tank (cylindrical FRP), complete with mixing capability and steam sparger
- Surplus Sludge Tank
- DAF Sludge Holding Tank
- Caustic Scrubber w/ Carbon Polishing System for odor control
- Gas handling system and flare
- Process Engineering
 - P&ID's for system operation
 - I/C control system drawings
 - Conduit and Cable Schedule for any blower, pump motors and field devices furnished by anaerobic system supplier
 - Conduit routing drawings will be developed by the Electrical Contractor
 - Tank orientation drawings for digester(s)
 - System layout

- Anaerobic seed granular biomass (50,000 gallons) from U.S. operating digester installation of the type sold by the supplier
- On site construction assistance (30 days) spaced over 5 trips to site
- System start up supervision (21 days) and training of Owner personnel, continuous
- One (1) year operational support, offsite monitoring and minimum of one (1) day monthly on site
- Warranty on Final BOD and TSS limits
- Vendor's recommended spare parts for 1-year of operation

5.1 ANAEROBIC PROCESS SPECIFICATION

The anaerobic process will be a high rate Anaerobic Digester process as provided by Veolia.

The process will include:

- a) A means for distributing wastewater on the floor of the reactor such that the distribution system accomplishes mixing of the wastewater and biomass.
- b) A means of incorporating automated sequential pulsing of the feed flow to prevent channeling through the sludge bed or other proprietary device.
- c) A settler section in the top of the digester, so designed to efficiently separate the three phases of wastewater, biomass and biogas. The settler should be of design to optimize granulation and the retention of biomass in the reactor.
- d) A proven process that has as its basis the ability to produce granular anaerobic biomass and retain it in the reactor. Systems producing alternate sludge growth structures will not be permitted.

5.2 PROCESS DESIGN BASIS

The Anaerobic Digester system will be designed to treat the Brewery wastewater stream as outlined in Table 1 "Yuengling Wastewater Characteristics". The Contractor will perform general process design and will specify system dimensions for a complete and fully operable Anaerobic Digester wastewater treatment system, which shall achieve effluent per Table 2.

TABLE 1. YUENGLING WASTEWATER CHARACTERISTICS

<u>Parameter</u>	<u>Unit</u>	<u>Average</u>	<u>Maximum</u>
Flow	gpd	200,000	250,000
Flow	gpm	140	175
Flow (instantaneous peak)	(gpm) 30 minutes	--	350
BOD	mg/l	1800	
BOD	lb/d	3000	
COD	mg/l	3300	
COD	lb/d	5500	
TSS	mg/l	450	900
T (Steam provided by owner to heat to 95 °F)	°F	60	100
pH	s.u.	6.0	4 - 11.5
TKN**	mg/l	22	8 - 320
P, Total	mg/l	10	1 - 30
Sulfate	mg/l	34	0 - 200

TABLE 2. EFFLUENT CHARACTERISTICS

Parameter	GPASA Permit (Monthly Average)	Unit
BOD	300	mg/L
TSS	350	mg/L
BOD	2,252	lb/d
TSS	1,251	lb/d
Total Phosphorus	10	mg/L
NH ₃ -N	40	mg/L

The Anaerobic Digester process is designed with an average volumetric load of no more than 13 kg COD/m³/d. The high-rate anaerobic system is designed for 900 mg/L TSS maximum and 450 mg/L TSS average.

Contractor will provide detailed design and specifications for all equipment items associated with or affecting the operating anaerobic system whether or not supplied by Contractor as part of these specifications, to be provided during the design phase.

The Anaerobic Digester reactor vessel top works is designed to accomplish effective separation of solids, liquid, and biogas at the design average, and maximum wastewater flow and loads.

The anaerobic system is designed in accordance with the following:

The wastewater is directed to an Influent Sump, and Influent Pumps will pump the wastewater to two new static screens. The screened wastewater will gravity flow to a Screened Influent Sump and then pumped to the Equalization Tanks. The precast sumps are provided by Yuengling, and the pumps and controls by Contractor. This system is based on the peak instantaneous flow noted in Table 1.

The purpose of the Equalization Tanks is to ensure equalization and homogeneous solution with mechanical mixing. This system should be designed to have at least 4 hours hydraulic retention time at maximum flow. The system shall be designed with a control system to give the proper hold up at various flows. As the future flow increases from the design to the maximum, the level is just adjusted to maintain the proper hold up and minimize solids growth. Further, the volume above the operating level can act as surge as required.

From the Equalization Tanks, the wastewater is directed to a Rapid Mix Tank. The level in the EQ Tanks is controlled.

In the Rapid Mix Tank, the anaerobic process recycles the equalized raw wastewater stream, and the process chemicals are uniformly blended with a side-entry mixer. The reactor feed pH is recorded via an in-line pH meter just downstream of the Rapid Mix Tank. Since pH is an important factor in system performance, caustic is dosed in the Rapid Mix Tank. The pH control loop regulates the caustic dose rate. It is important to note that we automatically control the pH of the reactor feed. Due to the retention time in the anaerobic reactor (9.1 hours), if the pH was solely based on the effluent, by the time the pH inline meter would see a low pH, it would be too late for the caustic pump to keep up with the lowering pH.

Iron/micronutrients are an essential nutrient for anaerobic digestion and must be supplied if not already present in the wastewater. The process chemicals are metered into the conditioned flow using mechanical diaphragm pumps.

The Reactor operates in the mesophilic temperature range, that being 90° to 95°F. The wastewater average temperature is 60°F. Therefore, a steam sparger is included in the Rapid Mix Tank to supply steam injection.

The Rapid Mix Tank contents are transferred to the Biobed Reactors via the Reactor Feed Pump. The reactor feed flow is automatically controlled to a preset flow rate that is at least as high as the equalized feed flow rate, with effluent recycle comprising any additional flow.

The reactor feed flow then passes through a set of pulsing valves and the influent feed distribution system located at the bottom of the Biobed Reactors. In the Biobed reactor, the granular biomass degrades the COD and produces biogas (methane and carbon dioxide). As the wastewater filters up through the sludge bed in the reactor, the biodegradable components are converted to biogas and a small amount of new sludge. The wastewater passes up through the patented three phase settlers, which are located at the top of the reactor. The settler system performs the function of degassing the biomass so the biomass can settle back down to the sludge bed while the biogas is directed to the biogas headspace in the dome of the reactor. The biogas is collected and piped away to an enclosed safety flare or GENSET where it is burned. Biogas flow from the reactors is monitored and recorded.

The treated wastewater or effluent passes out of the settler and then flows into an internal standpipe. Upon exiting the standpipe, the effluent flow splits. A small portion of the effluent water is preferentially recycled back to the Rapid Mix Tank. The recycled effluent water passes through pH and temperature meters where these parameters are monitored and recorded. A grab sample of the recycled anaerobic effluent is also collected daily. The balance of the effluent water not used for recycle exits the anaerobic treatment system by gravity and continues to the Dissolved Air Flotation (DAF) system.

Dissolved Air Flotation (DAF) is the process whereby micro-air-bubbles cause suspended materials to float to the surface of a vessel to achieve liquid/solids separation. The wastewater first enters the low shear mixing pipe flocculator where flocculants are introduced to increase the particle size. The flocculated wastewater then combines with the "whitewater." Whitewater is a mixture of a portion of the DAF effluent, which has been saturated with atmospheric air. The whitewater/wastewater then enters the vessel across the length of the system. The velocity of the water is significantly reduced to maximize separation potential. Inside the vessel, the microbubbles, which have attached to the particle surface, reduce the particle density, causing the suspended solids to float to the

surface where a chain and flight skim them from the surface into a top cone. The "clean" liquid is continuously removed at several points inside the vessel and flows to the Final Effluent Sump. The final effluent will be pumped to final discharge. The DAF float is removed continuously and pumped to a Solids Tank for storage before being disposed of.

The selection of the DAF as the clarification process is due to its small footprint, operational flexibility and track record as a system that easily removes suspended solids. As the TSS coming out of the reactor does not settle rather floats, the DAF is a perfect choice for separation. The specified DAF achieves high rate removal efficiencies at a low operational cost.

Regarding the solids handling system, the anaerobic system will grow sludge over time but does not need to be handled each day. For the initial operating period, no sludge will be wasted from the reactor as it will be utilized for building sludge inventory. The sludge can be stored in the Anaerobic Solids Tank. Residual sludge can simply be trucked away or sold to other companies implementing anaerobic reactors and will not need to be dewatered.

SDE acts as design and construction manager for the following aspects of the project:

- 1 General Construction
- 2 Electrical
- 3 Mechanical Installation of Process Equipment
- 4 Electrical Control and SCADA
- 5 CHP System Mechanical
- 6 CHP System Electrical

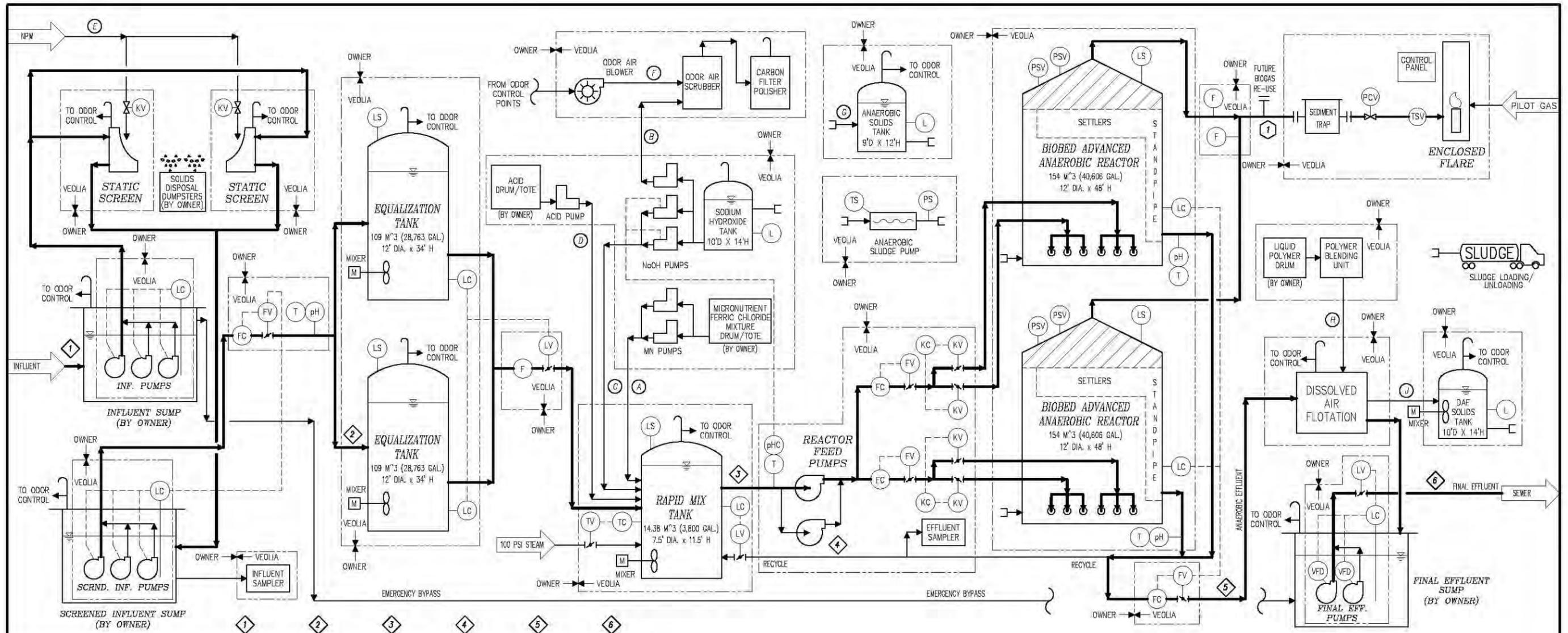
6.0 OPERATION AND MAINTENANCE OF THE PRE-TREATMENT SYSTEM

A detailed Operations and Maintenance Manual that includes all system equipment and instrumentation will be provided to Brewery personnel prior to system startup. SDE will remain closely involved with Yuengling during the startup and early operation phase to ensure proper system operation and technological transfer to selected Brewery personnel. A Brewery onsite operator will conduct the daily system monitoring at the Brewery and will be supported by SDE.

7.0 WASTEWATER PRE-TREATMENT SYSTEM LAYOUT DRAWINGS

Drawing 520.800 illustrates the onsite General Arrangement of the Wastewater Pre-Treatment System at the Brewery

Drawing 520.700A Rev C illustrates the Piping and Instrumentation Diagram for the Wastewater Pre-Treatment System at the Brewery



PARAMETER	UNITS	RAW WASTEWATER	SCREENED INFLUENT	DIGESTER FEED	RECYCLE	ANAEROBIC EFFLUENT	FINAL EFFLUENT
DESIGN FLOW	GPD	200,000	200,000	250,000	50,000	200,000	200,000
	GPM	139	139	174	35	139	139
MAX FLOW	GPD	250,000	250,000	-	-	250,000	250,000
	GPM	174	174	-	-	174	174
PEAK INSTANTANEOUS FLOW (30 MIN MAX)	GPM	350	350	-	-	-	-
TOTAL CHEMICAL OXYGEN DEMAND DESIGN (TCOD)	MG/L	3,300	-	-	-	789	-
	KG/D	2,500	-	-	-	598	-
	LBS/D	5,500	-	-	-	1,316	-
SOLUBLE CHEMICAL OXYGEN DEMAND DESIGN (SCOD)	MG/L	2,750	-	-	-	330	-
	KG/D	2,083	-	-	-	250	-
	LBS/D	4,583	-	-	-	550	-
BIOLOGICAL OXYGEN DEMAND DESIGN (BOD)	MG/L	1,800	-	-	-	216	300
	KG/D	1,364	-	-	-	164	-
	LBS/D	3,000	-	-	-	361	-
TOTAL SUSPENDED SOLIDS DESIGN (TSS)	MG/L	450	-	-	-	450	350
	KG/D	341	-	-	-	341	-
	LBS/D	750	-	-	-	750	-
TEMPERATURE (MINIMUM)	DEG F	60	-	-	-	-	-
pH		6	-	-	-	-	-
TOTAL PHOSPHORUS	MG/L	10	-	-	-	10	-
TKN	MG/L	22	-	-	-	40	-
SULFATE	MG/L	34	-	-	-	-	-

		CHEMICALS & MISCELLANEOUS (DESIGN CASE)					
		A	B	C	D	E	
GAS PHASE		1					
PARAMETER	UNITS	DIGESTER BIOGAS	MICRO/FERRIC CHLORIDE SOLUTION	SODIUM HYDROXIDE ODOR CONTROL	SODIUM HYDROXIDE pH CONTROL	ACID pH CONTROL INTERMITTENT	SCREEN SPRAY WATER INTERMITTENT
		9 GPD		5 GPD	43 GPD	0 GPD	15 GPM
VOLUMETRIC FLOW (DESIGN)	CFM	21	F	G	H	J	
GAS QUALITY			ODOR AIR	ANAEROBIC SOLIDS 10%	POLYMER SOLUTION	DAF SOLIDS 3%	
METHANE	VOL %	75					
CARBON DIOXIDE	VOL %	20					
HYDROGEN SULFIDE	PPMV	800-1,000					
PRESSURE	IN. WC	12					

- NOTES:**
- ALL MCC & VFDs BY OWNER
 - ALL PIPING, INSULATION & HEAT TRACING BY OWNER
 - ALL PROCESS TANKS SUPPLIED BY VEOLIA
 - ALL PROCESS INSTRUMENTS AND EQUIPMENT SUPPLIED BY VEOLIA
 - ALL PROCESS CONTROL VALVES SUPPLIED BY VEOLIA
 - ALL PROCESS MANUAL VALVES SUPPLIED BY VEOLIA. ALL OTHER MANUAL VALVES BY OWNER.
 - ALL CHEMICAL TOTES OR DRUMS SUPPLIED BY OWNER.
 - PEAK INSTANTANEOUS FLOW BASED ON 30 MINUTE MAXIMUM SURGE.
 - SUFFICIENT 100 PSI STEAM WILL BE REQUIRED TO RAISE INFLUENT FROM 60° F TO 90-95° F.
 - EMERGENCY BYPASS - ON POWER FAILURE, INFLUENT SUMP WILL OVERFLOW TO FINAL EFFLUENT SUMP. FINAL EFFLUENT PUMPS WILL BE ON EMERGENCY POWER, BY OWNER.

LEGEND

- (F) = FLOW
- (K) = TIMER
- (L) = LEVEL
- (P) = PRESSURE
- (pH) = pH
- (T) = TEMPERATURE
- C = CONTROL
- S = SWITCH
- SV = SAFETY VALVE
- CV = CONTROL VALVE
- PROCESS PIPING (MAIN FLOW)
- (BIOGAS FLOW)
- (SECONDARY FLOW)
- (OPTIONAL FLOW)
- BOUNDARY LIMITS
- BIOGAS HEADSPACE

REV. NO.	ISSUE DATE	DESCRIPTION
C	11/18/2014	JMK WOD AS SOLD; ADD ACID PUMP, EMERG. BYPASS REV. FINAL EFF. SUMP, DAF SOLIDS TK SIZE

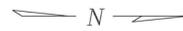
VEOLIA WATER
Solutions & Technologies

100 W. MARKET STREET, SUITE 100, POTTSTVILLE, PA 17424
TEL: 717-836-1770 FAX: 717-836-1779

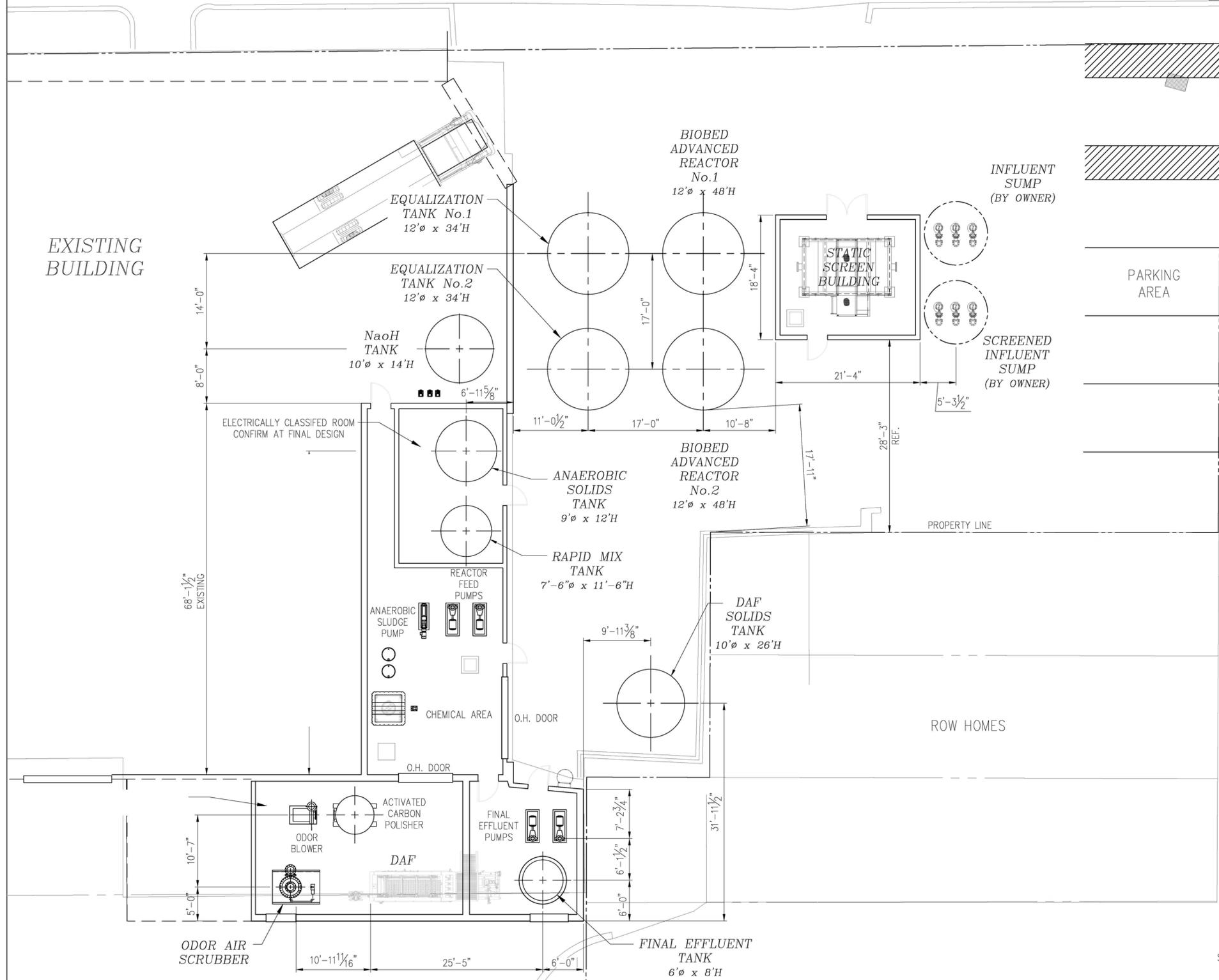
SCALE: NONE FIRST ISSUE DATE: 10/3/2014

TITLE: PIPING & INSTRUMENTATION DIAGRAM SHEET 1 OF 1 YUENGLING POTTSVILLE, PA

NO. 520.700A

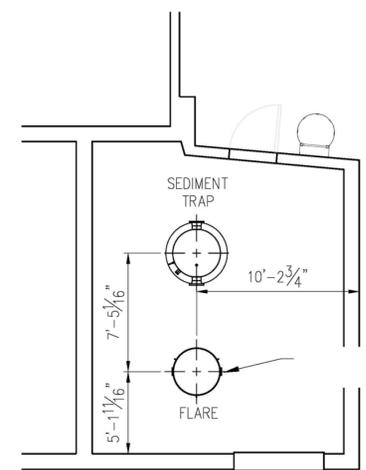


NORTH FIFTH STREET



EXISTING BUILDING

WEST NORWEGIAN STREET



ROOF PLAN
SCALE: 3/16"=1'-0"

OVERALL SITE PLAN
SCALE: 1/8"=1'-0"



REV. NO.	ISSUE DATE	DRAWN BY	CHECKED BY	DESIGN/DRAFTING	REVIEWED BY	ENGINEERING	APPROVED BY	DESCRIPTION
A	10/09/2014	PGD	JMK	WOD	-	N/A	ISSUED FOR REVISED PROPOSAL	



601 HANE ANAEROBIC TREATMENT: 601 N. PARK DR. PENNSAUKEN, NJ 08109 USA. TEL: 1-438-1778; FAX: 1-438-1779

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SCALE	AS NOTED	FIRST ISSUE DATE:	10/09/2014
TITLE	GENERAL ARRANGEMENT PRELIMINARY SITE LAYOUT YUENGLING POTTSVILLE, PA		
DWG. NO.	520.800	REV	A



PROJECT COMPLETION SCHEDULE

A schedule for completion of the wastewater pre-treatment system and related milestones is provided below.

YUENGLING POTTSVILLE BREWERY WASTEWATER PRE-TREATMENT SYSTEM

PROJECT SCHEDULE AND MILESTONES

ITEM #	MILESTONE EXPECTED	COMPLETION PERIOD
1.	Wastewater Sampling and Characterization	Complete
2.	Preliminary Engineering Design Report (EDR) <ul style="list-style-type: none"> • Submittal to the Greater Pottsville Area Sewer Authority (GPASA), including: <ul style="list-style-type: none"> • System design basis • System components • Layout within existing structures • Expected system performance • Design for sewer connection point • GPASA treated effluent sampling location 	Complete
3.	GPASA EDR review and comments back to Yuengling	Complete
4.	Final EDR submittal to GPASA	Complete
5.	Plans and Specifications (P&S) development	Complete
6.	Site grading and concrete work	Complete
7.	System fabrication and delivery	Complete
8.	System installation	Complete
9.	System shakedown and start-up	1/18/16 – 5/1/16
10.	System long-term operation	Starting on 5/01/2016

APPENDIX C



November 13, 2015

Ms. Jennifer Yuengling
D. G. Yuengling & Son, Inc.
310 Mill Creek Avenue
Pottsville, PA 17901

Re: Yuengling Mill Creek
Pretreatment Adequacy Opinion

Dear Ms. Yuengling:

Systems Design Engineering, Inc. ("SDE") has been project engineer for D. G. Yuengling & Son, Inc. ("Yuengling") facilities for nearly twenty (20) years. In this capacity, SDE designed and provided construction management for the Mill Creek brewery from its inception, including the wastewater pretreatment facility on site based on the Biothane anaerobic process. SDE is also providing design and construction management for the Pottsville and Tampa wastewater pretreatment systems.

Yuengling has requested SDE to provide its professional opinion as to the adequacy of the existing Mill Creek wastewater pretreatment system as it relates to the current operation of the Mill Creek Brewery. This opinion is based on SDE's knowledge of the facility, review of operating data and discussions with Yuengling management and facility personnel.

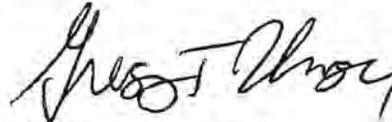
SDE provides its opinion that the existing Mill Creek wastewater pretreatment facility has sufficient pretreatment capacity without modification for current and anticipated growth based on the following:

- Current levels of production on a daily basis remain constant.
- Increased production, as needed, will be accomplished by extending the production cycle on a weekly basis, not a daily basis.
- Yuengling management and staff continue to be educated on the operation of the pretreatment plant; specifically what operations or actions have the potential to upset the pretreatment plant operations.
- Standard Operating Procedures (SOP) will be written and followed for normal and extraordinary events such as, but not limited to, the following:
 - Handling of ullage (beer returning in kegs) at the keg filling operation
 - Cleaning operations and disposal of cleaning solutions
 - Accidental release of caustic or acid solutions
 - Accidental release from a production vessel
 - Disposal of "out of specification" or unpackaged product

- The pretreatment plant will continue to be operated and maintained per the Operation and Maintenance (O & M) manuals provided by Biothane (Veolia).

As provided for above, it is SDE's opinion that no modifications to the Mill Creek pretreatment facility are warranted at this time.

Respectfully submitted,
Systems Design Engineering, Inc.



Gregory T. Unger, P.E.
President

Cc: John Jakub, Esq.
Robert Seaman, Plant Manager