

EPA ENFORCEMENT ACCOUNTS RECEIVABLE CONTROL NUMBER FORM FOR ADMINISTRATIVE ACTIONS

This form was originated by Wanda L. Santiago for Steven C. Schlang 9/30/15
Name of Case Attorney Date

in the ORC (RAA) at 918-1113
Office & Mail Code Phone number

Case Docket Number CAA-01-2015-0044

Site-specific Superfund (SF) Acct. Number _____

This is an original debt This is a modification

Name and address of Person and/or Company/Municipality making the payment

City of Meriden

Total Dollar Amount of Receivable \$ 10,000 Due Date: 10/29/15

SEP due? Yes No Date Due 12/31/16

Installment Method (if applicable)

INSTALLMENTS OF:

1st \$ _____ on _____
2nd \$ _____ on _____
3rd \$ _____ on _____
4th \$ _____ on _____
5th \$ _____ on _____

For RHC Tracking Purposes:

Copy of Check Received by RHC _____ Notice Sent to Finance _____

TO BE FILLED OUT BY LOCAL FINANCIAL MANAGEMENT OFFICE:

IFMS Accounts Receivable Control Number _____

If you have any questions call: _____
in the Financial Management Office

Phone Number



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

RECEIVED

SEP 30 2015

EPA ORC WS
Office of Regional Hearing Clerk

Steven C. Schlang
Enforcement Counsel
617-918-1773 (phone)
617-918-1809 (fax)

September 30, 2015

Wanda I. Santiago
Regional Hearing Clerk
U.S. Environmental Protection Agency
Region 1
5 Post Office Square
Mail Code – ORA18-1
Boston, Massachusetts 02109-3912

In Re: City of Meriden, Connecticut
Docket Number: CAA-01-2015-0044

Dear Ms. Santiago,

Please find enclosed for filing an original and one copy of a Consent Agreement and Final Order that both initiates and resolves the above-matter.

Please do not hesitate to contact me should you have any questions regarding the enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven C. Schlang", with a large, sweeping flourish at the end.

Steven C. Schlang

cc: Attorney Fredric P. Andes

**In re: City of Meriden, Connecticut:
Docket Number CAA-01-2015-0044**

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Settlement Agreement and Memo has been sent to the following persons on the date noted below:

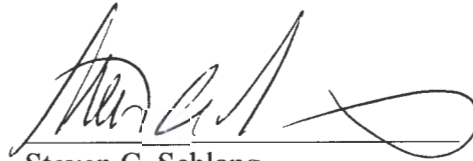
Original and one copy
hand delivered:

Wanda Santiago
Regional Hearing Clerk (RAA)
U.S. EPA, Region I
One Congress Street, Suite 1100
Boston, MA 02114-2023

Copy by Certified Mail-
Return Receipt Requested

Attorney Fredric P. Andes
Barnes & Thornburg
Suite 4400
One N. Wacker Drive
Chicago, Illinois 60606-2833

Date: September 30, 2015



Steven C. Schlang
Office of Environmental Stewardship U.S.
Environmental Protection Agency
Region I
Five Post Office Square, Suite 100
Mail Code OES04-4
Boston, MA 02109-3219
tel: (617) 918-1773
fax: (617) 918-0773

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1**

In the Matter of:)	
)	
City of Meriden, Connecticut,)	
Respondent)	
)	CONSENT AGREEMENT AND
)	FINAL ORDER
)	
)	Docket No. CAA-01-2015-0044
)	
Proceeding under Section 113(a) and (d) of the)	
Clean Air Act, 42 U.S.C. § 7413(a) and (d).)	

Complainant, the United States Environmental Protection Agency, Region 1 (“EPA”), alleges that Respondent City of Meriden, Connecticut (“Meriden” or “Respondent”), has violated Section 112(r)(7), 42 U.S.C. § 7412(r)(7) and its implementing regulations found at 40 C.F.R. Part 68.

EPA and Respondent agree that settlement of this matter is in the public interest and that entry of this Consent Agreement and Final Order (“CAFO”) without further litigation is the most appropriate means of resolving this matter. Pursuant to 40 C.F.R. § 22.13(b) of EPA’s “Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation, Termination or Suspension of Permits” (“Consolidated Rules” or “Part 22”), EPA and Respondent agree to simultaneously commence and settle this action by the issuance of this CAFO.

Therefore, before any hearing, without adjudication of any issue of fact or law, upon the record, and upon consent and agreement of EPA and Respondent, it is hereby ordered and adjudged as follows:

RECEIVED

SEP 30 2015

EPA ORC WS
Office of Regional Hearing Clerk

I. STATUTORY AND REGULATORY AUTHORITY

1. Section 112(r) of the Act, 42 U.S.C. § 7412(r), authorizes EPA to promulgate regulations and programs to prevent and minimize the consequences of accidental releases of certain regulated substances. In particular, Section 112(r)(3), 42 U.S.C. § 7412(r)(3), requires EPA to promulgate a list of substances that are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment if accidentally released. Section 112(r)(5), 42 U.S.C. § 7412(r)(5), requires EPA to establish for each such substance a threshold quantity over which an accidental release is known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health. Section 112(r)(7) of the Act, 42 U.S.C. § 7412(r)(7), requires EPA to promulgate requirements for the prevention, detection, and correction of accidental releases of certain regulated substances, including a requirement that an owner or operator of certain stationary sources prepare and implement a risk management plan (“RMP”).

2. Pursuant to Section 112(r) of the Act, 42 U.S.C. § 7412(r), EPA promulgated 40 C.F.R. §§ 68.1-68.220 (“Part 68”).

3. Forty C.F.R. § 68.130 lists the substances, and their associated threshold quantities, regulated under Part 68.

4. Under 40 C.F.R. § 68.10, an owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process must comply with the requirements of Part 68 by no later than the latest of the following dates: (a) June 21, 1999; (b) three years after the date on which a regulated substance is first listed under 40 C.F.R. § 68.130; or (c) the date on which a regulated substance is first present above a threshold quantity in a process.

5. Each process in which a regulated substance is present in more than a threshold quantity (“covered process”) is subject to one of three risk management programs. Program 1 is the least comprehensive, and Program 3 is the most comprehensive. Pursuant to 40 C.F.R. § 68.10(b), a covered process is subject to Program 1 if, among other things, the distance to a toxic or flammable endpoint for a worst-case release assessment is *less* than the distance to any public receptor. Under 40 C.F.R. § 68.10(d), a covered process is subject to Program 3 if the process does not meet the eligibility requirements for Program 1 and is either in a specified NAICS code or subject to the Occupational Safety and Health Administration (“OSHA”) process safety management (“PSM”) standard at 29 C.F.R. § 1910.119. Under 40 C.F.R. § 68.10(c), a covered process that meets neither Program 1 nor Program 3 eligibility requirements is subject to Program 2.

6. Forty C.F.R. § 68.12 mandates that the owner or operator of a stationary source subject to the requirements of Part 68 submit an RMP to EPA, as provided in 40 C.F.R. § 68.150. The RMP demonstrates compliance with Part 68 in a summary format. For example, the RMP for a Program 3 process demonstrates compliance with the elements of a Program 3 Risk Management Program, including 40 C.F.R. § Part 68, Subpart A (General Requirements and a Management System to Oversee Implementation of RMP); 40 C.F.R. Part 68, Subpart B (Hazard Assessment to Determine Off-Site Consequences of a Release); 40 C.F.R. Part 68, Subpart D (Program 3 Prevention Program); and 40 C.F.R. Part 68, Subpart E (Emergency Response Program).

7. Additionally, 40 C.F.R. § 68.190(b) requires that the owner or operator of a stationary source to revise and update the RMP submitted to EPA at least once every five years from the date of its initial submission or most recent update. Other aspects of the prevention program must also be periodically updated.

8. A key requirement of the prevention program is a Process Hazard Analysis (“PHA”). A Program 3 PHA must identify, evaluate, and control the hazards involved in each of the covered processes. 40 C.F.R. § 68.67(a). Along with other obligations, a Program 3 PHA must address: (1) the hazards of the process, (2) engineering and administrative controls applicable to the hazards, (3) the consequences of failure of those engineering and administrative controls, (4) stationary source siting, and (5) possible safety and health effects of control failure. 40 C.F.R. § 68.67.

9. Forty C.F.R. § 68.69 requires the owner or operator of a covered process to develop and implement written operating procedures to ensure that activities associated with the covered process are conducted safely.

10. Forty C.F.R. § 68.71(c) requires the owner or operator of a stationary source with regulated substances to ascertain that each employee involved in operating a regulated process has received and understood the training required and shall document the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

11. Forty C.F.R. § 68.79 requires the owner or operator of a stationary source with a covered process to conduct a compliance audit to verify that the Facility’s procedures and practices developed under 40 C.F.R. Part 68, Subpart D are adequate and being followed. In addition, the owner or operator is required to document such audits.

12. Forty C.F.R. § 68.87(b) requires an owner or operator of a stationary source with a covered process to, when selecting a contractor: (1) obtain and evaluate information regarding the contract owner or operator’s safety performance and programs; (2) inform contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor’s work and the process; (3) explain to the contract owner or operator the applicable

provisions of subpart E of 40 C.F.R. § 68.87; (4) develop and implement safe work practices consistent with 40 C.F.R. § 68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in covered process areas; and (5) periodically evaluate the performance of the contract owner or operator in fulfilling their obligations as specified in 40 C.F.R. § 68.87(c).

13. Owners or operators of a stationary source with a covered process must comply with the requirements of Part 68 by no later than the latest of the following dates: (a) June 21, 1999; (b) three years after the date on which a regulated substance is first listed under 40 C.F.R. § 68.130; or (c) the date on which a regulated substance is first present above the threshold quantity in a process. 40 C.F.R. § 68.10; see also 40 C.F.R. § 68.190(b) (updated RMPs must be submitted to EPA at least once every five years).

14. Section 112(r)(7)(E) makes it unlawful for any person to operate any stationary source subject to Section 112(r) of the CAA, 42 U.S.C. § 7412(r), in violation of the regulations promulgated thereunder. See 42 U.S.C. § 7412(r)(7)(E); see also 40 C.F.R. Part 68.

15. Sections 113(a) and (d) of the CAA, 42 U.S.C. § 7413(a) and (d), as amended by EPA's 2008 Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, promulgated in accordance with the Debt Collection Improvement Act of 1996 ("DCIA"), 31 U.S.C. § 3701, provide for the assessment of civil penalties for violations of Section 112(r) of the CAA, 42 U.S.C. § 7412(r), in amounts up to \$37,500 per day for violations occurring after January 12, 2009.

16. Sections 113(a) and (d) of the Act, 42 U.S.C. §§ 7413(a) and (d), provide for the assessment of civil administrative penalties for violations of the Act, including violations of Section 112(r) of the Act, 42 U.S.C. § 7412(r). EPA has obtained from the United States

Department of Justice a waiver of the twelve-month limitation on EPA's authority to initiate administrative cases.

II. GENERAL ALLEGATIONS

17. Respondent, the City of Meriden, is the current owner and operator of the Broad Brook Water Treatment Plant, a municipal water purification plant located at 1285 South Meriden Road, Cheshire, Connecticut (the "Facility").

18. The City of Meriden, Connecticut, is a municipality.

19. As a municipality, Respondent is a "person" within the meaning of Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

20. At the Facility, Respondent processed, handled, and stored chlorine, which is an extremely hazardous toxic substance listed under 40 C.F.R. § 68.130.

21. Chlorine is a toxic substance that is normally shipped and stored as a liquefied compressed gas. Chlorine is a heavier-than-air gas, is non-flammable, and is a strong oxidizer. Chlorine causes respiratory distress and may burn skin, eyes, and lungs. Effects of inhalation range from headaches, nausea, and lung irritation to severe eye, nose, and respiratory distress. Inhaling high concentrations of chlorine gas can be lethal. The substance is highly reactive and will readily mix with other substances causing further hazards. In the presence of moisture, chlorine becomes highly corrosive.

22. Pursuant to 40 C.F.R. § 68.130, any facility storing more than 2,500 pounds of chlorine gas in a covered process is subject to the RMP regulations of 40 C.F.R. Part 68.

23. The Facility is a "stationary source", as that term is defined in 40 C.F.R. § 68.3.

24. Respondent is the "owner or operator", as that term is defined by Section 112(a)(9) of the CAA, 42 U.S.C. § 7412(a)(9), of a stationary source.

25. The Facility is a water treatment plant designed to produce potable drinking water for municipal distribution for use by the citizens of Meriden. Chlorine gas was used in the treatment process to ensure that no levels of bacteria were present that could pose problems to the public health, safety and welfare.

26. On June 18, 2004, Respondent submitted its last complete RMP for its use, storage, and handling of chlorine gas at the Facility (the “2004 RMP”).

27. EPA conducted an inspection of the Facility on December 4, 2012 (the “Inspection”). Authorized EPA inspectors and Respondent’s employees and/or officers, including the Facility’s Superintendent of Operation and a water plant operator, were present during the Inspection. The Inspection was conducted to determine the Facility’s compliance with Sections 112(r)(7) and 112(r)(1) of the CAA, 42 U.S.C. §§ 7412(r)(7) and 7412(r)(1), the RMP accident prevention program and the General Duty Clause, respectively.

28. At the time of the Inspection, Respondent had designated the Facility as an RMP Program Level 3 facility.

29. Respondent stored its chlorine gas in one-ton and 150-pound cylinders. At the time of the Inspection, Respondent stored up to a maximum of 11,750 pounds of chlorine gas at the Facility in the chlorine tank room.

30. At the time of the Inspection, the storage of more than 2,500 pounds of chlorine gas in the chlorine tank room was a “covered process” as such term is defined in 40 C.F.R. § 68.3.

31. As the owner and operator of a stationary source that had more than the threshold amount of a regulated substance in a covered process, Respondent was subject to the RMP provisions of Part 68.

32. In particular, Respondent's storage and handling of chlorine was subject to the requirements of Program 3, in accordance with the requirements found in 40 C.F.R. § 68.10(c), because the end point for a worst case release was greater than the distance to a public receptor and the process(es) were subject to the OSHA Process Safety Management Standard at 29 C.F.R. § 1910.119.

33. Pursuant to 40 C.F.R. § 68.190(b)(1), Respondent was required to review, update, and resubmit the Facility's RMP at least once every five years from the date of its initial submission.

34. In February 2014, Meriden modified its operations by removing all chlorine gas from the Facility and substituting the gas with sodium hypochlorite, a much less hazardous chemical. Accordingly, Meriden is no longer required to maintain an RMP. Respondent spent in excess of seventeen million dollars to complete the chlorine gas removal project.

III. CAA VIOLATIONS

COUNT I: Failure to Update Process Hazard Analysis

35. The allegations in paragraphs 1 through 34 are incorporated by reference as if fully set forth herein.

36. Pursuant to 40 C.F.R. § 68.67(f), at least every five years after the completion of the initial process hazard analysis ("PHA"), the owner or operator of a stationary source with a covered process shall update its PHA and have it revalidated by a team meeting the requirements of § 68.67(d), to assure that the PHA is consistent with the current process.

37. Pursuant to 40 C.F.R. § 68.67(c), the PHA must include: (1) the hazards of the process; (2) the identification of any previous incident which had a likely potential for catastrophic consequences; (3) engineering and administrative controls applicable to the hazards

and their interrelationship such as appropriate application of detection methodologies to provide early warning of releases; (4) consequences of failure of engineering and administrative controls; (5) stationary source siting; (6) human factors; and (7) a qualitative evaluation of a range of the possible safety and health effects of failure of controls.

38. Pursuant to 40 C.F.R. § 68.67(g), the owner or operator shall retain PHAs and updates or revalidations for each process covered by § 68.67, as well as the documented resolution of recommendations described in paragraph (e) of § 68.67 for the life of the process.

39. As of March 2014, Respondent's last documented PHA had been performed on June 1, 2004.

40. Respondent's failure to update its PHA at least every five years violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E), and 40 C.F.R. §§ 68.67(f), 68.67(c) and 68.67(g).

COUNT II: Failure to Maintain Complete and Certified Written Operating Procedures

41. The allegations in paragraphs 1 through 40 are incorporated by reference as if fully set forth herein.

42. Pursuant to 40 C.F.R. § 68.69(a), the owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information, and shall address, among other requirements, safety and health considerations. Specifically, the written operating procedures shall include: (1) properties of, and hazards presented by the chemicals used in the process; (2) precautions necessary to prevent exposure, including engineering controls, administrative controls and personal protective equipment; (3) control

measures to be taken if physical contact or airborne exposure occurs; and (4) safety systems and their functions.

43. Pursuant to 40 C.F.R. § 68.69(c), the operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.

44. At the time of the Inspection, Respondent had only a generic cylinder change procedure on file. This procedure was not tailored to Respondent's facility. This operating procedure failed to address the safety and health issues associated with chlorine gas or the handling of a chlorine gas 1-ton cylinder.

45. The Facility's emergency contact and Superintendent of Operation told EPA inspectors that he had not certified the operating procedure.

46. During the Inspection, Respondent was unable to produce any further operating procedures when requested.

47. Respondent's failure to address safety and health considerations in its operating procedures violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E) and 40 C.F.R. § 68.69(a). Respondent's failure to certify its operating procedures annually violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E), and 40 C.F.R. § 68.69(a) and (c).

COUNT III: Failure to Document Training and Maintain Proper Training Records

48. The allegations in paragraphs 1 through 47 are incorporated by reference as if fully set forth herein.

49. Pursuant to 40 C.F.R. § 68.71(c), the owner or operator shall ascertain that each employee involved in operating a process has received and understood the training required, and shall prepare a record which contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

50. During the Inspection, the Superintendent of Operation stated that new operators were assigned to experienced operators for “training.” No formal or verifiable training was provided by Respondent and the informal training was not documented. There were no records confirming that the initial training included emphasis on safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee’s job task.

51. During the Inspection, Respondent was unable to produce documentation confirming that refresher training had been provided to employees working with the chlorine gas process. During the Inspection, a water plant operator told EPA inspectors that he had not been provided refresher training in the last five years.

52. Respondent’s failure to maintain adequate training documentation violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E), and 40 C.F.R. § 68.71(c).

COUNT IV: Failure to Conduct Compliance Audits

53. The allegations in paragraphs 1 through 52 are incorporated by reference as if fully set forth herein.

54. Pursuant to 40 C.F.R. § 68.79, the owner or operator is required to conduct compliance audits at least every three years to verify that its procedures and practices developed under 40 C.F.R. Part 68, Subpart D are adequate and being followed. In addition, the owner or operator is required to document such audits, document an appropriate response to each of the

findings of the compliance audit, document that deficiencies have been corrected, and maintain documentation of the two most recent compliance audit reports.

55. At the time of the Inspection, Respondent had failed to conduct timely, required compliance audits. During the Inspection, Respondent produced its most recent audit reports, conducted in February 2003 and October 2009.

56. Based on the requirement for conducting audits every three years, Respondent should have also conducted audits in 2006 and 2012.

57. Respondent's failure to conduct compliance audits at least every three years to verify that its procedures and practices developed under 40 C.F.R. Part 68, Subpart D were adequate and being followed and to document such audits violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E), and 40 C.F.R. § 68.79.

COUNT V: Failure to Implement Contractor Program

58. The allegations in paragraphs 1 through 57 are incorporated by reference as if fully set forth herein.

59. Pursuant to 40 C.F.R. § 68.87(b), an owner or operator or a stationary source with a covered process, when selecting a contractor, shall: (1) obtain and evaluate information regarding the contract owner or operator's safety performance and programs; (2) inform contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process; (3) explain to the contract owner or operator the applicable provisions of subpart E of 40 C.F.R. § 68.87; (4) develop and implement safe work practices consistent with 40 C.F.R. § 68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in covered process areas; and (5) periodically evaluate

the performance of the contract owner or operator in fulfilling their obligations as specified in 40 C.F.R. § 68.87(c).

60. At the time of the Inspection, Respondent had failed to implement the contractor program for the chlorine gas process.

61. Respondent's representatives told EPA inspectors that, although several contractors had worked on or around the chlorine gas process, the contractor program had not been used to document the contractors' training and/or knowledge of specific hazards and emergency procedures associated with the chlorine gas process.

62. Respondent's failure to implement and/or document a contractor program violated Section 112(r)(7)(E) of the CAA, 42 U.S.C. § 7412(r)(7)(E), and 40 C.F.R. § 68.87(b).

IV. TERMS OF SETTLEMENT

63. Respondent certifies that it has terminated its chlorine gas process at the Facility by substituting chlorine gas with sodium hypochlorite. As a result of this substitution, Respondent certifies that it is no longer subject to Section 112(r) of the CAA and the regulations promulgated thereunder at 40 C.F.R. Part 68.

64. Respondent agrees that EPA has jurisdiction over the subject matter alleged in this CAFO and hereby waives any defenses it might have as to jurisdiction and venue.

65. Respondent acknowledges that it has been informed of its right to request a hearing in this proceeding and hereby waives its right to a judicial or administrative hearing or appeal on any issue of law or fact set forth in this CAFO.

66. Without admitting or denying the facts and violations alleged in this CAFO, Respondent consents to the terms and issuance of this CAFO and agrees to perform a

Supplemental Environmental Project (“SEP”) and to the payment of the civil penalty. The terms of the SEP and penalty are each set forth, respectively, below.

Supplemental Environmental Project

67. As a SEP, Respondent shall eliminate the use of chlorine gas at three municipally-owned water-filtration facilities and four municipally-owned drinking water wells and convert to using calcium hypochlorite tablet feeder systems, as a substitute for chlorine gas (“Chlorine Elimination SEP”). The Chlorine Elimination SEP and the water filtration facilities and wells subject to the SEP are each further described in Appendix A, which is incorporated by reference and is enforceable under this CAFO. The parties agree that this Chlorine Elimination SEP is intended to secure significant public health benefits by protecting workers, emergency responders, and the community from the risk of chlorine gas releases.

68. Satisfactory Completion of the Chlorine Elimination SEP: Respondent shall satisfactorily complete the Chlorine Elimination SEP according to the requirements set forth in Appendix A. Some of the key elements required for satisfactory completion of the SEP include the following:

- a. Review and approval of project documents by the Connecticut Department of Public Health prior to bringing the calcium hypochlorite system on line;
- b. Demolition and removal of chlorine-related equipment; and
- c. Installation of seven tablet feeder units with load cells to measure the quantity of calcium hypochlorite tablets for usage and reporting purposes and, if applicable, any necessary tanks, pumps, piping, instrumentation and controls; and
- d. Conformance to standards and guidelines for construction and operation of public water systems.

The projected date for the SEP systems becoming operational is December 31, 2016. The projected date for construction completion and SEP project closeout likewise is December 31, 2016.

69. Semi-annual progress reports: Respondent shall submit semi-annual progress reports on January 31 and July 31 until the SEP is completed. The semi-annual progress reports shall be submitted by electronic mail to Jim Gaffey, gaffey.jim@epa.gov, and Steven Schlang, schlang.steven@epa.gov. They shall provide a brief description of the work completed to date on the SEP. If Respondent anticipates any difficulties meeting future deadlines, the semi-annual progress reports shall state the reasons for such difficulties and describe steps that Respondents has taken to minimize delays.

SEP Completion Report

70. After completion of the Chlorine Elimination SEP, Respondent shall send an electronic mail message to Jim Gaffey, gaffey.jim@epa.gov, and Steven Schlang, schlang.steven@epa.gov, to confirm that chlorine gas has been eliminated from the facilities and wells specified in Appendix A to this CAFO and that calcium hypochlorite tablet feeder systems are being used in all former chlorine-based operations. Respondent shall also submit a written SEP Completion Report within 30 days of completing the SEP. The SEP Completion Report shall contain the following information:

- a. A detailed description of the SEP as implemented;
- b. A description of any implementation problems encountered and the solutions thereto;
- c. Evidence of SEP completion and itemized costs, documented by photographs, copies of invoices, purchase orders, receipts, canceled checks, or wire transfer records that specifically identify and itemize the individual costs associated with the SEP. Where

the SEP Completion Report includes costs not eligible for SEP credit, those costs must be clearly identified as such;

- d. Certification that the SEP has been fully completed;
- e. A description of the environmental and public health benefits resulting from the implementation of the SEP (with quantification of the benefits and pollutant reductions, if feasible);
- f. A statement that no tax returns filed or to be filed by Respondent will contain deductions or depreciations for any expense associated with the SEP; and
- g. The following statement, signed by Respondent's officer, under penalty of law, attesting that the information contained in the SEP Completion Report is true, accurate, and not misleading:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Respondent shall submit the SEP Completion Report by first class mail or any other commercial delivery service, to:

Steven Schlang
Senior Enforcement Counsel (Mail Code OES 04-4)
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912;

and

Jim Gaffey
Chemical Engineer (Mail Code OES 05-1)
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912.

71. Respondent shall maintain, for a period of three (3) years from the date of submission of the SEP Completion Report, legible copies of all research, data, and other information upon which the Respondent relied to write the SEP Completion Report and shall provide such documentation within fourteen (14) business days of a request from EPA.

72. Respondent agrees that failure to submit the SEP Completion Report shall be deemed a violation of this CAFO, and Respondent shall become liable for stipulated penalties pursuant to paragraph 75 below.

73. After receipt of the SEP Completion Report described in paragraph 70 above, EPA will notify Respondent in writing: (i) identifying any deficiencies in the SEP Completion Report itself and granting Respondent an additional thirty (30) days to correct any deficiencies; or (ii) indicating that the project has been completed satisfactorily; or (iii) determining that the project has not been completed satisfactorily and seeking stipulated penalties in accordance with paragraph 75 herein.

74. If EPA elects to exercise options (i) or (iii) in paragraph 73 above, Respondent may object in writing to the notice of deficiency given pursuant to this paragraph within ten (10) business days of receipt of such notice, except that this right to object shall not be available if EPA found that the project was not completed satisfactorily because Respondent failed to implement or abandoned the project. EPA and Respondent shall have an additional thirty (30) days from the receipt by EPA of Respondent's objection to reach agreement on changes necessary to the SEP or SEP Completion Report. If agreement cannot be reached on any such issue within this thirty (30) day period as may be extended by the written agreement of both EPA and Respondent, EPA shall provide a written statement of its decision on adequacy of the completion of the SEP to Respondent. Respondent agrees to comply with any requirements imposed by EPA that are not inconsistent with this CAFO as a result of any failure to comply

with the terms of this CAFO. In the event that the SEP is not completed as contemplated herein, as determined by EPA, stipulated penalties shall be due and payable by Respondent in accordance with paragraph 75 herein.

Stipulated Penalties for SEP Obligations

75. In the event that Respondent fails to comply with any of the terms or provisions of this CAFO relating to the performance of the SEP, Respondent shall be liable for stipulated penalties according to the provisions set forth below:

a. For failure to meet interim deadlines in Appendix A, submit required semi-annual progress reports, and/or provide a SEP Completion Report, Respondent shall pay \$500 per day for the first thirty (30) days of violation; \$750 per day for the next sixty days of violation; and \$1,000 per day for each day of violation thereafter until the deadline is achieved or the report is submitted;

b. For failure to satisfactorily complete the SEP as described in the CAFO and Appendix A (including, for example, abandoning the SEP), Respondent shall pay \$1,000 per day for the first thirty (30) days of violation; \$1,500 per day for the next sixty days of violation; and \$2,000 per day for each day of violation thereafter, but the total stipulated penalty in this subsection shall not exceed \$46,500.

76. The determination of whether the SEP has been satisfactorily completed shall be in the sole discretion of EPA.

77. Stipulated penalties as set forth in paragraph 75 above shall begin to accrue on the day after performance is due and shall continue to accrue through the final day of the completion of the activity.

78. Respondent shall pay stipulated penalties not more than fifteen (15) days after receipt of written demand by EPA for such penalties. The method of payment shall be in

accordance with the provisions of paragraph 84(b) and (c). Interest and late charges shall be paid as stated in paragraph 80 below.

79. Payment of stipulated penalties shall be in addition to any other relief available under federal law. EPA may, in its sole discretion, decide not to seek stipulated penalties or to waive any portion of the stipulated penalties that accrue pursuant to this CAFO.

80. Collection of Unpaid Stipulated Penalties for SEP: Pursuant to 31 U.S.C. § 3717, EPA is entitled to assess interest and penalties on debts owed to the United States and a charge to cover the cost of processing and handling a delinquent claim. In the event that a stipulated penalty relating to the performance of SEPs pursuant to paragraphs 67-71, above, is not paid when due, the penalty shall be payable, plus accrued interest, without demand. Interest shall be payable at the rate of the United States Treasury tax and loan rate in accordance with 31 C.F.R. § 901.9(b)(2) and shall accrue from the original date on which the penalty was due to the date of payment. In addition, a penalty charge of six percent per year will be assessed on any portion of the debt which remains delinquent more than ninety (90) days after payment is due. Should assessment of the penalty charge on the debt be required, it will be assessed as of the first day payment is due under 31 C.F.R. § 901.9(d). In any such collection action, the validity, amount, and appropriateness of the penalty shall not be subject to review.

81. Respondent hereby certifies the truth and accuracy of each of the following:

a. That all cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that Respondent in good faith estimates the cost to implement the SEP is at least \$140,000.

b. As of the date of executing this CAFO, Respondent is not required to perform or develop the Chlorine Elimination SEP by any federal, state, or local law or regulation.

Nor is Respondent required to perform or develop the SEP under any grant or agreement

with any governmental or private entity, as injunctive relief in this or any other case, or in compliance with state or local requirements.

c. Respondent is not party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the Chlorine Elimination SEP. Nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of this settlement (unless the project was barred from funding as statutorily ineligible). For the purposes of this certification, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement loan, federally-guaranteed loan guarantee, or other mechanism for providing federal financial assistance whose performance period has not yet expired.

c. The SEP is not a project that Respondent was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this CAFO;

d. Respondent has not received and will not receive credit for the SEP in any other enforcement action; and

e. Respondent has not received and will not receive any reimbursement for any portion of the SEP from any other person.

82. Respondent agrees that any public statement, oral or written, in print, film, or other media, made by Respondent making reference to the SEP shall state that “This project was undertaken in connection with the settlement of an enforcement action taken by the U.S. Environmental Protection Agency to enforce federal laws.”

Civil Penalty Payment

83. Pursuant to Section 113(e) of the CAA, 42 U.S.C. § 7413(e), and taking into account the relevant statutory penalty criteria, the facts alleged in the Complaint, Respondent’s conversion from chlorine gas to sodium hypochlorite prior to the initiation of this enforcement

action, and any such other circumstances as justice may require, EPA has determined that it is fair and proper to assess a civil penalty of \$10,000 for the violations alleged in this matter.

84. Respondent agrees to pay a civil penalty in the amount of \$10,000 in the manner described below:

a. Payment shall be in a single payment of \$10,000, due no later than 30 calendar days from the date of the Final Order. If the due date for the payment falls on a weekend or federal holiday, then the due date is the next business day. The date the payment is made is considered to be the date processed by U.S. Bank, as described below. Payment must be received by 11:00 a.m. Eastern Standard Time to be considered as received that day.

b. The payment shall be made by remitting a check or making an electronic payment, as described below. The check or other payment shall designate the name and docket number of this case, be in the amount stated in part “a,” above, and be payable to “Treasurer, United States of America.” The payment shall be remitted as follows:

If remitted by regular U.S. mail:

U.S. Environmental Protection Agency / Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, Missouri 63197-9000

If remitted by any overnight commercial carrier:

U.S. Bank
1005 Convention Plaza
Mail Station SL-MO-C2GL
St. Louis, Missouri 63101

If remitted by wire transfer: Any wire transfer must be sent directly to the Federal Reserve Bank in New York City using the following information:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, New York 10045
Field Tag 4200 of the Fedwire message should read "D 68010727
Environmental Protection Agency"

If remitted on-line with a debit card, credit card, or bank account transfer: No user name, password, or account number is necessary for this option. On-line payment can be accessed via WWW.PAY.GOV, entering 1.1 in the form search box on the left side of the screen to access the EPA's Miscellaneous Payment Form, opening the form, following the directions on the screen and, after selecting "submit data," entering the relevant debit card, credit card, or bank account information.

- c. At the time of payment, a copy of the check (or notification of other type of payment) shall also be sent to:

Wanda Santiago, Regional Hearing Clerk
U.S. Environmental Protection Agency, Region 1
Mail Code ORA18-1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

and to:

Steven Schlang, Senior Enforcement Counsel
U.S. Environmental Protection Agency, Region 1
Mail Code OES04-4
5 Post Office Square, Suite 100
Boston, MA 02109-3912

85. Pursuant to 31 U.S.C. § 3717, EPA is entitled to assess interest and penalties on debts owed to the United States and a charge to cover the cost of processing and handling a delinquent claim. Pursuant to Section 113(d)(5) of the CAA, 42 U.S.C. § 7413(d)(5), if Respondent fails to pay any of the CAA penalty amount described in paragraph 67, plus interest thereon, it will be subject to an action to compel payment, plus interest, enforcement expenses, and a nonpayment penalty. Interest will be assessed on the penalty if it is not paid by the due

dates established herein. In that event, interest will accrue from the date the CAFO is signed by the Regional Judicial Officer, at the “underpayment rate” established pursuant to 26 U.S.C § 6621(a)(2). In the event that the penalty is not paid when due, an additional charge will be assessed to cover the United States’ enforcement expenses, including attorneys’ fees and collection costs. A quarterly nonpayment penalty will be assessed for each quarter during which the failure to pay the penalty persists. Such nonpayment penalty shall be 10 percent of the aggregate amount of Respondent’s outstanding penalties and nonpayment penalties hereunder accrued as of the beginning of such quarter.

86. The provisions of this CAFO shall be binding upon Respondent and Respondent’s officers, directors, agents, servants, employees, and successors or assigns.

87. Respondent shall bear its own costs and attorneys’ fees in this proceeding and specifically waives any right to recover such costs pursuant to the Equal Access to Justice Act, 5 U.S.C. § 504, or other applicable laws.

88. This CAFO constitutes a settlement by EPA of all claims for civil penalties pursuant to Section 113 of the CAA for the violations specifically alleged in this CAFO. Compliance with this CAFO shall not be a defense to any other actions subsequently commenced pursuant to federal laws and regulations administered by EPA, and it is the responsibility of Respondent to comply with such laws and regulations. This CAFO in no way relieves Respondent or its employees of any criminal liability. Nothing in this CAFO shall be construed to limit the authority of the United States to undertake any action against Respondent in response to conditions which may present an imminent and substantial endangerment to the public.

89. Nothing in this CAFO shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions if Respondent is in violation of this CAFO or continues to be in violation of the statutes and regulations upon which the

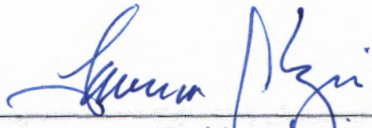
allegations in this CAFO are based, or for Respondent's violation of any other applicable provision of federal, state or local law.

90. The terms, conditions, and requirements of this CAFO may not be modified or amended except upon the written agreement of all parties, and approval of a Regional Judicial Officer, except that minor modifications to the SEP (such as deadline extensions) need not be approved by the Regional Judicial Officer.

91. The undersigned representative of Respondent certifies that he or she is fully authorized by Respondent to enter into the terms and conditions of this CAFO and to execute and legally bind Respondent to it.

92. In accordance with 40 C.F.R. § 22.31(b), the effective date is the date on which this CAFO is filed with the Regional Hearing Clerk.

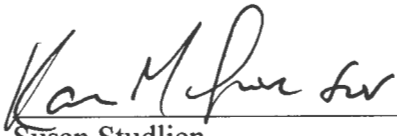
FOR RESPONDENT, CITY OF MERIDEN



Lawrence J. Kenczior
CITY MANAGER

Date: 9-28-15

FOR COMPLAINANT, United States Environmental Protection Agency:



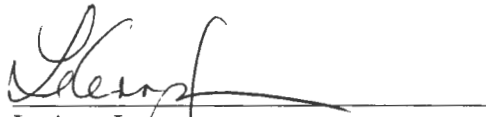
Susan Studlien
Director
Office of Environmental Stewardship
U.S. EPA, Region 1

Date: 9-28-15

VII. FINAL ORDER

The foregoing Consent Agreement is hereby approved and incorporated by reference into this Final Order. Respondent is hereby ordered to comply with the terms of the above Consent Agreement, which will be effective on the date it is filed with the Regional Hearing Clerk.

Date: September 29, 2015


LeAnn Jensen
Acting Regional Judicial Officer
U.S. EPA, Region 1

Fredric P. Andes
(312) 214-8310
Email: fand@btlaw.com

Suite 4400
One North Wacker Drive
Chicago, Illinois 60606-2809 U.S.A.
(312) 357-1313
Fax (312) 759-5646

www.btlaw.com

August 13, 2015

Via E-mail (schlang.steven@epa.gov)

Steven Schlang
U.S. Environmental Protection Agency, Region 1
Mail Code OES04-4
5 Post Office Square, Suite 100
Boston, MA 02109-3912

RE: Supplemental Environmental Project
Proposed Scope of Work for the City of Meriden
Docket No.: CAA-01-2015-00044

Dear Mr. Schlang:

Our client, the City of Meriden, Connecticut, Department of Public Utilities, Water Division, proposes this Scope of Work for the Supplemental Environmental Project (“SEP”) that would be performed in conjunction with the Consent Agreement and Final Order resulting from the above-referenced complaint (“Complaint”). Dennis Waz, Director of Public Utilities for the City, provided the information contained in this proposal.

The Meriden Department of Public Utilities (“Meriden Public Utilities”) already has reduced the threat posed by chlorine gas used in its water treatment system by converting its main water treatment facility, Broad Brook Water Treatment Plant, from chlorine gas to sodium hypochlorite following the inspection that gave rise to the Complaint. This conversion will be finalized in September 2015, at a cost of more than \$17.9 million.

However, Meriden Public Utilities has seven additional locations utilizing gaseous chlorine (in 150 lb. cylinders) as part of its system. Having investigated various disinfection alternatives to the use of gaseous chlorine gas, Meriden Public Utilities proposes to eliminate the use of chlorine at these other water treatment facilities and subsurface drinking water wells. Of the seven locations, three are water filtration plants and the remaining four locations are drinking water wells; a table identifying these facilities appears below.

Meriden Public Utilities is proposing to replace the existing gaseous chlorine gas systems at these seven facilities with calcium hypochlorite tablet feeders. Prior to converting each of these chlorine systems, Meriden Public Utilities has to secure approval from the State of Connecticut’s Department of Health, Drinking Water Section for the conversion. Conversion to calcium hypochlorite tablet feeders involves purchase of seven tablet feeder units with load cells to measure the quantity of calcium hypochlorite tablets for usage and reporting purposes. In

addition to those units, redundant pumps (both chemical mixing and chemical feed) and piping modifications would be required. Each unit would also have to be integrated into the existing SCADA system. Each facility would be required to have spare parts, pumps, and other equipment should a system failure occur. Once each calcium hypochlorite system is installed and commissioned, and reliability has been demonstrated, the existing gaseous chlorine system at the facility would be decommissioned.

Water Treatment Facilities	Address	Estimated Conversion Costs	Additional Information
Bradley Hubbard Water Filtration Plant	800 Westfield Road Meriden, CT 06450	\$19,300	Plant located next to Guiffrida Park.
Elmire Water Filtration Plant	2700 Chamberlain Highway Berlin, CT 06037	\$23,385	This is a Meriden plant, located in the neighboring town of Berlin.
Merimere Water Filtration Plant	568 Reservoir Avenue Meriden, CT 06451	\$19,300	Located in Hubbard Park.
Drinking Water Wells	Address	Estimated Conversion Costs	Additional Information
Columbus Well*	Water Street Meriden, CT 06451	\$16,950	Located next to Columbus Park, adjacent to an elementary school.
Evansville Well*	214 Evansville Avenue Meriden, CT 06451	\$19,400	
Mule Well*	31 Bailey Avenue Meriden, CT 06451	\$16,950	
Platt/Lincoln Well	Oregon Road Meriden, CT 06451	\$24,900	Located between two high schools.

* Permits for the conversion of these have been obtained from Connecticut's Department of Health. However, approval from the City Council to obtain funding for these projects has not yet been obtained.

The total expenditure to convert seven sites is expected to be in excess of \$140,000.00, which includes costs incurred to date and costs to be incurred through completion of the SEP. Included are costs to pilot equipment, construct and commission new equipment, de-commission the gaseous chlorine equipment, and procure equipment and services.

The City recognizes that the proposed SEP must be consistent with the 2015 Update to the EPA Supplement Environmental Projects Policy, effective March 10, 2015, as well as the underlying regulations and statutes. All required approvals, including those from the State of Connecticut's Department of Health, Drinking Water Section as well as local municipal entities, must be obtained prior to initiating work on the project.

Below is a table summarizing Meriden Public Utilities' action items and proposed schedule for completing the proposed conversion.

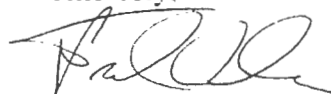
Task	Projected Completion Date
Submit applications to obtain necessary approvals for conversions, including applications to the State Department of Health.**	December 2015
Procure all equipment and associated parts, as well as calcium hypochlorite tablets.	March 2016
Complete installation of new calcium hypochlorite tablet feeder systems at each of the seven facilities.	December 2016
Commission calcium hypochlorite tablet feeder systems at each of the seven facilities.	December 2016
Decommission chlorine gas systems at each of the seven facilities.	December 2016

** Regulatory approvals may cause delays in the completion of each installation. Every location requires an application and approval prior to work commencing.

Meriden Public Utilities would be amenable to discussing the inclusion of additional benchmarks for the conversions or providing U.S. EPA with quarterly or semi-annual reports regarding its progress at each of the seven facilities. The schedule represents Meriden Public Utilities' projected schedule for completion of the entire conversion.

Please let me know if you would like to set up a time to discuss this proposed Scope of Work prepared by the City. We look forward to continuing to work with you and the Region to promptly resolve this matter on behalf of the City.

Sincerely,



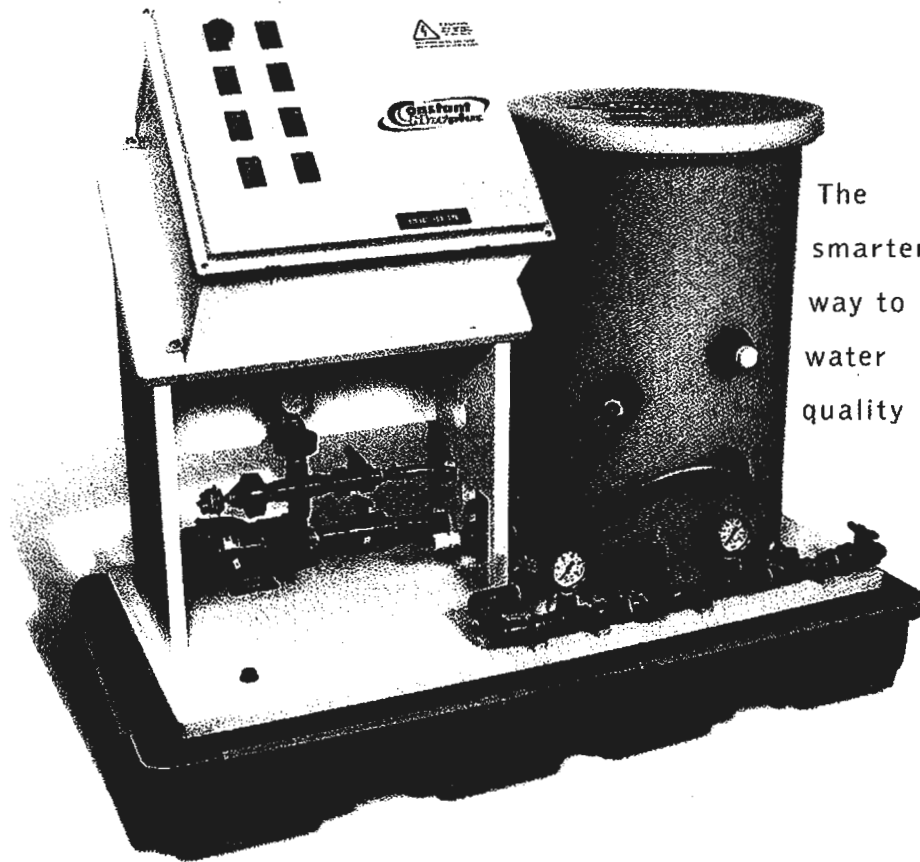
Fredric P. Andes

cc: Jim Gaffey (via email at gaffey.jim@epa.gov)

INDS01 1524913v1

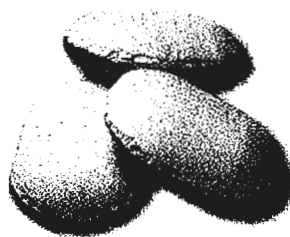
MC4-50 Feeding System

Dry Calcium Hypochlorite For Municipal Applications



The
smarter
way to
water
quality

PATENTED
SPRAY
TECHNOLOGY



DELIVERS
UNPARALLELED
CONSISTENT RESULTS

**Constant
Chlorplus**

The Constant Chlor® Plus MC4-50 Dry Calcium Hypochlorite Feeding System

Designed via feedback from actual field users, The Constant Chlor® Plus MC4-50 dry calcium hypochlorite feeding system prepares and automatically delivers a consistently accurate dose of liquid available chlorine for disinfection applications. This feeding system can supply up to 50 pounds of AvCL/day on a sustained basis without the storage and handling issues associated with liquid bleach or chlorine gas.

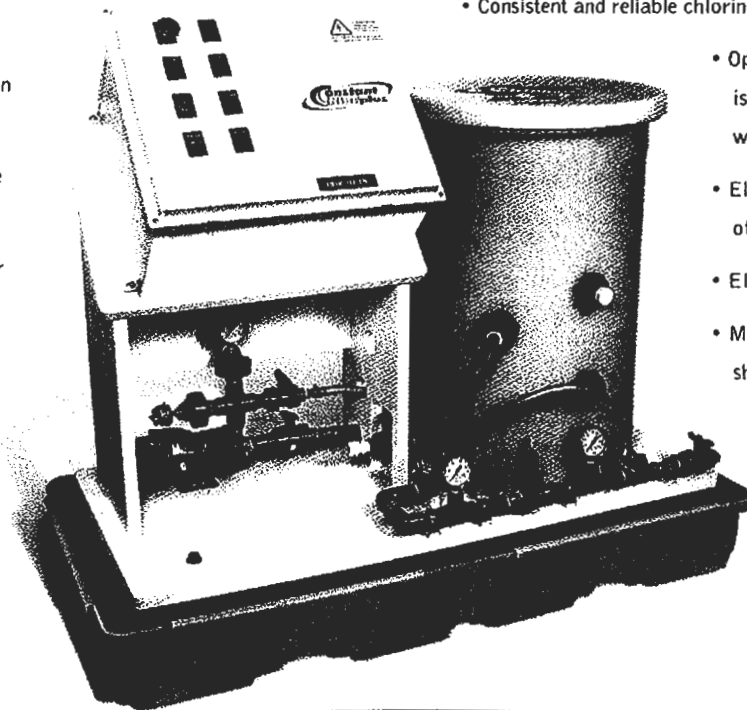
With the ability to stand alone or be integrated with other process and control equipment, this highly customizable feeder uses NSF Standard on listed Constant Chlor® Plus dry calcium hypochlorite briquettes and patented spray technology to produce fresh liquid chlorine solution as needed. The reservoir is filled and volume maintained via an electronically controlled spray manifold where it is continually circulated to maintain unparalleled solution consistency.

FEATURES

- Unit constructed of high impact HDPE; all wetted areas, internal fittings and level controls constructed of suitable plastics or other non-metallic material
- Utilizes patented spray technology
- Patent-pending mixing mechanism within solution reservoir
- SCADA compatible
- Automatic solution tank refill
- Mechanical overflow-prevention valve
- Large 62 lb. capacity briquette hopper
- Delivers up to 50 lbs. AvCL per day
- Skid mounted with secondary containment
- Area for pump mount

BENEFITS

- Compatible with all types of pumps including positive displacement pumps
- Customizable, convenient and easy to use
- Effective, safer, easier & less expensive alternative to gas and liquid bleach
- Reduced regulatory compliance required including eligibility for Material of Trade (MOT) exceptions for transport
 - Efficiencies in bulk storage and man hours
 - Consistent and reliable chlorine solutions
- Operates at normal atmospheric pressure and is readily serviceable for refilling and cleaning while in operation
- Eliminates metering pump air locks due to off-gassing
- Eliminates transfer spills
- Minimizes man hours for maintenance and shut downs
 - Pre-plumbed and skid mounted for ease of installation
 - Internal mixing mechanism enables sustainable homogeneous solution and prevents solids build up
 - Option for pre-treatment



Specifications

Chlorine Delivery Rate*	1.0 - 50.0 lb. AvCL/day with 70° F inlet water temp.
Discharge Pressure Range	50 - 150 psig
Water Inlet Size	1/2 inch, FNPT
Solution Outlet (injector) Size	1/2 Inch, MNPT

Dry Chemical Capacity 62 lbs.

Site Requirements:

Inlet Water	1.0 gpm @ 50 - 150 psig
Electrical	20 amp @ 120V/1ph/60Hz
Operating Temperature	40° - 105° F

*Delivery rate is dependent on the dosing pump size

Municipal Applications

Arch Chemicals, Inc. provides municipalities across the country with products that meet the toughest regulations and standards including NSF/ANSI 61 for our feeding equipment and NSF 60 for Constant Chlor® Plus Briquettes, allowing the public to rest easy about the quality of their water supply.

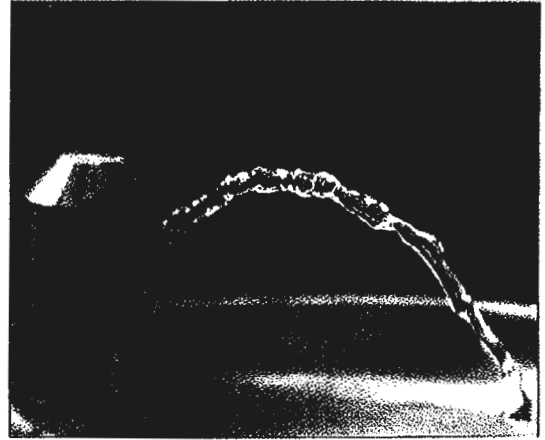
- Remote Well Sites
- Reclaimed Water
- Booster Stations
- Surface Water Treatment Plants
- Waste Water
- Ground Water Treatment Plants

Potable Water

- Provides hypochlorination to disinfect water supplies in smaller communities
- Requires low initial investment
- Maintains economical operating costs

Private Water Supplies

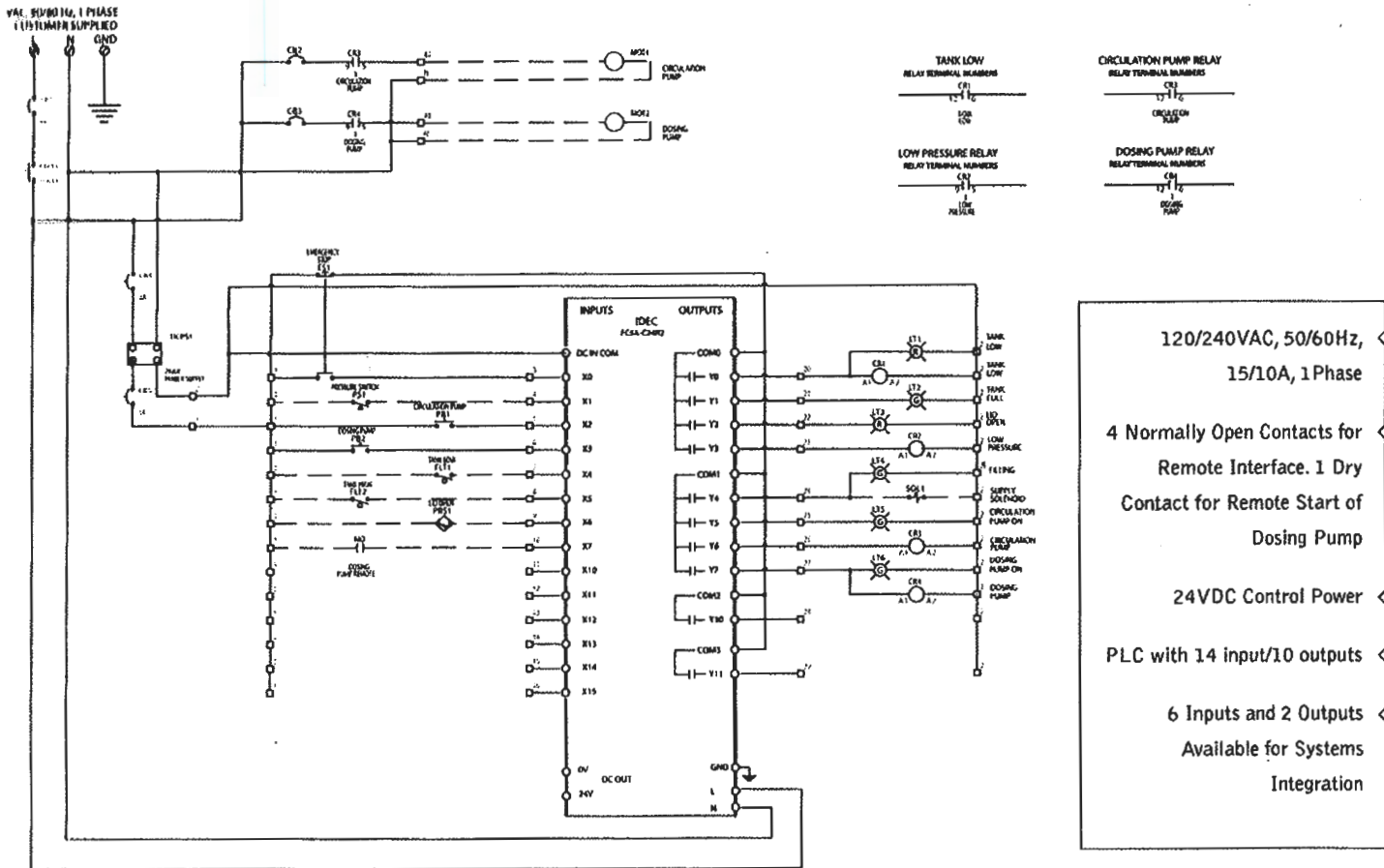
- Sanitizes wells, natural springs, cisterns and storage tanks by destroying microbes
- Purifies by destroying harmful organic matter



Other Water Treatments

- Controls slime and maximizes cooling efficiency in cooling towers, ponds and reservoirs of power plants
- Controls growth of slime in commercial air conditioning systems, improving cooling efficiency and eliminating unpleasant odors
- Destroys disease-producing organisms in raw or treated sewage
- Keeps decomposing septic sewage odors and masonry disintegration in check by "up sewer hypochlorination"

Electronics Panel and PLC Information



120/240VAC, 50/60Hz,
15/10A, 1Phase

4 Normally Open Contacts for
Remote Interface. 1 Dry
Contact for Remote Start of
Dosing Pump

24VDC Control Power

PLC with 14 input/10 outputs

6 Inputs and 2 Outputs
Available for Systems
Integration

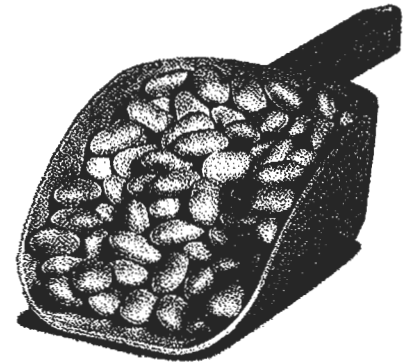
BUTTONS / INDICATORS

- **STOP:** Push-Button emergency stop for the unit. Turns OFF every function.
- **OFF/ON Indicator:** Push-Button to turn the unit ON or OFF.
- **CIRCULATION PUMP:** Circulation pump is interlocked with TANK LOW and will not operate if TANK LOW alarm is activated. Lamp flashes if circulation pump pressure drops below 5 psi. Push-Button to turn ON or OFF.
- **DOSING PUMP:** Chemical dosing pump is interlocked to the system. Will not pump if LOW CHLORINE SOLUTION alarm is activated. Remote or manual start capability. Push-Button to turn ON or OFF.
- **LID OPEN:** Prevents the unit from operating if lid is opened.
- **FILLING:** Indicates that the solenoid is energized and unit is making solution.
- **TANK FULL:** The high float is engaged and tank is full of chlorinated solution.
- **TANK LOW:** Solution inside tank is low, alarm condition.



Patented Spray Technology

Patented Spray Technology + Constant Chlor® Plus Briquettes = Consistently Accurate Hypochlorite Solution



How It Works

Markedly different from erosion feeders currently on the market, the Constant Chlor® Plus MC4-50 feed system injects supply water into the unit by spraying upward into a bed of briquettes; this short intermittent spray cycle contacts the entire bottom of the bed evenly, not just the material resting on the grid.

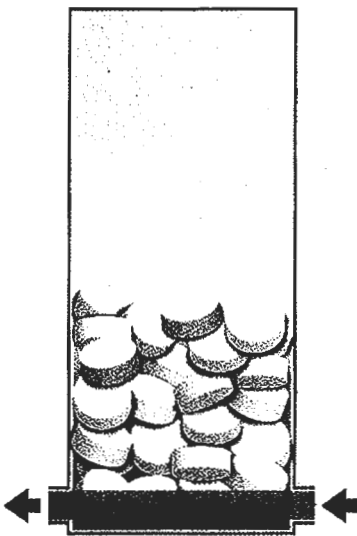
Specifically designed for use in the Constant Chlor® Plus Spray Technology feed systems, the briquettes are relatively small, smooth and "pillow shaped", for maintaining optimum packing in the spray bed.

Maintaining a well-packed bed of briquettes significantly reduces the potential for large voids in the spray surface that can result in inconsistent residual concentration in the final solution.

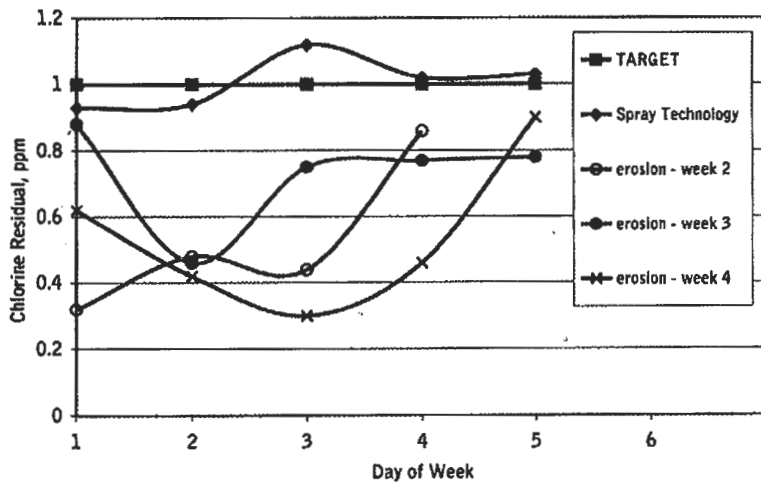
The hypochlorite solution produced by the unit's spray cycle is collected in a 13-gallon solution tank, where the total volume is slowly and continuously mixed, further enhancing concentration consistency.

Unlike an erosion feeder, the Constant Chlor® Plus MC4-50 feeder sprays upward to a well packed bed of briquettes, contacting the entire bottom of the bed evenly. The chlorinated solution flows to the lower reservoir where it is continuously mixed. The accuracy and consistency of the resulting solution concentration far exceeds that achieved by an erosion feeder. Consequently, operator dosage adjustment is minimal.

EROSION

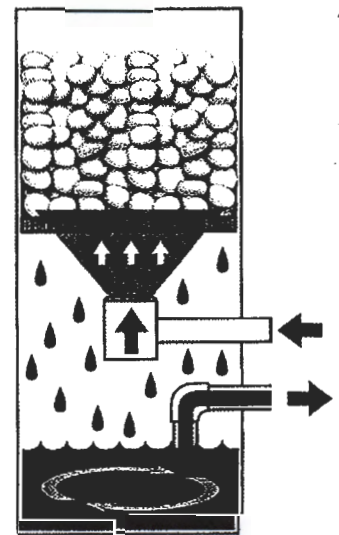


ACCURACY AND CONSISTENCY OF SPRAY TECHNOLOGY VS EROSION



Data source: Arizona test facility

SPRAY



Product Stewardship



Arch is committed to maintaining and improving our leadership in Product Stewardship – from manufacture, marketing, distribution, use, recycling and disposal. Successful implementation includes educating all involved of their responsibilities to address society's interest in a healthy environment and in products that can be used safely. We are each responsible for providing a safe workplace, and all who use and handle products must follow safe and environmentally sound practices.

Constant Chlor® Plus Briquettes

Constant Chlor® Plus Briquettes are designed for use in the Constant Chlor® Plus MC4-50 feeding system. The briquettes provide chlorine solution for use in many applications including treatment of surface and groundwater for municipal drinking water use, industrial process water as well as pre- and post-harvest food safety.

These patented, pillow-shaped briquettes contain a scale inhibitor designed to reduce maintenance and improve reliability of the feeder system.



FEATURES

- Dry Solid Product
 - Longer shelf life than liquid bleach
 - Occupies much less space than liquid bleach
 - Less hazardous than liquid bleach or gas chlorine
 - Easier to handle than liquid bleach or gas chlorine

SCALE INHIBITED

- Patented formulation
- Reduces maintenance of equipment

REGULATORY

- EPA No. 1258-1179
- NSF Standard 60, Drinking Water Additives
- Meets AWWA Standard B300

PROPERTIES

- Available Chlorine (wt%) 65% minimum
- Scale Inhibitor (wt%) 0.5%
- Weight 0.25 oz. (7 grams)
- Dimensions 1-1/4 in. X 3/4 in. X 1/2 in.
- Appearance Pillow Shaped Briquettes

PACKAGING

Constant Chlor® Plus Dry Chlorinator Briquettes are available in 50 lb. plastic pails



Arch also produces Dry Tec® FG Briquettes (Food Grade) for use with the Constant Chlor® Plus MC4-50 feeder. Dry Tec® FG contains an anti scale formulation for food industry applications.

CALL 1-800-478-5727

to find out more about
CONSTANT CHLOR® PLUS
or visit our website at
www.archwaterworks.com/municipal



Automatic. Accurate. Consistent.



Arch Chemicals, Inc.
5660 New Northside Dr NW, Suite 1100
Atlanta, GA 30328
1-800-478-5727