UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
901 NORTH 5th STREET
KANSAS CITY, KANSAS 66101

IN THE MATTER OF: Behlen Mfg. Co. 4025 East 23rd Street Columbus, Nebraska 68601 RCRA I.D. No. NED007268790 Respondent Proceeding under Section 3008(a) and (g) of the Resource Conservation and Recovery Act as amended, 42 U.S.C. § 6928(a) and (g)	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION 7 2012 SEP 24 AM/PM 3:43 **CONSENT AGREEMENT AND FINAL ORDER** Docket No. RCRA-07-2012-0021

I. PRELIMINARY STATEMENT

The United States Environmental Protection Agency (EPA), Region 7 (Complainant) and Behlen Mfg. Co. (Behlen or Respondent) have agreed to a settlement of this action before the filing of a complaint, and thus this action is simultaneously commenced and concluded pursuant to Rules 22.13(b) and 22.18(b)(2) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits (Consolidated Rules of Practice), 40 Code of Federal Regulations (C.F.R.) §§ 22.13(b) and 22.18(b)(2).

II. ALLEGATIONS

Jurisdiction

1. This administrative action is being conducted pursuant to Sections 3008(a) and (g) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. § 6928(a) and (g), and in accordance with the Consolidated Rules of Practice.

2. This Consent Agreement and Final Order (CA/FO) serves as notice that EPA has reason to believe that Respondent violated Section 3005 of RCRA, 42 U.S.C. § 6925.

Parties

3. The Complainant is the Chief of the Waste Enforcement and Materials Management Branch in the Air and Waste Management Division of EPA, Region 7, as duly delegated from the Administrator of EPA.

4. The Respondent is Behlen Mfg. Co., a company incorporated under the laws of Nebraska.

Statutory and Regulatory Framework

5. The state of Nebraska (Nebraska) has been granted authorization to administer and enforce a hazardous waste program pursuant to Section 3006 of RCRA, 42 U.S.C. § 6926, and Nebraska has adopted by reference the federal regulations cited herein at pertinent parts of the Nebraska Administrative Code, Title 128, Chapters 4, 12 and 25. Section 3008 of RCRA, 42 U.S.C. § 6928, authorizes the EPA to enforce the provisions of the authorized State program and the regulations promulgated thereunder. When EPA determines that any person has violated or

is in violation of any RCRA requirement, EPA may issue an order assessing a civil penalty for any past or current violation and/or require immediate compliance or compliance within a specified time period pursuant to Section 3008 of RCRA, 42 U.S.C. § 6928.

6. Section 3008(g) of RCRA, 42 U.S.C. § 6928(g), authorizes a civil penalty of not more than $25,000 per day for violations of Subchapter III of RCRA (Hazardous Waste Management). This figure has been adjusted upward for inflation pursuant to the Civil Monetary Penalties Inflation Adjustment Rule, 40 C.F.R. Part 19, so that penalties of up to $37,500 per day are now authorized for violations of Subchapter III of RCRA that occurred after January 12, 2009.

Factual Background

7. Respondent is a Nebraska corporation authorized to conduct business in the State of Nebraska and is a "person" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

8. Respondent, located at 4025 East 23rd Street, Columbus, Nebraska, manufactures livestock and ranch equipment, grain bins, steel buildings and industrial presses. Behlen employs approximately 586 people at this location, and began operations in 1936.

9. As part of its operations, Respondent generates hazardous waste and universal waste. Once a waste is classified a hazardous waste, it is assigned a waste code pursuant to the regulations set forth in Paragraph 10. Hazardous wastes generated by Respondent, along with their waste codes, have included: paint wastes, waste solvent materials, foam mixed with small amounts of methyl n-amyl ketone (MAK), and liquids drained from punctured aerosol cans (D001). Universal wastes generated by Respondent include spent mercury-containing

fluorescent lamps, lead acid batteries and nickel/cadmium batteries, which are classified as universal wastes pursuant to Neb. Admin. Code Title 128, Chapter 25.

10. The regulations for determining whether a waste is a solid and/or hazardous waste are set forth at Neb. Admin. Code Title 128, Chapters 2 and 3. The paint wastes, solvent wastes and liquids drained from aerosol cans listed in Paragraph 9 are "solid wastes" and "hazardous wastes" within the meaning of these regulations.

11. On or about October 14 through 16, 2009, an EPA representative conducted a Compliance Evaluation Inspection at Respondent's facility (hereinafter "the October 2009 inspection").

12. At the time of the October 2009 inspection, Respondent's hazardous waste notification on file with the Nebraska Department of Environmental Quality (NDEQ), dated October 3, 2003, stated that the facility was a "small quantity generator," i.e., that the facility generated between 100 kilograms and 1,000 kilograms of hazardous waste per month. On December 31, 2009, Respondent updated its hazardous waste notification, identifying its facility as a conditionally exempt small quantity generator, i.e., that the facility generated less than 100 kilograms of hazardous waste per month.

13. At the time of the October 2009 inspection, Respondent had generated and had in storage at the facility the hazardous wastes and universal wastes listed in Paragraph 9.

14. During the October 2009 inspection, the inspector observed several violations of RCRA, which are set forth below.

Violations

15. Complainant hereby incorporates the allegations contained in Paragraphs 1 through 14 above, as if fully set forth herein.

I. Failure to Perform A Hazardous Waste Determination

16. Neb. Admin. Code Title 128 Chapter 4.002 requires generators of solid waste to perform hazardous waste determinations using methods prescribed in the regulations.

17. At the time of the October 2009 inspection, Respondent was storing used paint and spent solvent materials in an area of the facility referred to as the "paint kitchen." Some of these materials were in storage for use in the ongoing liquid painting operations associated with the industrial press division. Some of the paint was outdated and therefore considered waste. Some of the outdated paint was related to a liquid painting line that had been discontinued approximately three years before the date of the inspection.

18. At the time of the October 2009 inspection, MAK was being used to clean foam roto-molding gun tubes after use. The foam that came into contact with the MAK was placed in small plastic bags. The non-MAK foam resulting from this process was placed into large plastic bags. The small plastic bags were then placed inside the larger bags with the non-MAK soaked test foam and the larger bags were later disposed in a solid waste landfill.

19. At the time of the inspection, Respondent had not properly performed hazard waste determinations on the wastes listed in Paragraphs 17 and 18.

20. Respondent's failure to characterize the wastes listed in Paragraphs 17 and 18 is a violation of Neb. Admin. Code Title 128, Chapter 4.

II. Operation of a Hazardous Waste Storage Facility Without a RCRA Permit

21. Section 3005 of RCRA, 42 U.S.C. § 6925, Nebraska Revised Statutes section 81-1505(13) and Title 128, Chapter 12.001.01 require each person owning or operating a facility for the treatment, storage, or disposal of hazardous waste identified or listed under Subchapter C of RCRA or under Neb. Admin. Code Title 128 Chapters 2 and 3 to have a permit for such activities.

A. Storage of Hazardous Waste Over 180 Days

22. At the time of the inspection, Respondent had paint waste and solvent waste in storage in an area of the facility referred to as the "paint kitchen." Some of these materials were outdated and/or generated from a liquid painting process that had been discontinued.

23. A facility representative stated that one of the liquid paint processes had been discontinued approximately three years prior to the date of the October 2009 inspection.

24. Facilities classified as "small quantity generators" are allowed to store hazardous waste without a permit for up to 180 days pursuant to Neb.Admin. Code Title 128 Chapter 9.007.03, but storage of hazardous waste beyond 180 days constitutes operation of a hazardous waste storage facility without a permit.

25. Respondent's storage of D001 hazardous waste for, at a minimum, approximately three years at their facility constitutes operation of a hazardous waste storage facility without a permit.

B. Failure to Comply with Generator Requirements

26. Generators of hazardous waste are allowed to store hazardous waste at their facility provided that they comply with various waste handling requirements. Neb. Admin. Code Title 128 Chapter 9.007.03. If a generator fails to comply with these waste handling requirements, they are not allowed to store hazardous waste at their facility for any length of time. Respondent failed to comply with the following waste handling requirements:

1. Failure to label and date containers of hazardous waste

27. At the time of the October 2009 inspection, Respondent had four containers of waste paint (D001) in its hazardous waste storage area which were not labeled as hazardous waste and not marked with the date upon which accumulation began, as required by Neb. Admin. Code Title 128 Chapter 9.007.03D, which references the requirements at Title 128 Chapter 10.004.01F and G.

2. Failure to label a satellite accumulation container as hazardous waste

28. At the time of the October 2009 inspection, there was one 55-gallon drum containing drained aerosol materials (D001) that was not marked as hazardous waste or with any other words identifying the contents of the drum, as required by Neb. Admin. Code Title 128 Chapter 9.007.04A.

3. Failure to take precautions to prevent ignition of ignitable waste

29. At the time of the October 2009 inspection, there were twenty-five (25) cigarette butts and three (3) empty cigarette packages to the south of the chemical storage area, which is adjacent to the hazardous waste storage area and which contained ignitable hazardous waste.

30. Neb. Admin. Code Title 128 Chapter 9.007.03C referencing Chapter 10.004.01A5 requires generators to comply with the requirements found in Title 128 Chapter 16. Title 128 Chapter 16.001.01 requires generators to take precautions to prevent accidental ignition or reaction of ignitable or reactive waste, which must be separated and protected from sources of ignition or reaction. In addition, the generator must confine smoking and open flames to designated areas and "No Smoking" signs must be placed in areas where there is a hazard from ignitable or reactive waste.

4. Failure to post emergency information near the telephone

31. At the time of the October 2009 inspection, there was no emergency information posted near the telephone closest to the hazardous waste storage area. In addition, there was incomplete emergency information near the telephone in the office nearest to the hazardous waste storage area.

32. Neb. Admin. Code Title 128 Chapter 9.007.09 requires that small quantity generators must post emergency information next to the telephone, including name and telephone number of the emergency coordinator, the locations of the fire extinguishers and spill control materials, and the telephone number of the local fire department unless the facility has a direct alarm.

33. Because Respondent failed to comply with the generator requirements as set forth in Paragraphs 27 through 33 above, Respondent was not authorized to store hazardous waste at its facility for any length of time, and therefore was operating a hazardous waste storage facility without a permit.

III. Failure to Comply with Universal Waste Requirements

34. The Nebraska rules governing the handling of universal waste are found at Neb. Admin. Code Title 128 Chapter 25. This rule allows less stringent handling of universal waste, which includes mercury-containing lamps, lead-acid batteries and nickel/cadmium batteries, and handlers of these materials comply with these rules.

35. Respondent failed to comply with the universal waste rules as follows:

A. Universal Waste Lamps

1. Failure to label universal waste containers

36. At the time of the October 2009 inspection, there were four (4) eight-foot and four (4) four-foot mercury containing fluorescent light bulbs in an open, unlabeled trash can and there was no documentation of the date upon which the material became a waste.

37. Neb. Admin. Code Title 128 Chapter 25.012.04A requires that spent mercury-handling bulbs must be contained in closed containers.

38. Neb. Admin. Code Title 128 Chapter 25.013.05 requires that spent mercury-containing bulbs be labeled with the words "universal waste—lamps" or "waste lamps" or "used lamps."

39. Neb. Admin. Code Title 128 Chapter 25.014.03 requires that the universal waste handler be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste.

B. Universal Waste Batteries

40. At the time of the October 2009 inspection, there were between 75 and 100 batteries in an area at the facility referred to as the "tool crib." These included lead acid and nickel/cadmium batteries, as well as other batteries that were not universal or hazardous wastes. None of the batteries were labeled as universal waste batteries and there was no documentation of the date upon which the batteries became a waste.

41. A facility representative stated that batteries had been accumulating in the tool crib for approximately eight years.

42. Neb. Admin. Code Title 128 Chapter 25.013.01 requires that universal waste batteries must be labeled or clearly marked with the words "universal waste—batteries" or "waste batteries" or "used batteries."

43. Neb. Admin. Code Title 128 Chapter 25.014.03 requires that the universal waste handler be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste.

44. Neb. Admin. Code Title 128 Chapter 25.014.01 provides that universal waste handlers may not accumulate universal waste for longer than one year.

45. The allegations set forth in Paragraphs 36 through 45 above demonstrate that Respondent violated Nebraska's universal waste rules.

CONSENT AGREEMENT

1. Respondent and EPA agree to the terms of this CA/FO and Respondent agrees to comply with the terms of the Final Order portion of this CA/FO.

2. Respondent admits the jurisdictional allegations of this CA/FO and agrees not to contest EPA's jurisdiction in this proceeding or any subsequent proceeding to enforce the terms of the Final Order portion of this CA/FO set forth below.

3. Respondent neither admits nor denies the factual allegations and legal conclusions set forth in this CA/FO.

4. Respondent waives its right to a judicial or administrative hearing on any issue of fact or law set forth above, and its right to appeal the Final Order portion of the CA/FO.

5. Respondent and Complainant agree to conciliate the matters set forth in this CA/FO without the necessity of a formal hearing and to bear their respective costs and attorney's fees.

6. This CA/FO addresses all civil administrative claims for the RCRA violations identified above. Complainant reserves the right to take any enforcement action with respect to any other violations of RCRA or any other applicable law.

7. Nothing contained in the Final Order portion of this CA/FO shall alter or otherwise affect Respondent's obligation to comply with all applicable federal, state, and local environmental statutes and regulations and applicable permits.

8. The undersigned representative of Respondent certifies that he or she is fully authorized to enter the terms and conditions of this CA/FO and to execute and legally bind Respondent to it.

9. Respondent agrees that, in settlement of the claims alleged in this CA/FO, Respondent shall pay a mitigated penalty of $59,996.00 as set forth in Paragraph 1 of the Final Order.

10. Respondent understands that failure to pay any portion of the civil penalty on the date the same is due may result in the commencement of a civil action in Federal District Court to collect said penalty, along with interest thereon at the applicable statutory rate.

11. This CA/FO shall be effective upon entry of the Final Order by the Regional Judicial Officer for EPA, Region 7. Unless otherwise stated, all time periods stated herein shall be calculated in calendar days from such date.

12. This Consent Agreement and the Final Order shall remain in full force and effect until Complainant provides Respondent with written notice, in accordance with Paragraph 11 of the Final Order, that all requirements hereunder have been satisfied.

13. By its signature on this Consent Agreement, Respondent certifies that it is currently in compliance with RCRA.

A. Supplemental Environmental Project

14. Respondent shall perform a Supplemental Environmental Project (SEP) as part of the settlement of this matter. Specifically, Respondent shall install three heat exchangers and an air-cooled chiller on the piping outside of the pickling tank in order to process spent acid from the pickling tank in a manner which reduces the production of acid mud within the tank and generates beta crystals for downstream use by various customers.

15. The SEP plan is Attachment 1 to this CAFO and is incorporated into the Consent Agreement portion of this CAFO by reference.

16. Within thirty (30) days of the effective date of this CAFO, Respondent shall submit an addendum to the SEP plan which sets forth a schedule for installation, start-up and operation

of the equipment. The addendum to the SEP plan shall be reviewed by EPA's representative identified in Paragraph 23 below. All activities set forth in the schedule, including submission of a final SEP report, must be completed within one year of the effective date of this CAFO, and must include operation of the completely installed equipment for a period of no less than six months.

17. The total expenditure for the SEP shall not be less than $75,578.00. Respondent shall include documentation of the expenditures made in connection with the SEP as part of the SEP Completion Report required in Paragraph 16.

18. Respondent shall provide a SEP Completion Report within 30 days of the conclusion of the six-month operation period as set forth in the approved SEP plan addendum. The SEP Completion Report shall be submitted to EPA's representative identified in Paragraph 23 below and shall include:

a. a statement of the actual costs of performing the SEP as outlined in the SEP Work Plan;

b. documentation demonstrating the SEP expenditures;

c. a detailed discussion of how the SEP was implemented (i.e., installation, start-up and operation of the equipment, and any necessary adjustments made during the six-month operation period) and the effectiveness of the SEP project (i.e., quantify the volume of reduction of the acid mud); and

d. certification that the SEP has been fully implemented pursuant to the provisions of this Consent Agreement.

19. Deadlines established herein for SEP deliverables may be extended by written agreement of the parties.

20. 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 24 below.

21. After receipt of the SEP Addendum as set forth in Paragraph 16 above and the SEP Completion Report described in Paragraph 18 above, EPA's representative will do one of the following:

a. For review of the addendum, notify Respondent in writing of any deficiencies in the addendum, in which case Respondent shall have an additional 14 days to correct any deficiencies;

b. for review of the SEP Completion Report, notify Respondent in writing of any deficiencies in the SEP Completion Report, in which case Respondent shall have an additional 30 days to correct any deficiencies;

c. inform Respondent that the addendum is approved or, in the case of the SEP Completion Report, that the project has been satisfactorily completed;

d. for review of the addendum, modify the addendum to comport with the schedule as set forth in Paragraph 16 above; or

e. for review of the SEP Completion Report, determine that the project has not been completed satisfactorily and seek stipulated penalties pursuant to Paragraph 24 below.

22. If Respondent receives notice that the addendum or the SEP Completion Report is deficient, Respondent shall correct the deficiencies and re-submit the addendum within 14 days or the SEP Completion Report within 30 day time period. If, upon resubmission, the deficiencies identified in the addendum or SEP Completion Report have not been corrected, EPA reserves the right to determine that the project has not been completed satisfactorily and to seek stipulated penalties pursuant to Paragraph 24 below.

23. All documents required to be submitted pursuant to this Consent Agreement shall be sent to:

Deborah Bredehoft
Environmental Engineer
AWMD/WEMM
U.S. EPA Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

24. Respondent shall pay stipulated penalties as follows:

a. For failure to satisfactorily complete the SEP in accordance with the provisions of this Consent Agreement relating to the performance of the SEP, Respondent shall pay a stipulated penalty to the United States in the amount of $37,789.00.

b. If the SEP is completed in accordance with the provisions of this Consent Agreement, but Respondent fails to expend at least 90 percent of the amount of money which was required to be spent on the SEP, Respondent shall pay a stipulated penalty to the United States in the amount of $3,778.90.

c. If the SEP is completed in accordance with this Consent Agreement and Respondent spends at least 90 percent of the money required to be spent on the SEP, Respondent shall not be liable for any stipulated penalties.

d. For failure to timely submit the SEP Completion Report required by Paragraph 18 of this Consent Agreement, Respondent shall pay a stipulated penalty in the amount of $300.00 per day for each day after the report is due, until the report is finally submitted.

e. Failure to pay any portion of the stipulated penalties on the date upon which they are due will result in the accrual of interest on the unpaid portion of the stipulated penalties at the rate of one percent (1%) per annum.

25. Respondent agrees that in any public statement, oral or written, in print, film, or other media, made by Respondent making reference to the SEP, Respondent will include a statement that the SEP was undertaken in connection with the settlement of an enforcement action taken by the EPA for violations of RCRA.

26. Respondent further agrees that no costs of performing the SEP will be claimed as a deductible business expense and that Respondent will not capitalize the costs expended in the performance of the SEP in order to increase the basis of any of Respondent's assets.

27. Respondent certifies that it is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP. Respondent further certifies that, to the best of its knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity

as the 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.

FINAL ORDER

Pursuant to the authority of Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), and according to the terms of this CA/FO, IT IS HEREBY ORDERED THAT:

A. Payment of Civil Penalty

1. Within thirty (30) days of the effective date of this CA/FO, Respondent will pay a mitigated civil penalty of $59,996.00.

2. Payment of the penalty shall be made either by cashier or certified check or by wire transfer. If made by cashier or certified check, the check shall be made payable to "Treasurer of the United States" and remitted to:

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

Wire transfers shall be directed to the Federal Reserve Bank of New York as follows:

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."

The Respondent shall reference the Docket Number on the check or transfer. A copy of the check or transfer shall also be mailed to EPA's representative identified in Paragraph 23 of the Consent Agreement above.

3. No portion of the civil penalty or interest paid by Respondent pursuant to the requirements of this CA/FO shall be claimed by Respondent as a deduction for federal, state, or local income tax purposes.

B. Compliance Actions

4. EPA acknowledges that Respondent has satisfactorily completed the following compliance actions, which were agreed upon between the parties as part of the settlement of this matter. Respondent has:

a. submitted a plan outlining how Respondent will perform hazardous waste determinations on current and future solid waste streams in accordance with 40 C.F.R. § 262.11;

b. submitted documentation, including photographs, that the required emergency information is posted next to the telephone; and

c. submitted documentation that demonstrates that Respondent is complying with the satellite accumulation requirement to keep the aerosol can puncturing units closed unless adding or removing waste.

C. Parties Bound

5. This Final Order portion of this CA/FO shall apply to and be binding upon Respondent and Respondent's agents, successors and/or assigns. Respondent shall ensure that all

contractors, employees, consultants, firms, or other persons or entities acting for Respondent with respect to matters included herein comply with the terms of this CA/FO.

D. Reservation of Rights

6. Notwithstanding any other provision of this CA/FO, EPA reserves the right to enforce the terms of the Final Order portion of this CA/FO by initiating a judicial or administrative action under Section 3008 of RCRA, 42 U.S.C. § 6928, and to seek penalties against Respondent in an amount not to exceed Thirty-seven Thousand Five Hundred Dollars ($37,500) per day per violation pursuant to Section 3008(c) and/or Section 3008(g) of RCRA, for each day of non-compliance with the terms of the Final Order, or to seek any other remedy allowed by law.

7. Complainant reserves the right to take enforcement action against Respondent for any future violations of RCRA and its implementing regulations and to enforce the terms and conditions of this CA/FO.

8. Except as expressly provided herein, nothing in this CA/FO shall constitute or be construed as a release from any claim (civil or criminal), cause of action, or demand in law or equity by or against any person, firm, partnership, entity, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from Respondent's facility.

9. Notwithstanding any other provisions of the CA/FO, an enforcement action may be brought pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, or other statutory authority, should EPA find that the future handling, storage, treatment, transportation, or disposal of solid waste or hazardous waste at Respondent's facility may present an imminent and substantial endangerment to human health and the environment.

10. The headings in this CA/FO are for convenience of reference only and shall not affect interpretation of this CA/FO.

11. The provisions of this CA/FO shall be deemed satisfied upon a written determination by Complainant that Respondent has fully implemented the actions required in the Final Order.

COMPLAINANT:
U.S. ENVIRONMENTAL PROTECTION AGENCY

9-24-12
Date

Donald Toensing
Chief
Waste Enforcement and Materials Management Branch
Air and Waste Management Division

9/24/2012
Date

Belinda L. Holmes
Senior Counsel
Chemical Management Branch
Office of Regional Counsel

For Respondent Behlen Mfg. Co.:

By: Phil Raimondo

Date

Signature

Phil Raimondo

Printed Name President + CEO

IT IS SO ORDERED. This Final Order shall become effective immediately.

Sept. 24, 2012
Date

Robert Patrick
Regional Judicial Officer

Attachment 1
In the matter of Behlen Mfg. Inc.

KOLEYJESSEN■COM

KOLEY JESSEN P.C., L.L.O.
ATTORNEYS AT LAW
[illegible]
PHONE. [illegible]
FAX. [illegible]

KOLEY■JESSEN

March 29, 2012

Via Email Only

Belinda L. Holmes
Senior Counsel
U.S. EPA Region 7
901 N. 5th Street
Kansas City, Kansas 66101

Re: Supplemental Environmental Project Proposal
In the Matter of Behlen Mfg. Co., Respondent,
Docket No. RCRA-07-2012-xxxx

Dear Belinda:

On behalf of our client, Behlen Mfg. Co., please consider the following information and the attached proposal from Phoenix Systems, Inc. in connection with our proposal to conduct a Supplemental Environmental Project in the above referenced matter. Also enclosed is a simplified flow chart diagram showing a typical acid recovery system. This project would upgrade the acid recovery system on the galvinizing line at the Behlen facility to reduce and eliminate materials that result from the recovery process, as discussed at the end of this letter.

Behlen prepared a technical description of the galvinizing and acid recovery processes which helped me understand why the new equipment will accomplish the desired objectives. The technical description follows, and I hope it will help the EPA in evaluating our proposal.

Galvinizing Process - Pickling

Pickling is a method used in sheet and wire mills and metal fabricating plants to remove oxide and scale from metal sheets, strips, wire, or parts before galvanizing, electroplating, or painting, by passing the metal products through an acid bath. The spent pickling baths contain residual acid and metal salts of the pickling acid. The principal acids used are hydrochloric and sulfuric and the resulting metal salts are ferrous chloride and ferrous sulfate, respectively. In a hot-dip galvanizing operation such as Behlen's, the pickling bath or acid tank containing 10% sulfuric acid is occasionally used to strip zinc from off-specification products. In this case, the pickling liquor or acid also contains zinc salts.

MICHAEL S. MOSTEK
DIRECT. 402.343.3788
MICHAEL.MOSTEK@KOLEYJESSEN.COM

In a typical pickling operation for iron or steel, the pickling tank is filled initially with virgin sulfuric acid and water and is maintained at about 150° F. During pickling, the acid reacts with iron oxide scale on the metal to form ferrous sulfate heptahydrate ($FeSO_4 \cdot 7H_2O$). As the operation progresses, the acid strength diminishes (from an initial value of about 10% by weight), and there is a gradual buildup of ferrous sulfate in the tank. Slowdown of pickling rate resulting from acid depletion can be delayed by replenishing the solution with virgin acid as required.

When the iron concentration reaches about 8% by weight, however, ferrous sulfate starts to crystallize in the tank and on the work pieces. In some facilities, therefore, the operation is suspended when the iron concentration reaches 8% by weight and the acid concentration falls to about 7% by weight. The solution in the tank is then drained and replaced by virgin acid and water. Usually the waste acid solution is hauled away for treatment to neutralize the acidity and precipitate the iron as ferrous hydroxide before disposal.

Behlen, however, recovers the spent acid by passing the depleted solution through a refrigerated tank to crystallize ($FeSO_4 \cdot 7H_2O$) at temperatures near 32° F. and then returns the acid to the pickling tank. When the metal salts produced by the descaling reaction build up to a preselected value, a spent acid solution of metal acid salts is transferred to a crystallizer tank. Chilled refrigerant is delivered to circulate through a heat exchanger coil in the crystallizer and then return to the refrigeration unit.

A portion of the metal salts crystallizes out of the spent acid solution as its temperature drops. The mixture of crystals and acid passes through to a crystal dewatering unit. The acid, no longer being in its intial depleted state, then returns as recovered acid to the pickle bath, while the crystals are discharged from the dewatering unit into bags. The heptahydrated ferrous sulfate crystals obtained in this way have a texture and particle size similar to table sugar. The crystals dewater very easily and become a commercially desirable by-product of the pickling operation.

Fallout or Sludge Generation

As described above when the iron concentration exceeds 8% by weight (equilibrium), the tank reaches saturation causing ferrous oxide and ferrous sulfate to form, producing fallout and sludge to accumulate at the bottom. The materials also adhere to heating units that keep the tank hot, causing a heat loss, which further exacerbates the fallout and sludge accumulation. Current equipment shortcomings will not maintain iron concentration below 8% and, therefore, lead to precipitate formation, fallout and fouling of the heating units.

This precipitate or sludge contains the same constituents as the ferrous sulfate crystals. In order to keep the sludge from coming into contact with the parts, occasionally the sludge is removed and placed into bags and the acid and water are allowed to drain back into the pickling tank so that it can be reused. The pickling sludge is then recycled and has been analyzed for zinc and iron to demonstrate comparability of the constituents to the ferrous sulfate crystals and its value as a recyclable material.

By upgrading the recovery system as proposed in the SEP, the amount of crystals generated could be reduced and by maintaining the iron concentration at 8% or below, the production of pickling sludge will be eliminated.

Belinda, we are prepared to answer any questions you or Deborah Bredehoft may have with regard to our proposal, and look forward to discussing the details with you. Thank you for your time and attention to this matter.

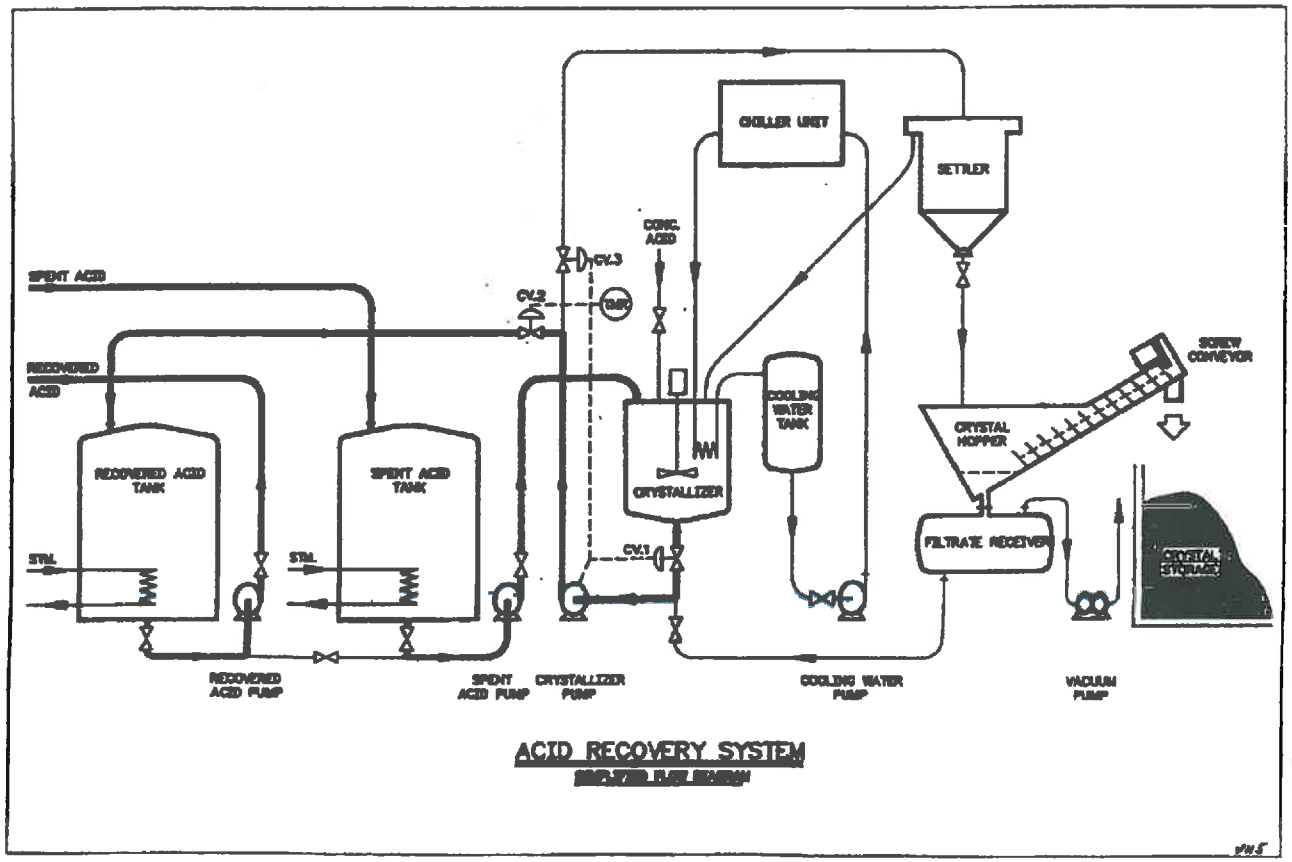
Best Regards,

Michael S. Mostek

Michael S. Mostek

cc: Deborah Bredehoft
Erik Hash
Don Green
Kevin Vering
(all via email)

Enclosures: Equipment Proposal of Phoenix Systems, Inc.
Typical Acid Recovery System – Simplified Flow Diagram



ACID RECOVERY SYSTEM

PHOENIX SYSTEMS, Inc.
P.O. Box 2261 | Beaverton, OR 97075
T: 503.228.6550 | Fax: 503.922.2081

March 30, 2012

Don Green
Behlen Manufacturing Company
4025 East 23rd Street
Columbus, NE 68602-0569

RE: Phoenix Systems, Inc. Acid Recovery System Upgrade with 10 gpm capacity

Dear Don,

Thank you for your production updates. Your volume galvanized per month is way beyond the capability of your current acid recovery system even if it were operating at design capacity. When I prepare a quotation for a continuous process acid recovery system, I use a rule of thumb consideration of 3 complete turns of the process acid per week. Generally, while running continuously, 3 turns per week allows for ample crystal precipitation to have low Fe, but also enough extra capacity to attack the FeO "iron oxide" sludge that rests in the bottom of the pickling tank. The FeO is a major player that contributes to slow pickling, high acid consumptions, and heat exchanger fouling and down time and more. As well, because the acid bath remains at a high Fe and Zn level, significant Fe and Zn pass into the rinse, the flux and into the kettle. Our clients who use the cold process are demonstrating a 28% reduction in kettle dross and significant reductions in ash and skims. As well, some are reporting an extra 2 or 3 lifts per shift through the kettle.

My information is that you operate two 7,000 gallon acid tanks operating at 140° Fahrenheit. As I recall, when you purchased your acid recovery system you only had one pickling tank. So, it goes almost without saying, that you at least doubled your pickling capacity or more while not increasing your processing system. As well, the acid system is not and has not been working at design capacity for a very long time.

When you are pickling with sulfuric acid, and processing significant tonnage, as Behlen Manufacturing is, the acid becomes depleted rapidly due to the violent pickling action. As you know, the violent bubbling that you see as the parts are immersed is actually hydrogen bubbles working their way underneath the scale to pop the scale off the surface of the steel. In the process, red rust and easily dissolved scale are dissolved quickly and is dispersed into the acid where those particles attach with a sulfate ion and form ferrous sulfate heptahydrate crystal ($FeSO_4 7H_2O$). As more ferrous sulfate is made, the available "free" sulfuric acid is diminished and requires that more acid be added to continue the process.

If you have a properly sized sulfuric acid system, then the acid recovery system will effectively remove your ferrous sulfate at an adequate rate to keep the Fe and in your case Zn at sufficiently low levels to have optimized pickling. As well, if your acid recovery system is sized properly, there will be adequate additional capacity to attack and chemically dissolve the lion's share of the "gray sludge" resting at the bottom of the pickling tank. I will explain:

As mentioned above, the pickling action removes easily dissolved scale "Fe", and hard to dissolve scale called iron oxide" FeO". The FeO will only partially dissolve and will fall to the bottom of the tank. It will be combined with the naturally occurring carbon (graphite) because you are pickling carbon steel. The FeO can be solubilized, the graphite is not soluble, but represents only a small percentage of the sludge. The graphite is filterable and can be removed through the filtration system of the acid recovery system.

As I said earlier, the FeO dissolves slowly and in Behlen's case presents a problem as it dissolves it attaches to the heating source – the in-tank heat exchangers. Where you have a saturated solution and high heat, ferrous sulfate monohydrate will form at about 160° Fahrenheit. Obviously the surface to the heat exchanger is much hotter than that. As a result ferrous sulfate monohydrate will form on the surface of the heat exchanger and grow into a hard thick blanket that looks like concrete. As a result, since the heat is absorbed by the insulating blanket, the tank goes cold and the tanks need to be shut down for the heat exchangers to be stripped clean. This causes significant process down time. ***Please note:*** *The gray sludge at the bottom of the pickling tank is the ferrous sulfate monohydrate, a recoverable commodity. The dark material is graphite (carbon). Since you are pickling carbon steel, it will always be there. It is the same material you have in a lead pencil. It is harmless. As well, you probably have some regular dirt if any of your materials are stored outside*

As said earlier, with a properly sized sulfuric acid recovery system and a free acid condition around 10% to 12%, and low maintained Fe, the free acid will begin to dissolve the sludge resting at the bottom of the tank. In other words, with the proper solution maintained, the process acid will chemically "desludge" the tank by quickly dissolving the FeO and creating $FeSO_4 7H_2O$. *As well, the acid recovery system will precipitate the ferrous sulfate heptahydrate crystal and remove it from the effluent by means of the system's centrifuge.*

The process of chemically de-sludging the tank has a number of benefits or process improvements:

- *Reduced energy consumption for tank heating*
- *Low Fe and Zn in the pickling solution optimizes pickling efficiency allowing for faster product throughput and minimized product defect*
- *Downstream processes are optimized because the low Fe content in the pickling solution means better rinsing as there is less Fe carry-over to the rinse tank*
- *The flux solution chemistry is more easily optimized as there is little Fe carry-over to the flux. This will help maintain the flux for much longer cycles before cleaning is required.*

- *Since there is low Fe available in the flux, you will realize significant reduction in the production of kettle dross. This puts more zinc on the product galvanized and less money to the residuals buyers' pockets.*
- *Most galvanizers also realize savings in reduction of ash and skims*

The following proposal will feature a new Trane 30 Ton Air-Cooled Chiller, three (3 ea) Fluorotherm K16PPTL2G Conductive Tubing Heat Exchangers with manifolds and brackets. Also included will be a secondary, optional plate and frame heat exchanger to re-heat the return acid to pickling tank temperature.

Not included in the proposal is the labor for field install of the heat exchanger brackets and heat exchangers. I would estimate 2 technicians, 3 days on site at a daily man rate of $650 USD/day + per diem, lodging, rental car, air transportation and baggage fees ...

I am also not making any special allowances for rework or additions to your control system, though we should have a discussion on that.

This proposal is for upgrading your system to double your capacity from 4 to 5 gpm up to 8-10 gpm. It does feature using the cold process operating the chiller delivery 16° Fahrenheit chilled water, and bringing the chilled acid to 35°.

Please note: The proposed upgrade will require a minimum of two full shifts of operation per day to accommodate your process needs as we have discussed. It also requires that the operation take place with the system operating at high efficiency, so if some component starts to lose its efficiency or is broken, then replace it. An old acid recovery system should be just as capable as a new one. Where systems lose capacity is by degradation of components. Stay vigilant on this and you will have an optimized process.

All pricing is being quoted FOB Portland, Oregon

1. Trane 30 Ton Packaged Air Cooled Chiller, Model # CGAF, 480 Volt, 3 Phase, 60 Hertz, Cold Water Turn Down Capability to 10° Fahrenheit.
2. Three Fluorotherm H2 Conductive Tubing Heat Exchanger, Model #K16PPTL2G, Polypropylene Frame with Teflon Liner
3. Field installed new chilled water lines with header, with isolation valves and heat exchanger connections.

Total Price $75,578.00

Optional: Plate and Frame Heat Exchanger, plates and nozzles specified in Hastelloy C 276 for corrosion resistance in 10 to 15% sulfuric acid with chlorides entrained. This heat exchange is used to reheat your return acid up to tank temperature or above by using your own hot water or steam

Plate Heat Exchanger, Hastelloy C 276 $ 6,902.00

It is estimated that most equipment can be shipped within 8 weeks. It may take an additional two weeks for the centrifuge. If that were the case, we would ship when ready and have the centrifuge shipped directly to your plant where your people can install it.

FINANCIAL

- Forty percent (40%) of the purchase price due upon execution of a purchase agreement.
- Forty percent (40%) of the purchase price due six weeks from the initial purchase order.
- Fifteen percent (15%) upon delivery of shipping documents (Please Note: In the event that if through no fault of Phoenix Systems, Inc., that the installation cannot commence upon delivery of the equipment, then this payment is due within 7 days of delivery of equipment to the site.
- Five percent (5%) of purchase price payable within 30 days of delivery of equipment to the site of the purchaser.

CANCELLATION

In the event the purchaser cancels the order after the execution of the purchase agreement, purchaser agrees to pay a cancellation fee of twenty percent (20%) of the purchase price, or of Phoenix's accrued costs of the order plus twenty-five percent (25%), whichever is greater. This cancellation fee exists solely to protect Phoenix Systems, Inc. and should not be construed as a penalty.

This agreement shall be governed by Oregon laws applicable to contracts made wholly to be performed in Oregon.

Kevin, thank you for considering Phoenix Systems as chosen vendor for your acid recovery system upgrade. I will be also following this letter with a proposal for an entirely new Phoenix Systems, Model 15 Sulfuric Acid Recovery System. The Model 15 is sized appropriately to take care of your entire acid processing requirement and do so on one shift per day. It also comes with a full Phoenix warranty.

Let me know if I can answer any questions or provide additional information.

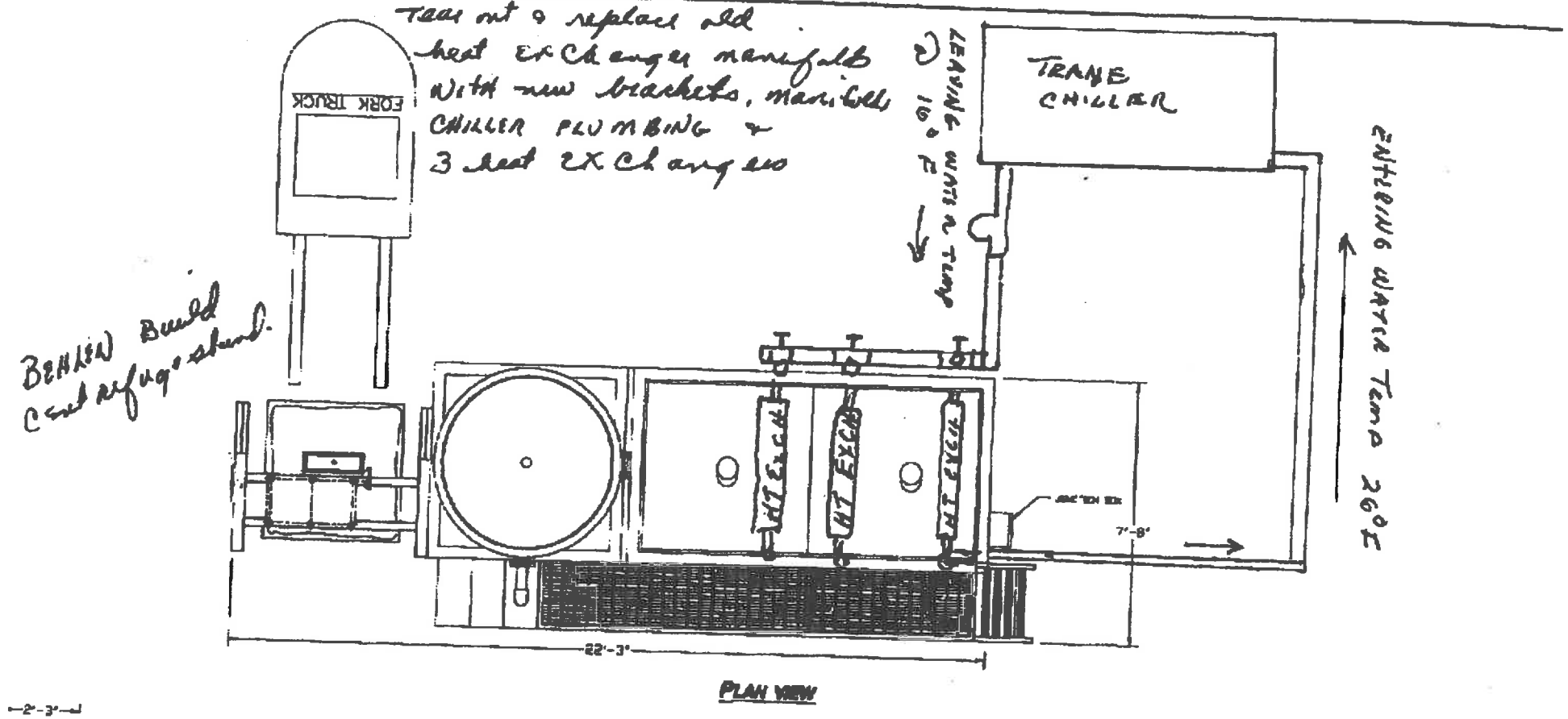
Respectfully,

Joe McDonnell

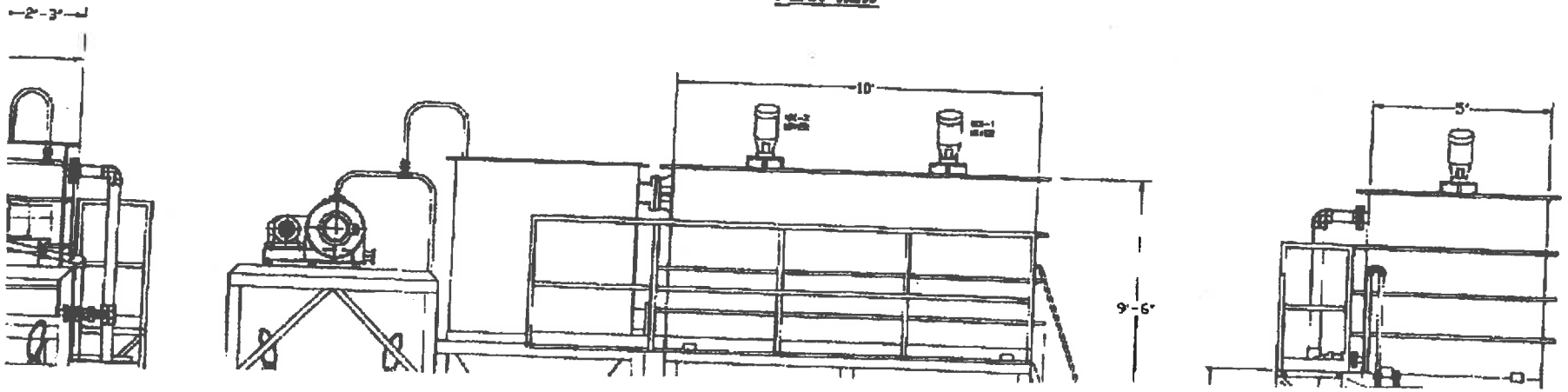
Joe McDonnell
President
Phoenix Systems, Inc.
Tel: 503.228.6550
Cell: 503.939.7212

Tear out & replace old heat exchanger manifolds with new brackets, manifolds, CHILLER PLUMBING & 3 heat exchangers

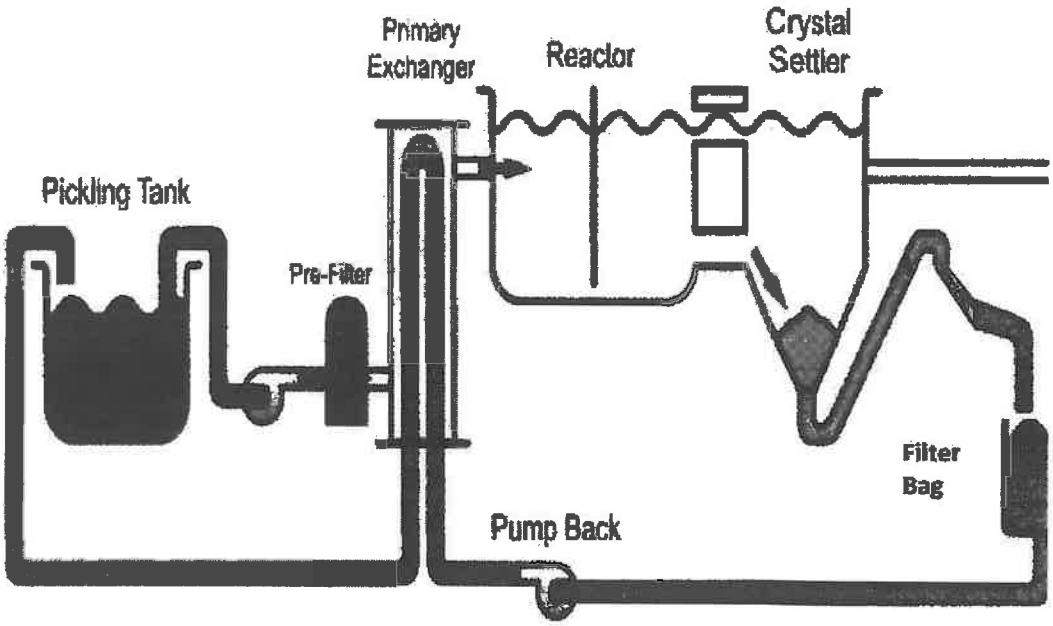
BEHLEN Build Centrifugal stand.



PLAN VIEW



Pickling Tank Recovery System Diagram



IN THE MATTER OF Behlen Mfg. Co., Respondent
Docket No. RCRA-07-2012-0021

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing Order was sent this day in the following manner to the addressees:

Copy hand delivered to
Attorney for Complainant:

Belinda L. Holmes
Senior Counsel
Region 7
United States Environmental Protection Agency
901 N. 5th Street
Kansas City, Kansas 66101

Copy by First Class Certified Mail to:

Michael Mostek, Esq.
Koley Jessen, PC, LLO
One Pacific Place
Suite 800
Omaha, Nebraska 68214

Dated: 9/24/12

Kathy Robinson
Hearing Clerk, Region 7