TOWN OF EMMITSBURG
EMMITSBURG WWTP ENR UPGRADE

CONTRACT NO. 2011-5-1651
ADDENDUM NO. 2

May 16, 2012

To All Document Holders:

This Addendum No. 2 is hereby made a part of the Contract Documents on which the Contract will be based, and is issued to modify, explain and/or correct the original Contract Documents. Please attach this Addendum to your Contract Documents and submit bids and be otherwise governed accordingly. **Receipt of this Addendum must be acknowledged on Page 00410-2 of the Bid Form**.

RESPONSES TO CONTRACTOR QUESTIONS:

The questions included in this Addendum were received between the dates of April 24, 2012 and May 15, 2012, inclusive, and are listed below in no particular order. If you submitted a question between these dates that is not included in this addendum, please forward the question to john.cannon@ghd.com.

1. Section 00200, article 25.01 directs us to use the wage determination MD111, Heavy Construction Water and Sewer. This does not appear to be a valid determination number. A search on the DOL website shows that General Decision Number MD120055, dated 2/24/2012, is the most current Heavy rate for Frederick County. Please confirm that this is the one that we are to use for bidding this project.

   The latest edition of wage determination MD55 shall replace MD111 for this project. Refer to Changes to Contract Specifications

2. Section 03300-1.04.H: Shouldn't secondary clarifier #2 be included in this warranty requirement?

   Yes. Refer to Changes to Contract Specifications

3. Section 03250-3.01.C.4 calls for "custom formed sealant grooves" which would seem to imply that sealant is used at wall construction joints. However, drawings S-001 and S-002 do not show a typical wall construction joint detail. Please provide a detail, and confirm if we are to provide sealant at one (or both) sides of this construction joint.

   On drawing S-001 within the "Horizontal Wall Reinforcement - Plan View" detail is a sub-detail for a wall "Construction Joint." Also on drawing S-001 is a "Joint sealant" detail. All wall construction joints in water containment structures shall include the joint sealant detail on both sides.

4. Given that the excavation for some structures is to be to the top of bedrock, can you provide bidders with a copy of the geotech report, referenced in SC-4.02?

   The geotechnical report will be made available at the Town offices. Bidders should note that the technical information contained in this report upon which Bidders should rely on is none. The Contract Documents contain all pertinent information from the geotechnical report and should be sufficient for the preparation of a Bid.

5. Spec section 02698-2.02.A.4.d allows "rubber gasket restrained joint conforming to AWWA C111". American Fast-Grip gasket meets this intent, as well as it meets AWWA C111. Other manufacturer's make similar products that also meet AWWA C111. However, paragraph e lists several types of proprietary restrained joints made by pipe manufacturers, and the products that you are naming are not the same as a rubber gasket restrained joint. Please confirm that paragraph

2.02.A.4.d governs, and that we can use American Fast-Grip gaskets (or an equal from a different mfgr.).

American Fast-Grip gaskets are not considered equal to the products listed in Section 02698 Article 2.02.A.4.e.

6. The Yard Piping Schedule in section 02698 does not call for any of the DIP pipelines to have restrained joints. Spec section 02698-2.02.A.1 calls for DIP to be restrained "where indicated", and since the Piping Schedule does not indicate that any lines are restrained, it would follow that neither pipe joints nor fitting joints are to be restrained for this project. However, drawing C-025 has a Pipe Joint Restraint Detail, which calls for fittings and certain lengths of straight pipe on each side of the fitting to be restrained, with the length of the restrained pipe dependent on the pipe size, fitting, and pressure. Seems like a conflict between the specifications (no pipe or fitting gets restrained) and this drawing (all fittings and certain lengths of pipe get restrained). To make matters more confusing, drawings C-007 through C-009 each have a note that states "all pipes shall be restrained for 2 pipe lengths at every change in direction, horizontal and vertical". The two pipe lengths requirement does not match the lengths shown on the table on C-025. Please clarify your intent.

   The intent of the documents is that yard piping is restrained. The Specifications state that restraint is required where indicated; this indication is present on the Drawings. Refer to the detail on Drawing C-025 for specific information relating to the required placement of pipe restraints. In some cases, such as for smaller diameter pipe, this detail would require less restraint than is desired. The requirements stated on Drawings C-007 through C-009 are intended to overlap with the requirements on C-025 to cover all instances for which restraint is intended.

7. Related to above, if we are to follow the Joint Restraint Detail on C-025, then please clarify if the means of restraining these joints is to follow specification section 02698, or if we are to follow Note 2 on this detail, which calls for pipe joint harnesses or mechanical joint retainers.

   Either type of restraint listed in Note 2 is acceptable provided it meets the requirements of Section 02698.

8. Drawing C-007 shows a new 14" tapping sleeve and valve for the RAW entering the Headworks. Just south of this TS&V, there appears to be a gate valve. Is this gate valve existing? If this is a new valve, advise if the existing force main can be shut down in order to install this new valve.

   This is a new valve. It is intended to be a live tap on the existing influent to connect new 14" RAW influent.

9. Reference above question, the drawing shows a tapping sleeve and valve, and the valve is depicted as a gate valve. The profile for this line on C-010 calls for a plug valve at this location. It is not possible to tap through a plug valve. Should the call-out on the profile be changed to a gate valve, or do you want both a gate valve for tapping purposes, and a plug valve, to be installed at this location.

   The plan is correct; a gate valve is required. Refer to Changes to Contract Drawings.

10. The Yard Pipe Schedule shows that Plant Drain piping (4", 8", and 12") is to be ductile iron. Profiles H and H1 on C-012 shows plant drain piping to be PVC. Which is correct? And if it is to be PVC, please advise on SDR rating.

    Plans will govern; all plant drain pipes shall be ductile iron in accordance with Section 02698. Refer to Changes to Contract Drawings.

11. Reference C-012, Profile H, shows that a 4" line from the RAS PS sump pump discharge is to connect to PDMH-3. Should this be the 4" BD from the Chemical/Blower Bldg.?

The reference to the RAS PS Sump pump discharge is incorrect. The callout should refer to the sump pump connections from the chemical storage containment areas. The 4" BD from the Chemical/Blower Building also enters this manhole, but is not intended to be shown on the profile. Refer to Changes to Contract Drawings.

12. Drawing C-007, there is an 8" RAW line from existing manhole into Headworks. There is also a new manhole on this line, but no invert or rim elevation is provided. Please provide this info.

    This question has been received and will be responded to in the next Addendum.

13. Drawing C-008, the sludge line from the digesters to the dewatering facility is designated as 4". On drawing W-026 it is called out as 6". Which is correct?

    Drawing W-026 is correct; the line size is 6". Refer to Changes to Contract Drawings.

14. Drawing C-008 and the yard pipe schedule show the 4" digester decant line to be PVC, yet W-023 calls this to be DIP. Which is correct?

    Drawing W-023 is correct, the decant line is DIP. Refer to Changes to Contract Drawings.

15. Drawing C-008, Eastside, there is a 12" storm sewer with a catch basin. No profile for this line. Invert elevation?

    This question has been received and will be responded to in the next Addendum.

16. Same question (above) applies to the storm drain pipe on the West side.

    This question has been received and will be responded to in the next Addendum.

17. Cannot find a spec section for RCP storm sewer pipe, nor do the drawings indicate a class for this pipe. What are we to provide?

    Class 3 RCP is acceptable for storm sewer pipe. A detailed specification will be issued in the next Addendum.

18. If headwalls are required for the ends of storm drain piping, please provide a detail.

    This question has been received and will be responded to in the next Addendum.

19. You are showing 2" and 2.5" ductile iron pipe used for the PW service on C-008. Ductile iron is not available in these sizes. What material should we use?

    Schedule 80 PVC shall be used for small diameter PW piping in accordance with Section 02698. Refer to Changes to Contract Drawings.

20. Per W-009, the 12" AIN pipes that dump into the lagoons are to be DIP. The liner penetration detail on C-026 shows the pipes that penetrate the liner to be HDPE. Which is correct?

    The 12" AIN pipes are intended to be ductile iron. Refer to Changes to Contract Drawings.

21. On yard pipe schedule, scum line is designated to be DIP. On W-014 it is shown as PVC. Which is correct?

    The piping from the clarifiers to the scum wet well is PVC with DI cast in wall at the clarifiers and the wet well. The discharge pipe for the scum pumps going to the digesters are 4" and 6" DI pipes.

22. Section 03482, Precast/Post-Tensioned Concrete Tanks PART 1 GENERAL, 1.01, letter A gives the contractor an option for precast post-tensioned concrete tanks. Is there a place on the bid form where the option for cast in place or precast is noted? If not , how will the general contractors convey if they decide to go with this option?

    The revised List of Proposed Subcontractors includes a space for Bidders to write in their selected supplier or "Self Perform" if they will cast-in-place concrete tanks. Refer to Changes to Contract Specifications.

23. Section 03482, Precast/Post-Tensioned Concrete Tanks Under 1.03 REFERENCES, letter A, ACI 350 Environmental Concrete Structures and Letter C, AWWA D115 Tendon Prestressed-Concrete Water Tanks is mentioned. You may want to clarify that for the RECTANGULAR tanks the ACI 350 would apply, and for the circular structures, AWWA D115 would apply.

    This specification allows the option to construct the circular clarifier tanks and the rectangular digester tanks using precast concrete. All tank designs shall follow ACI 350 for precast concrete tanks utilizing post-tensioned reinforcing tendons constructed per AWWA D115. Note that AWWA D115 has been expanded to include rectangular structures.

24. Section 03482, Precast/Post-Tensioned Concrete Tanks: Under 1.08 WARRANTY, Addendum 1 deletes letter A in regards to the manufacturer providing a 10-year structural warranty to the owner. Yet on page 03482-4 Letter B on defects was left in. Please clarify.

    Addendum No. 1 removed requirements for a 10-year warranty indicated in two places in this paragraph A. These requirements are restored by this Addendum. Refer to Changes to Contract Specifications.

25. Drawing C-008 shows a 4" building drain leaving the Filter Bldg. from the South side. Drawing P-005 shows the drain leaving from the North side. Which is correct?

    The building drain will leave from the north side as shown on P-005. Connection of this Drain will be to PDMH-5, not PDMH-4 as shown on C-008. Refer to Changes to Contract Drawings.

26. The yard pipe schedule has two entries for MTH (methanol) pipe-SS and HDPE, with a pipe size of 1". The yard pipe drawings show that the buried portion of these lines are to be SS, with a pipe size of ½". Drawing W-029 shows that this piping is to be 1" "flexible secondary contained XP piping". Spec section 02698-2.02.D also calls for the XP pipe. Please clarify the pipe material, as well as the diameter.

    Below-grade piping will be XP pipe. Above-grade piping will be stainless steel. Pipe diameters for each will be 1/2".

27. The site chemical feed piping (ALM, CAU, PHS, PLY) is called out to be 1" HDPE on the yard pipe schedule. Detail C-109 on drawing C-023 appears to show that chemical piping is flexible chemical tubing, installed in conduits. Other vault details show HDPE in a 6" carrier pipe. The yard pipe schedule does call for 6" PVC pipe for chemical carrier. Should the piping within the 6" carrier be HDPE, or some sort of flexible tubing? Tubing would be easier to install/replace at a future date.

    The chemical pipes will be HDPE in a 6" carrier pipe. Note that the contractor must provide a spare line matching the feed line in diameter and material in each of these carrier pipes; refer to drawing W-030.

28. On some areas of the grading plans there is a bold line paralleling the edge of pavement, offset by a couple feet. For example, C-005, between the lagoons and the pavement on the North side, and on the outside edge of the pavement on the West and south sides. Looks like a ditch, but there is no

detail callout. What is this?

These are infiltration strips used for stormwater management. Refer to their locations indicated on Drawing C-021 and the details on Drawing C-022.

29. Drawing E-002, detail 105, calls for ductbank concrete to be 4000 psi. Conflicts with 16110-3.02.G.12, which calls for 4500 psi. Which is correct?

    The requirement for 4500 psi concrete in Section 16110 Article 3.02.G.12 is correct. Refer to Changes to Contract Drawings.

30. Do we need a spec section for precast concrete manholes and catch basins, or do we just follow the details on C-024 and C-022?

    The details contain the pertinent design criteria for these items – a separate specification will not be issued.

31. Will the construction materials testing and inspection for this project be contracted by the Town of Emmitsburg or the Contractor?

    The Town will be hiring a firm to do CM/I for this contract. Their scope will include materials testing and inspection. The Town has already received bids for this work, and will make a selection based on these bids.

32. For the PLE plant effluent line, spec calls for HDPE pipe. Would DIP be an acceptable alternate?

    Ductile iron will be an acceptable alternative material to HDPE.

33. Addendum 1 deleted a sentence in 01310-1.11.B regarding withholding of progress payments. Please consider a similar edit to 1.05.B, whereby Owner has the right to withhold progress payments due to late submittals.

    Refer to Changes to Contract Specifications.

34. Reference drawing S-010, Aeration Distribution Box. Note 4 states that we are to excavate to rock, and backfill. This structure is built within the embankment that divides the existing lagoon into two lagoons. Wouldn't it be more appropriate to build this structure on 12" of stone, founded on the embankment, and not excavate to rock?

    This question has been received and will be responded to in the next Addendum.

CHANGES TO CONTRACT SPECIFICATIONS:

Section 00200: REPLACE Article 11 with the following:

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 - The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. Request for Engineer's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been

submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

Section 00200, Article 25.01: REPLACE "MD111" with "MD55"

Section 00410 (Bid Form): REPLACE the List of Proposed Subcontractors (00410B-1) with the attached list.

Section 00410 (Bid Form): REPLACE the List of Proposed Suppliers (00410C-1 through 00410C-3) with the attached list.

Section 00520 (Agreement), Article 4.03.A; CHANGE the amount of liquidated damages to be paid to Owner for each day of delay prior to Substantial Completion from "$1500" to "$2000".

Section 00800 REPLACE Paragraph SC6.05.C.1 with the following:

1. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in Paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or "or-equal" item. Request for Engineer's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bid. Each request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

Section 01310, Paragraph 1.05.C; DELETE this paragraph in its entirety.

Section 03300, Paragraph 1.04.H; ADD the following structures to the list of structures to include a warranty from the integral waterproofing manufacturer: Secondary Clarifier No. 2 and Effluent Filtration Facility.

Section 03482, Paragraph 1.08.A; ADD the 10-year warranty requirements back to the specification which were removed by Addendum No. 1.

Section 11500, Paragraph 2.03.L.1; REPLACE the first four sentences of this paragraph with the following: "The suspended air diffuser assembly will consist of a fully functioning unit capable of housing at least four (4) diffuser tubes."

Section 11500, Paragraph 2.03.N.1; REPLACE the first two sentences of this paragraph with the following: "The diffuser sheath shall be composed of a silicone or urethane special soft thermo-plastic material. This sheath shall be held in place by stainless steel clamps."

CHANGES TO CONTRACT DRAWINGS:

Drawing G-002: REPLACE this Drawing in its entirety with the attached Drawing G-002.

Drawing C-008; CHANGE the sludge line from the digesters to the dewatering facility from (4" DI, SLG) to (6" DI, SLG).

Drawing C-008; CHANGE the decant line from the digesters to PDMH-1 from (4" PVC, DCT) to (4" DI, DCT).

Drawing C-008, CHANGE all material callouts for Plant Water (PW) piping with diameters of 2" and 2.5" from "DI" to "PVC".

Drawing C-010, Profile A; CHANGE the valve callout from "Plug Valve" to "Gate Valve"

Drawing C-012, Profile H; CHANGE material callouts for all 4", 8", and 12" Plant Drain Piping from "PVC" to "DI".

Drawing C-012, Profile H; DELETE the 4" PVC PD connected to PDMH-3. ADD a 2" PVC PRD. REPLACE the note callout at STA 2+47 to read "Connect to Sump Pump Discharges from Chemical/Blower Building Containment Sumps"

Drawing C-012, Profile H1; CHANGE material callouts for all 4" and 8" Plant Drain Piping from "PVC" to "DI".

Drawing C-026, Liner Penetration Detail; CHANGE the pipe callout from "HDPE Pipe" to "DI Pipe." Welding of the pipe to the liner will not be required.

Drawing S-019, Concrete Schedule; CHANGE Item 1: Slabs and Walls to Use "Mix B-I" Concrete which includes an integral waterproofing admixture.

Drawing W-002: CHANGE the Design Effluent Parameter for TN from 4.0 mg/L to 3.0 mg/L

Drawing P-003 "Chemical/Blower Building – Plumbing Plan": REVISE 1 1/2" potable water line to be connected to potable water service after water meter. ADD 1 1/2" pressure reducing valve and backflow preventer to 1 1/2" potable line.

Drawing P-004: REVISE plant water to screw conveyer note to read: "1" PLW for screw conveyer washdown. Mount pipe parallel to conveyer and slope back to 1" drain inside building. Refer to plant water schematic on Sheet P-006 for Piping Details."

Drawing P-004 "Dewatering Facility – Plumbing Plan": REVISE 3/4" potable water line to be connected to potable water service after water meter. ADD 3/4" pressure reducing valve and backflow preventer on 3/4" potable line after water meter.

Drawing P-004, Backflow Preventer (RPZ-1) – Detail: REVISE 3/4" potable water branch connection location to after the water meter. ADD a 3/4" pressure reducing valve and a 3/4" backflow preventer (RPZ-1A) to protect potable water supply in the building. ADD backflow preventer drain from RPZ-1A to wye connection to 3" backflow preventer drain for RPZ-1.

Drawing P-004, Backflow Preventer (RPZ-2) – Detail; REVISE 1 1/2" potable water branch connection location to after the water meter as follows: ADD 1 1/2" pressure reducing valve and 1 1/2" backflow preventer (RPZ-2A) to protect potable water supply in the building. ADD backflow preventer drain from RPZ-2A to wye connection to 3" backflow preventer drain for RPZ-2.

Drawing E-002, Detail 105; CHANGE callout of concrete strength from "4000 psi" to "4500 psi"

ATTACHMENTS:

- Section 00410 Attachment B

- Section 00410 Attachment C
- Drawing G-002

John Cannon
Engineer

LIST OF PROPOSED SUBCONTRACTORS

Each Bidder shall complete this "List of Proposed Subcontractors" in its entirety for the identified categories of work listed below and for any other subcontract valued at greater than 1% of the total contract amount. Attach additional sheets if necessary to list all subcontractors. Failure to complete this list may render the Bid Form non-responsive. If Bidder intends to self perform the type of work indicated, write "Self Perform" under Subcontractor Name and leave the other columns empty.

Type of Work	Subcontractor Name & Address	Certified Disadvantage Business Enterprise?	Subcontract Amount	State Contractor License Number
Mechanical				
Electrical				
Controls				
Civil/Site				
Masonry				
Painting				
Roofing				
HVAC				
Concrete Formwork and Placement				
Concrete Reinforcing				
Secondary Clarifiers Tank Supplier				
Aerobic Digesters Tank Supplier				

Total Subcontracted Amount: $_____

Percent of Total Contract: _____%

LIST OF PROPOSED SUPPLIERS

1. Equipment Listing

Each Bidder shall complete this "List of Proposed Suppliers" in its entirety. Failure to do so may render the Bid Form non-responsive. Procedures for requesting approval of "or-equal" products or substitutions are included in SC-6.05.C.

SPECIFICATION	DESCRIPTION	MANUFACTURER
11302	Plant Water System	
11303	Dry-Pit Submersible Pumps	
11312	In-Line Grinder	
11333	Mechanical Screen	
11334	Grit Removal System	
11335	Secondary Clarifier Equipment	
11360	Decanter Centrifuge	
11371	Positive Displacement Blowers	
11380	Denitrification Filter System	
11390	Ultraviolet Disinfection System	
11500	Phased Aeration Lagoon Treatment System	
13200	Methanol Storage Tank	
16480	Variable Frequency Drives	
16486	Motor Control Center	
16497	Transfer Switches	
16620	Packaged Engine Generator	
17100	Programmable Logic Controllers (PLC)	

LIST OF DRAWINGS

SHEET NO.	DRAWING NO.	DRAWING TITLE
		GENERAL
1	G001	COVER SHEET
2	G002	LIST OF DRAWINGS
3	G003	LIST OF ABBREVIATIONS, SYMBOLS AND EQUIPMENT DESIGNATIONS
		CIVIL
4	C001	EXISTING SITE PLAN
5	C002	SITE DEMOLITION PLAN
6	C003	CONSTRUCTION STAKEOUT PLAN
7	C004	OVERALL SITE AND GRADING PLAN
8	C005	PARTIAL SITE AND GRADING PLAN I
9	C006	PARTIAL SITE AND GRADING PLAN II
10	C007	PARTIAL YARD PIPING PLAN I
11	C008	PARTIAL YARD PIPING PLAN II
12	C009	PARTIAL YARD PIPING PLAN III
13	C010	YARD PIPING PROFILES I
14	C011	YARD PIPING PROFILES II
15	C012	YARD PIPING PROFILES III
16	C013	YARD PIPING PROFILES IV
17	C014	YARD PIPING PROFILES V
18	C015	YARD PIPING PROFILES VI
19	C016	PRE-DEVELOPMENT - EROSION AND SEDIMENT CONTROL PLAN
20	C017	POST-DEVELOPMENT - EROSION AND SEDIMENT CONTROL PLAN I
21	C018	POST-DEVELOPMENT - EROSION AND SEDIMENT CONTROL PLAN II
22	C019	EROSION AND SEDIMENT CONTROL NOTES
23	C020	EROSION AND SEDIMENT CONTROL DETAILS
24	C021	STORMWATER MANAGEMENT PLAN
25	C022	STORMWATER MANAGEMENT NOTES AND DETAILS
26	C023	MISCELLANEOUS DETAILS
27	C024	MISCELLANEOUS DETAILS
28	C025	MISCELLANEOUS DETAILS
29	C026	PHASED AERATION LAGOON SECTIONS AND LINER DETAILS
30	C027	PHASED AERATION LAGOON SECTIONS AND LINER DETAILS - OPTION A
31	C028	PHASED AERATION LAGOON SECTIONS AND LINER DETAILS - OPTION B
32	C029	SOIL BORING LOGS
		ARCHITECTURAL
33	A001	GENERAL ARCHITECTURAL DETAILS AND SCHEDULES
34	A002	HEADWORKS FACILITY PLAN
35	A003	HEADWORKS FACILITY ELEVATIONS
36	A004	HEADWORKS FACILITY SECTIONS
37	A005	CHEMICAL/ BLOWER BUILDING FLOOR & REFLECTED CEILING PLANS
38	A006	CHEMICAL/ BLOWER BUILDING ELEVATIONS
39	A007	CHEMICAL/ BLOWER BUILDING SECTIONS
40	A008	CHEMICAL/ BLOWER BUILDING SECTION
41	A009	ROOF PLANS & FILTER FACILITY CANOPY
42	A010	DEWATERING FACILITY FLOOR PLAN
43	A011	DEWATERING FACILITY ELEVATIONS
44	A012	DEWATERING FACILITY SECTIONS
45	A013	FILTER-SAMPLER BUILDING PLAN ELEVATIONS & SECTIONS
46	A014	STAIR AND LADDER PLANS
47	A015	STAIR, LADDER AND GUARDRAIL PLANS AND DETAILS
48	A016	DOOR,WINDOW AND LOUVER SCHEDULES AND DETAILS
49	A017	DOOR,WINDOW AND LOUVER DETAILS
50	A018	WALL SECTIONS
51	A019	MISCELLANEOUS DETAILS
		STRUCTURAL
52	S001	STRUCTURAL DESIGN CRITERA AND STANDARD DETAILS
53	S002	STANDARD DETAILS
54	S003	STANDARD DETAILS
55	S004	HEADWORKS FACILITY LOWER PLAN AND INTERMEDIATE PLAN AT EL 412.00
56	S005	HEADWORKS FACILITY UPPER PLAN AT EL 417.50
57	S006	HEADWORKS FACILITY ROOF PLANK FRAMING PLAN AND DETAILS
58	S007	HEADWORKS FACILITY SECTIONS
59	S008	HEADWORKS FACILITY SECTIONS
60	S009	HEADWORKS FACILITY SECTIONS AND DETAILS
61	S010	AERATION AND SECONDARY CLARIFIER DISTRIBUTION BOXES
62	S011	FILTER BUILDING FOUNDATION PLAN, SECTIONS AND DETAILS
63	S012	CHEMICAL/BLOWER BUILDING FOUNDATION PLAN
64	S013	CHEMICAL/BLOWER BUILDING ROOF PLANK FRAMING PLAN AND DETAILS
65	S014	CHEMICAL/BLOWER BUILDING SECTIONS AND DETAILS
66	S015	SECONDARY CLARIFIERS LOWER AND UPPER PLANS
67	S016	SECONDARY CLARIFIERS SECTIONS AND DETAILS
68	S017	RAS PUMPING STATION LOWER AND UPPER PLANS
69	S018	RAS PUMPING STATION SECTIONS AND DETAILS
70	S019	EFFLUENT FILTRATION FACILITY LOWER PLAN
71	S020	EFFLUENT FILTRATION FACILITY INTERMEDIATE PLAN AND SECTIONS
72	S021	EFFLUENT FILTRATION FACILITY UPPER PLAN AND SECTIONS
73	S022	EFFLUENT FILTRATION FACILITY SECTIONS
74	S023	EFFLUENT FILTRATION FACILITY SECTIONS AND DETAILS
75	S024	AEROBIC DIGESTERS LOWER PLAN
76	S025	AEROBIC DIGESTERS UPPER PLAN
77	S026	AEROBIC DIGESTERS SECTIONS AND DETAILS
78	S027	DEWATERING FACILITY FOUNDATION AND ROOF PLANK FRAMING PLANS
79	S028	DEWATERING FACILITY SECTIONS AND DETAILS
80	S029	METHANOL FACILITY FOUNDATION PLAN AND SECTIONS

LIST OF DRAWINGS CONT.

SHEET NO.	DRAWING NO.	DRAWING TITLE
		WASTEWATER
81	W001	DESIGN CRITERIA
82	W002	PROCESS FLOW SCHEMATIC
83	W003	HYDRAULIC PROFILE
84	W004	HEADWORKS FACILITY PLAN - TYPE A
85	W005	HEADWORKS FACILITY PLAN - TYPE B
86	W006	HEADWORKS FACILITY SECTIONS AND DETAILS - TYPE A
87	W007	HEADWORKS FACILITY SECTIONS AND DETAILS - TYPE B
88	W008	DISTRIBUTION BOXES PLANS, SECTIONS AND DETAILS
89	W009	PHASED AERATION LAGOONS PLAN
90	W010	PHASED AERATION LAGOONS SECTIONS AND DETAILS
91	W011	PHASED AERATION LAGOONS DETAILS
92	W012	CHEMICAL/BLOWER BUILDING PLAN
93	W013	CHEMICAL/BLOWER BUILDING SECTIONS
94	W014	SECONDARY CLARIFIER PLANS AND DETAILS
95	W015	SECONDARY CLARIFIER SECTIONS AND DETAILS
96	W016	RAS PUMPING STATION PLANS
97	W017	RAS PUMPING STATION SECTIONS AND DETAILS
98	W018	EFFLUENT FILTRATION FACILITY PLAN AND SECTIONS - TYPE A
99	W019	EFFLUENT FILTRATION FACILITY PLAN AND SECTIONS - TYPE B
100	W020	EFFLUENT FILTRATION FACILITY SECTIONS AND DETAILS
101	W021	EFFLUENT FILTRATION FACILITY SECTIONS AND DETAILS
102	W022	RECYCLE PUMPING STATION PLAN, SECTIONS AND DETAILS
103	W023	AEROBIC DIGESTERS LOWER PLAN
104	W024	AEROBIC DIGESTERS UPPER PLAN
105	W025	AEROBIC DIGESTERS SECTIONS AND DETAILS
106	W026	DEWATERING FACILITY PLAN
107	W027	DEWATERING FACILITY SECTIONS AND DETAILS
108	W028	TRANSFER PUMPING STATION PLANS AND SECTIONS
109	W029	METHANOL FACILITY PLAN, SECTIONS, DETAILS AND SCHEMATIC
110	W030	CHEMICAL SYSTEMS DETAILS AND SCHEMATICS
111	W031	FLOW METER VAULTS PLAN AND SECTIONS
112	W032	PIPE SUPPORT DETAILS
113	W033	MISCELLANEOUS DETAILS
114	W034	MISCELLANEOUS DETAILS
		MECHANICAL
115	M001	SCHEDULES, NOTES, SYMBOLS AND ABBREVIATIONS
116	M002	HEADWORKS FACILITY AND FILTER BUILDING HVAC PLANS AND SECTIONS
117	M003	CHEMICAL/BLOWER BUILDING HVAC PLAN
118	M004	DEWATERING FACILITY HVAC PLAN AND MISCELLANEOUS DETAILS
		PLUMBING
119	P001	ABBREVIATIONS, SYMBOLS, NOTES AND DETAILS
120	P002	HEADWORKS FACILITY PLUMBING PLAN
121	P003	CHEMICAL/BLOWER BUILDING PLUMBING PLAN
122	P004	DEWATERING FACILITY PLUMBING PLAN AND DETAILS
123	P005	FILTER BUILDING PLUMBING PLAN
124	P006	PLANT WATER SCHEMATIC

LIST OF DRAWINGS CONT.

SHEET NO.	DRAWING NO.	DRAWING TITLE
		ELECTRICAL
125	E001	ELECTRICAL LEGEND, ABBREVIATIONS AND SYMBOLS
126	E002	CONSTRUCTION DETAILS
127	E003	CONSTRUCTION DETAILS
128	E004	CONSTRUCTION DETAILS
129	E005	OVERALL ELECTRICAL SITE PLAN
130	E006	PARTIAL ELECTRICAL SITE PLAN NO. 1
131	E007	PARTIAL ELECTRICAL SITE PLAN NO. 2
132	E008	PARTIAL ELECTRICAL SITE PLAN NO. 3 AND DUCTBANK SECTIONS
133	E009	UNDERGROUND DISTRIBUTION SYSTEM - DUCTBANK SCHEDULE
134	E010	LIGHTING SPECIFICATIONS
135	E011	LIGHTING DETAILS AND SCHEDULE
136	E012	EXISTING CONTROL BUILDING AND TRANSFER PUMPING STATION POWER AND CONTROL PLANS
137	E013	HEADWORKS FACILITY POWER AND CONTROL PLAN
138	E014	HEADWORKS FACILITY LIGHTING PLAN
139	E015	AERATION LAGOONS POWER, CONTROL AND LIGHTING PLAN
140	E016	CHEMICAL/ BLOWER BUILDING POWER AND CONTROL PLAN
141	E017	CHEMICAL/ BLOWER BUILDING LIGHTING PLAN
142	E018	SECONDARY CLARIFIERS AND RAS PUMP STATION POWER, CONTROL AND LIGHTING PLANS
143	E019	METHANOL FACILITY POWER, CONTROL AND LIGHTING PLANS
144	E020	EFFLUENT FILTRATION FACILITY POWER AND CONTROL PLANS
145	E021	EFFLUENT FILTRATION FACILITY LIGHTING PLAN
146	E022	FILTER BUILDING POWER, CONTROL AND LIGHTING PLANS
147	E023	RECYCLE PUMPING STATION AND FLOW METER VAULTS POWER, CONTROL AND LIGHTING PLANS
148	E024	AEROBIC DIGESTER POWER, CONTROL AND LIGHTING PLANS
149	E025	DEWATERING FACILITY POWER AND CONTROL PLAN
150	E026	DEWATERING FACILITY LIGHTING PLAN
151	E027	POWER DISTRIBUTION ONE-LINE DIAGRAM
152	E028	GENERATOR CONNECTION DETAILS AND DIAGRAMS
153	E029	MCC SCHEDULES AND ELEVATIONS
154	E030	DEWATERING AND HEADWORKS FACILITY PANELBOARD SCHEDULES
155	E031	CHEMICAL/BLOWER BUILDING PANELBOARD SCHEDULES
156	E032	FILTER BUILDING PANELBOARD SCHEDULES
157	E033	PROCESS ELEMENTARIES AND SCHEMATICS NO. 1
158	E034	PROCESS ELEMENTARIES AND SCHEMATICS NO. 2
159	E035	PROCESS ELEMENTARIES AND SCHEMATICS NO. 3
160	E036	PROCESS ELEMENTARIES AND SCHEMATICS NO. 4
161	E037	PROCESS ELEMENTARIES AND SCHEMATICS NO. 5
162	E038	PROCESS ELEMENTARIES AND SCHEMATICS NO. 6
163	E039	PROCESS ELEMENTARIES AND SCHEMATICS NO. 7
164	E040	PROCESS ELEMENTARIES AND SCHEMATICS NO. 8
165	E041	PROCESS ELEMENTARIES AND SCHEMATICS NO. 9
166	E042	PROCESS ELEMENTARIES AND SCHEMATICS NO. 10
167	E043	HVAC ELEMENTARIES AND SCHEMATICS
168	E044	HVAC SCHEMATICS AND MISCELLANEOUS DIAGRAMS
169	E045	TELECOMMUNICATION SYSTEM AND DEWATERING FACILITY FIRE ALARM RISER DIAGRAMS
170	E046	SCADA SYSTEM ARCHITECTURE DIAGRAM
171	E047	CHEMICAL SYSTEMS AND COMBUSTIBLE GAS DETECTION DIAGRAMS
172	E048	INSTRUMENTATION DETAILS

172 = TOTAL NUMBER OF SHEETS IN SET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22479 , EXPIRATION DATE: 9/27/2013

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
1	REVISED PER ADDENDUM 2		KML	JHC	TAY	5/12
0	FOR BID		SAN	MEC	TAY	11/11

NOT TO SCALE

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Drawn	CEG	Designed	JHC
Drafting Check	JFM	Design Check	MEC
Approved	TAY		
Date	11/11		
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client TOWN OF EMMITSBURG, MARYLAND
Project EMMITSBURG WWTP ENR UPGRADE
Title LIST OF DRAWINGS

Original Size Ansi D
Drawing No: 86-14601-G002
Rev: 0

Plot Date: 15 May 2012 - 2:58 PM
Cad File No: G:\86\14601\CADD\Drawings\General\86-14601-G-002.dwg