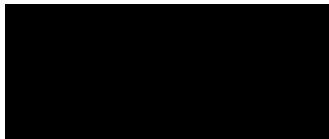


Quotation No. Q-012F13-S

Date: December 14, 2010

Expiration: 30 Days



Reference: (E) Dated 11/30/10
NAO Quotation No. Q-012F13-S



This proposal and all drawings, designs, specifications and other data appended or related to it are the property of NAO, Inc. and are supplied only for the purpose of enabling the customer to evaluate it in response to their request. The information contained or referred to in the proposal or appended to it, is not to be disclosed or released for any other use or purpose.

NAO, Inc. is a Certified ISO 9001 Company. You are sure to receive a Quality Product and Service from this Quality Company! NAO, Inc. has been Redefining Quality service since 1912!

Delivery Schedule: Please advise, if an improved delivery schedule is required. The delivery schedule shown is based on our present backlog and is subject to change pending our order backlog at the time of this order acceptance.

We trust the enclosed information will be of assistance. Should there be any changes in specifications, which might possibly influence the price quoted, please advise NAO, Inc., for adjustment.

Sincerely yours,

Jacqueline Mishinski
for John F. Straitz, III
Sales

JHM

Enclosure: NAO Terms & Conditions

s:\prop\spare parts\jackie\2010\Solar\T-28402 Q-012F13-G Solar PA Micro Flare #49941.doc



NAO Inc., 1284 East Sedgley Avenue • Philadelphia, PA 19134 • USA
Telephone: 215.743.5300, USA & Canada 800.523.3495 • Fax: 215.743.3018 & 3020

<http://www.nao.com>

sales@nao.com



Summary

Item No. 1 – One (1) 2" MICRO FLARE with 16" Combustion Chamber with NSFP-TCW-CP Burner Pilot with Control System (See B-15316 Mark-Up) -- The System consists of the following:

16" Combustion Chamber – Material 304SS

NSFP-TCW-CP-SSV (NAO Spark Ignited Flare Pilot – Energy Conversation Pilot with Thermocouple & Stainless Steel Venturi)

Nominal Length	--	6 Ft.
Pilot Windshield	--	310SS
Pilot Tip/Tube	--	Cast 316SS / 304SS
Waste Gas Inlet Pipe		
Inspirating Body	--	304SS
Pilot Fuel Gas Filter	--	304SS
Explosionproof Excitor		
Control Box Bast Aluminum	--	(NEMA 7)
High Intensity	--	Excitor 24 Volt / Ignitor / Lead Assembly
Thermocouple Type	--	Chromel – Alumel
Thermocouple Sheath	--	310SS
Thermocouple	--	446SS
Thermocouple Guide Tube	--	304SS
Connections	--	Pilot Gas – ½" NPTF Excitor Box Inlet/Outlet – ½" NPTF (Electrical) Waste Gas – 2" NPTF

One (1) Length of 2 Pair Thermocouple (25 Ft) with Seals & Fittings

One (1) Length of Excitor Extension Wire (25 Ft) with Seals & Fittings

NICP-1A-W/APC (NAO Ignition Control Panel for One (1) Pilot Weatherproof Automatic Pilot Control) consisting of:

- Solid State Temperature Controller
- Automatic Ignition Timer
- Fully Wired NEMA 4 Control Cabinet
- 2 – Weatherproof Indicator Lights (Green Pilot "ON" and Red Pilot "OFF")
- Dry Contracts for Customer Remote Alarm
- Carbon Steel Mounting Panel
- Electric: 120 V / 60 HZ / 1 PH
- Solenoid Fuel Gas On/Off Valve
- Manual Bypass Valves
- Pressure Gauge
- Pilot Line ½" A-53B with M. I. 150# Fittings

One (1) Thermocouple Junction Box – NEMA 4 & 7

NAO In-Line Hydrogen Flame Arrestor consisting of:

Size of Arrestor	--	2"
Housing/Grid Material	--	304SS
Grid Type	--	2F2
Connection	--	2" NPT

NAO System Structure consisting of:

Size of Burner	--	2"
Overall Height (Burner & Riser)	--	8 Ft.
Elevation of Entry	--	2 Ft.
Support Pipe	--	2 Ft. IPS SCH 80
Base Plate	--	Carbon Steel

External Surface Preparation

SS -- Self Color

CS -- Commercial Sandblast for SSPC-SP6,

Application of One (1) Coat of Inorganic Zinc Primer 2-3 MIL Maximum Dry Film Thickness.

NOTE: No paint is to be applied to stainless steel surfaces. Flange faces within 2 Inches of any field Welded joint, these areas are masked prior to painting.

Price: (U.S. Funds) – X-Works Philadelphia

Item No. 1

Domestic Packed

\$26,805.00 Each

Estimated Weight (Lb) / Dimension (Ft):

	Net	Shipping	L	W	H
One (1) Skid		325#	104"	29"	24"
One (1) Skid		120#	27"	28"	30"

Delivery

Shipment:

Weeks

Order Processing

1

General Arrangement Drawings

1

Customer Drawing Approval

1

Detail Drawings into Production

2

After Drawing Approval for Fabrication

14

Testing/Packing

1

Included Non-Destructive Testing

Included NDT

Packing-- Visual Inspection

Technical Data & Utility

MICRO FLARE with Combustion Chamber -- Performance Characteristics:

Pressure Drop -- 15.0"WC Flame Arrestor / 3.0"WC Flare

Inlet Gas Temperature (oF) -- 300

Inlet Flow Rate (SCFM) -- 150

Gas Composition -- 100% H2 -- 50% H2 & 50% Argon (By Volume)

Maximum Inlet Gas NHV (BTU/CF) -- 275

Maximum Heat Release (BTU/HR) -- 2.5 MM

Pilot Fuel -- Hydrogen

Pilot Gas -- Hydrogen 275 BTU/CF Amount 150 SCFH @ 10 PSIG

NAO Standard Commercial & Technical Notations

Commercial:

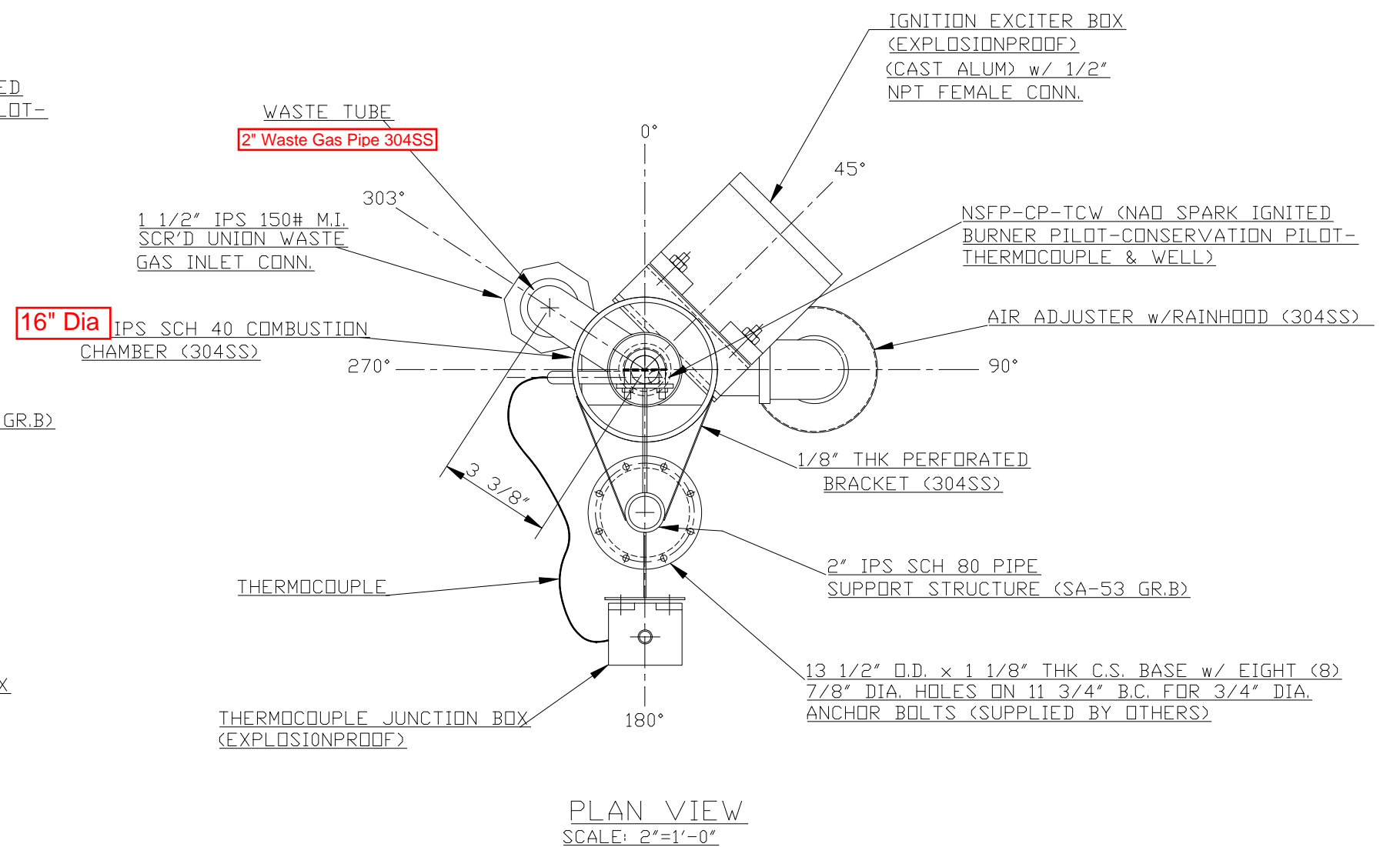
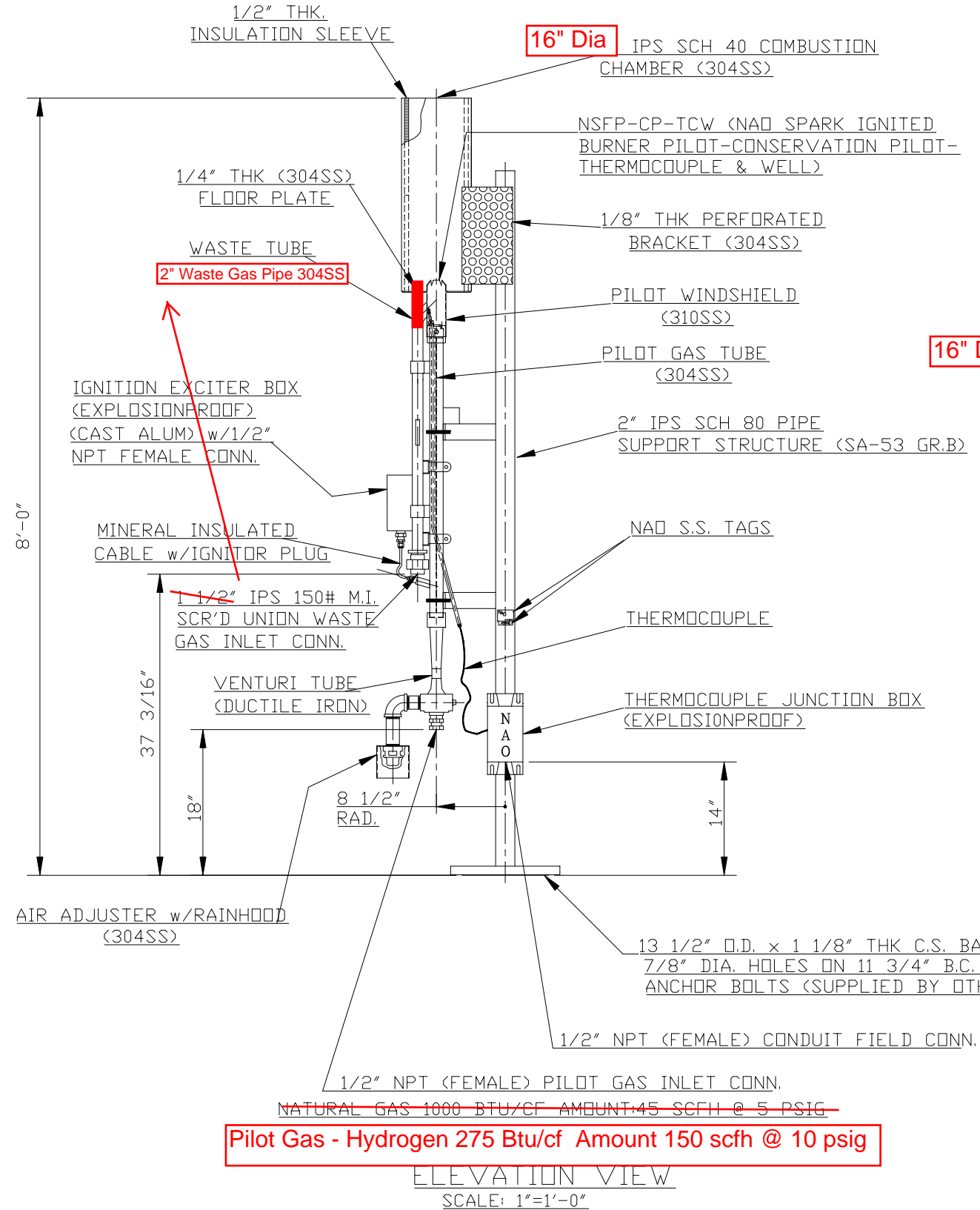
01. Prices are firm for Sixty (60) days from proposal date and through completion of order. Prices on this quotation are contingent upon NAO, Inc. commercial terms if no commercial terms are provided with the original request for quotation by the customer. To accommodate the use of a customers conditions, A price increase may be necessary. Please address all correspondence (including Purchase Order) to NAO, Inc., 1284 East Sedgley Avenue, Philadelphia PA 19134-1590.
02. No duty, taxes or G.S.T. are included in pricing.
03. Field erection is not included in our scope of supply. Field assistance rates are net. Any taxes or other charges will be added to the invoice.
04. Guarantee is Twelve (12) months after initial operation/start-up or Eighteen (18) months after shipment whichever comes first? Warranty includes replacement of defective goods on a FOB, Philadelphia basis. Incidental/Consequential damages are not Included/Installation/Transportation of replacement parts is by Customer.
05. Delivery -- Overall delivery is based upon the fabrication time after receipt of approved, not approved as Noted, drawings in our office in Philadelphia.
06. Point of Manufacture -- The Flare Burner/Pilots/Control Panel will be Fabricated/Assembled at our Plant in Philadelphia. The flare structure will be fabricated by our sub-fabricators of which a list can be provided upon request.
07. QA Requirement -- NAO, Inc. has implemented the ISO 9000 Quality Control System and has obtained the ISO 9001 certification.
08. The scope of work includes the equipment as stated in our proposal.
09. NAO's standard terms of payment for our previous domestic customers are NET Thirty (30) Days. For Orders over \$25,000.00, progress payments are required. **For first time customers please submit your credit references prior to your Purchase Order for term of payment selection. For foreign customers requesting open lines of credit, financial statements must be submitted with your RFQ or an irrevocable letter of credit, from a corresponding USA Bank, must be set up for the entire order value or cash prior to shipment.**
10. Indemnity -- NAO, Inc. will comply with the indemnification requirement, only if caused by the sole Negligence or willful misconduct of NAO, Inc.
11. Waiver of Subrogation -- A waiver of subrogation against the buyer cannot be provided.
12. Liability -- The limit of liability will be as indicated in Addendum No. 1 of our General Terms.
13. Arbitration shall be conducted under the Rules of Conciliation and Arbitration for the International Chamber Of Commerce. The Arbitration shall be conducted in the English language and in a neutral country acceptable to both parties.
14. Equipment inspection will be prior to shipment. Physical acceptance will be required at time of shipment. Performance acceptance will only be required at final destination.
15. Special tools are not included/required for maintenance.
16. The equipment delivery is based upon drawing approval by the customer as a hold point. Therefore, delay in return of the approved drawings will delay delivery. NAO will not order materials until all provided General Arrangement Drawings/Documentations are approved, not approved as noted, by customer and returned to the NAO Drafting Department.
17. Cancellation - Cancellation Charges:
0 - 30 days ARO 20% of Order Value -- **Plus expediting fee, if applicable.**
30 - 60 days ARO 20% of Order Value Plus Labor and Materials -- **Plus expediting fee, if applicable**
60 - 90 days ARO 35% of Order Value Plus Labor and Materials -- **Plus expediting fee, if applicable**
18. NAO, Inc. will not accept any liquidated damages for delay in shipments, unless specific arrangements have been made in advance and in writing and signed by an officer of the company.
19. Service - If service is required, no receipts will be provided on any expenses unless it is requested in writing on the Purchase Order.
20. If Performance/Warranty/Progress Payment-Bonds/Letters of Credit are requested by foreign customers, all charges for the guarantees in the customer's country are for customer's account.

21. Be advised that all equipment included within the quotation, may be subject to field approval by certain Canadian Regulatory Agencies, in accordance with CSA specification B 149.3-00 Code. This approval will be the customer's responsibility and must be obtained on or before commissioning at the buyers expense. **(Canadian Orders Only)**

General Technical Notations (IF APPLIES):

01. Customer is solely responsible for identifying and defining all process and mechanical considerations which may affect the performance, reliability or operation of the equipment furnished by NAO, Inc.
02. No X-Ray, Dye Penetrant, Ultra Sonic, PMI, Magnetic Particle, Hardness Test, Hydrotest or other test is Included in our quotation unless specified, in writing by NAO's quotation.
03. Detailed Fabrication/Instrumentation Drawings cannot be submitted since they are proprietary. NAO will Submit detailed General Arrangement Drawings for customer's review/approval.
04. Welding procedures can be submitted upon request for your review.
05. Materials of construction are as indicated in our proposal.
06. Surface finishes and coatings are as indicated in our proposal.
07. NAO Incorporated, standard policy is to supply final documentation, One (1) CD-Rom Disk containing O&M Manual complete with drawing & One (1) hard copy of O&M Manual complete with One (1) reduced copy + One (1) full size print of certified General Arrangement Drawings. Manuals and Drawings are sent approximately Two (2) weeks after equipment shipment from our Philadelphia Plant.
08. Testing of the actual Flare Burner cannot be performed at our facilities and should be done in the field by customer. Reference list of similar equipment in operation is available upon your request.
09. The Pilots are operationally tested prior to shipment.
10. Due to the design of our Flare Burner, refractory lining is not necessary and is not included in our pricing.
11. Special tools are not included/required for maintenance.
12. This proposal was prepared as specified by the documents supplied by the customer and received by NAO, Inc. before the Proposal date. If additional specifications are to be considered after the date indicated on this quotation, a price revision may be required.
13. NAO, Inc. has reviewed the technical specifications submitted with your inquiry documents, at this time we have NOT designed the quoted equipment to operate with the following components: Organo-Metallics Radioactive Agents, Hydrogen Sulfide, Corrosive Agents, Biological (Germ) Components, Hydrofluoric Acid, Pyrophoric Gases, Explosives, Hydrogen Chloride, Fluorides, Solid Components and/or Particulate Matter. In the event that one or more of these components are present and NAO, Inc. was not made aware of their Existence (in writing) at the time of its design, all warranty coverage on the equipment will be **terminated** immediately. Please contact NAO, Inc. immediately with specific details. It is imperative that the detailed gas composition for each application is submitted for review prior to order placement. Most systems are NOT designed for use with Hydrogen, Acetylene, Ethylene, Butadiene, or Ethylene Oxide unless these gases were detailed in the original inquiry documents.
14. All interconnecting piping, wiring, conduit and fittings are by others, unless the unit is skid mounted.
15. Advise if the seismic rating is adequate for the area in which the unit will be installed.
16. Due to on-site & specific application conditions, final control adjustments cannot be performed at the factory. Fine tuning is necessary in the field, whether by an NAO service technician or by your qualified personnel with assistance from an NAO technician.
17. Gas Pressure Regulator(s) - by others. Advise if necessary and NAO will quote.
18. For Enclosed Flares, Thermal Oxidizers and Vapor Control Units, we have included multiple layers Insulation, please advise if additional insulation is necessary. *For personnel protection we have also Included an option for a base located personnel protection shield.*
19. It is our policy to provide accurate quotations. In the event of an error NAO will make every reasonable effort to accommodate our customer's needs.
20. Please advise if additional equipment is necessary, such as a Disentrainment Vessel, Liquid Seal Detonation Arrestor, Check Valve, Isolation Valve, Etc.
21. Please note, the carbon steel which we have included in our scope is NOT designed for use below (-20) °F. If Lower temperatures will be a regular occurrence, please advise and we will quote accordingly. (Low Temperature Steel or Stainless Steel)

22. We have not included an inlet isolation valve; however, NAO strongly recommends the installation and use of the fail-safe (Fail-Closed) designed valve. Please advise if a bid is necessary. (For emergency relief Flare / Vent systems, an Inlet Isolation Valve is not suggested.)
23. NAO, Inc. will export pack, the equipment as per our Standard Typical export packing, if included by NAO, will comprise of a standard steel shipping container (20' or 40' Lengths) which NAO will secure the Equipment inside of, for safe shipment. Unless written acceptance from NAO is received, by our client NAO will utilize our standard means of export packing. Additional charges will apply for complying with Customer export packing specifications which are NOT NAO standard. Please advise, in writing, if we must comply with the specification's export packing procedure.
24. All Explosionproof Enclosures should be equipped with a breather/drain. Two options are available, NEC Gas Group C + D - (a) ADA XDB2 -- Or -- NEC Gas Group B - (b) ADA XDBH2, please advise if this is required, by NAO.



NOTES: 1). ALL FLANGE BOLT HOLES TO STRADDLE CENTERLINES.
2). SOME ITEMS SHOWN OUT OF POSITION FOR CLARITY. SEE PLAN VIEW FOR ORIENTATION
3). EXTERNAL PAINT & FINISH:
S.S. - SELF COLOR
C.S. - COMERCIAL SANDBLAST PER SSPC-SP6
ONE (1) COAT OF INORGANIC ZINC PRIMER (2 1/2-3 MILS) DFT
4). 25'-0" OF THERMOCOUPLE & EXCITER WIRE w/SEALS & FITTINGS TO BE SHIPPED LOOSE.

PANEL GA. B-15299
WIRING DWG. W-1797

WL

TAG: Serial No. 4994108/21/98 AS NOTED

GENERAL ARRANGEMENT

8" COMBUSTION CHAMBER
w/NSFP-CP-TCW BURNER PILOT

L

49941

B-15316