



NACAG Public Bid Questions and Answers (Rev. 2)

NOTE: This document corresponds to the questions and answers from the previous tender (2024) and is uploaded to the APASA website as it may be useful for some bidders.

- 1) As the amount of N₂O in the tail gas at the reactor inlet we assume 1500 ppmv, do you know this value or do you have a more accurate estimate?
Answer: We do not have an N₂O measurement. The value comes from a simulation so it is estimated; take as reference a content of 1,500 ppmv.

- 2) What concentration of N₂O do you want at the reactor outlet?
Answer: An N₂O reduction of at least 90% is expected. Based on the estimated content of 1,500 ppmv, the value at the outlet should decrease. In the case of NO_x, the maximum value is 50 ppm.

- 3) Estimated N₂O value before current NSCR? 1000ppm?
Answer: Idem question N°1 and 2.

- 4) Is the current NSCR reactor in a condition that allows reuse? If so, could you provide drawings?
Answer: See documentation attached in the technical information package (Dropbox) for companies that have signed the confidentiality agreement.

- 5) Could you please send technical information about the equipment 10-R-203, 10-BO-155 as drawings, data sheets, natural gas flow rates, 3D, photos, 3D in the short term NAVIS and then in autocad (.dwg extension). From the outlet of the equipment 10-E-151 (Hot Tail Gas line) to the outlet of the reboiler 10-B-155. Containing the line between the chiller 10-R-2039 and the reboiler 10-B-155 with the gantry and its support, as well as the pipe rack that is on the gantry.
Answer: Technical information package sent to all interested bidders who signed confidentiality agreement.

- 6) The proposed technology should ensure a reduction in N₂O concentration from 90% of the current N₂O concentration. Provide N₂O content to the NSCR.
Answer: Idem question N°1.

- 7) APASA requires that technology to co-abate NO_x emissions from tail gas be included in this proposal and that this NO_x abatement system not be negatively dependent on O₂ (oxygen) concentration. The N₂O abatement system can also handle NO_x abatement, but due to the large amount of NO_x (5500 ppmv), high abatement conversion cannot be achieved and this may be critical for a standard SCR with ammonia. In addition, this will require an ammonia mixer to feed ammonia to the catalyst to perform NO_x reduction by SCR. The reason for this request, since according to NACAG-ANEX-001-Technical Specifications for Nitric Acid Plant (EN) item 5.10 "NO_x content after reactor (ppm)" is 50 ppmv, which shows that NSCR is already capable of handling NO_x reduction.
Answer: The NO_x content at the inlet of the gas reduction reactor is 5,000 ppm (approx. 3,000 ppm NO₂ and 2,000 ppm NO). With the NSCR we are able to reduce NO_x up to 50 ppm, when we manage to keep the O₂ content stable and in the optimal range for the reaction in the abatement (when the Pt screens lose



efficiency, we are not able to reach these values). We are interested in changing our current system (NSCR) to one that does not depend on O2 content to reduce NOx gases.

8) Is the application to abate NOx together with N2O mandatory?

Answer: It is not mandatory, but it's APASA's interest.

9) If yes, what is the NOx level required at the outlet of the abatement system?

Answer: The NOx limit in the tail gas stream is 50 ppm.

10) Clarify the reason for having carried out a new commissioning in 2018.

Answer: The plant was operating in the 1960s in Canada and then the nitric acid plant was moved to Salta-Argentina and started up in 2018/19; operating continuously in 2020.

11) Is it technically possible to increase the NOx concentration at the outlet of the existing NSCR to, for example, 500 ppmv?

Answer: No

12) Is the outlet temperature of the tail gas heat recovery boiler 10-B-156 (upstream of the NSCR) controlled?

Answer: The gas temperature to the recovery boiler 10-BO-156 can be controlled in a certain range by a manual bypass on the tail gas heater (10-E-151) but it is not an automatic control and the range is limited. The gas temperature at the outlet of this boiler can also be corrected in a limited range by a manual bypass of the boiler, but it is not automatic either.

13) What is the tail gas temperature range upstream of the 10-B-156 heat recovery boiler? Please provide the range for the different cases in summer with EOR (End of Run for platinum screens) and winter with SOR (Start of Run for platinum screens) or other cases defining the minimum and maximum temperatures.

Answer:

Shell side operating temperature: 104/197.7°C

Tube side operating temperature: tube 547/482°C

14) Does the tail gas heat recovery boiler 10-B-156 (upstream of the NSCR) already operate at the limit or can the load be increased to reduce the outlet temperature?

Answer: Operates at maximum capacity.

15) Please provide the mechanical design pressure of the tail gas system (should be similar to the NSCR design pressure).

Answer: 9kg/cm2g



- 16) Does the expander operate continuously with a bypass or does the tail gas flow completely through the machine at all times during normal operation?
Answer: While the expander is bypassed, it is operated continuously with full gas through the equipment.
- 17) What type of streams do we have available and enabled for the project? Example Is compressed air available for the process heater upstream of the expander, e.g. from the ammonia plant?
Answer:
Currents available:
- *Natural gas*
 - *Ammonia*
 - *Purge gas*
- Compressed air is not available for this service, so if necessary, it should be considered in the offer.*
- 18) Will proposals that do not include NOx abatement, but only tertiary N2O abatement, be accepted? Consequently, the existing NSCR must continue to operate with the same NOx level at the outlet.
Answer: No.
- 19) One design option may be to reduce N2O and NOx with technologies other than the NSCR and leave the existing NSCR for tail gas heating only. The NSCR should be dismantled and removed if necessary.
Answer: Keeping the NSCR catalyst only for tail gas heating should be evaluated, read Annex 006
- 20) One design option could be to reduce N2O and NOx emissions with technologies other than the NSCR, leaving the NSCR operating only for tail gas heating. The NSCR will operate with a large excess of O2, thus independently of the upstream operation. Can this be a design option?
Answer: A comprehensive techno-economic study should be performed to evaluate the effects on the thermal and energy efficiency of the system, considering all the variables involved.
- 21) Does the customer require the NSCR to be decommissioned and dismantled?
Answer: Yes, the reactor and NSCR must be decommissioned, removed if necessary (APASA could be responsible for the disposal of equipment and catalyst). In addition to the assembly of the new reactor if so. According to the bidder's technical proposal.
- 22) What chemical pollutants are measured in the stack?
Answer: N2O and NOx are measured in the stack. In addition, there is an O2 measurement upstream and downstream of the abatement.
- 23) What compounds are measured?
Answer: We'll measure the following: N2O, NOx in the stack, and we measure O2 upstream and downstream of the abatement.



24) ANNEX-001 - Nitric Acid Plant Technical Specifications, point 6.6 mentions that the O2 in the stack is 1.3% - 1.5%. Is the NSCR working properly in de NOx decomposition with such excess of O2?

Answer: If we maintain this O2 content, the NSCR system is working properly.

25) ANNEX-001 - Nitric Acid Plant Technical Specifications, point 5.16 mentions that the O2 in the SCR is 1.3%-1.5%. Is any SCR currently installed in the plant or is it a typographical error?

Answer: It is a typographical error, we currently have an NSCR. It has been corrected and the bidders have been advised.

5.16	O2 content of the NSCR (% vol.)	1.3 - 1.5 % (up to 2.5% could be achieved but due to the requirements of the current abatement system it operates between 1.3-1.5%)
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26) ANNEX-001 - Nitric Acid Plant Technical Specifications, point 4.3 mentions that the available depth for a secondary catalyst under the screens is 260 mm. The client should confirm that N2O will be reduced only with a tertiary catalyst and that the installation of a catalyst II is not foreseen within the scope of the project.

Answer: N2O abatement will be performed using tertiary technology (no secondary technology for N2O abatement). In addition, NOx abatement should be considered, either in the same unit or in a different one; one bed with a mixed catalyst or two beds. Technologists should evaluate possible alternative improvements.

27) ANNEX-001 - Nitric acid plant technical specifications, point 1.8. The production design capacity is 180 MTD, and point 1.9 mentions 160 MTD. Should the new unit be designed for 180 MTD or 160 MTD?

Answer: It should be designed for a design capacity of 180 MTD.

28) Confirm what operating capacity the figures reported in ANNEX-001 refer to (180 MTD or 160 MTD) and whether specific considerations should be made to modify the flow proportionally in the design of the new equipment.

Answer: idem question N° 27

29) Requests a NOx reduction from 5500 to 50 ppmv with a NOx abatement system that is "not negatively dependent on O2 (oxygen) concentration."

This means that the NSCR can no longer be used effectively for NOx abatement and a SCR reactor should be used to break down NOx to 50 ppmv. Doing so using an ammonia SCR will lead to an additional ammonia consumption of about 16-20 kg/MT HNO3. Confirm that such additional ammonia consumption has been contemplated within the project.

Answer: Yes.

30) Does Austin Powder have its own safety regulations, for example for the safety distance between equipment? The question is based on the requirement to place a direct or indirect gas furnace (preferably) in the area close to the outlet of the future chiller, what complications in the layout could arise.

Answer: Yes, see it attached in the technical information folder.



31) We understand that the scope of the project includes the replacement of the following equipment: 10-V-255, 10-R-203 and 10-B0-155.

Answer: Whatever the contestant deems necessary.

32) It is our understanding that the currently installed instruments are not to be modified or changed, but will be calibrated by Austin Powder and must be reinstalled by the contractor.

Answer: If necessary, they will be changed, if it is considered really necessary, the case for changing them will be evaluated, otherwise they will be maintained.

33) What kind of piping does the plant have or what materials is Austin Powder requesting for this application?

Answer: Yes, see it attached in the technical information folder.

34) In the ENG version of the document NACAG-POT-RQC, some paragraphs are repeated many times inside the tender: for example language requirements (ENG/ESP) are repeated at pages 8, 26, 46. Evaluation criteria are repeated at pages 18-20, 36-38, 57-59

Answer: They repeated paragraphs, but they aren't incorrect; they are just repeated. It's uploaded the version without repetitions in our web.

35) The composition of NG shows 5.5 % ETHYLENE (i.e., C₂H₄), which is rather uncommon in NG composition. We assume that this 5.5 mole % is ETHANE (i.e., C₂H₆).

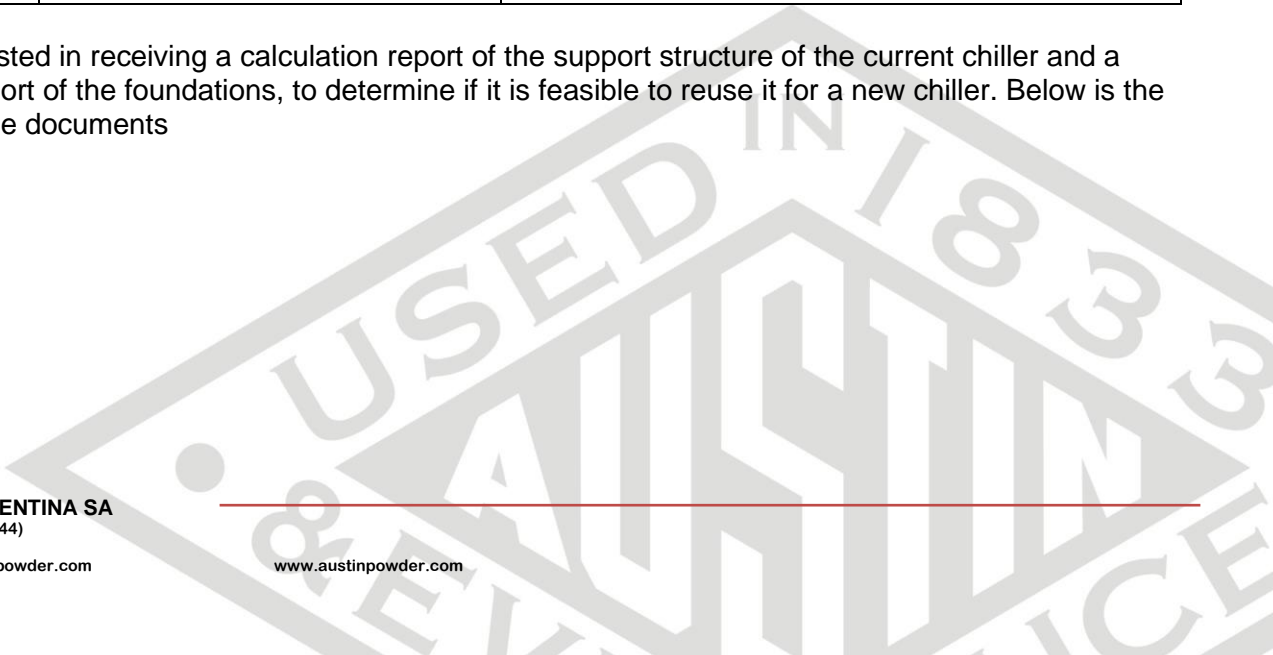
Answer: Yes, it is a typographical error: 5.5% C₂H₆ ETHANE in NG.

36) The purge does not contain CH₄ which is the common inert along with He and Ar in the Ammonia loop purge with upstream methanizer.

Answer: In the specification, precisely in ANNEX-NACAG-ANEX-001-Plant Information (EN)-we place information about the composition of NG and Purge Gas with the corrections of % of chemical compositions. It'll be corrected.

5.26	<ul style="list-style-type: none"> • Purge gas composition • Composition GN 	<p>30 % CH₄; 7 % H₂; 26 % Ar; 37 % N₂ 91% CH₄ - 5.5% C₂H₆ - 0.5% C₃H₈ - 0.2% C₄H₁₀ - 2.8% others</p>
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37) We are interested in receiving a calculation report of the support structure of the current chiller and a calculation report of the foundations, to determine if it is feasible to reuse it for a new chiller. Below is the reference of the documents





REFERENCIAS	
A1290-01-90-T03-206	PLOT PLAN AREA DE TRABAJO
A1290-01-90-C03-213	DETALLE TIPICOS DE BULONES DE ANCLAJES
A1290-01-90-C03-214-0	TIPICO DE PLATAFORMAS Y ESCALERAS
A1290-01-8191-M-GEN-013-A	PLANOCONSTRUCTIVOS 10-BO-156
A1290-01-8191-M-GEN-007-A	PLANOCONSTRUCTIVOS 10-BO-155
A1290-01-10-T39-CAL-201-2-MC-A	MEMORIA DE CALCULO ESTRUCTURA EQUIPO 10-R-203
A1290-01-10-C01-CAL-401	MEMORIA DE CALCULO FUNDACION SUPRESOR DE HUMO-CALDERAS-ENFRIADOR Y PLATAFORMA

Answer: Yes, it is attached in the technical information folder (in dropbox) for companies that have signed the confidentiality agreement.

38) Under what conditions is the purge gas delivered (temperature and pressure)? Confirm whether it is in molar basal or mass % described in shared document.

Answer: ídem N°36. The balance was performed on base mass and volumetric. Read Annex 001

39) Is purge gas of any use today?

Would the use of this purge gas in a possible technical solution generate any value for its utilization?

Answer: It has 2 possible uses: to the auxiliary burner of the primary reformer of the ammonia plant or to the NSCR abatement of the nitric acid plant. But at the moment it is being sent to the stack.

40) According to the last reply received, the purge gas does not contain ammonia. Please confirm this.

Answer: It is answered in question 36.

41) In case of needing ammonia or natural gas in an intervention zone, whose responsibility is it to bring the supply to that zone?

Answer: The project is a turnkey project, in case of need, the successful bidder is responsible for

42) Indicate the collective bargaining agreement and/or specific agreements to be used.

Answer: The winning bidder must define which union he/she is to work with.

43) Indicate working hours and schedule. Regimes to be adopted.

Answer: As indicated in the public bid, plant shutdowns are worked 7 days a week, 24 hours a day, to meet scheduled deadlines.

44) Will we be able to use any existing plant dining room for our resources or will it be at the contractor's expense?

Answer: Yes, they will have a physical space available on the floor that they will be able to use.

45) If you have a physical space for the client's dining room, please indicate the approximate distance from it. Do you have a vendor list for contacting local suppliers or manufacturers that can supply us?

Answer: Between 200-500m approximately and yes we've suppliers.

46) We need to have some description requested for the new control system of the new reactor to be installed.

Answer: Compatibility with ABB DCS 800xA.



47) Indicate the estimated dates of plant shutdowns and their duration, in order to optimize our resources and work fronts. Estimated start and completion of work (will there be any plant shutdown milestones?). Estimated total duration of the work.

Answer: As indicated in the public bid documents, the plant shutdown is scheduled for July/August 2026, with an approximate duration of 25 days.

48) Geographical and location data of the area of the works to be contemplated.

Answer: Geographical data

The site is surrounded by:

o To the east: Locality of Joaquín V. González.

o To the west: El Galpón City and Medina River

o North: El Tunal Dam and National Route No. 16.

o To the South: Department of Rosario de la Frontera

ENVIRONMENTAL AND SEISMOLOGICAL CONDITIONS

For the Basic Engineering of the CFIh Company, it was agreed to set the design parameters

Clima (1):	Subhúmedo-Húmedo
Presión Barométrica	950 hPa Media Estimada
Temperatura ambiente normal (2):	29,0 °C
Temperatura media mínima (2):	13,4 °C
Temperatura media máxima (2):	40 °C
Humedad Relativa Normal (2):	55 %
Precipitación media anual(3)	582 mm
Dirección predominante del Viento (4):	ENE
Velocidad del Viento Promedio (5):	9,3 km/h
Altitud sobre el nivel de mar:	498 m
Zonificación Sísmica (1):	Zona 3 de elevado riesgo

(1) Environmental Impact Study Nitrate Production Complex of the Nitrates Company Austin S.A (NASA), Page 1.

(1)(2) Comments to document: A1290-01-90-P01-TEC-001-0 (Process Design Basis)

(2)(3) According to the records (years 1934 to 1990) F.C.G.B. El Tunal Station (25° 15' S, 64° 39' S, 64° 39' S).

W.- 454 masl) (Bianchi and Yáñez, 1994).

(4) Annual average - Environmental Impact Assessment Nitrate Production Complex of the Nitratos Austin S.A. (NASA), Page 6.

(3)(5) Average - Environmental Impact Assessment Nitrate Production Complex of the company Nitratos Austin S.A. (NASA), Page 7

Works area: attached in the technical information folder (in dropbox) for companies that have signed the confidentiality contract.

49) Will the soil, topography and Georadar surveys be provided by Austin Powder or should they be performed by the contractor?

Answer: Soil studies from the project stage are available and will be provided at the next stage if required.

50) Will electricity and water be provided by the customer or will we have a specific connection point?

Answer: To be paid by the customer



- 51) If there is contaminated soil, indicate its disposal or treatment. Will the final disposal and treatment be by the client?
Answer: The final disposal is seen with SHES and the treatment is in charge of APASA.
- 52) For disassembly of equipment (if necessary), indicate the disposition of the equipment. Will the transportation be by Austin Powder?
Answer: If it is necessary to dismantle the equipment, the movement (crane) is at the contestant's expense, but the final disposal of the equipment is in charge of APASA.
- 53) We understand that there will be a physical location for our work shops near the work area. Please indicate distances.
Answer: Yes, between 100 - 500 m.
- 54) The Q&A document mentions "attached in the technical information folder" What does it refer to?
Answer: All the contestants, with whom we signed a confidentiality agreement and sent the form 8 where they declared their interest in participating, were sent a dropbox link with the technical information requested in each question (such as: P&ID, Pipping class, etc.) for the companies that have signed the confidentiality agreement
- 55) Provide the normal, minimum and mechanical design for the following current in the new installation.
Answer: We adapt to your needs
Ammonia
T(°C) 29 normal max, 13 min and 40 mechanical design
Pressure Up to (barg) 15 normal, 16 max, 14 min and 41 mechanical design
NG
T(°C) normal 30 max, 10 min and 40 mechanical design
Pressure op filter C act A40 (barg) 20 normal, 21 max, 15 min and 30 mechanical design
Purge gas
T(°C) 35°C normal; 36 max, 34 min and 232 mechanical design
Pressure op (barg) 15 normal, 16 max, 14 min and 25 mechanical design
- 56) Provide data sheet and mechanical details of purge mixer +tail gas existing today prior to NSCR.
Answer: Yes, it is attached in the technical information folder (dropbox) for companies that have signed the confidentiality agreement.
- 57) We need to know some technical characteristics of:
Answer:
steam turbine 10-TB-001:
a. Axle power: 1580 HP maximum
b. Steam inlet condition Steam consumption flow rate 8tn/h, Temperature 260 °C and Pressure 13.7895 bar
c. Make and model Worthington, serial number 24932 Frame 5-6
TB-C-001A/B compressors:
d. Shaft power at each stage: 4620 HP between high and low
e. Consum Normal outlet temp: 253C, Max.: 371.11°C Normal inlet pressure: 7.17 bar
f. Make and model: Ingersoll - Rand S/N EB-2458/9 E-516/EXI
10-TB-C-002:



g. Steam consumption: flow rate No steam consumption Kg/h, Temperature 593.3°C and Pressure 8.2 bar

h. Make and model: Dresser -Rand E-516

58) In the information sent, the location of the natural gas and ammonia lines from which the tie ins for the reactor and the furnace would be taken would be missing.

Answer: We'll adapt ourselves to the needs of the successful bidder. It's attached in the technical information folder (in dropbox) for companies that have signed the confidentiality agreement.

59) The specification talks about the durability of the catalyst for N₂O, does this apply to NO_x as well?

Answer: Yes.

60) Is there a natural gas line that we can use for the HX?

Answer: Yes, see the information attached in the technical information folder (in dropbox) for the companies that have signed the confidentiality contract.

61) What is the distance to the nearest electrical trays?

Answer: Approximately 200-300m. There are the electrical trays plans attached in the technical information folder (in dropbox) for the companies that have signed the confidentiality contract.

62) Is there any space we can use to place a crane?

Answer: Yes, look at the plot plan marked spaces, attached in the technical information folder (in dropbox) for companies that have signed the confidentiality contract.

63) What are the time windows we will have to replace the equipment?

Answer: Idem question 57. As indicated in the specifications, the plant shutdown is scheduled for July/August 2026, with an approximate duration of 25 days.

64) Is the use of gas detectors necessary?

Answer: No

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65) The purge flow rate available in "ANNEX-001-Technical specifications of the nitric acid plant" is 360 kg/h. Is it possible to use this flow rate only partially (i.e. between 50% and 80%) and let the Customer use the excess for other services?

Answer: Yes

66) The following documentation is requested for metallic structures
A1290-01-90-C03-213 Typical Anchor Bolt Detail.



A1290-01-90-C03-214-0 Typical Platforms and Ladders.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

67) Is it assumed that drawing A1290-01-10-C03-401 Rev 0 corresponds to the As-Built revision of the foundation? Is this assumption correct?

Answer: The plan named is the construction plan, we don't have a construction compliant plan.

68) The following documentation from the revamp area is requested:

- classification of existing areas,
- of the fire water system,
- of the F&G system

Answer:

- *Existing area classification: See attached documentation in technical information package (in dropbox) for companies that have signed confidentiality agreement.*
- *Fire and F&G water system: Willn't provided at this stage of the project.*

69) Indicate if there are APASA's own safety regulations that must be taken into account for the safety of the process.

Answer: No.

70) Indicate whether risk studies, such as HAZID, HAZOP, LOPA or SIL assignment, will be performed by APASA or should be considered as part of the supply.

Answer: Don't consider.

71) The scope of the revamp does not identify tasks related to modifications to the existing atmospheric protection systems, general or localized lighting, outlets, tracing and cathodic protection. Please confirm. If any of the above mentioned systems are to be included, please submit additional documentation.

Answer: Don't consider.

72) Documentation is requested from the revamp area regarding the existing grounding system.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

73) Is it possible to present forms of payment different from those in the model contract in order not to incur financing cost overruns? To propose neutral cash flow for the project.

Answer: The ratio established in the public bid documents is maintained.

74) INCOTERM Catalyst Can we offer INCOTERM DAP for catalyst supply? (DAP: Delivery on site by us and the customer APASA will pay the import taxes and customs handling).

Answer: APASA absorbs import duty payments if required.

75) Are there any plant access restrictions or additional security measures that contractors should consider?

Answer: See the documents annexes 002 and 003 of the public bid.

76) Does APASA have recommended suppliers or quality standards for materials and equipment?



Answer: Chinese pipes aren't accepted, see specifications in the public bid.

77) Is APASA expected to purge and/or clean existing equipment prior to disassembly, or will this be the contractor's responsibility?

Answer: Yes, it is done by APASA.

78) What in-plant operating or maintenance constraints should be considered in planning the schedule?

Answer: The execution of the plant shutdown will be executed in 2026, as specified in the public bid documents.

79) During plant shutdowns, is there flexibility in 24-hour shifts or specific staffing requirements? *Answer: As indicated in the specifications and in question 53 of the previous Q&A document, during plant shutdowns we work 7 days a week for 24 hours to meet scheduled deadlines. Regarding the specific personnel requirements, please read annexes 002; 003 and the public bid document for detailed specifications for personnel to enter the plant.*

80) What detailed corrosion, temperature and pressure resistance specifications must piping materials meet?

Answer: The piping class document must be complied with. See attached documentation in technical information package (in dropdown) for companies that have signed the confidentiality agreement.

81) What leak testing and non-destructive testing procedures are required by APASA for piping and fittings prior to commissioning?

Answer: The piping class doc. and doc: A1290-01-90-Q09-ESP-001_4 END BY PIPING CLASS must be complied with.

82) Are there any special APASA sealing or alignment requirements to connect the new system to the existing system to avoid leaks?

Answer: Non-destructive testing, hydraulic testing, torquing, pre-commissioning, commissioning and start-up support.

83) What are the specific load and vibration absorption requirements for foundations?

Answer: See attached documentation in the technical information package (in dropdown) for companies that have signed the confidentiality agreement.

84) Are additional soil studies required to support the piping infrastructure and equipment?

Answer: see attached documentation in the technical information package (in dropdown) for companies that have signed the confidentiality agreement.

85) Are there specific guidelines for the transportation and installation of heavy equipment?

Answer: This information will be provided to the successful public bid on this project.

86) What corrosion protection standards should be applied to structures and pipelines?

Answer: See attached documentation in the technical information package (in dropdown) for companies that have signed the confidentiality agreement.

87) Is any specific certification or type of paint required to comply with safety or environmental regulations?



Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

88) What are the specific insulation and protection requirements for piping wiring and instrumentation?

Answer: Area classification Zone 2, Group IIC, T2; safety instruments must be SIL 3 certified: intrinsically safe and all instruments must be ip68 certified.

89) What compatibility and communication protocols must be ensured to integrate the control system with the current system in the plant?

Answer: Process instrumentation: two-wire 4-20 ma + HART protocol + shielded instrumentation cable. Communication instrumentation: modbus rtu + shielded cable.

The sampler communicates with the dcs by modbus or ethernet protocol.

Compatibility with ABB's DCS 800xA.

90) General plant drawings o Plant layout and abatement system installation areas. o 3D piping model with specific location of the equipment and abatement system installation areas.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

91) Piping and Instrumentation Drawings (P&ID) o Process and instrumentation diagrams, detailing gas flow and connections, valves, meters and control points. Memory with references and nomenclature to understand the P&ID diagrams.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement as well as see all the questions and answers in the document uploaded on the website above.

92) Structural drawings of foundations and supports for existing piping and equipment to be removed, with dimensions and materials.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

93) Technical specification of the concrete slab on which the equipment to be removed is located.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

94) Details of existing piping and supports: paths, attachment points, expansion joints, and connections to existing facilities.

Answer: See attached documentation in technical information package (in dropbox) for companies that have signed confidentiality agreement.

95) Dimensions and weights of equipment to be removed

Answer: See attached documentation in technical information package (in dropbox) for companies that have signed the confidentiality agreement.

96) Technical documentation of materials for piping, valves, supports and thermal insulation, considering corrosion, pressure and temperature resistance conditions.



Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

97) Details of corrosion protection and thermal insulation of pipelines.

Answer: See attached documentation in technical information package (in dropbox) for companies that have signed the confidentiality agreement.

98) Electrical diagram and instrumentation for connection of equipment and sensors, indicating voltage requirements and compatibility with the central control system.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

99) Layout of cable trays to be used, indicating the location of the control station.

Answer: See attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

100) Control diagrams and configuration of sensors and actuators for N₂O and NO_x monitoring.

Answer: Not applicable to the scope at this stage of the project.

101) Soil study results, indicating load capacity and design recommendations.

Answer: See the attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement.

102) Access plans for equipment transport, safety areas and assembly details, especially in restricted or difficult to access areas.

Answer: See the attached documentation in the technical information package (in dropbox) for companies that have signed the confidentiality agreement, marked on the plot plan

103) Specific requirements for the integration of the gas abatement and preheating control system with the central system, including communication protocols and software compatibility.

Answer: idem question 92.

104) What is the maximum allowable pressure required for the SCR?

Answer: 9 barg

105) Is the provision of natural gas lines for the tail gas heater contemplated within the scope of this bid?

Answer: Yes

106) Could you please provide technical information about the natural gas installation? Please indicate the necessary piping route to be supplied.

Answer: Not applicable at this stage of the project, as answered in the previous Q&A document, TIE IN for gas connections are found.

107) Is it necessary to include natural gas pressure and flow measurement and monitoring systems as part of the supply? If so, what technical specifications must they meet?

Answer: For the supply of NG for the chiller no, but for the case of the heater if it is needed if it will be included. See document in dropbox doc. of piping class.



108) Is any pretreatment of the natural gas tail (filtering, pressure reduction, other) required prior to use in the heater?

Answer: No.

109) What are the expected operating conditions (temperature and pressure) at the connections for the tail gas heater?

Answer: These were answered in the previous question and answer document, also see Annex 001-Plant Information.

110) Can performance and hidden defects guarantees be offered by means of a bond for 10% of the contract value (change from 30% to 10%)?

Answer: It remains at 30%.