

PANAMA CANAL AUTHORITY	VARIATION	PAGE 1 OF 4
1. REQUEST FOR PROPOSAL No.:  RFP-76161	2. CONTRACT No.:  CMC-221427	3. DATE: October 13, 2011
		4. VARIATION No.: 021

5. ISSUED BY:

PANAMA CANAL AUTHORITY  
Employer's Representative  
Locks Project Management Division  
Building 740, Corozal  
Panama, Republic of Panama

6. NAME AND ADDRESS OF CONTRACTOR (INCLUDE PHYSICAL & POSTAL ADDRESS)  Grupo Unidos por el Canal, S.A. Building 22B, Brujas Road Cocoli, Republic of Panama	7. CONTRACTOR'S TELEPHONE NUMBER:  507-316-9900
	8. CONTRACTOR'S FACSIMILE NUMBER:

9. VARIATION:

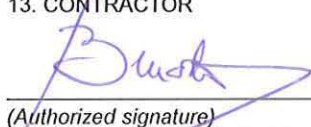

- ☒ The contract referred to in item No. 2 is hereby varied as set forth in item 10, entitled "DESCRIPTION OF VARIATION".
- ☒ YES. ☐ NO. The contractor shall send a copy, duly signed, of this Variation to the Employer's Representative/Contracting Officer.

	9 A. THIS VARIATION IS EXECUTED ON THE BASIS OF: (Specify the legal authority).  THE VARIATION DESCRIBED IN ITEM 10 IS HEREBY INCORPORATED AND MADE A PART OF THE CONTRACT.
	9 B. THE CONTRACT REFERRED TO IN ITEM NO. 2, IS VARIED TO INCORPORATE ADMINISTRATIVE CHANGES (such as the paying office, account numbers, etc.).
X	9 C. THIS BILATERAL AGREEMENT IS SIGNED AND INCORPORATED INTO THE CONTRACT REFERRED TO IN ITEM NO. 2 OF THIS FORM, ON THE BASIS OF: (Specify the legal authority) Volume III, Conditions of Contract, Sub-Clause 1.16 [Entire Agreement], 4 <sup>th</sup> Paragraph
	9 D. OTHER. (Specify manner and the legal authority).
	9 E. ACCOUNT NUMBER (If required):

10. DESCRIPTION OF THE VARIATION (List in accordance with the order of the Contract. If additional space is required, use blank sheets).

**See attached**

Except for the variation(s) herein specified, all other terms and conditions of the Contract remain unchanged.

11. NAME AND TITLE OF THE PERSON AUTHORIZED TO SIGN (Type or print)  Bernardo Gonzalez Contractor's Representative	12. NAME AND TITLE OF THE EMPLOYER'S REPRESENTATIVE/CONTRACTING OFFICER (Type or print)  Jorge de la Guardia, Employer's Representative
13. CONTRACTOR   (Authorized signature)	14. DATE:  14/10/2011
	15. PANAMA CANAL AUTHORITY   (Employer's Representative/Contracting Officer's signature)
	16. DATE:  13/x/2011

This Variation No. 21 is issued to incorporate the following:

1. **Volume II, Part 1, Section 31 23 16.26 – [Drilling and Blasting]-** Paragraph 1.03 C.1. a shall be deleted entirely and replaced with the following paragraph:

“1. Explosive:

*a. **Acceptable and Unacceptable Explosives:** Explosives made with nitroglycerine-based material will not be permitted for safety, health, and environmental reasons. Dry blasting agents and slurries or water gels and emulsions are acceptable. Explosives are known to age and deliver much less than the rated energy. For this reason, it is required that all explosives used on this Contract be 1 year or less in age. Products that do not meet manufacturers' specifications shall not be used on the project.*

*Detonating cords [including those that are classified as explosive, more than 5g/m and above]: It is required that all detonating cords used on this Contract be 5 years or less in age according to the manufacturer requirements. Products that do not meet manufacturers' specifications shall not be used on the Project. The Contractor must demonstrate that the storage conditions of the detonating cord is appropriate according to Institute of Makers of Explosives (IME) and to the manufacturer requirements to achieve the usable period of the product. The Contractor must clearly show the date of manufacture of detonating cords before they are used in the Project.”* (RFV 0067)

2. **Volume II, Part 2, Section 26 33 00 – [Direct Current Equipment]-** Paragraph 1.03 A.7.b shall be deleted entirely and replaced with the following paragraph:

*“b. Unless otherwise specified, use of a UPS as a single component is unacceptable. Each new lock complex shall have at least one redundant inverter for AC loads in control buildings (including HMI) in accordance with Section 48 19 16 (Inverters), connected to battery banks and battery chargers of this Section.”* (RFV-081)

3. **Volume II, Part 2, Section 26 33 00 – [Direct Current Equipment]-** Paragraph 1.03 C.5.e., in Table 26 33 00-3:

Delete:

Input	Voltage	120 or 120/240 VAC, 60 Hz.
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And replace with the following:

Input	Voltage	120/240 VAC single phase, 480 VAC, or 480/277 VAC three phase, 60 Hz.
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(RFV-081)



4. **Volume II, Part 2, Section 26 33 00 – [Direct Current Equipment]**- Paragraph 1.03 E.4 shall be deleted entirely and replaced with the following:

**"4. Battery Chargers:** All units shall be floor or rack mounted."(RFV-081)

5. **Volume II, Part 2, Section 26 33 00 – [Direct Current Equipment]**- Paragraph 1.04 C.7.g. 1 shall be deleted entirely and replaced with the following paragraph:

*"1) **Normal Mode:** During normal operation, power shall be supplied by the normal AC source. Should this AC source fail, the UPS shall automatically transfer to DC power supplied by +125 VDC batteries, and the transfer shall be uninterrupted. The UPS shall monitor battery status to avoid possible damage if the batteries are exhausted. Should battery voltage drop below a low limit, the UPS shall automatically disconnect batteries and transfer load to normal AC power, and this transfer shall be uninterrupted."*(RFV-081)

6. **Volume II, Part 2, Section 48 19 16 – [Inverters]**- Paragraph 1.03 B.1, in Table 48 19 16-2:

Delete:

Voltage	120 VAC, sinusoidal, single phase, two-wire, grounded.
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And replace with the following:

Voltage	<ul style="list-style-type: none"><li>• <b>Units with maximum capacity smaller than 20 kVA:</b> 120 VAC, single phase, three-wire, grounded.</li><li>• <b>Units with 20 kVA or larger maximum capacity:</b> 120/208 VAC, three phase, four-wire, grounded.</li></ul>
Waveshape	Sinusoidal

(RFV-081)

7. **Volume II, Part 2, Section 28 23 00 Closed Circuit Video Systems** - Paragraph 1.03 C.17 shall be deleted entirely and replaced with the following paragraph

*"17. **Video Display:** Video display at locks machinery control system (LMCS) control rooms shall be in a video wall in accordance with Section 11 52 23 (Video Walls)."*(RFI- 328)

8. **Volume III, Conditions of Contract** - Sub-Clause 1.15 [Confidentiality] shall be deleted entirely and replaced with the following paragraph:



#### **"1.15 Confidentiality**

*The Contractor shall treat the details of the Contract, the Contractor's Documents and the Works as private and confidential, except to the extent necessary to carry out obligations under the Contract or comply with applicable Laws. The Contractor shall not publish, permit the publication, or disclose any details of the Works and the Maintenance Services in any trade or technical paper or elsewhere without the previous consent of the Employer and any such permitted disclosure shall only be to third parties whose confidentiality obligations are either approved in writing in advance by the Employer or which are subject to at least equivalent terms as this Sub-Clause 1.15. This Sub-Clause 1.15 shall survive the transfer of the rights in the Contractor's Documents to the Employer as described in Sub-Clause 1.10 [Employer's Use of the Contractor's Documents].*

*Notwithstanding the above, the Employer, in its absolute discretion, may give its previous consent, to the publication or disclosure of professional practice monographs and academic degree thesis to a third party, provided that the Contractor complies with the following:*

*(a) the Contractor shall ensure that the data and the documents for which consent to publish or disclose is being requested by the Contractor, are reviewed and edited as to eliminate confidential or sensitive information pertaining to the Works and Maintenance Services;*

*(b) after the Contractor's review and edit referred to in paragraph (a) above, the data and the documents contained in the professional practice monographs and academic degree thesis shall be subject to the Employer's review and further editing.*

*The publication or disclosure of professional practice monographs and academic degree thesis to a third party, once consented by the Employer, shall be made by the Contractor in the exact form and content consented by the Employer. (RFV-076)*

9. There is no time or cost impact to the Locks Contract as a consequence of this Variation



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