



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

**Bid Receiving - PWGSC / Réception des soumissions
- TPSGC**

11 Laurier St. / 11, rue Laurier

Place du Portage, Phase III

Core 0B2 / Noyau 0B2

Gatineau, Québec K1A 0S5

Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Electrical & Electronics Products Division
11 Laurier St./11, rue Laurier
7B3, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Title - Sujet Centralized Access Control System	
Solicitation No. - N° de l'invitation 23572-160528/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client 23572-160528	Date 2015-11-12
GETS Reference No. - N° de référence de SEAG PW-\$\$HN-460-68079	
File No. - N° de dossier hn460.23572-160528	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-11-23	
Time Zone Fuseau horaire Eastern Standard Time EST	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Guertin, Benoit	Buyer Id - Id de l'acheteur hn460
Telephone No. - N° de téléphone (819) 420-0331 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

This amendment (3) seeks to make the following changes as well as provide question and answers from the site visit.

- 1) At Part 4, 1.1 **Mandatory Technical Criteria**
Add: • Meet criterion specified in **Annex “B”, - Mandatory Criterion**
- 2) At Part 6, 10. Priority of Documents, delete: (d) the Contractor's bid dated (...) and replace with the following:

(d) Annex B, Mandatory Criterion;
(e) the Contractor's bid dated _____ (insert date of bid) (If the bid was clarified or amended, insert at the time of contract award: “, as clarified on _____” or “, as amended on _____” and insert date(s) of clarification(s) or amendment(s))
- 3) Remove Annex “A” and replace it with attached Annex “A”
- 4) Insert Site Visit Questions and Answers as Appendix 2 to Annex “A”

All other terms and conditions remain unchanged.

ANNEX “A” - Statement of work

Building Automation System with Access Control

Natural Resources Canada (NRCan), CanmetENERGY-Ottawa (CE-O) located at 1 Haanel Drive, Ottawa, Ontario, requires the supply, delivery, installation, configuration and training of a new building automation system. This Enterprise Level Automation System or ELAS will be required to control access to 24 doors in pilot facilities and labs in 2 buildings (buildings 3 and 4) with the ability to expand to more doors within other pilot facilities at CE-O. It will also need to provide the ability to interface with other control systems such as gas monitoring systems and their alarm based event information. All devices and computers must be connected using hardwire. No wireless devices will be accepted.

The ELAS must conform to UL294 (Access Control) standards and additional consideration will be given to those following quality standards such as ISO 9001.

The Building Integration Software (BIS) must be installed on an NRCan provided workstation loaded with an NRCan profile and located in building 3, room 127D. (Ref. DWG #2)

The BIS must be compatible with our software and hardware as indicated below:

- Desktop Computer with Windows 7 Enterprise Operating System
- Intel Core i5 processor
- 8GB Ram
- Graphics Card capable of 1280x1024 pixel resolution and 65K color
- 12 function-key keyboard
- Mouse point device
- 500GB Hard Drive
- DVD Rom Drive
- TCP/IP Adapter

1 - Building Integration Software (Building 3)

The BIS must use client-server architecture, utilizing Microsoft Windows 7 Enterprise operating system, an SQL database, and standard TCP/IP networks and protocols. SQL and Client Access Licenses (CALs) will **NOT** be provided by NRCan. Windows Server and CALs must not be required.

The BIS must be capable of providing an open solution for integration and support service oriented architecture (SoA). This system must support communication protocols such as TCP/IP, Modbus TCP, BACnet and OPC to aid in the integration and communication with the following systems:

- Ambient gas monitoring system
- Access control system
- Video surveillance system
- Pilot facility control systems

The BIS must have a graphical display builder for the creation of custom graphics and interactive displays. The interface must make use of standard Microsoft Windows tool bar icons and standard windowing conventions. It must provide the ability to create site specific graphic displays with both static and dynamic objects. It must allow importing graphics from third party packages including GIF, JPEG, WMF, BMP and TGA. It must be possible to animate display elements using JavaScript or VBScript and the script editor must be provided.

A local operator interface must be provided to allow for the assignment of card holder data as well as configuration of alarm thresholds and event management triggers. The operator interface must display collected information from the gas detection system such as instantaneous sensor values, sensor life, sensor status, system alarms, etc. It must also display collected information from the card access system such as door status and alarms. These values must be displayed on an interactive building floor plan. The colour of the symbols used should change based upon the status of each device (normal – green, trouble/fault – yellow, alarm – red). User interface layout will be determined during consultations between NRCan and the winning bidder.

The BIS must have the ability to distribute functions such as monitoring, control, and graphical user interfaces across our network to allow flexibility. A remote operator interface must be available through standard internet browser technology. The browser interface must provide login and security authentication and the system must allow for multiple simultaneous remote user logins. Through the browser, the operator must be able to perform all functions on the same standard and custom graphics as used in the local operator interface such as acknowledge alarms, view graphics, execute reports, modify configuration settings, etc.

The system must also provide an operator interface designed for use on a smartphone device with 3G, 4G, LTE network access such as, Blackberry, iPhone, Android, Windows Mobile. The interface should provide an alarm dashboard indicating recent alarms with the ability to acknowledge.

The BIS must utilize a real-time database to store data from various sources (analogue inputs, digital inputs, data from external systems via the network, etc.). This database must be configurable by NRCAN staff without the need for any programming. Modifications to live database must be possible without interruption of data collection and reporting. The database must provide historian capabilities for digital, analog and event based information. Information contained in the database must be accessible to all parts of the system such as custom displays, trends, reports, and any NRCAN custom applications. Database backups must be possible using standard Microsoft Windows operating system utilities while the system is live and these backups must also include the historical data.

The BIS must provide flexible trending options with the ability to trend real-time, historical or archived data in a variety of formats. NRCAN must be able to combine trend types for comparison (e.g. archived data vs real-time data). Event information with time and location filtering options should also be available in the same display for comparison purposes.

The BIS must have the ability to send alarm information based on configured points to mobile phone as text messages (SMS) and email. The system must allow for the configuration of selectable times and days of operation, alternate device for use in escalation when alarms have not been acknowledged over a specified time period, and alarm priority thresholds for prioritizing actions based on number and types of alarms.

The BIS must have the ability to interface to a digital video management system that allows viewing and recording of video from pilot facility network connected cameras through the BIS user interface. The system must have an easily scalable architecture based on network connected cameras and must be compatible with our current cameras, WVSP306P Panasonic Hi Def, WVSW395P Panasonic IP66 PTZ IP Dome Camera.

The system must be delivered with a supply of 50 access cards.

A minimum of one day of training must be provided, in English, for up to 10 people. The training must provide a detailed understanding of the system and its operation, as well as the process required to generate/configure access permissions for employees. It must also provide an understanding of the reporting functions, how to configure reports and how to interpret them. Trainees must understand how to integrate this system with other third-party software/hardware systems such as those used with gas detection equipment.

2 - Buildings Access Control

This is a pilot project involving two buildings at CanmetENERGY-Ottawa, Buildings 3 and 4. The controlled access on specific doors in the pilot facilities and labs is required to ensure workplace health and safety compliance.

2.1 Access Control in Building 3

Ref. DWG #2, 3 and 4

Only the doors listed in the table below require access control. There are no hazardous locations in building 3.

Supply, installation, programming, integration and commissioning of access control hardware and software. This must include but is not limited to an access control panel, power supply, CSA enclosures complete with standardized locks, HID iCLASS card readers, door contacts, request to exit devices and electric strikes all as required. NRCan will provide power to each access controller.

Access controller(s) must have tamper protection to detect unauthorized access and watchdog protection for quick malfunction recovery. They must be powered by a low voltage source (12-30 VDC) and have on-board battery backup. Battery back-up must last at least 60 minutes in the event of a power failure. Access controller(s) must have an autonomous clock with time zone and daylight saving time support. They must be able to be configured, updated (firmware updates, etc.), and maintained using a standard web browser. System administrators should be able to log in directly to the controller(s) from a remote location to perform these tasks.

One network drop will be provided by NRCan for the ELAS computer only and one per any other building with access control system. Communication between the ELAS, access control panels, access control and security devices is required and must be provided by using a complete colour coded conduit network installed by a licensed and unionized electrician.

EMT conduit can be used with flex cable termination point if required (no long runs of flex cable will be accepted).

Note: A sounding device must be installed for all doors. In the event that a door is propped open an alarm should occur at the ELAS and a local sounder be activated until the condition is resolved.

Door hardware such as locks, door closures, panic bars, etc. are not currently uniform but they will be made uniform by NRCan before the work starts.

If an electrical subcontractor is required, the winning bidder must provide references showing that they have worked on similar type projects with that subcontractor.

Building	Floor	Door	DC	CR	ES	RTE	SO
3	1	120	X	X	X	X	X
3	1	125	X	X	X	X	X
3	1	126	X	X	X	X	X
3	2	221	X	X	X	X	X
3	2	223	X	X	X	X	X
3	2	225	X	X	X	X	X
3	2	229	X	X	X	X	X
3	2	231	X	X	X	X	X
3	2	233	X	X	X	X	X
3	3	303	X	X	X	X	X
3	3	304	X	X	X	X	X
3	3	306	X	X	X	X	X
3	3	312	X	X	X	X	X
3	3	313	X	X	X	X	X
3	3	317	X	X	X	X	X

DC – Door Contact

ES – Electric Strike

CR – Card Reader

RTE – Request to Exit Motion Detector

SO – Local Door Sounder (Piezoelectric or similar)

2.2 Access Control in Building 4

Ref. DWG #1

Access control requirements are listed in the table below.

Supply, installation, programming, integration and commissioning of access control hardware and software. This must include but not limited to an access control panel, power supply, CSA enclosures complete with standardized locks, HID iCLASS card readers, door contacts, request to exit devices and electric strikes all as required. NRCan will provide power to each access controller. Installation details such as controller mounting locations and conduit installation locations will be determined during consultations between NRCan and the winning bidder.

Access controller(s) must have tamper protection to detect unauthorized access and watchdog protection for quick malfunction recovery. They must be powered by a low voltage source (12-30 VDC) and have on-board battery backup. Battery back-up must last at least 60 minutes in the event of a power failure. Access controller(s) must have an autonomous clock with time zone and daylight saving time support. They must be able to be configured, updated (firmware updates, etc.), and maintained using a standard web browser. System administrators should be able to log in directly to the controller(s) from a remote location to perform these tasks.

One network drop will be provided by NRCan for the ELAS computer only and one per any other building with access control system. Communication between the ELAS, access control panels, access control and security devices is required and must be provided by using a complete colour coded conduit network installed by a licensed and unionized electrician.

EMT conduit can be used in the non-hazardous areas. Hazardous areas as indicated in the table below will require approved devices and conduit construction. Card readers for these doors can be installed outside the hazardous area such as the hallway.

Note: A sounding device must be installed for all doors. In the event that a door is propped open an alarm should occur at the ELAS and a sounder be activated until the condition is resolved.

Access control for garage doors will operate by a single read to open/close and double read (authorized personnel only) to stay open for a predetermined period of time. Open doors must close automatically after the normal working hours (programmable).

EMT conduit can be used in the non-hazardous areas. Hazardous areas as indicated in the table below will require approved devices with wiring to be run in rigid conduit or HL rated Teck cable to meet the building classification requirements. Installations of conduit in the bay areas must be run under the mezzanine level and not interfere in the open areas where access is from ground floor to the building ceiling.

This building contains a blow-out wall. Nothing can be mounted directly to the blow-out panels, but mounting to building structural frame is acceptable.

Entrance door access card readers will be installed outside, near their respective doors. Card readers for the garage doors will be installed inside and can be installed outside the hazardous areas such as the hallway.

Door hardware such as locks, door closures, panic bars, etc. are not currently uniform but they will be made uniform by NRCan before the work starts.

If an electrical subcontractor is required, the winning bidder must provide references showing that they have worked on similar type projects with that subcontractor.

Building	Floor	Door	Type	Hazard Class	DC	CR	ES	RTE	OH	SO
4	1	1	Overhead	Class 1 Div. 2		X			X	X
4	1	2	Exit	Class 1 Div. 2	X					X
4	1	3	Entrance	N/A	X	X	X	X		X
4	1	4	Overhead	Class 1 Div. 2		X			X	X
4	1	5	Overhead	Class 1 Div. 2		X			X	X
4	1	6	Exit	Class 1 Div. 2	X					X
4	1	7	Overhead	Class 1 Div. 2		X			X	X
4	1	8	Exit	Class 1 Div. 2	X					X
4	1	9	Double Entrance	N/A	2	X	X	X		X
4	1	10	Exit	N/A	X					X
4	1	11	Entrance	N/A	X	X	X	X		X
4	1	12	Double Exit	N/A	2					X
4	1	13	Overhead	N/A		X			X	X
4	1	14	Double Exit	N/A	2					X
4	1	15	Exit	N/A	X					X
4	1	16	Exit	Class 1 Div. 2	X					X

DC – Door Contact ES – Electric Strike OH – Overhead Door Contact

CR – Card Reader RTE – Request to Exit Motion Detector

SO – Local Door Sounder (Piezoelectric or similar)

ANNEX “B” – Mandatory Criterion

ONLY submissions meeting ALL the following requirements will be considered.

Software Requirements

No.	Requirement	Compliant
1	Building Integration software (BIS) must be compatible with Windows 7 Enterprise Desktop Computer containing, Intel Core i5 processor, 8GB Ram, Graphics Card capable of 1280x1024 pixel resolution and 65K colour, 12 function-key keyboard, Mouse pointing device, 50GB Hard Drive, DVD Rom Drive, TCP/IP Adapter.	
2	The BIS must integrate with Access Control, Gas Detection, and Video surveillance. It must be capable of providing an open solution for integration and support service oriented architecture (SoA).	
3	The BIS must support communication protocols such as TCP/IP, Modbus TCP, BACnet and OPC to aid in the integration and communication with devices such as Industrial Gas Detection equipment used to meet Health & Safety regulations.	
4	The BIS must use client server architecture, utilizing Microsoft Windows 7 Enterprise operating system, SQL database, standard TCP/IP networks and protocols.	
5	The BIS must have a graphical display builder for the creation of custom graphics and interactive displays. The interface must make use of standard Microsoft Windows tool bar icons and standard windowing conventions. It must provide the ability to create site specific graphic displays with both static and dynamic objects.	
6	The BIS must allow importing graphics from third party packages including GIF, JPEG, WMF, BMP and TGA. It must be possible to animate display elements using JavaScript or VBScript and the script editor must be provided.	
7	The BIS must have the ability to distribute functions such as monitoring, control and graphical user interfaces across our network to allow flexibility. An operator interface must be available through standard internet browser technology. The browser interface must provide login and security authentication. Through the browser, the operator must be able to perform all functions on the same standard and custom graphics as used in the local operator interface such as acknowledge alarms, view graphics, execute reports, modify configuration settings, etc.	
8	The BIS must also provide an operator interface designed for use on a smartphone device with 3G, 4G, LTE network access such as, blackberry, iPhone, Android, Windows Mobile. The interface must provide an alarm dashboard indicating recent alarms with the ability to acknowledge.	
9	The BIS must display collected information from the gas detection system such as instantaneous sensor values, sensor life, sensor status, system alarms, etc. It must also display collected information from the card access system such as door status and alarms. These values must be displayed on an interactive building floor plan. The colour of the symbols used should change based upon the status of each device	

	(normal – green, trouble/fault – yellow, alarm – red). The BIS must allow for the assignment of card holder data as well as configuration of alarm thresholds and event management triggers.	
10	The BIS must utilize a real-time database to store data from various sources (analogue inputs, digital inputs, data from external systems via the network, etc.). This database must be configurable by NRCan staff without the need for any programming.	
11	Modifications to the BIS live database must be possible without interruption of data collection and reporting.	
12	The BIS database must provide historian capabilities for digital, analog and event based information from various systems as indicated in item 2 of this document. Information contained in the database must be accessible to all parts of the system such as custom displays, trends, reports and any NRCan custom applications.	
13	Database backups must be possible using standard Microsoft Windows operating system utilities with the system live and these backups must also include the historical data.	
14	The BIS must provide flexible trending options with the ability to trend real-time, historical or archived data in a variety of formats. NRCan must be able to combine trend types for comparison e.g. archived data vs real-time data. Event information with time and location filtering options should also be available in the same display for comparison purposes.	
15	The BIS must have the ability to send alarm information based on configured points to mobile phone as text messages (SMS) and email. The system must allow for the configuration of selectable times and days of operation, alternate device for use in escalation when alarms have not been acknowledged over a specified time period, and alarm priority thresholds for prioritizing actions based on number and types of alarms.	
16	The BIS must have the ability to interface to a digital video management system that allows viewing and recording of video from pilot facility network connected cameras through the BIS user interface. The system must have an easily scalable architecture based on network connected cameras and must be compatible with our current cameras, WVSP306P Panasonic Hi Def, WWSW395P Panasonic IP66 PTZ IP Dome Camera.	

Hardware

No.	Requirement	Compliant
1	All card readers must be HID iCLASS compliant.	
2	All electrical end use devices located in hazardous areas as indicated in the SOW must have a Class 1 Div. 2 rating.	
3	In Building 3, EMT can be used instead of rigid conduit with flex cable termination point if required (no long runs of flex cable will be accepted). In Building 4, EMT can be used in the non-hazardous areas. Rigid and/or Teck HL must be used in hazardous areas.	
4	All devices and computers must be connected using hardwire. No wireless devices will be accepted.	
5	Access controller(s) must have tamper protection to detect unauthorized access and watchdog protection for quick malfunction recovery.	
6	Access controller(s) must be powered by a low voltage source (12-30 VDC) and have on-board battery backup. Battery back-up must last at least 60 minutes in the event of a power failure.	
7	Access controller(s) must have an autonomous clock with time zone and daylight saving time support.	
8	Access controller(s) must be able to be configured, updated (firmware updates, etc.), and maintained using a standard web browser. System administrators should be able to log in directly to the controllers from a remote location to perform these tasks.	

Appendix 2

CANMET Site Visit OCT. 16th, 2015 Q&A

1. Q: How will the gas detection system connect to the access control command centre software system?
A: The gas detection system will connect to the access card command centre software system using Modbus TCP.
2. Q: How will the gas sensor trigger a door to open?
A: The gas sensor will communicate with the gas detector controller via Modbus. The gas detector controller has onboard relays which will communication to the inputs on the access control panel.
3. Q: How would you like to display the gas sensor information on the command center computer?
A: We would like to display the values for instantaneous, sensor status, sensor life, gas type etc. in a list form on the computer. This information would also need to be available while hovering over the sensor graphic on the floor plan overview screen. Graphic customizations will be finalized at a later date.
4. Q: What is your current model of CCTV cameras you'd like to interface with?
A: WVSP306P Panasonic Hi Def, WVS395P Panasonic IP66 PTZ IP Dome Camera
5. Q: Can you clarify the configuration of the controller via the web browser (item #8 on the hardware requirement list)?
A: The access controller must be able to be configured, updated (firmware updates, etc.), and maintained using a standard web browser. System administrators should be able to log in directly to the controllers from a remote location to perform these tasks.
6. Can the gas sensor data being sent to the Building Integration Software be transmitted via 4-20 mA signals?
A: No. There is too much data being pulled from each sensor to make this type of communication feasible. Communication between the Gas Monitoring System and the Building Integration Software must be via Modbus TCP.
7. Can you provide a list of systems to be connected to the Building Integration Software?
A: The following systems will be connected to the Building Integration Software:
 - Ambient Gas Monitoring System
 - Access Control System
 - Surveillance System

8. Q: What type of access cards are currently being used on site?
A: NRCan security is moving towards HID iClass technology so this is the technology that we are going with.
9. Q: Does the contractor provide access cards?
A: Yes. The system must be supplied with at least 50 access cards.
10. Q: Are mustering capabilities a requirement for the system?
A: Mustering capabilities are not required for this system. It would be a nice “bonus” for the future if the system includes mustering capabilities but this is not a current requirement.
11. Q: Can rigid conduit be replaced with EMT?
A: In Building 3, EMT can be used instead of rigid conduit with flex cable termination point if required (no long runs of flex cable will be accepted). In Building 4, EMT can be used in the non-hazardous areas. Rigid and/or Teck HL must be used in hazardous areas.
12. Q: Are electrical strikes required or can magnetic locks be used?
A: Electrical strikes are required.
13. Q: Are the locks uniform throughout the buildings?
A: The locks are not currently uniform but they will be made uniform before the work starts.
14. Q: Is the contractor responsible for the door closing mechanisms?
A: No.
15. Q: Does the contractor need access to the electrical common room?
A: No. Power will be fed to each floor.
16. Q: Do all the doors on the Building 3 floorplans require access control?
A: No. Only doors which are numbered on the floorplan need access control.
17. Q: Does Building 3 have any hazardous areas?
A: No. Only the pilot facilities in Building 4 are classified as hazardous areas.
18. Q: Is there a specific layout required for the access control panel(s)?
A: No. Since each system is different, we are open to various configurations depending on the requirements of each system. We would, however, require consultation before the layout is finalized.

19. Q: Who will provide the network drops?

A: NRCan will provide a network drop for the Building Integration software computer in Room 127D (Command Centre) building 3. We will also provide one network drop in building 3 and 4 for the access control system panels.

20. Q: How will the access control system panels communicate with each other?

A: Panels should communicate with each other via RS485 bus.

21. Q: Who will provide electrical power to each panel?

A: NRCan will provide power connection to each access control panel.

22. Q: Are all the doors in building 3 manual?

A: Yes

23. Q: How should the garage doors in building 4 operate?

A: Garage doors will operate by a single read to open/close and double read (building chief officer) to stay open for a predetermined period of time. Open doors must close automatically after the normal working hours (programmable).

24. Q: Should the access card readers be installed inside or outside of the building 4?

A: Entrance door access card readers will be installed outside and garage doors access card readers to be installed inside (Non-Hazard area).

25. Q: Who is responsible for standardizing the door hardware (Panic bar, lock, door closure etc.)?

A: NRCan.

26. Q: Do you have a central place to install access control panel(s) in building 4?

A: Panels must be installed on the North wall (block wall) of the hallway.

27. Q: In building 4, can the existing ceiling mounted Unistrut be used to mount conduit or cabling?

A: Yes.

28. Q: Does the red sign installed over the entrance door at building 4 need to be integrated?

A: No.

29. Q: Do you require conduit to be colour coded?

A: Yes

30. Q: Can we mount any hardware to blow out wall?

A: Nothing can be mounted directly to the blow out panels, but mounting to building structural frame is acceptable.

31. Q: How high must the conduit be installed in the bay area?

A: It must be installed at the mezzanine level and not interfere in the open bay area where access is from ground floor to the building ceiling.

32. Q: Is the entrance door on the West side of the building in a hazardous area?

A: No.

33. Q: Will the fork lift operator have special access to the exterior access for garage doors (door opens automatically when fork lift is within certain distance)?

A: No, access readers for garage doors will be installed inside only.

34. Q: What are the working hours for the contractor work installation?

A: 7AM - 6PM

35. Q: Can we use hydraulic lift for installation operated by propane?

A: No propane, Electric power only.

36. Q: Do you want to integrate the pilot facility cameras with NRCan security network?

A: No