Supplemental/ Bid Bulletin No. 4
15 July 2019

PUBLIC BIDDING No. 19 – 142 – 4
Supply, Delivery, Installation, Testing, and Commissioning of Nuclear Medical Equipment and Room Shielding for the Philippine Orthopedic Center

Issued pursuant to Sec. 22.5 of the IRR of R.A. 9184 to clarify and/or amend certain provisions in the Bidding Documents issued for this project, considering the issues raised and clarifications made by prospective bidders during the Pre-Bid Conference held on **July 4, 2019,** likewise, respond to bidders' written queries received within the prescriptive period for filing.

I. Amendments

REFERENCE	BASES FOR AMENDMENT / INCLUSION
Section III. Bid Data Sheet ITB Clause 20.3 *Page 41* *Each bidder shall submit One (1) original and ~~one (1) copy~~ **two (2) copies** of the first and second components of its bid.* *xxx*	***To amend the requirement due to typographical error.***
Section III. Bid Data Sheet ITB Clause 29.2 *Page 44* *xxx* ***10. Certification that upon receipt of the Notice to Proceed the bidder will apply for licensing with the Philippine Nuclear Research Institute prior to the installation and commissioning of the Nuclear Medical Equipment.*** *xxx*	***To include said Certificate as part of the required documents to be submitted during post qualification.***
Section V. Special Conditions of the Contract GCC Clause 16.1 Page 67 *x x x* 2. The Gamma Camera SPECT/CT, DEXA Bone Densitometer, Uptake Machine and all its	

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REFERENCE	BASES FOR AMENDMENT / INCLUSION
components, associated accessories and peripherals must be functioning and must have no physical defects and damages. 3. ~~It must also pass the~~ The Gamma Camera and DEXA Bone Densitometer must pass the Performance Evaluation to be conducted ~~to the CT Scanner by the Center for Device Regulation, Radiation Health and Research~~ by the Food and Drug Administration or its authorized representative. All costs should be shouldered by the supplier.	***To amend the requirements for better understanding.***
Section VII. Technical Specifications *xxx* aa.1) Block Phantoms for Spine and whole body *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* a. Detectors shall be shielded for high energy range of ~~85 to 100~~ 250 keV or higher xxx	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* **1. Gantry** *xxx* b. At least one of the detectors shall permit caudal and cephalic til of ~~≥~~greater than 15 degrees or equivalent allowing detector positioning close to imaging area and detector motion shall allow patient imaging in sitting and standing positions. *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* h. Continuous spiral CT range should be at least ~~159~~ 150cm *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***

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REFERENCE	BASES FOR AMENDMENT / INCLUSION
Section VII. Technical Specifications *xxx* i. Tube Anode heat storage capacity: ~~3.5~~ 2.0 MHU *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* j. Tube Current up to ~~240~~ 200 mA or higher *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* m. Scan times for full 360 degree scan of 0.98s or faster *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* 4. Patient Bed b. Minimum Patient bed height: 55cm *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* **6. ACQUISITION SYSTEM REQUIREMENTS** e. Energy window width up to ~~60 x 40 cm~~ 160keV up to 600 keV *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***
Section VII. Technical Specifications *xxx* 13. COLLIMATORS *xxx* b. Collimator changing shall be possible without moving the patient table away or partial movement of table *xxx*	***Refer to the Technical Specifications attached as Attachment "A".***

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REFERENCE	BASES FOR AMENDMENT / INCLUSION
Section VIII. Bidding Forms Annex C – Statement of Single Largest Completed Contract Form *Page 101* STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID This is to certify that _____(company)_____ has the following completed contracts for the period CY ~~2009-2019~~ 2014-2019. Date of the Contract | Contracting Party | Name of Contract | Kind of Goods Sold | Amount of Contract | Date of Delivery/ End-user's Acceptance | Date of Official Receipt | Bidder is A) Manufacturer B) Supplier C) Distributor _____ Name and Signature of Authorized Representative _____ Date *xxx*	***To amend the requirement due to typographical error. See revised form attached as Attachment "B".***
Section VIII. Bidding Forms Annex I - Drawing	***To amend the requirements for better understanding. See revised form attached as Attachment "C".***

II. Clarifications

ITEM NO.	*ISSUE/ REQUEST*	*CLARIFICATION/ RESOLUTION*
	DURING PREBID CONFERENCE[1]	
1	**Section III. Bid Data Sheet** ITB Clause 20.3 *Page 41* *Each bidder shall submit One (1) original and ~~one (1) copy~~* ***two (2) copies*** *of the first and second components of its bid.* *xxx*	***Please refer to the discussion in I. Amendment.***
2	**Section VIII. Bidding Forms** Annex I - Drawing	***Please refer to the discussion in I. Amendment.***

[1] *Held on 4 July 2019*

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	HealthSolutions Enterprises, Inc.[2]	
4	Page 89 AA. ACCESSORIES aa.1) Phantoms for Spine and whole body *Request to change Spine and whole body phantom to BLOCK phantom, because block phantom necessary and mandatory for daily quality assurance of the machine.*	***Please refer to the discussion in I. Amendment.***
5	Page 91 II. Training b. Two (2) weeks on-site training of one (1) Nuclear Medicine Physician *Request an off-site training for One (1) Nuclear Medicine Physician off-site*	***The original requirement will be retained.***
6	Page 91 IV. Drawing *Recommend that Installation Site will be in the New Building.*	***Please refer to the discussion in I. Amendment.***
	Global Medical Solutions.[3]	
7	**I. GAMMA DETECTOR** a. Detectors shall be shielded for high energy range of 85 to 100 keV *Detectors shall be shielded for high energy range of up to 600 keV* *The high energy in gamma camera starts from 300keV and above. The detector shielding should be more than 300keV or the best.*	***Please refer to the discussion in I. Amendment.***

[2] *Received on 8 July 2019*

[3] *Received on 8 July 2019*

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8	**1. GANTRY** b. At least one of the detectors shall permit caudal and cephalic tilt ~~of ≥15 degrees,~~[4] allowing detector positioning close to imaging area and detector motion shall allow patient imaging in sitting and standing positions. *At least one of the detectors shall permit caudal and cephalic tilt of ≥15 degrees allowing detector positioning close to imaging area and detector motion.* *The 15 degree tilt is vendor specific, detector caudal and cephalic tilt can be useful for certain studies and the patient sitting and standing positions are allowed using different detector configuration on GE scanners.*	***Please refer to the discussion in I. Amendment.***
9	**3. SPECT/CT FEATURES & CAPABILITIES** a. CT can acquire at least two (2) slices or better, interleaved reconstruction per rotation *CT can acquire **at least six (6)** slices or better, interleaved reconstruction per rotation* *The 2-slice model is older platform in the industry hence the 6-slice or above should be quoted for better scanner performance.*	***The original requirement will be retained.***
10	h. Continuous spiral CT range should be at least 159 cm *Continuous spiral CT range should be **at least 150 cm*** *GE SPECT/CT scanner can do 150cm for stand-alone CT application and 156cm for SPECT/Ct application*	***Please refer to the discussion in I. Amendment.***
11	i. Tube Anode heat storage capacity: 3.5 MHU ***Tube anode heat storage capacity: 2.0 MHU and above*** *The recent CT or SPECT/CT or PET/CT scanners are equipped with CT dose reduction technique using iterative reconstruction technique; hence the CT dose to the patient has reduced up to 50% compared to the FBP reconstruction technique. The 2MHU tube will help to deliver the relevant tube current for routine CT applications including CT angiography and all SPECT/ CT applications.*	***Please refer to the discussion in I. Amendment.***

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12	j. Tube Current up to 240 mA or higher Tube Current up to **200ma or higher** *The recent CT or SPECT/ CT or PET/CT scanners are equipped with CT dose reduction technique using iterative reconstruction technique; hence the CT dose to the patient has reduced uo to 50% compared to the FBP reconstruction technique. The 2MHU tube will help deliver the relevant tube current for routine CT applications including CT angiography and all SPECT/CT applications.*	***Please refer to the discussion in I. Amendment.***
13	m. Scan times for full 360 degree scan of 0.8s or faster *The scan time for full rotation with 0.98 with GE scanners provides the best performance for routine CT diagnostics procedures as well as SPECT/CT procedures.*	***Please refer to the discussion in I. Amendment.***
14	4. Patient Bed b. Patient bed height: 55cm Patient bed height: **59cm** *GE scanner table is capale of lowering to 59cm for easy patient transfer from wheelchair or stretcher and which makes more convenient for the patient to use without the use of footrest.*	***Please refer to the discussion in I. Amendment.***
15	**6. ACQUISITION SYSTEM REQUIREMENTS** e. Energy window width up to 60 x 40 cm *Energy window width* ***up to 600 keV*** *The energy window or range should be in the range of keV and the specification needs to be changed to express the right values.*	***Please refer to the discussion in I. Amendment.***

16	***13. COLLIMATORS*** *b. Collimator changing shall be possible without moving the patient table away* ***Collimator changing shall be possible without moving the patient table or partial movement of table for easy use*** *Partial movement of table ensures that the collimator cart is docked properly in front of the detectors for easy loading and unloading the collimators. The entire collimator exchange is the semi-automatic procedure and the turnaround time with GE scanners are much lesser in the industry.*	***Please refer to the discussion in I. Amendment.***
17	**f. General Purpose** ***Medium Energy*** *General Purpose* *The Medium energy collimators are useful for the Lu177 and Ga67/In111 applications*	***The original requirement will be retained.***

The herein amendments form an integral part of the bidding documents. Correspondingly, all other provisions in the bidding documents affected by these amendments are similarly amended or modified.

The clarifications made, explain in greater detail the purpose or intent of the requirement and do not necessarily amend that particular provision in the bidding documents.

(SGD.)
ENGR. ESTRELLITA G. FULE
Chairperson, BAC IV

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Attachment "A"

Technical Specifications

LOT NO. 1	:	**Supply, Delivery, Installation, Testing, and Commissioning of Nuclear Medical Equipment and Room Shielding for the Philippine Orthopedic Center**
QUANTITY	:	**One (1) Lot**
APPROVED BUDGET FOR THE CONTRACT	:	**₱ 52,000,000.00**

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
Conforms with the following minimum requirements:			
A. Dual Head Gamma Camera with Single-Photon Emission Computed Tomography-Computed Tomography (SPECT/CT Scan)		Brand and Model:	
Shielding –not less than 6 feet in height with at least 1.5 mm lead sheet thickness or equivalence in concrete, applicable to lead doors and walls as necessary. Shielding should be in place in the following rooms: SPECT/CT Room, Uptake Room, Bone Densitometer Room, Hot Laboratory Room, Decontamination Room, Radioisotope Storage Room, Post Admin Room, Dose Admin Room, and Radioactive Patient Toilet External partition walls will be provided by the End-User.			
I. GAMMA DETECTOR			
a. Detectors shall be shielded for high energy range of 250 keV or higher			
b. Number of Detectors: Two (2)			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
c. With true rectangular Field of view (FOV)(i.e., FOV corners not clipped for wider FOV and better appreciation of images)			
d. Field of View shall be equal or larger than 52 cm x 37 cm (20.5 in x 14.5 in) Crystal Thickness			
e. Number of PMTs /Detector > 56			
II. NEMA SPECIFICATIONS (Minimum Requirements using the appropriate NEMA Standards)			
A. Intrinsic Spatial Resolution (typical)			
a. FWHM for CFOV < 4.0 mm			
b. FWHM for UFOV < 4.0 mm			
c. FWTM for CFOV < 8.0 mm			
d. FWTM for UFOV < 8.0 mm			
B. Intrinsic Spatial Linearity			
a. Differential CFOV < 0.25 mm			
b. Differential UFOV < 0.25 mm			
c. Absolute CFOV < 0.5 mm			
d. Absolute UFOV < 0.8 mm			
C. Maximum count rate (per detector) > 300 000 cps			
D. System Sensitivity per detector			
(Tc-99m, LEHR collimator) > 160cts/min/uCi			
1. GANTRY			
a. The gantry should support variable angle configurability of the detectors including 90°, 180° SPECT, and other angles useful for SPECT.			
b. At least one of the detectors shall permit caudal and cephalic tiltgreater than or equal to 15 degress or equivalent, allowing detector positioning close to imaging area and detector motion shall allow patient imaging in sitting and			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
standing positions.			
c. The system shall support Step and Shoot and Continuous SPECT detector rotation modes.			
d. The system shall support Non-circular orbits and automatic contouring for SPECT Acquisitions with all detector configurations (90° and 180°)			
e. The gantry shall have an opening of at least 70 cm			
f. Necessary hand controls, for gantry and detector motion, shall be provided on both sides of the gantry.			
g. The gantry shall have safety features including emergency stop buttons on both sides of the gantry and patient contact sensors on each collimator			
h. The gantry shall be linked to the patient table and have the necessary sensors to recognize the patient table position at all times to prevent accidental collisions.			
i. The system shall be able to perform non-uniform attenuation correction using CT Attenuation maps acquired in the same system, for general SPECT imaging.			
2. GANTRY AND ACQUISITION STATUS			
Patient positioning monitor (PPM) at the gantry display monitor shows status of the acquisition.			
3. SPECT/CT FEATURES & CAPABILITIES			
a. CT can acquire at least two (2) slices or better, interleaved reconstruction per rotation			
b. Minimum CT Slice Thickness: < 1mm			
c. The CT scan required for attenuation correction and			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
anatomical mapping shall not add more than 30 seconds to the total SPECT/CT acquisition time.			
d. The system shall be capable of automatically matching the CT slice thickness to the SPECT slice thickness for accurate image fusion and attenuation correction			
e. CT Field of View Diameter: 70cm			
f. The system shall offer a technology that reduces the unnecessary CT dose			
g. Gantry Port Diameter: 70cm			
h. Continuous spiral CT range should be greater than or equal to 150 cm			
i. Tube Anode heat storage capacity: 2.0 MHU and above			
j. Tube Current up to 200mA or higher			
k. Selection of Tube voltage up to 130 kV			
l. Reconstructed slice width of 1 mm			
m. Scan times for full 360 degree scan of 0.98s or faster			
n. High contrast resolution at 0% MTF (+/-10%)should be 15 lp/cm or higher			
4. PATIENT BED			
a. With motorized vertical and horizontal motion activated from the hand controls and preset positions.			
b. Minimum Patient bed height: 55cm			
c. Patient bed shall have ability to position any part of body under the detectors without moving the patient. All pallet motions shall be activated from the hand controller.			
d. The patient bed shall have < 10 % attenuation for 140 keV photons.			
e. Whole body scan Length shall be			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
up to 200 cm			
f. Patient Table: Maximum patient load shall be less than or equal to 220 kgs			
g. ECG Cable port integrated into Bed or Gantry			
5. COMPUTER SYSTEM MINIMUM REQUIREMENTS			
a. Acquisition Workplace section: Customizable Display			
b. Acquisition Workplace section: Customizable Workflows			
c. Two (2) workstations (WS): 1WS for acquisition and 1WS for post-processing and reading			
d. All organ processing software (renal, lungs, bone, GIT, liver and neuro protocols)			
e. Appropriate and Authentic Licenses for operating system software.			
f. Conversion data files to DICOM format integrated to existing hospital information system and modality worklist.			
6. ACQUISITION SYSTEM REQUIREMENTS			
a. User shall have the ability to modify acquisition parameters easily and quickly.			
b. Simultaneous acquisition and processing capability on same computer			
c. Independent energy window selection			
d. Number of energy windows supported should be at least 6 windows per detector			
e. Energy window width of 160keV up to 600 keV			
f. The system shall support symmetric and asymmetric energy windows			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
g. The system shall offer manual and automatic annotation (patient, study)			
h. Start and stop acquisition control from: i. Camera hand control ii. Computer			
i. Allow the user to combine acquisition and processing of protocols in one protocol			
j. Capable of combining multiple SPECT acquisitions (e.g. Cardiac Stress & Rest acquisitions) in one protocol.			
k. ECG compatible to the system shall be provided and connected.			
l. Acquire cardiac data in-half the time (half-time imaging)			
7. STATIC ACQUISITION			
Matrix size			
a. 64 x 64			
b. 128 x 128			
c. 512 x 512			
d. 1024 x1024			
8. DYNAMIC IMAGE ACQUISITION			
Matrix size			
a. 64 x 64			
b. 128 x 128			
c. 256 x 256			
9. WHOLE BODY ACQUISITION			
Whole body scan length: 200 cm maximum length			
10.GATED IMAGE ACQUISITION			
Matrix Sizes			
a. 64 x 64			
b. 128 x 128			
c. Buffered beat			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
d. Bad beat rejection			
11.SPECT ACQUISITION			
a. SPECT with step and shoot and acquire during step acquisition - Variable zoom factors up to 3.0 or greater			
b. Variable Start angle			
c. Dual isotope SPECT capability			
12.GATED SPECT ACQUISITION			
a. Matrix Sizes			
i. 64 x 64			
ii. 128 x 128			
b. Buffered beat			
c. Accepted and rejected beats shall be saved separately in the patient file to ensure high statistical accuracy with the summed image			
d. Forward/Backward framing by a user-defined percentage			
e. End study by time per view or number of accepted beats per view			
13.COLLIMATORS			
a. Collimators change should include some level of automation.			
b. Collimator changing shall be possible without moving the patient table or partial movement of table			
c. Low Energy High Resolution			
d. High Energy Collimator			
e. Pinhole Collimator			
f. General Purpose			
14.QUALITY CONTROL			
a. Integrated / Supplied Source Holder for QC			
b. Simultaneous QC for Both Detectors			
c. Energy Independent QC			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
d. Four-quadrant bar phantom			
e. Flood Phantom for Technetium			
f. Flood Phantom for Iodine			
g. Linearity Phantom			
h. ECT phantom			
i. Thyroid Phantom			
15. INSTALLATION REQUIREMENTS			
a. One (1) Uninterruptible Power Supply (UPS) for the Workstations			
- Should be compatible with the workstation			
b. One (1) Uninterruptible Power Supply (UPS) for the Gamma Camera			
- Should be compatible with the wattage of the Gamma Camera SPECT/CT			
c. Transformer and TVSS for the CT			
- Should be compatible with the wattage of the Gamma Camera SPECT/CT and UPS			
d. Lead Glass: 2.1mm Pb, 100 x 120cm			
III. SPECIFICATION FOR UPTAKE MACHINE & HOT LABORATORY			
1. THYROID UPTAKE SYSTEM WITH WELL COUNTER - RADIOACTIVE IODINE UPTAKE AND THERAPY			
a. 15" VGA LCD Colored Screen Display or higher			
b. Detector: 3/8" shielded NaI (Tl) crystal			
c. Multichannel Analyzer: 1800 Channels; Automatic self-calibration of 2000 counts per seconds;Intrinsic EnergyResolution of (IER) 9.9%; Intrinsic Count Rate Performance of 280 CPS; Multiple Window Spatial Registration of 1.0mm; Energy Range of 40KeV-500KeV; Correction of para-injection and empty syringe. ROI - Automatic or Manual;			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
Background subtraction and mean energy calculation via curve fittings; with ; Linear Display - Automatic/Manual			
d. Nuclide Data: Over 90 Nuclides in Memory (major gamma-ray energies, keV and half-life)			
e. Advanced System Setup: Test sources, Efficiencies, User Nuclides, Bioassay Data, Thyroid Uptake protocols, Thyroid Uptake Normal Values			
f. Diagnostics and Tests: Full system self-diagnostics including all program and data memories; Comprehensive test programs include automatic Chi-Square, MDA and FWHM			
g. Printer: Color Inkjet Resolution: 1200 x 1200 dpi Power Specifications: 230 volts			
2. NECK PHANTOM FOR THYROID UPTAKE			
a. Made of clear lucite Poly (methyl methacrylate)			
b. With two (2) part insert for bottle counting and vial capsule counting			
c. Phantom Dimensions: 5"h x 5" diameter (127 x 127 cm)			
d. I.D.: 4"h x 2"diameter (10 x 5 cm)			
e. Should include bottle carrier, capsule holder and 12 polyethylene bottles			
3. DIGITAL DOSE CALIBRATOR			
Combination of the Dose Calibrator and Well Counter			
3.1.SPECIFICATIONS			
a. Display Screen: touch screen display			
b. Communications: Ethernet,serial port for Nuclear medicine management system.			
c. Automatic range selection up to			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
100 Curies of Tc 99 or 25 Curies of F-18			
d. Display in Curies or Becquerels			
e. Library of over 80 nuclides with calibration number and half-life and room for 10 additional nuclides			
f. Over 80 Nuclides with half-lives in memory			
g. 64 Channel MCA			
h. Built-in dose calibration, quality control and self-diagnostics to ensure longer life accuracy			
i. Automated QC including constancy and linearity programs			
j. USB/PC Communications			
k. Software upgrade via Ethernet interface			
l. High sensitivity, drilled NaI well crystal			
m. Energy Spectrum: 0-800 Kev			
n. Wipe test result and QA data can be stored in memory and printed at any time			
o. Measurement Range: Auto-ranging, up to 250GBq			
p. Energy Range: 20KeV			
q. Format: Direct reading in Bq or Ci – User selectable or fixed			
r. Response Time: one or two seconds for doses grrater than 200uCi, three seconds for doses greater than 20 uCi; 50-100 seconds below 20 uCi of Tc-99m with default threshold			
s. Electrometer: Accuracy: +-1% or 0.2 uCi whgichever is greater			
t. Repeatability: Within +-0.3% above 1 mCi short term in 24 hours and 1% long term in 1 year			
3.2.TESTS: DIAGNOSTICS			
a. Full test of program, system			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
memories; Daily – Auto Zero, Background Adjust, Data Check, Accuracy and Constancy, Enhanced – Linearity, Geometry, Strip QC			
3.3.NUCLEAR DATA			
a. Nuclide Keys – 10 preset keys keys; System Memory – Over 80 nuclides (cal number and half-life)			
4. RADIOIODINE FUME HOOD			
a. Dosage Cabinet with stainless steel frame on both sides and glass door in front.			
b. 0.60mW x 0.72mD x 1.2 mH			
c. with Charcoal Filter			
5. LAMINAR FLOW HOOD			
a. Working area:1200 x 600 x 600mm (w x d x h)			
b. Internal and external cabinet: stainless steel sheet			
c. Absolute filter for air outlet – HEPA-H14			
6. UNIVERSAL POWER SUPPLY			
a. Should be compatible with the Laminar Flow Hood			
b. At least 1KVA			
7. ACCESSORIES			
7.1 One(1) Survey Meter calibrated for appropriate radio nuclei			
a. Alpha, beta, gamma and x-ray detection			
b. Multiplier Ranges: x0.1; x1; x 10; 100 for external detector; 1000 for internal detector			
c. Meter Face: 0-2 mR/hr, 0-2 mR/hr, 0-6.6k cpm			
d. Reset switch: Push button to zero meter after over range exposure			
e. Detectors: Internal – Energy compensated GM, for high range gamma detection only; 2000mR/hr			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
f. Detector: Pancake type halogen quenched GM			
g. Meter Face Dimension: 6.1 x 3.6 cm			
h. Probe Holder: Unique tongue and grove probe holder for one or two handed surface mounting.			
l. Sensitivity: 2100 cpm/mR/hr for Cs-137 dose			
j. Batteries: Two each, size "D", typical life 600 hours			
7.2One (1) Contamination Meter calibrated for appropriate radio nuclei			
a. Three range surface rate meter with 2" built-in diameter pancake gauge memory detector			
b. Read-out is in counts per minute (and mR/hr).			
c. Ranges: Linear – 0-500, 0-5,000, 0-50,000cpm			
d. Switch Position: Off, Battery Test, x100, x10, x1			
e. Audio: Internally mounted speaker			
f. Detector: Halogen-quenched "Pancake GM Tube"			
g. Diameter: 2" (5cm)			
h. Window Thickness: 1.5mg/cm2			
i. Background: Typical 50cmp. Thin profile of tube (13mm) gives low background			
j. Efficiency: 100% for all betas and alphas that have energy to penetrate the thin window			
k. Voltage: 900V Nominal			
l. Gamma Sensitivity: Nominal is 3000 cpm/mr/h (based on Cs-137)			
m. Feet: Replaceable neoprene feet			
n. Calibration: Single master calibration potentiometer and individual calibration pots for each			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
scale.			
o. Power: 9 volt nominal "transistor battery" mercury or equivalent			
p. Current Drain: 3 mA typical			
q. Handle: Swivel Type polished anodized aluminum			
r. Battery Life: 100 hours in normal operation.			
7.3Co-57, Cs-137 & Ba-133 Reference Standard for Dose Calibrator			
7.4Personal Radiation Protection			
a. Three(3) Lead aprons with light weight flexible Lead vinyl with 0.5 mm lead attenuation			
b. Three (3) thyroid shields with light weight flexible Lead vinyl with 0.5 mm lead attenuation			
c. Two (2) pairs of lead glove			
c.1) Protective Gloves for x-ray			
c.2) 0.5mm lead equivalence			
d. Two (2) pairs of lead goggles			
d.1) 2" x 4.25" single sheet of fluoroscopic quality lead glass			
d.2) Glass provides 2.00 mm lead equivalency			
e. Two (2) Direct Read Dosimeter			
e.1) Range: 0-200mR			
f. One (1) Dosimeter Charger			
f.1 Capable of charging any Direct-Reading Dosimeter			
f.2 Conforms to ANSI N42.6-1980			
f.3 Controls: One-Turn Potentiometer			
f.4 Reading: Spring-Loaded Push Rod			
f.5 Operating Temperature: 0-120F (-18–49C);			
f.6 Lamp: LED			
7.5 One (1) Benchtop Clear Lead "L" Shield			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
a. Dimension: maximum of 281.94 mm w x 281.94 mm			
b. Lead Shielding: 5" thick (1.2 cm)			
c. Viewing Panel: 2mm lead lead equivalent			
d. Clear plexi glass for Beta Shielding			
7.6 One(1) Benchtop Clear Lead "L" Shield			
a. Dimensions of 281 mm high x 281 mm viewing area			
b. Lead Equivalent: 2mm			
7.7 Two (2) 3cc Tungsten Syringe Shields			
a. Barrel shield with 2 mm thick tungsten			
b. With 5.0 density lead window			
c. With reflective internal surface for easy reading of the syringe markings			
7.8 Two (2) 5cc Tungsten Syringe Shields			
a. Barrel shield with 2 mm thick tungsten			
b. With 5.0 density lead window			
c. With reflective internal surface for easy reading of the syringe markings			
7.9 One (1) Small Shielded Waste Bin			
a. 10 to 20 mm lead shielding			
b. 7 to 12 liter capacity with pedal or handle cover			
7.10 One (1) Large Shielded Waste Bin			
a. 10 to 20 mm lead shielding			
b. With 14 to 20 liter capacity with pedal or handle cover			
7.11 One (1) Niptong			
a. Specific for Nuclear Medicine Use			
7.12 One (1) Forceps			
a. Specific for Nuclear Medicine Use			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
7.13 One (1) Set Rectangular interlocking Lead Bricks			
a. Depend on the size of dose calibrator shield			
b. With V- shaped edges and common straight-edge bricks interlocking to cover the area of the dose calibrator shield			
7.14 One (1) Decontamination Kit which contains the following:			
a. One (1) 30 gallon fiber drum			
b. Two (2) pairs of coverall, disposable			
c. Two (2) pairs Shoe cover, disposable			
d. Two (2) disposable nostril type Respirators			
e. Four (4) pieces eight inches by eleven inches (8" x 11") size Filters			
f. Two (2) Pairs Gloves, reusable			
g. One (1) gallon Radiation Decontamination Wash			
h. One (1) canister Radiation Decontamination Wipes			
i. One (1) bottle of One (1) Liter Radiation Decontamination Spray Mist			
j. Ten (10) Poly bags at least 6" x 9" x 2 mil			
k. One (1) piece metal 12" Niptong			
l. One (1) piece hand Sponge			
m.One (1) piece standard Mop			
n. One (1) piece hand Scrub Brush			
o. One (1) piece 5 liter pail			
p. One (1) piece 5 meter at least 9.0 mm thickness rope			
q. One (1) set of at least 5 pieces of the following:			
q.1) radiation danger warning			
q.2) radiation contamination sign			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
q.3) Emergency sign with radiation hazard.			
7.15 Radiation Warning Signs and Labels			
a. For small room: 210mm x 85 mm (at least 10 pieces)			
b. For large room: 280 mm x 122 mm (at least 5 pieces)			
7.16 One (1) Leaded Sharps Container			
a. Compatible for Nuclear Medicine Waste			
b. With lockable hinge access			
7.17 One (1) Movable Lead Barrier with Lead Plastic Window			
a. Opaque Panel with 0.8mm Lead Casters			
b. Shielding Window: 0.5 mm lead equivalency			
c. Four hospital grade: two locking and two non-locking			
7.18 One (1) Laboratory Cart, Stainless Steel			
a. Stainless steel			
b. With four (4) wheels			
7.19 One (1) Dehumidifier			
a. Water Container Capacity: Minimum of five (5) liters			
7.20 One (1) Temperature & Humidity Monitor (For Gamma Camera room)			
a. Indoor monitor with temperature range of 0 to 50°C			
b. Humidity range of 16% to 98%			
7.21 One (1) Moly Assay Canister			
a. 7.6 mm Lead Shielding			
b. Standard size			
7.22 One (1) Elution Vial Shield			
a. Lead glass thickness: 14 mm			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
b. Shielding thickness: 6mm lead with 360 view point			
7.23 Radioaerosol Administration System for V-Q Scan enclosure is lead-shielded from top to bottom with oxygen dedicated external port and nebulizer attachments			
7.24 One (1) Urea Breath Test (14Carbon) starter kit set			
B. DEXA CENTRAL DUAL ENERGY X-RAY ABSORPTIOMETRY (DEXA) BONE DENSITOMETER			
a. **Scanning method:** Linear x-ray fan-beam with motorized table and motorized C-arm.			
b. **Detector system**: High density multi-detector array assembly.			
c. **X-ray system:** Dual-energy 100kVp/140kVp			
d. With automated internal calibration system and capable of storing and analyzing data			
e. Single energy scan switch capability			
f. Automated bone mapping features			
g. Ability to scan lumber spine (AP and Lateral), femur and forearm			
h. Supine lateral imaging			
i. Supine lateral lumbar spine densitometry for volumetric calculation of Bone Mineral Density (BMD)			
j. Capable of performing whole body scans			
k. On/Off positions shall be clearly identified or has indicator light			
l. Visible indication to identify that it is ready to do exposure			
m. Radiation symbol or indicator to denote exposure			
n. Warning Signal to indicate termination of the exposure			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
o. Electronic timer			
p. Display of kV and mA			
q. Position indicator: laser light			
r. Spine phantom for QA/ QC			
s. Standard Software			
t. Basic Skeletal Package			
t.1) AP Spine			
t.2) Femur			
t.3) Dual Femur			
t.4) Forearm			
t.5) FRAX Fracture Risk Tool			
u. Total Body BMD			
v. Pediatric Package			
v.1) Pediatric AP Spine			
v.2) Pediatric Total Body			
v.3) Pediatric Femur			
v.4) Pediatric Total Body – Birth to 20 years			
w. Orthopedic			
w.1) Orthopedic Hip			
w.2) Orthopedic Knee			
x. Other Software			
x.1) Digital Vertebral Assessment			
x.2) Advanced Hip Assessment			
x.3) Spine Geometry			
x.4) Hand, Encore			
x.5) Total Body Composition			
x.6) Advance Body Composition			
y. Connectivity: HL7, DICOM, Multi User DB (1-3)			
z. Work flow: Tele densitometry, Scan check, Report Composer			
aa. Accessories:			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
aa.1) Block Phantoms for spine and whole body			
aa.2) Complete Table pad and positioning accessories			
aa.3) Desk top computer with at least 20 inch monitor and with Pre-installed latest Operating System, 64 bit OEM, 4-physical cores, 4 GB Memory, 1 TB Hard Disc, DVD+/-RW Sata Drive, Tower Case with power supply unit 600W Max, USB keyboard and Mouse, USP 220-240V, At least 1 KVA, Productivity Software, Internet Security			
aa.4) One (1) unit Mobile computer table/cart			
aa.5) Printer: Color Inkjet Resolution: 1200 x 1200 dpi Power Specifications: 110 volts			
C. ADDITIONAL REQUIREMENTS			
I. WARRANTY			
a. Comprehensive Warranty Certificate for (1) year on parts and three (3) years on service with Service Level Agreement (SLA) after testing and acceptance registration to the Philippine Nuclear Research Institute (PNRI) and Department of Health- Food and Drug Administration – Center for Device Regulation Radiation Health and Research (DOH-FDA-CDRRHR). Reckoning of the warranty period will be upon approval of DOH-FDA-CDRRHR.			
b. The Service Level Agreement (SLA) shall cover the complete unit/system its sub-systems, components, associated accessories and peripherals supplied by third party should be considered by the bidder as its own. Warranty shall be signed by the manufacturer and must			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
provide the guarantee that failures in materials and workmanship that occur within the warranty period will be corrected. Such failures will include those attributable to abnormal aging. The maintenance and service of third party items will also be the sole responsibility of the primary vendor. Essential non-propriety spare parts should be made available. The SLA should cover the following: a. Guaranteed up-time of at least 95% b. Availability of One (1) Service Engineer assigned within Metro Manila c. Response Time: Within twenty four (24) hours from notice d. Mode of Delivery of service- with help desk that can be contacted by email, text and phone; and remote online troubleshooting.			
c. Supplier must specify post warranty comprehensive preventive maintenance costs including list and prices of major spare parts of the SPECT CT Scan and DEXA Bone Denstitometer and all accessories for the next three (3) years after the warranty period.			
II. TRAINING a. Two (2) weeks on-site training of three (3) Nuclear Medicine Technologists b. Two (2) weeks on-site training of one (1) Nuclear Medicine Physician			
III. DELIVERY PERIOD One hundred five (105) Calendar Days from receipt of Notice to Proceed including the Delivery, Installation, Testing, and Commissioning. Partial Delivery			

AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	ACTUAL OFFER	REFERENCE
allowed within the completion/ delivery period.			
IV. DRAWING Please refer to the Drawing attached as Annex "I".			

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bids.

Name of Company	Signature Over Printed Name of Authorized Representative	Date

Attachment "B"

ANNEX "C"

STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

This is to certify that _____(company)_____ has the following completed contracts for the period CY ~~2009-2019~~ 2014-2019.

Date of the Contract	Contracting Party	Name of Contract	Kind of Goods Sold	Amount of Contract	Date of Delivery/ End-user's Acceptance	Date of Official Receipt	Bidder is A) Manufacturer B) Supplier C) Distributor

_____ Name and Signature of Authorized Representative

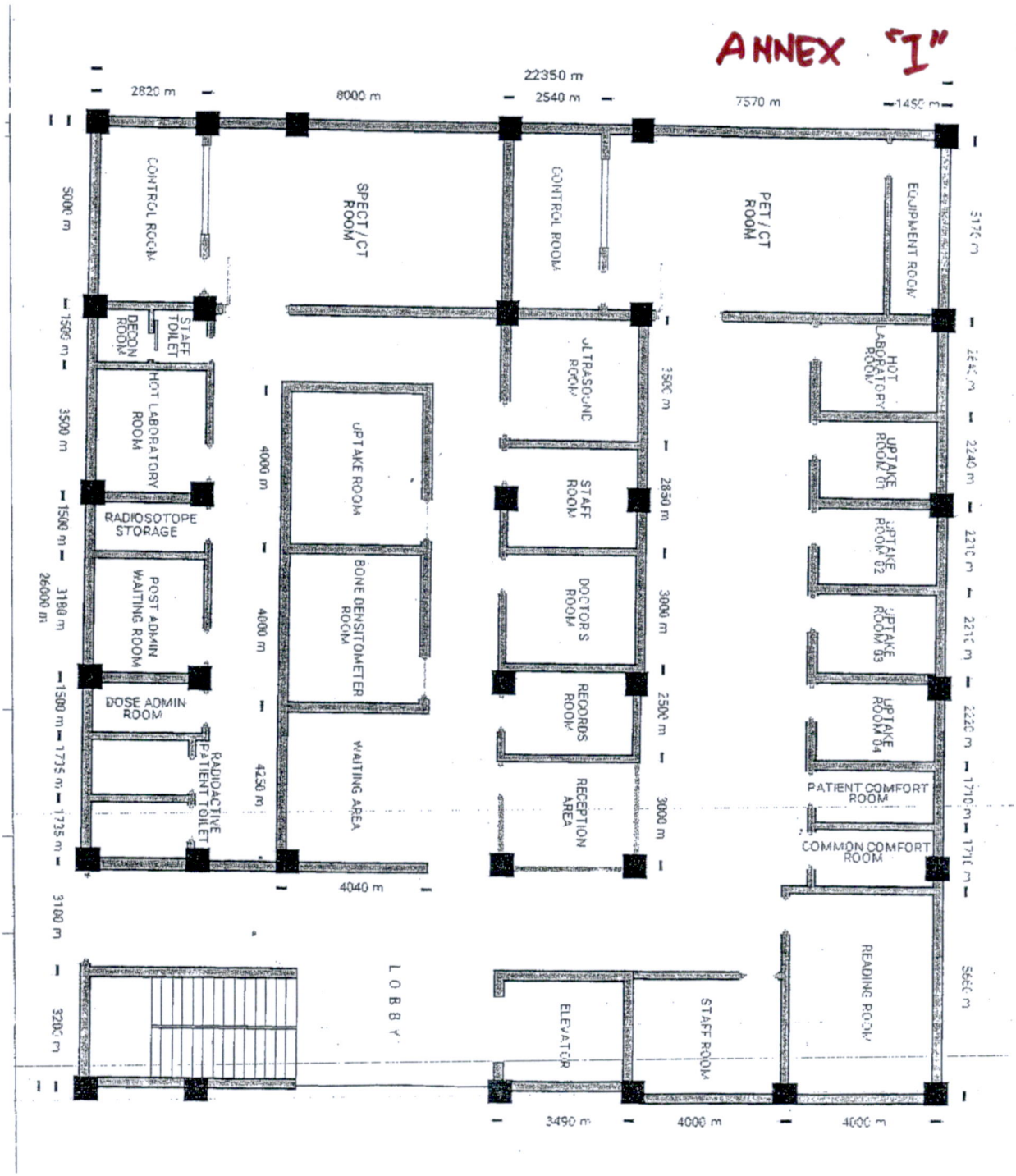
_____ Date

*Instructions:

a) Cut-off date as of:
   (i) **Up to the day before the deadline of** submission of bids.
b) **In the column under "Dates", indicate the dates of Delivery/ End-user's Acceptance and Official Receipt.**
c) **"Name of Contract". Indicate here the Nature/ Scope of the Contract for the Procuring Entity to determine the relevance of the entry with the Procurement at hand.** *Example: "Supply and Delivery of Generator Set"*

ATTACHMENT "C"

ANNEX "I"



EUGENE C. DY MD, MBA, FPCR, CESE	**IRENE BANDONG MD FPCR**
Head, Radiology Department	Radiologist, Nuclear Medicine Section