

## Radiometric Interface Profile – Multi-Point Density Array

Company Name: \_\_\_\_\_  
 Customer Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Sales Person/Rep.: \_\_\_\_\_  
 Representative Firm: \_\_\_\_\_

Customer Contact Name: \_\_\_\_\_  
 Phone and Fax: \_\_\_\_\_  
 Cell: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Tag Number: \_\_\_\_\_



### Process Material

- Description/Name: \_\_\_\_\_
- Density ranges: SG kg/m<sup>3</sup> lb/ft<sup>3</sup>  
 Phase 1: Low: \_\_\_\_\_ High: \_\_\_\_\_  
 Phase 2: Low: \_\_\_\_\_ High: \_\_\_\_\_  
*Example: Oil @ 700 kg/m<sup>3</sup>  
 Water @ 990 kg/m<sup>3</sup>*
- Process temp.: Max: \_\_\_\_\_ Operating: \_\_\_\_\_  
 °F °C
- Process pressure: Max: \_\_\_\_\_ Operating: \_\_\_\_\_  
 psig bar
- Do any of the above parameters change during operation?  
 Yes\* No  
*\*If yes, which parameter(s) and what are their ranges? \_\_\_\_\_*
- Process buildup on vessel wall: Yes\* No  
*\*If yes, how much: \_\_\_\_\_ in mm*

### Drywell

- Drywell: Customer supplied VEGA supplied  
 Pipe size \_\_\_\_\_ Schedule \_\_\_\_\_
  - Drywell Material Requirements: Stainless Steel Other \_\_\_\_\_
  - Piping standard: \_\_\_\_\_
  - Includes: Radiograph welds Hydrostatic test  
 Liquid penetrant welds Other \_\_\_\_\_
  - Vessel design pressure: \_\_\_\_\_ psi bar
  - Vessel design temperature: \_\_\_\_\_ °F °C
- Vessel nozzle for mounting (*Provide vessel drawing*)  
 Nozzle(s) available Identify available nozzle(s) \_\_\_\_\_  
 New nozzle added if required: Yes No

### Vessel (Please provide vessel drawing)

- New or existing vessel? New Existing  
 Shape of vessel:    
 Other: Please sketch
- Vessel liner material: \_\_\_\_\_  
*Example: Gunnite*
  - Vessel ID: \_\_\_\_\_ in mm
  - Vessel Material: \_\_\_\_\_  
 Wall thickness in measurement area: \_\_\_\_\_
  - Vessel insulation: Yes No  
 Material thickness: \_\_\_\_\_  
 Material and density: \_\_\_\_\_
  - Vessel jacket: Yes\* No  
*\*If yes, describe: \_\_\_\_\_*
  - Vessel internal obstructions: Yes\* No  
*\*If yes, describe: \_\_\_\_\_*
- Height of process levels (from vessel bottom): in mm  
 HIL: \_\_\_\_\_  
 NIL: \_\_\_\_\_  
 LIL: \_\_\_\_\_
- Measurement span from lowest measurement point to highest measurement point:  
*See diagram point "A"* \_\_\_\_\_ in mm
- Lowest measurement point elevation (from vessel bottom):  
*See diagram point "B"* \_\_\_\_\_ in mm
- Number of desired density measurements within span:  
*See diagram point "C"* \_\_\_\_\_
- Vessel height clearance restriction: Yes\* No  
*See diagram point "D"*  
*\*If yes, height: \_\_\_\_\_ in mm*

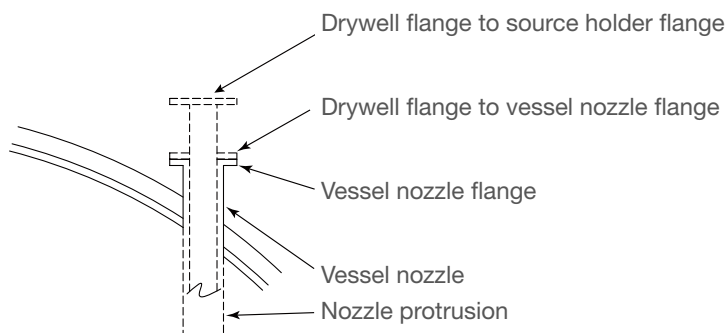
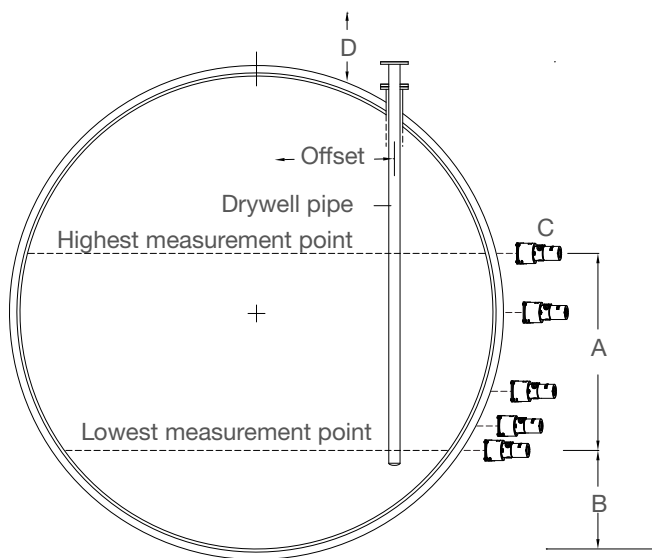
## Electronics

15. Area classification: \_\_\_\_\_ (Class/Zone/Division) General Purpose
16. Ambient temperature range: Min: \_\_\_\_\_ Max: \_\_\_\_\_ °F °C Indoors Outdoors
17. Input power: 110 V AC 220 V AC 24V DC
18. Display: Remote User Interface Display Integral None

## Radiation Specification

19. Will the detector be exposed to external X-ray radiation during operation? Yes No
20. Does the customer have a license to possess/use radioactive material? Yes No
21. Does the customer facility have a plant standard radiation specification (5mR@12 in Standard)? Yes No  
 \*If yes: \_\_\_\_\_ mR μSV @ in mm
22. Are there potential external obstructions in the detector mounting area? Yes\* No  
 \*If yes, describe: \_\_\_\_\_
23. Rank the following by importance (1-4 Highest to Lowest):  
 Best Density Resolution \_\_\_\_\_ Fast Response Time \_\_\_\_\_ Low Radiation \_\_\_\_\_ Low Price \_\_\_\_\_

## Diagrams



- Nozzle flange size: \_\_\_\_\_ Flange rating: \_\_\_\_\_
- External projection: \_\_\_\_\_ Nozzle ID: \_\_\_\_\_
- Nozzle protrusion: Yes\* No  
 \*If yes, depth: \_\_\_\_\_
- Nozzle offset from center line: \_\_\_\_\_ in mm

Please use this diagram to answer questions 11-14 on page 1.

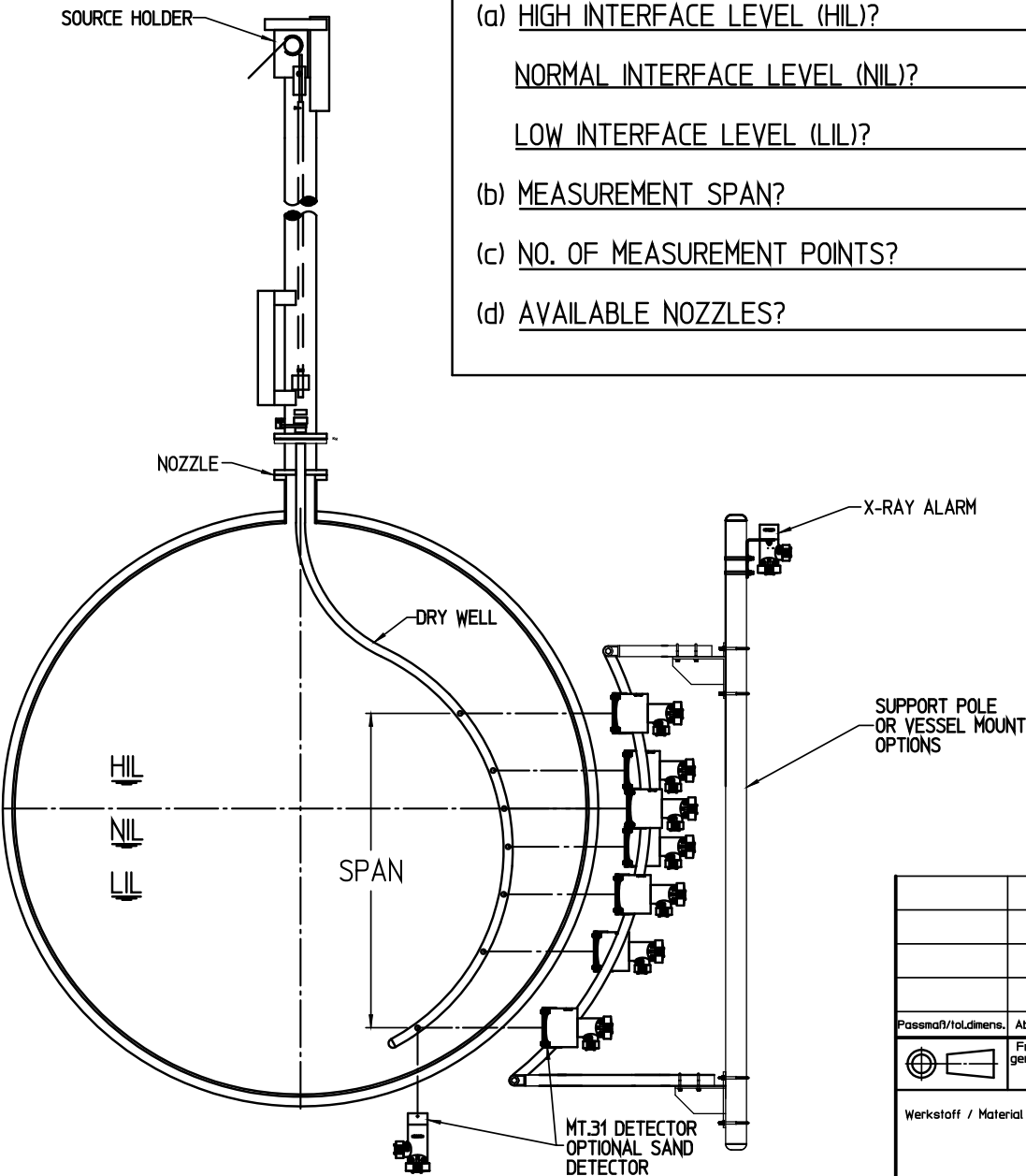
- A. Measurement span  
 B. Elevation from bottom of vessel  
 C. Number of sensors  
 D. Vessel height clearance restriction

## Additional Information

Please provide a current copy of your current radioactive materials license, if available.

NOTES:

- 1) EXISTING NOZZLE USED MAY BE ON OR OFF VESSEL CENTERLINE OR NEW NOZZLE MAY BE ADDED
- 2) DRY WELL PIPE SIZE AND CURVATURE DICTATED BY NOZZLE ID. AND PROJECTION
- 3) SPACING AND NUMBER OF DETECTORS/SOURCES MAY VARY. DETECTORS/SOURCES TO BE STRATEGICALLY PLACED TO MONITOR DESIRED CONTROL POINTS/RANGE.
- 4) SOURCES MUST REMAIN SUBMERGED IN LIQUID. NOT FOR MEASURING VAPOR DENSITY
- 5) HIGH INTERFACE LEVEL (HIL), NORMAL INTERFACE LEVEL (NIL) AND LOW INTERFACE LEVEL (LIL) REFER TO THE DESIRED INTERFACE CONTROL RANGE
- 6) OPTIONAL DETECTOR AVAILABLE FOR MEASUREMENT OF SAND/SLUDGE BUILDUP IN BOTTOM OF VESSEL



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CLIENT: Enter Client Name Here	QUOTE#	Quote #
PROJECT: Enter Project Name Here	VESSEL ID:	Vessel ID
REFERENCE: Enter Reference Here		
DETECTOR TAG(S):	Enter Detector Tag(s) Here	
SOURCE TAG(S):	Enter Source Tag(s) Here	

Passmaß / tol.dimens.		Abmaß / allowance	Änderung / revision		Änd. Nr. / Datum / Date	gezeichnet / freigegeben / drawn / checked
Freimaß / toleranz / general tolerance		gezeichnet / drawn	Datum / Date	Name / Name	Benennung	Description
freigegeben / checked		03.08.2017	riedy	Generic MDA Template	Generic MDA Template	
Werkstoff / Material		Maßstab / Scale	Originalformat / size of origin	Art.Nr. / Art.No.	SK7046	Änd.-Zust. / Rev.
		B	1	Zchnngs.-Nr. / Drawing No.	SK7046	
		Blatt / Sheet	von / of	Var.Fam.:	Var.Fam.2:	
		1		Teil ähnl. / sim. part	Ersatz f./replacement f.	
				Arb.Anw. / work.instr.		

all dimensions are in in. (mm)