

**Criticality Designation:**



**Green**

Insp. Interval Change:



Insp. Comp.: PennWest	District: Seal	Field: Seal Main
Location: 09-06-082-15W5	Unit / Skid #:	Facility: 09-06-082-15W5
Jur. #:	Equip. Tag #:	Serial #: 128560.1
CRN #: W0467.2	Nat'l Bd #: 23607	Year Built: 2013
Manufacturer:	Equip. Description: Aerial Cooler	
Status: IN SERVICE	Equip. Type: Aerial Cooler	Service: Unknown
MAWP Shell: 1958.11 kPa @ 148.9 °C	Capacity:	Code Stamp: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MAWP Tube:	Height/Length:	Insulated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Shell MDMT: -45.0 °C	Radiography:	Size/Diameter:
Support:	Joint Efficiency:	PWHT: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C.A.:	Coated: No	Clad: Yes
Static Data: Confirmed <input checked="" type="checkbox"/>	Changed: <input checked="" type="checkbox"/>	Remote Access: <input type="checkbox"/>
		On Inventory List: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Location-Component	Material	Nominal Thk	Corr Allow.	DesignTMin	CalcTMin	Side

Component Comments:

**PSV Static Data:**

PSV Tag #:	Serial #:	CRN:
Model #:	Capacity:	Set Pressure:
Manufacturer:		Service Company:
Inlet Size & Type: -		Last Service Date:
Outlet Size & Type: -	Block Valve: -	-
Carseal Intact:		Code Stamp:
Side:	Out for Service during Insp.:	Location of PSV:

PSV Comments:

No PSV

External Inspection Results - VE: \_\_\_\_\_ External Inspection Performed \_\_\_\_\_

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Nameplate	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foundation and Supports	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anchor Bolts	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grounding	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation Condition	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PSV	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shell Heads & Nozzles	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal Surfaces (Paint)	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Valves	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodic Protection	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alignment	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange Connections	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure Gauge	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature Gauge	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sight Glass	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ladder / Platform	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Davit Arm	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reinforcement Pads	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manway Size	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leaks	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piping from Vessel	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

External Visual Observations:

Aerial Cooler is In-Line Boleted. Cooler and Associated Piping Looked Good.

Recommendations:

Insp. Company: PennWest \_\_\_\_\_ Facility: 09-06-082-15W5 \_\_\_\_\_ Jurisdiction: \_\_\_\_\_

Internal Inspection Results - VI: \_\_\_\_\_

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Shell	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heads	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manway	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gasket Surfaces	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refractory	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating Coils	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demister Pad	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vane Pack	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baffles	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trays	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filter	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Coating	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tubesheet	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Bundle	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Internal Visual Observations:

Recommendations:

Insp. Company: PennWest \_\_\_\_\_ Facility: 09-06-082-15W5 \_\_\_\_\_ Jurisdiction: \_\_\_\_\_

**Firetube Static Data:**

Diameter: m \_\_\_\_\_ Nom Thickness: mm \_\_\_\_\_ Bend: \_\_\_\_\_  
 Length: m \_\_\_\_\_ Firetube Description: \_\_\_\_\_

Firetube NDE Performed:    UT:     Report #: \_\_\_\_\_    ET:     Report #: \_\_\_\_\_  
    MT:     Report #: \_\_\_\_\_    RT:     Report #: \_\_\_\_\_  
    PT:     Report #: \_\_\_\_\_    Other     Report #: \_\_\_\_\_

**Firetube Inspection Results:**

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Burner	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stack	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange (Throat)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Sheet	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hot Side	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miter	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return Bend	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supports	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butt Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fillet Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Firetube Visual Observations:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Recommendations:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Insp. Company: PennWest Facility: 09-06-082-15W5 Jurisdiction:

**Vessel NDE and Final Summary**

NDE Performed: UT  Report #: ET  Report #:  
MT  Report #: RT  Report #:  
PT  Report #: Other  Report #:

Maxi-Trak Observations Summary (Summarize inspection results Max 255 Characters):

Green - 4 Years

Maxi-Trak Recommendations Summary (Summarize Recommendations Max 255 Characters):

Actions Corrected at Time of Inspection (If actions were corrected at the time of Inspection - note the corrected actions here.):

Additional Visual Observations:

Any other safety concerns or observations from associated equipment: (for example associated piping, buildings, pimps etc...):

Recommended Inspection Interval : 48 months

Insp. Company: PennWest \_\_\_\_\_

Facility: 09-06-082-15W5 \_\_\_\_\_

Jurisdiction: \_\_\_\_\_

**Thickness and Remaining Life Evaluation**

**MUST BE COMPLETED AND RESOLVED IMMEDIATELY UPON DISCOVERY OF LOW WALL THICKNESS AREAS**

**Step 1:** Was any thickness measurement location found to be less than (Nominal WT - Corrosion Allowance)?: \_\_\_\_\_

*If YES, proceed to Step 2; if NO, proceed to "Crack Evaluation" and "Criticality Designation".*

**Step 2:** Which component(s) were found below (Nominal WT - Corrosion Allowance)?

Components found below Nom - CA:

Components

Perform Steps 3 - 8 for each component with actual thickness than (Nominal WT - Corrosion Allowance).

**Step 3:** Describe Location and Extent of Corrosion:

Components	Location and Extent of Corrosion

Notes:

**Step 4:**

- For shells and nozzles, calculate minimum required thickness (T-min) as per ASME Section VIII UG-27.
- For heads, calculate minimum required thickness (T-min) as per ASME Section VIII UG-32.

Components	T-Min

Insp. Company: PennWest \_\_\_\_\_

Facility: 09-06-082-15W5 \_\_\_\_\_

Jurisdiction: \_\_\_\_\_

**Thickness and Remaining Life Evaluation (Continued)**

**Step 5:** Is any measured thickness less than calculated minimum required thickness (T-min)?: \_\_\_\_\_

*If YES, complete Step 6.*

*If NO, complete Step 7.*

**Step 6:** Is nature and extent of pitting acceptable as per API 510?: \_\_\_\_\_

**Step 7:** Calculate Remaining Life as per API 510. How? (Find last reading; use nominal thickness if nothing available). Short Term Corrosion Rates and Long Term Corrosion Rates.

Components	Remaining Life (Yrs)

**Step 8:** Contact Integrity Coordinator to discuss above results.

- Name of Contact: \_\_\_\_\_
- Date and time of conversation: \_\_\_\_\_

Summary/results of conversation: \_\_\_\_\_

**Crack Evaluation by Magnetic Particle or Alternative Inspection**

**MUST BE COMPLETED AND RESOLVED IMMEDIATELY UPON DISCOVERY OR CRACK-LIKE INDICATIONS**

Were any indications found to suggest the vessel contained cracks? \_\_\_\_\_

*If NO, proceed to "Criticality Designation"*

*If YES, Contact Integrity Coordinator to discuss results.*

- Name of Contact: \_\_\_\_\_
- Date and time of conversation: \_\_\_\_\_

Summary/results of conversation: \_\_\_\_\_

**Criticality Evaluation**

The In-Service Pressure Vessel Inspector MUST answer all the following questions

- 1. Is the vessel fit-for-service? : **Yes**
- 2. Was the measured thickness less than the calculated minimum required thickness (T-min) for any component? : **No**
- 3. Were MT indications found? : **No**
- 4. Was the remaining life less than 6 years for sour service vessels or less than 10 years for sweet service vessels? : **No**
- 5. Were NCR's or Action Items generated as a result of the inspection? : **No**
- 6. Were UT readings below (Nominal WT - Corrosion Allowance) found? : **No**

**Information on Owner User Program - Criticality Designation and Required Review**

**RED** - Vessel Inspection Results are deemed RED if one of the following occurred:

- The measured thickness was less than the calculated minimum required thickness (T-min) for any component.
- MT indications were found.
- The remaining life was calculated to be less than 6 years for sour-service vessels or less than 10 years for sweat-service vessels.

*RED inspection reports must be signed off by the Chief Inspector.*

**YELLOW** - Vessel Inspection Results are deemed YELLOW if one or more of the following occurred:

- The vessel was declared NOT fit-for-service by the 3rd Party In-Service PV Inspector
- NCR's or Action Items were generated as a result of the inspection.
- UT readings below (Nominal WT - Corrosion Allowance) were found.

*YELLOW inspection reports must be signed off by the Pressure Equipment Integrity Coordinator.*

**GREEN** - Vessel Inspection Results are deemed GREEN if all of the following are true:

- The vessel was declared fit-for-service by the 3rd Party In-Service PV Inspector
- UT readings below (Nominal WT - Corrosion Allowance) were NOT found.
- MT indications were NOT found.
- NCR's or Action Items were NOT generated as a result of the VE inspection.

*GREEN inspection reports must be signed off by the 3rd Party In-Service Pressure Vessel Inspector.*

**Criticality Designation**



**Green**



Insp. Company: PennWest Facility: 09-06-082-15W5 Jurisdiction:

Vehicle #: \_\_\_\_\_ Kms: \_\_\_\_\_  
Time In: \_\_\_\_\_ Time Out: \_\_\_\_\_ Hrs \_\_\_\_\_  
Time In: \_\_\_\_\_ Time Out: \_\_\_\_\_ Hrs \_\_\_\_\_  
Personnel: \_\_\_\_\_  
Billing Info: \_\_\_\_\_

Inspector (Name): Gerald Page Prov. Lic. #: 000412  
Inspector (Signature): \_\_\_\_\_ API: \_\_\_\_\_  
Company Coordinator (Name): \_\_\_\_\_  
Company Coordinator (Signature): \_\_\_\_\_  
(I am in full agreement with report contents)  
Chief Inspector (Name): \_\_\_\_\_  
Chief Inspector (Signature): \_\_\_\_\_  
(I am in full agreement with report contents)