

ภาคผนวก ข-43

แผนและผลการบำรุงรักษาท่อขนส่ง




INSPECTION REPORT
FOR
S&L SPECIALTY POLYMERS CO., LTD.

VISUAL EXAMINATION
FOR
LINE CHLORINE GAS


INSPECTION DATE
29-30 April 2024





PREPARED BY
IS INDUSTRIE (THAILAND) LTD.





| | | | |
|-------------|----------------------------------|------------------|------------------|
| PROJECT : | Pipeline Inspection | DATE: | 29-30 April 2024 |
| CLIENT : | S&L SPECIALTY POLYMERS CO., LTD. | LOCATION: | Rayong |
| WELDER No.: | N/A | WELDING PROCES: | N/A |
| NDE METHOD: | Visual inspection | REFERENCE CODE : | API 570 |




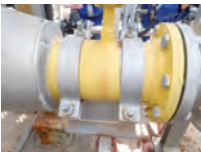
| | | |
|---|--|---------------|
|  IS INDUSTRIE Soudure THAILAND | INSPECTION REPORT | Page 1 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |
| Rev. 00 Effective date May 17, 2013 | | |
| Technical Data | | |
| Line No. : | CL-200-A5C-16001-H25 | |
| Description : | Pipe | |
| Design Pressure : | N/A Kg/cm ² G | |
| Design Temperature : | N/A °C | |
| Fluid : | CL | |
| Material : | Carbon Steel | |
| Type of inspection | | |
| 1. External Visual inspection ➢ Extent of examination 100% VT | | |
| 2. CUI inspection ➢ Extent of examination random | | |
| 3. Vibration piping inspection: N/A | | |

| Inspection Item | | Comment | | |
|--|--|---|--|--|
| Leak : VT not found leakage of piping system ➢ Process ➢ Steam tracing ➢ Existing Clamps | | <input type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input checked="" type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | | | |
| Additional comment : | | - Found leak on flange. | | |
| Misalignment : VT not found of piping Misalignment ➢ Piping misall./Restricted movement ➢ Expansion joint misalignment | | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | | | |
| Additional comment : | | No comment | | |
| Vibration : ➢ Excessive overhung weight ➢ Inadequate support. ➢ Thin, small-bore, or alloy piping ➢ Threaded connections ➢ Loose supports causing metal wear | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| Additional comment : | | No comment | | |

| | | | |
|--|--|--|--|
|  IS INDUSTRIE Soudure THAILAND | INSPECTION REPORT | Page 2 of 143 | |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | | |
| Rev. 00 Effective date May 17, 2013 | | | |
| Inspection Item | Comment | | |
| Supports : ➢ Shoes off support ➢ Hanger distortion or breakage ➢ Bottomed-out springs ➢ Brace distortion/breakage ➢ Loose brackets ➢ Slide plates/rollers ➢ Counter balance condition ➢ Support corrosion | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| Additional comment : | | - Found U-Bolts missing. | |
| Corrosion : ➢ Bolting support points under clamps ➢ Coating/Painting deterioration ➢ Soil-to-air interface ➢ Insulation interfaces ➢ Biological growth | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input checked="" type="checkbox"/> Abnormal |
| | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| Additional comment : | | - Found paint deterioration on pipe and elbow. | |
| Insulation : ➢ Damage/penetrations ➢ Missing jacketing/insulation ➢ Sealing deterioration ➢ Bulging ➢ Banding (broken/missing) | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |
| Additional comment : | | No comment | |




| | | |
|--|---|---|
|  IS INDUSTRIE Soudure THAILAND | INSPECTION REPORT | Page 3 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |
| Rev. 00 Effective date May 17, 2013 | | |
| INSPECTION PICTURE | | |
| Item | Picture | Description |
| 1 |  | For Visual External Date : 29-30/04/2024 Found rust on bolts and nuts. Found slight corrosion on valve (Depth = 1 mm.). |
| 2 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve (Depth = 1 mm.). |
| 3 |  | For Visual External Date : 29-30/04/2024 UTM01-The pipe was normal condition. |

| | | |
|---|---|--|
|  IS INDUSTRIE Soudure THAILAND | INSPECTION REPORT | Page 4 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |
| Rev. 00 Effective date May 17, 2013 | | |
| INSPECTION PICTURE | | |
| Item | Picture | Description |
| 4 |  | For Visual External Date : 29-30/04/2024 Found rust on support. |
| 5 |  | For Visual External Date : 29-30/04/2024 Found rust on valve. |
| 6 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve. |

| | | |
|--|---|--|
|  IS INDUSTRIE Soudure THAILAND | INSPECTION REPORT | Page 5 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |
| Rev. 00 Effective date May 17, 2013 | | |
| INSPECTION PICTURE | | |
| Item | Picture | Description |
| 7 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve. |
| 8 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve. |
| 9 |  | For Visual External Date : 29-30/04/2024 UTM02-Found rust on pipe. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 6 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 10 |  | For Visual External Date : 29-30/04/2024 Found rust on valve. |
| 11 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve. |
| 12 |  | For Visual External Date : 29-30/04/2024 Found slight corrosion on valve. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 7 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 13 |  | For Visual External Date : 29-30/04/2024 UTM03-Insulation was normal condition. |
| 14 |  | For Visual Internal Date : 29-30/04/2024 UTM03-Found rust on elbow. |
| 15 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 8 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 16 |  | For Visual Internal Date : 29-30/04/2024 UTM04-Insulation was normal condition. |
| 17 |  | For Visual Internal Date : 29-30/04/2024 UTM05-Found rust on weld elbow. |
| 18 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 9 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 19 |  | For Visual Internal Date : 29-30/04/2024 UTM06, UTM07-Found rust on weld elbow. |
| 20 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 21 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 10 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 22 |  | For Visual Internal Date : 29-30/04/2024 Normal condition. |
| 23 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 24 |  | For Visual Internal Date : 29-30/04/2024 UTM08-Normal condition. |


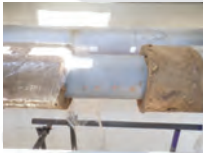
| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 11 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 25 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 26 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 27 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 12 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 28 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 29 |  | For Visual Internal Date : 29-30/04/2024 UTM09-Normal condition. |
| 30 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 13 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 31 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 32 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 33 |  | For Visual Internal Date : 29-30/04/2024 UTM10-Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 14 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 34 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 35 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 36 |  | For Visual External Date : 29-30/04/2024 UTM11-Normal condition. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 15 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 37 |  | For Visual Internal Date : 29-30/04/2024 UTM11-Normal condition. |
| 38 |  | For Visual Internal Date : 29-30/04/2024 UTM12-Normal condition. |
| 39 |  | For Visual External Date : 29-30/04/2024 Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 16 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 40 |  | For Visual Internal Date : 29-30/04/2024 UTM13-Found rust on elbow. |
| 41 |  | For Visual External Date : 29-30/04/2024 Normal condition. |
| 42 |  | For Visual Internal Date : 29-30/04/2024 UTM14-Found rust on elbow. |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 17 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |


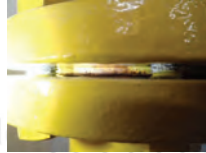

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 43 |  | For Visual External Date : 29-30/04/2024 Normal Condition. |
| 44 |  | For Visual Internal Date : 29-30/04/2024 UTM15-Normal condition. |
| 45 |  | For Visual Internal Date : 29-30/04/2024 UTM16-Normal condition. |




| | |
|--|--|
|  | Page 18 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 46 |  | For Visual Internal Date : 29-30/04/2024 Found slight corrosion on valve. |
| 47 |  | For Visual Internal Date : 29-30/04/2024 Found slight corrosion on valve. |
| 48 |  | For Visual External Date : 29-30/04/2024 UTM17-Normal condition |

| | |
|---|--|
|  | Page 19 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 49 |  | For Visual External Date : 29-30/04/2024 Found rust on gasket. |
| 50 |  | For Visual External Date : 29-30/04/2024 Found rust on gasket. |
| 51 |  | For Visual External Date : 29-30/04/2024 Found rust on valve. |




| | |
|---|--|
|  | Page 20 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 52 |  | For Visual External Date : 29-30/04/2024 Found rust on valve. |
| 53 |  | For Visual External Date : 29-30/04/2024 UTM18-Normal Condition |
| 54 |  | For Visual External Date : 29-30/04/2024 Found rust on valve. |




| | |
|--|--|
|  | Page 21 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 55 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 56 |  | For Visual External Date : 29-30/04/2024 Found rust on gasket. |
| 57 |  | For Visual External Date : 29-30/04/2024 UTM19-Normal Condition |

| | |
|---|--|
|  | Page 22 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |




| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 58 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 59 |  | For Visual External Date : 29-30/04/2024 UTM20-Normal Condition |
| 60 |  | For Visual External Date : 29-30/04/2024 UTM21-Normal Condition |

| | |
|--|--|
|  | Page 23 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 61 |  | For Visual External Date : 29-30/04/2024 UTM22-Normal Condition |
| 62 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 63 |  | For Visual External Date : 29-30/04/2024 UTM23-Normal Condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 24 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 64 |  | For Visual External Date : 29-30/04/2024 UTM24-Normal Condition |
| 65 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 66 |  | For Visual External Date : 29-30/04/2024 Normal Condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 25 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 67 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 68 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 69 |  | For Visual External Date : 29-30/04/2024 Normal Condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 26 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 70 |  | For Visual External Date : 29-30/04/2024 UTM25,UTM29-Normal Condition |
| 71 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 72 |  | For Visual External Date : 29-30/04/2024 Normal Condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 27 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 73 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 74 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 75 |  | For Visual External Date : 29-30/04/2024 Normal Condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 28 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 76 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 77 |  | For Visual External Date : 29-30/04/2024 Normal Condition |
| 78 |  | For Visual External Date : 29-30/04/2024 Normal Condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 29 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 79 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal Condition |
| 80 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal Condition |
| 81 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on U-Bolt. |




| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 30 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 82 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal Condition |
| 83 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on valve. |
| 84 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on valve. |




| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 31 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 85 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust and painting deterioration on pipe and U-Bolts. |
| 86 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM30,UTM31 Found rust on flange, bolts and nuts. Found painting deterioration on pipe. |
| 87 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on support. |




| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 32 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 88 |  | For Visual V11-1-A Date : 29-30/04/2024 Found oxide scale on head ceramic filter. |
| 89 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust and painting deterioration on flange, bolts and nuts. |
| 90 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM32, Utm33- Found rust and painting deterioration on pipe and elbow. |




| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 33 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 91 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust and painting deterioration on valve, flange, bolts and nuts. |
| 92 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM34-Found painting deterioration on pipe. |
| 93 |  | For Visual V11-1-A Date : 29-30/04/2024 Found painting deterioration on pipe. |




| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 34 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 94 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM35, UTM36-Found U-Bolts missing. Found painting deterioration on pipe. |
| 95 |  | For Visual V11-1-A Date : 29-30/04/2024 Found oxide scale on valve. |
| 96 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM37- Normal condition Found U-Bolts missing. |




| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 35 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 97 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on U-Bolt. |
| 98 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |
| 99 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 36 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 100 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM38-Found rust on pipe. |
| 101 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |
| 102 |  | For Visual V11-1-A Date : 29-30/04/2024 Overview |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 37 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 103 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM39- Normal condition |
| 104 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |
| 105 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 38 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 106 |  | For Visual V11-1-A Date : 29-30/04/2024 Found U-Bolt missing. Found rust and painting deterioration on pipe. |
| 107 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on valve. |
| 108 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 39 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 109 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM40-Normal condition |
| 110 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on valve. |
| 111 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM41- Found rust and painting deterioration on flange connection. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 40 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE




| Item | Picture | Description |
|------|---|--|
| 112 |  | For Visual V11-1-A Date : 29-30/04/2024 Normal condition |
| 113 |  | For Visual V11-1-A Date : 29-30/04/2024 Overview |
| 114 |  | For Visual V11-1-A Date : 29-30/04/2024 UTM42-Normal condition |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 41 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |




INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 115 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on flange connection. |
| 116 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on flange connection. |
| 117 |  | For Visual V11-1-A Date : 29-30/04/2024 Found rust on flange connection. |




| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 42 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 118 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 119 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 120 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |

| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 43 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 121 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on U-Bolt and support. Found U-Bolt loose. |
| 122 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 123 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 44 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 124 |  | For Visual V11-2-A Date : 29-30/04/2024 Found slight corrosion on valve. Found leakage on flange. |
| 125 |  | For Visual V11-2-A Date : 29-30/04/2024 Found leakage on flange. |
| 126 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |

| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 45 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 127 |  | For Visual V11-2-A Date : 29-30/04/2024 Found slight corrosion on valve. Found leakage on flange. |
| 128 |  | For Visual V11-2-A Date : 29-30/04/2024 Found leakage on flange. |
| 129 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM43, UTM44- Found rust and painting deterioration on pipe. |




| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 46 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 130 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on U-Bolt. |
| 131 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |
| 132 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |




| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 47 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 133 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 134 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 135 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |




| | |
|--|--|
|  | Page 48 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 136 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM45, UTM46- Found painting deterioration on pipe and elbow. Found rust on flange. |
| 137 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |
| 138 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM47-Normal condition |




| | |
|---|--|
|  | Page 49 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 139 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on reduce. |
| 140 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on socket elbow. |
| 141 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM48-Found U-Bolt missing |




| | |
|---|--|
|  | Page 50 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 142 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM49-Found U-Bolt missing |
| 143 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on valve. |
| 144 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM50-Found U-Bolt missing |




| | |
|--|--|
|  | Page 51 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 145 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM49-Found U-Bolt missing |
| 146 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 147 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM51-Found rust on valve. Found U-Bolt missing |

| | |
|---|--|
|  | Page 52 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |




| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 148 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 149 |  | For Visual V11-2-A Date : 29-30/04/2024 Overview |
| 150 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |

| | |
|--|--|
|  | Page 53 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 151 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |
| 152 |  | For Visual V11-2-A Date : 29-30/04/2024 UTM52-Normal condition |
| 153 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on valve. |




| | | |
|--|---|----------------|
|  | INSPECTION REPORT | Page 54 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 154 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on valve. |
| 155 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. Found U-Bolt missing. |
| 156 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on pipe. |




| | | |
|---|---|----------------|
|  | INSPECTION REPORT | Page 55 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 157 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |
| 158 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 159 |  | For Visual V11-2-A Date : 29-30/04/2024 UTMS3-Normal condition |




| | | |
|---|---|----------------|
|  | INSPECTION REPORT | Page 56 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 160 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on valve. |
| 161 |  | For Visual V11-2-A Date : 29-30/04/2024 Overview |
| 162 |  | For Visual V11-2-A Date : 29-30/04/2024 UTMS4-Normal condition |




| | | |
|--|---|----------------|
|  | INSPECTION REPORT | Page 57 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 163 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |
| 164 |  | For Visual V11-2-A Date : 29-30/04/2024 Normal condition |
| 165 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |




| | | |
|---|---|----------------|
|  | INSPECTION REPORT | Page 58 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |

INSPECTION PICTURE



| Item | Picture | Description |
|------|---|--|
| 166 |  | For Visual V11-2-A Date : 29-30/04/2024 Valve Normal condition |
| 167 |  | For Visual V11-2-A Date : 29-30/04/2024 UTMS5-Normal condition |
| 168 |  | For Visual V11-2-A Date : 29-30/04/2024 Found rust on flange. |

| | | |
|--|---|----------------|
|  | INSPECTION REPORT | Page 59 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. Rev: 00 Effective date: May 17, 2013 | |




INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 169 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition |
| 170 |  | For Visual V11-3-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 171 |  | For Visual V11-3-A Date : 29-30/04/2024 Found U-Bolt missing. |

| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 60 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 172 |  | For Visual V11-3-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 173 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on pipe. |
| 174 |  | For Visual V11-3-A Date : 29-30/04/2024 Overview |

| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 61 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 175 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition on pipe. |
| 176 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on flange. |
| 177 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on valve and flange. |




| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 62 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 178 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM56,UTM57-Normal condition on pipe and elbow. Found slight corrosion on U-Bolt. |
| 179 |  | For Visual V11-3-A Date : 29-30/04/2024 Found slight corrosion on U-Bolt. |
| 180 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM56,UTM57-Normal condition on pipe and elbow. |




| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 63 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 181 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition at Ceramic filter. |
| 182 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on support. |
| 183 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM58,UTM59-Found rust on elbow and flange. |

| | | |
|---|--|----------------|
|  | INSPECTION REPORT | Page 64 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |




| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 184 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on valve and flange. |
| 185 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM60- Found painting deterioration on reduce and pipe. |
| 186 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM60- Found painting deterioration on pipe. |

| | | |
|--|--|----------------|
|  | INSPECTION REPORT | Page 65 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 187 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on socket elbow. |
| 188 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM61,UTM62-Normal condition on pipe. Found U-Bolt missing. |
| 189 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on valve. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 66 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 190 |  | For Visual V11-3-A Date : 29-30/04/2024 Found U-bolt missing. |
| 191 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM63-Normal condition on pipe. |
| 192 |  | For Visual V11-3-A Date : 29-30/04/2024 Found U-bolt missing. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 67 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 193 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition on pipe. |
| 194 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition |
| 195 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM64-Found rust on pipe. Found U-bolt missing. |

| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 68 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 196 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition. |
| 197 |  | For Visual V11-3-A Date : 29-30/04/2024 Overview |
| 198 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM65-Normal condition on pipe. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 69 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 199 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on valve, bolts and nuts. |
| 200 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition on valve. |
| 201 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on flange and pipe. Found U-bolts missing. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 70 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 202 |  | For Visual V11-3-A Date : 29-30/04/2024 Normal condition on valve. |
| 203 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM66-Normal condition on elbow |
| 204 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on valve. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 71 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 205 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM67- Found painting deterioration on flange and elbow. |
| 206 |  | For Visual V11-3-A Date : 29-30/04/2024 Found painting deterioration on pipe. |
| 207 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM68-Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 72 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 208 |  | For Visual V11-3-A Date : 29-30/04/2024 UTM68-Normal condition |
| 209 |  | For Visual V11-3-A Date : 29-30/04/2024 Found rust on flange. |
| 210 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |

| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 73 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 211 |  | For Visual V11-4-A Date : 29-30/04/2024 Found U-Bolt missing. Found rust on support. |
| 212 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition. |
| 213 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on valve and flange. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 74 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 214 |  | For Visual V11-4-A Date : 29-30/04/2024 Found painting deterioration on pipe. |
| 215 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on valve and flange. |
| 216 |  | For Visual V11-4-A Date : 29-30/04/2024 Found painting deterioration on pipe and elbow. Found rust on U-Bolt. |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 75 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 217 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM69, UTM70-Found painting deterioration on pipe and elbow. |
| 218 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on flange. |
| 219 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 76 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 220 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 221 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on flange. |
| 222 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM71, UTM72-Found slight corrosion on elbow. (Depth= 1 mm.) |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 77 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 223 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on elbow. (Depth= 1 mm.) |
| 224 |  | For Visual V11-4-A Date : 29-30/04/2024 Found slight corrosion on elbow. (Depth= 1 mm.) |
| 225 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on flange. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 78 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 226 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM73-Normal condition |
| 227 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM74- Normal condition |
| 228 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM75-Found U-Bolt missing. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 79 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 229 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on valve. |
| 230 |  | For Visual V11-4-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 231 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM76-Normal condition. |

| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 80 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 232 |  | For Visual V11-4-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 233 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on valve. |
| 234 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM77-Found rust on pipe and elbow. Found U-Bolt missing. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 81 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 235 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 236 |  | For Visual V11-4-A Date : 29-30/04/2024 Overview |
| 237 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM78-Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 82 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 238 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on flange. |
| 239 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on valve. |
| 240 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on flange and pipe. Found U-Bolt missing. |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 83 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 241 |  | For Visual V11-4-A Date : 29-30/04/2024 Found rust on flange. |
| 242 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 243 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM79-Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 84 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 244 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 245 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 246 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM80 - Found rust and painting deterioration on elbow. |

| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 85 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 247 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 248 |  | For Visual V11-4-A Date : 29-30/04/2024 Normal condition |
| 249 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM81 - Found rust and painting deterioration on elbow and flange. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 86 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 250 |  | For Visual V11-4-A Date : 29-30/04/2024 UTM81 - Found rust and painting deterioration on pipe and flange. |
| 251 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 252 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 87 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 253 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 254 |  | For Visual V11-5-A Date : 29-30/04/2024 Found slight corrosion on U-Bolt. |
| 255 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 88 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 256 |  | For Visual V11-5-A Date : 29-30/04/2024 Found slight corrosion on valve and flange. |
| 257 |  | For Visual V11-5-A Date : 29-30/04/2024 Found slight corrosion on flange. |
| 258 |  | For Visual V11-5-A Date : 29-30/04/2024 Found slight corrosion on valve. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 89 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 259 |  | For Visual V11-5-A Date : 29-30/04/2024 Found painting deterioration on pipe. |
| 260 |  | For Visual V11-5-A Date : 29-30/04/2024 Found slight corrosion on valve and flange. |
| 261 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust and painting deterioration on pipe and elbow. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 90 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 262 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust and painting deterioration on U-Bolt. |
| 263 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM82, UTM83-Found rust and painting deterioration on elbow. |
| 264 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on flange. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 91 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 265 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 266 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 267 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on flange. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 92 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 268 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM84, UTM85- Found rust and painting deterioration on flange, pipe and elbow. |
| 269 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 270 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM86- Found painting deterioration on pipe. |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 93 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 271 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM87-Normal condition |
| 272 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM87, UTM88- Found U-Bolt missing. |
| 273 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition. |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 94 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE




| Item | Picture | Description |
|------|---|--|
| 274 |  | For Visual V11-5-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 275 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM89-Normal condition |
| 276 |  | For Visual V11-5-A Date : 29-30/04/2024 Found U-Bolt missing. |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 95 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |




INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 277 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 278 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on valve. |
| 279 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM90-Found U-Bolt missing. |




| | |
|--|--|
|  | Page 96 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 280 |  | For Visual V11-5-A Date : 29-30/04/2024 Overview |
| 281 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM91- Found painting deterioration on pipe. |
| 282 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM90-Found rust on bolts and nuts. |




| | |
|---|--|
|  | Page 97 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 283 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on valve. |
| 284 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on flange. Found U-Bolt missing. |
| 285 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |




| | |
|---|--|
|  | Page 98 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 286 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 287 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM92-Found rust on flange and elbow. |
| 288 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on dummy support. |




| | |
|--|--|
|  | Page 99 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 289 |  | For Visual V11-5-A Date : 29-30/04/2024 Found rust on flange. |
| 290 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM93-Found painting deterioration on elbow. |
| 291 |  | For Visual V11-5-A Date : 29-30/04/2024 Found painting deterioration on pipe. |

| | |
|---|--|
|  | Page 100 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |




| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 292 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |
| 293 |  | For Visual V11-5-A Date : 29-30/04/2024 UTM94- Normal condition |
| 294 |  | For Visual V11-5-A Date : 29-30/04/2024 Normal condition |

| | |
|--|--|
|  | Page 101 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 295 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 296 |  | For Visual V11-6-A Date : 29-30/04/2024 Found loose on nut U-Bolt support. |
| 297 |  | For Visual V11-6-A Date : 29-30/04/2024 Found loose on nut U-Bolt support. |




| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 102 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 298 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |
| 299 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |
| 300 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 103 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 301 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |
| 302 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |
| 303 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 104 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 304 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on U-Bolt. |
| 305 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM95, UTM96- Normal condition |
| 306 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange, bolts and nuts. |




| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 105 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 307 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 308 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on head. |
| 309 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on head. |

| | | |
|---|--|--------------------------------------|
|  | INSPECTION REPORT | Page 106 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE




| Item | Picture | Description |
|------|---|--|
| 310 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |
| 311 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM97, UTM98-Found rust on elbow and pipe. |
| 312 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |

| | | |
|--|--|--------------------------------------|
|  | INSPECTION REPORT | Page 107 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |




INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 313 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 314 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM99- Normal condition |
| 315 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on flange. |




| | |
|--|--|
|  | Page 106 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 316 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM100-Normal condition |
| 317 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM101-Normal condition |
| 318 |  | For Visual V11-6-A Date : 29-30/04/2024 Found U-Bolt missing. |




| | |
|---|--|
|  | Page 108 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 319 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on valve. |
| 320 |  | For Visual V11-6-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 321 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM102-Normal condition |




| | |
|---|--|
|  | Page 110 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 322 |  | For Visual V11-6-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 323 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on valve. |
| 324 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM103- Found rust on pipe. Found U-Bolt missing. |




| | |
|--|--|
|  | Page 111 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 325 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 326 |  | For Visual V11-6-A Date : 29-30/04/2024 Overview |
| 327 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM104- Normal condition |


| | |
|---|--|
|  | Page 112 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 328 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 329 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 330 |  | For Visual V11-6-A Date : 29-30/04/2024 Found rust on pipe and flange. Found U-Bolt missing. |



| | |
|--|--|
|  | Page 113 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 331 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 332 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 333 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM105-Normal condition |


| | |
|--|--|
|  | Page 114 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 334 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 335 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 336 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM106-Normal condition |




| | |
|---|--|
|  | Page 115 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 337 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 338 |  | For Visual V11-6-A Date : 29-30/04/2024 Normal condition |
| 339 |  | For Visual V11-6-A Date : 29-30/04/2024 UTM107-Normal condition |




| | |
|---|--|
|  | Page 116 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 340 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 341 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 342 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on U-Bolt. |




| | |
|--|--|
|  | Page 117 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 343 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 344 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on U-Bolt. |
| 345 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |

| | |
|---|--|
|  | Page 118 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 346 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |
| 347 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 348 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |




| | |
|--|--|
|  | Page 119 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 349 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |
| 350 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM108- Found rust on U-Bolt. |
| 351 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM109-Normal condition |




| | |
|--|--|
|  | Page 120 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 352 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |
| 353 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on ceramic filter. |
| 354 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on ceramic filter. |




| | |
|---|--|
|  | Page 121 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 355 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |
| 356 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM110, UTM111-Found rust on elbow. |
| 357 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |




| | |
|---|--|
|  | Page 122 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 358 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM112-Normal condition |
| 359 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM113-Normal condition |
| 360 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM114-Found U-Bolt missing. |




| | |
|--|--|
|  | Page 123 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 361 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 362 |  | For Visual V11-7-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 363 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM115- Normal condition |




| | |
|---|--|
|  | Page 124 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 364 |  | For Visual V11-7-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 365 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 366 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |




| | |
|--|--|
|  | Page 125 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 367 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM116-Found U-Bolt missing. |
| 368 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 369 |  | For Visual V11-7-A Date : 29-30/04/2024 Overview |



| | |
|--|--|
|  | Page 126 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 370 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM117- Normal condition |
| 371 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 372 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |




| | |
|---|--|
|  | Page 127 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 373 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. Found U-Bolt missing. |
| 374 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on flange. |
| 375 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |




| | |
|---|--|
|  | Page 128 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 376 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM118-Found rust on flange. |
| 377 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 378 |  | For Visual V11-7-A Date : 29-30/04/2024 Found rust on valve and flange. |




| | |
|--|--|
|  | Page 129 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 379 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM119-Normal condition |
| 380 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |
| 381 |  | For Visual V11-7-A Date : 29-30/04/2024 Normal condition |




| | |
|---|--|
|  | Page 130 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 382 |  | For Visual V11-7-A Date : 29-30/04/2024 UTM120-Found rust on flange and elbow. |
| 383 |  | For Visual V11-7-A Date : 29-30/04/2024 Found painting deterioration on pipe and flange. |
| 384 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |




| | |
|--|--|
|  | Page 131 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 385 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 386 |  | For Visual V11-8-A Date : 29-30/04/2024 Found loose on U-Bolt. |
| 387 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on flange and valve. |




| | |
|--|--|
|  | Page 132 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|---|
| Item | Picture | Description |
| 388 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 389 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on flange and valve. |
| 390 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM121, UTM122: Found painting deterioration on pipe. |




| | |
|---|--|
|  | Page 133 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 391 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on U-Bolt. |
| 392 |  | For Visual V11-8-A Date : 29-30/04/2024 Found nameplate missing. |
| 393 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |




| | |
|---|--|
|  | Page 134 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 394 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM123, UTM124-Found rust on flange. |
| 395 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM124-Found rust on flange. |
| 396 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM125-Normal condition |




| | |
|--|--|
|  | Page 135 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 397 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM126-Found rust on reduce. |
| 398 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM127-Found U-Bolt missing. |
| 399 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on valve. |

| | |
|---|--|
|  | Page 136 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |




| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 400 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM128-Found rust on reduce. |
| 401 |  | For Visual V11-8-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 402 |  | For Visual V11-8-A Date : 29-30/04/2024 Found U-Bolt missing. |

| | |
|--|--|
|  | Page 137 of 143 |
| | INSPECTION REPORT Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. |

| INSPECTION PICTURE | | |
|--------------------|---|--|
| Item | Picture | Description |
| 403 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on valve. |
| 404 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM129-Found U-Bolt missing. |
| 405 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 138 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 406 |  | For Visual V11-8-A Date : 29-30/04/2024 Overview |
| 407 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM130-Normal condition |
| 408 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 139 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|---|
| 409 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on valve. |
| 410 |  | For Visual V11-8-A Date : 29-30/04/2024 Found U-Bolt missing. |
| 411 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |




| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 140 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 412 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 413 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 414 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM131- Normal condition |




| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 141 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |

INSPECTION PICTURE

| Item | Picture | Description |
|------|---|--|
| 415 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on dummy support. |
| 416 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on valve. |
| 417 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM132- Normal condition |

| | | |
|---|--|---|
|  | INSPECTION REPORT | Page 142 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |


INSPECTION PICTURE


| Item | Picture | Description |
|------|---|--|
| 418 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 419 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |
| 420 |  | For Visual V11-8-A Date : 29-30/04/2024 UTM133- Normal condition |

| | | |
|--|--|---|
|  | INSPECTION REPORT | Page 143 of 143 |
| | Customer / Client: S&L SPECIALTY POLYMERS CO., LTD. | Rev: 00 Effective date: May 17, 2013 |


INSPECTION PICTURE


| Item | Picture | Description |
|------|---|---|
| 421 |  | For Visual V11-8-A Date : 29-30/04/2024 Found rust on gasket. |
| 422 |  | For Visual V11-8-A Date : 29-30/04/2024 Normal condition |


| <div><div></div><div>ULTRASONIC THICKNESS MEASUREMENT REPORT</div></div> | | | | | | | | | | | | Report No. : ISB-24-04-0417-UTM-001 | |
|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------------------|--|
| | | | | | | | | | | | | Project No. : N/A | |
| | | | | | | | | | | | | Date of Test : 29-30 April 2024 | |
| Rev. 01 | | | | | | | | | | | | Page : 6 of 28 | |
| Rev. 01 | | | | | | | | | | | | | |
| Date : 15/07/2025 | | | | | | | | | | | | | |
| Effective date : 15/07/2025 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

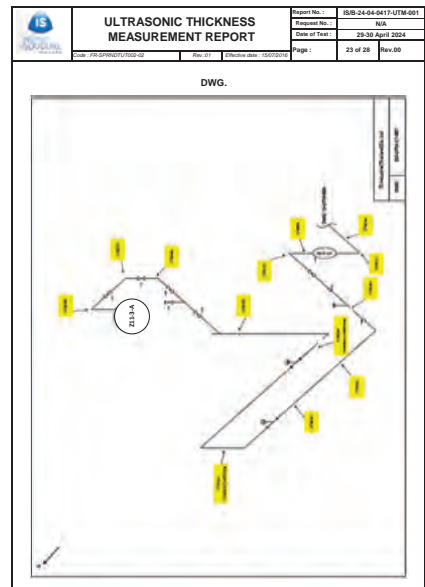
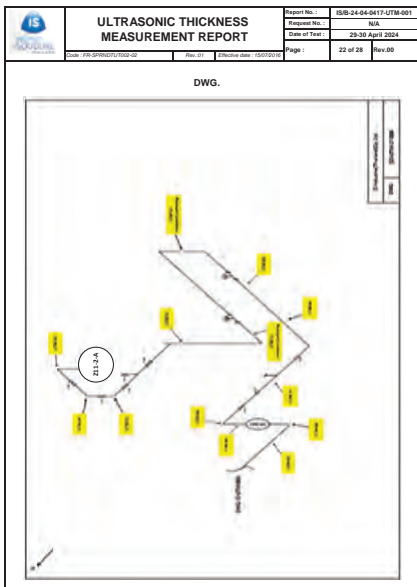
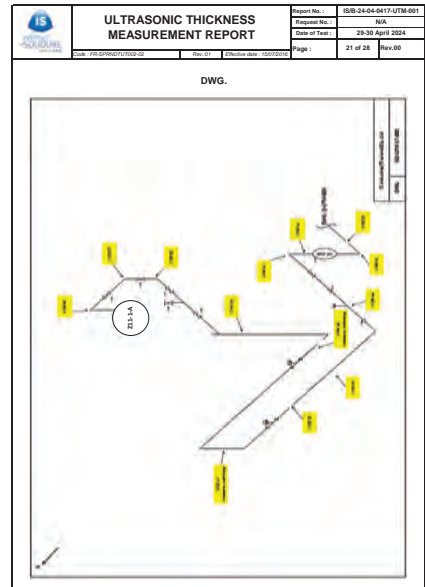
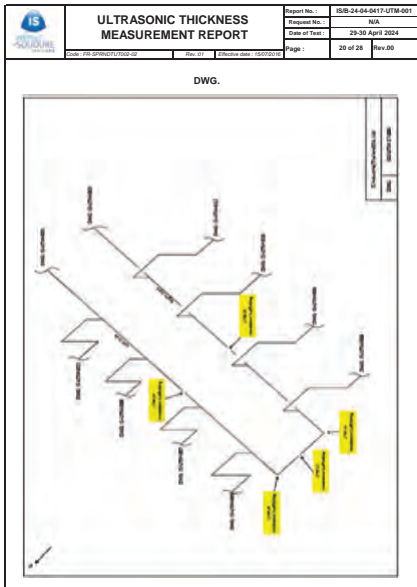
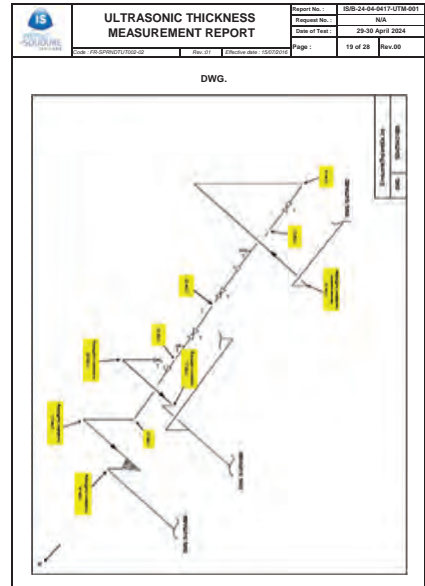
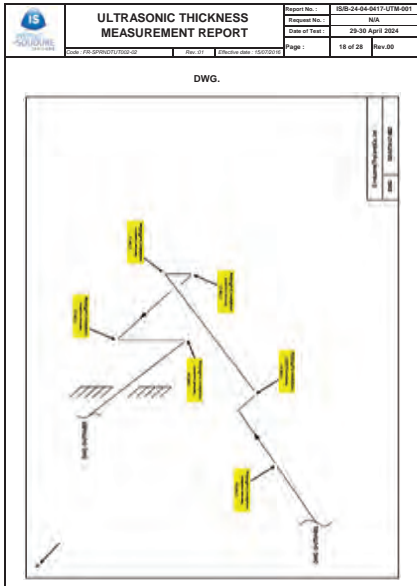
|  | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | Report No. : ISB-24-04-0417-UTM-001 | | | |
|---|-----------------------------|--|------|------|------|------|------|-------------------------------------|-------------------------|-----------------|----------------|
| | | | | | | | | Project No. : N/A | | | |
| | | | | | | | | Date of Test : 29-30 April 2024 | | | |
| | | Rev. 01 | | | | | | Page : 7 of 28 | | | |
| | | Effective date : 15/07/2025 | | | | | | Rev.02 | | | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | Nominal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remaining Life |
| | | 0° | 45° | 90° | 135° | 180° | 225° | | | | |
| UTM 50 | PIPE | 5.19 | 4.90 | 4.95 | 5.01 | - | - | 5.08 | 4.90 | 0.18 | |
| | | 5.13 | 4.98 | 4.98 | 5.08 | - | - | | | | |
| | | 5.18 | 4.95 | 4.95 | 5.10 | - | - | | | | |
| | | 5.18 | 5.02 | 5.02 | 5.12 | - | - | | | | |
| UTM 51 | PIPE | 4.88 | 5.05 | 4.72 | 5.04 | - | - | 5.08 | 4.72 | 0.36 | |
| | | 4.89 | 5.07 | 4.75 | 5.15 | - | - | | | | |
| | | 4.85 | 5.09 | 4.77 | 5.08 | - | - | | | | |
| | | 4.81 | 5.01 | 4.75 | 5.12 | - | - | | | | |
| UTM 52 | PIPE | 3.92 | 3.88 | 3.87 | 3.89 | - | - | 3.91 | 3.79 | 0.12 | |
| | | 3.90 | 3.87 | 3.90 | 3.85 | - | - | | | | |
| | | 3.79 | 3.88 | 3.89 | 3.88 | - | - | | | | |
| | | 3.82 | 3.94 | 3.94 | 3.90 | - | - | | | | |
| UTM 53 | ELBOW | - | - | 4.54 | 5.82 | 4.72 | - | 3.91 | 4.44 | -0.53 | |
| | | - | - | 4.63 | 5.78 | 4.50 | - | | | | |
| | | - | - | 4.48 | 5.38 | 4.55 | - | | | | |
| | | - | - | 4.44 | 5.20 | 4.53 | - | | | | |
| UTM 54 | ELBOW | 4.08 | - | - | - | - | - | 3.91 | 4.09 | -0.18 | |
| | | 4.25 | - | - | - | - | - | | | | |
| | | 4.84 | - | - | - | - | - | | | | |
| | | 4.65 | - | - | - | - | - | | | | |
| UTM 55 | ELBOW | 4.07 | - | - | - | - | - | 3.91 | 3.89 | 0.02 | |
| | | 4.30 | - | - | - | - | - | | | | |
| | | 4.72 | - | - | - | - | - | | | | |
| | | 4.21 | 4.00 | 4.12 | 4.05 | - | - | | | | |
| UTM 56 | PIPE | 4.19 | 4.08 | 4.18 | 4.02 | - | - | 3.91 | 4.00 | -0.09 | |
| | | 4.12 | 4.18 | 4.14 | 4.04 | - | - | | | | |
| | | 4.19 | 4.88 | 4.16 | 4.07 | - | - | | | | |
| | | 3.79 | 4.79 | 4.02 | 4.08 | - | - | | | | |
| UTM 57 | ELBOW | 3.69 | 4.90 | 4.30 | 4.62 | - | - | 3.91 | 3.54 | 0.37 | |
| | | 3.64 | 4.73 | 4.36 | 4.64 | - | - | | | | |
| | | 3.64 | 4.68 | 4.36 | 4.65 | - | - | | | | |
| | | 3.77 | 3.62 | 3.81 | 3.77 | - | - | | | | |
| UTM 58 | PIPE | 3.79 | 3.64 | 3.79 | 3.89 | - | - | 3.91 | 3.62 | 0.29 | |
| | | 3.70 | 3.72 | 3.76 | 3.72 | - | - | | | | |
| | | 3.89 | 3.68 | 3.83 | 3.74 | - | - | | | | |
| | | 3.65 | 4.58 | 3.90 | 4.72 | - | - | | | | |
| UTM 59 | ELBOW | 3.89 | 4.52 | 3.99 | 4.68 | - | - | 3.91 | 3.89 | 0.02 | |
| | | 3.98 | 4.58 | 4.10 | 4.58 | - | - | | | | |
| | | 3.92 | 4.48 | 3.96 | 4.35 | - | - | | | | |
| | | 3.82 | 4.48 | 3.98 | 4.32 | - | - | | | | |
| Remark : UTM 53 : 0° Bis support | | | | | | | | | | | |

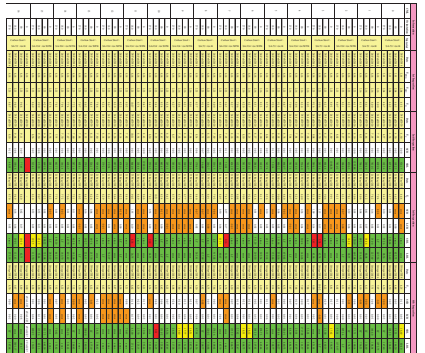
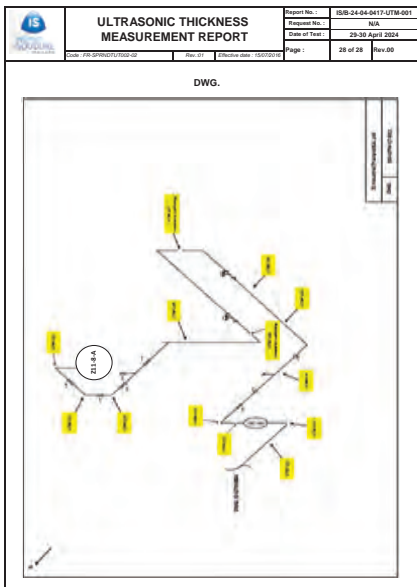
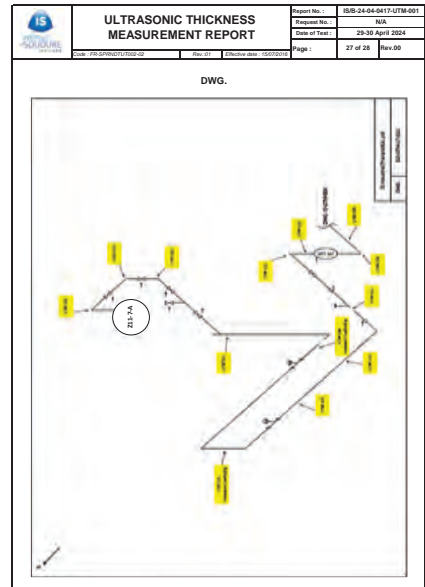
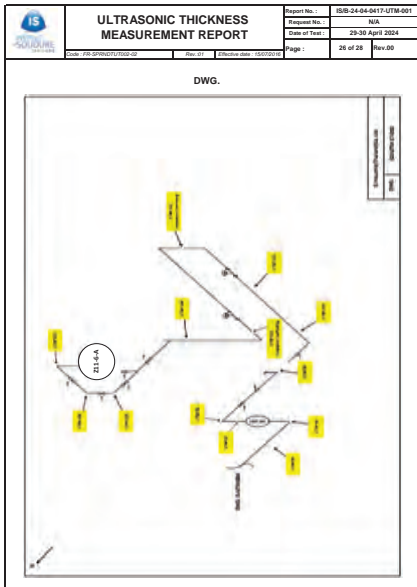
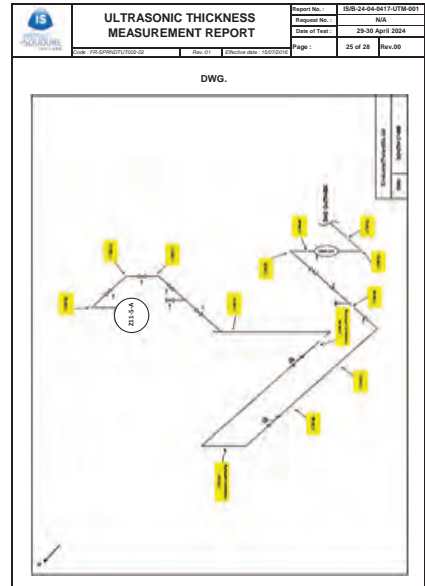
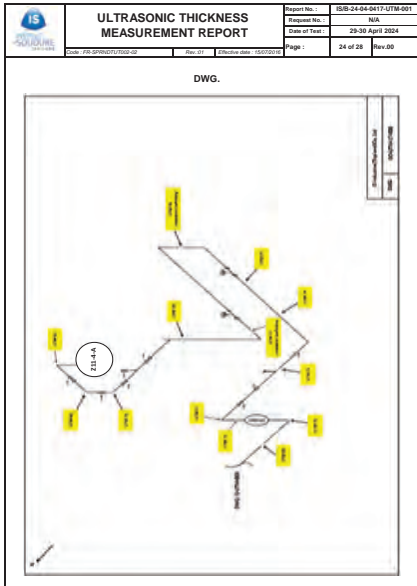
| IS SOLUTIONS | | | | | | | | | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | | | | | Report No. : ISB-24-04-0417-UTM-001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|-------------------------------------|--|--|--|--|--|--|--|--|--|------------------------|--|-------------------------|--|-----------------|--|----------------|--|--|--|------|--|--|--|--|--|--|--|--|--|------|--|--|--|--|--|--|--|--|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Project No. : N/A | | | | | | | | | | Project No. : N/A | | | | | | | | | | Report No. : N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of Test : 29-30 April 2024 | | | | | | | | | | Date of Test : 29-30 April 2024 | | | | | | | | | | Date of Test : 29-30 April 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 01 | | | | | | | | | | Rev. 01 | | | | | | | | | | Rev. 01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Effective date : 15/07/2025 | | | | | | | | | | Effective date : 15/07/2025 | | | | | | | | | | Effective date : 15/07/2025 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Page : 8 of 28 | | | | | | | | | | Page : 8 of 28 | | | | | | | | | | Page : 8 of 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area | | | | | | | | | | Component Type and Position | | | | | | | | | | Direction Thickness Measurement | | | | | | | | | | Normal Thickness (mm.) | | Minimum Thickness (mm.) | | Wall Loss (mm.) | | Remaining Life | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0° | | | | | | | | | | 45° | | | | | | | | | | 90° | | | | | | | | | | 135° | | | | | | | | | | 180° | | | | | | | | | | 225° | | | | | | | | | | 315° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 60 | | | | | | | | | | PIPE | | | | | | | | | | 6.08 | | | | | | | | | | 6.15 | | | | | | | | | | 5.91 | | | | | | | | | | 6.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 6.17 | | | | | | | | | | 6.12 | | | | | | | | | | 5.95 | | | | | | | | | | 6.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 6.19 | | | | | | | | | | 6.08 | | | | | | | | | | 5.92 | | | | | | | | | | 6.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 6.19 | | | | | | | | | | 6.18 | | | | | | | | | | 5.98 | | | | | | | | | | 6.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 61 | | | | | | | | | | PIPE | | | | | | | | | | 5.03 | | | | | | | | | | 4.88 | | | | | | | | | | 5.10 | | | | | | | | | | 4.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.02 | | | | | | | | | | 4.98 | | | | | | | | | | 5.02 | | | | | | | | | | 4.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.02 | | | | | | | | | | 5.02 | | | | | | | | | | 5.01 | | | | | | | | | | 4.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.08 | | | | | | | | | | 5.08 | | | | | | | | | | 5.08 | | | | | | | | | | 4.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 62 | | | | | | | | | | PIPE | | | | | | | | | | 5.08 | | | | | | | | | | 5.01 | | | | | | | | | | 5.18 | | | | | | | | | | 4.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.10 | | | | | | | | | | 4.92 | | | | | | | | | | 5.17 | | | | | | | | | | 4.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.08 | | | | | | | | | | 4.98 | | | | | | | | | | 5.13 | | | | | | | | | | 4.90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.12 | | | | | | | | | | 5.03 | | | | | | | | | | 5.08 | | | | | | | | | | 4.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 63 | | | | | | | | | | PIPE | | | | | | | | | | 4.98 | | | | | | | | | | 5.05 | | | | | | | | | | 5.02 | | | | | | | | | | 5.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.91 | | | | | | | | | | 4.92 | | | | | | | | | | 5.08 | | | | | | | | | | 5.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.92 | | | | | | | | | | 4.72 | | | | | | | | | | 5.07 | | | | | | | | | | 5.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.90 | | | | | | | | | | 4.90 | | | | | | | | | | 4.85 | | | | | | | | | | 5.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 64 | | | | | | | | | | PIPE | | | | | | | | | | 5.07 | | | | | | | | | | 4.82 | | | | | | | | | | 5.13 | | | | | | | | | | 5.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.02 | | | | | | | | | | 4.88 | | | | | | | | | | 5.15 | | | | | | | | | | 5.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.01 | | | | | | | | | | 4.86 | | | | | | | | | | 5.19 | | | | | | | | | | 5.06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5.00 | | | | | | | | | | 4.89 | | | | | | | | | | 5.08 | | | | | | | | | | 5.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 65 | | | | | | | | | | PIPE | | | | | | | | | | 3.74 | | | | | | | | | | 3.75 | | | | | | | | | | 3.73 | | | | | | | | | | 3.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.72 | | | | | | | | | | 3.76 | | | | | | | | | | 3.74 | | | | | | | | | | 3.81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.73 | | | | | | | | | | 3.79 | | | | | | | | | | 3.78 | | | | | | | | | | 3.71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.82 | | | | | | | | | | 3.77 | | | | | | | | | | 3.74 | | | | | | | | | | 3.83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 66 | | | | | | | | | | ELBOW | | | | | | | | | | 3.70 | | | | | | | | | | 3.68 | | | | | | | | | | 3.75 | | | | | | | | | | 3.82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.71 | | | | | | | | | | 3.69 | | | | | | | | | | 3.76 | | | | | | | | | | 3.82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.71 | | | | | | | | | | 3.96 | | | | | | | | | | 4.97 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.77 | | | | | | | | | | 3.08 | | | | | | | | | | 4.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 67 | | | | | | | | | | ELBOW | | | | | | | | | | 4.41 | | | | | | | | | | 4.87 | | | | | | | | | | 3.83 | | | | | | | | | | 4.95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.41 | | | | | | | | | | 4.32 | | | | | | | | | | 4.32 | | | | | | | | | | 4.28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.35 | | | | | | | | | | 4.43 | | | | | | | | | | 4.31 | | | | | | | | | | 4.31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.54 | | | | | | | | | | 4.52 | | | | | | | | | | 4.41 | | | | | | | | | | 4.41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 68 | | | | | | | | | | ELBOW | | | | | | | | | | 4.28 | | | | | | | | | | 4.40 | | | | | | | | | | 4.34 | | | | | | | | | | 4.34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.25 | | | | | | | | | | 4.75 | | | | | | | | | | 4.25 | | | | | | | | | | 4.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 4.33 | | | | | | | | | | 3.68 | | | | | | | | | | 3.68 | | | | | | | | | | 3.68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.69 | | | | | | | | | | 3.24 | | | | | | | | | | 3.42 | | | | | | | | | | 0.29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UTM 69 | | | | | | | | | | PIPE | | | | | | | | | | 3.79 | | | | | | | | | | 3.94 | | | | | | | | | | 3.85 | | | | | | | | | | 3.91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.73 | | | | | | | | | | 3.94 | | | | | | | | | | 3.81 | | | | | | | | | | 3.91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.74 | | | | | | | | | | 3.95 | | | | | | | | | | 3.88 | | | | | | | | | | 3.95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 3.73 | | | | | | | | | | 3.95 | | | | | | | | | | 3.83 | | | | | | | | | | 3.98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remark : UTM 66 : 5° Sin support | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

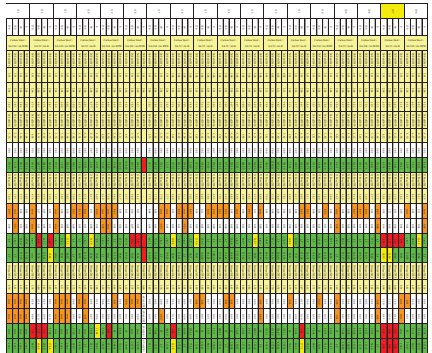
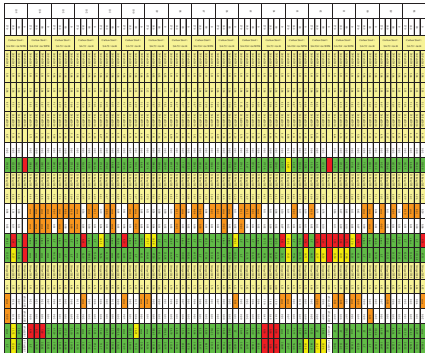
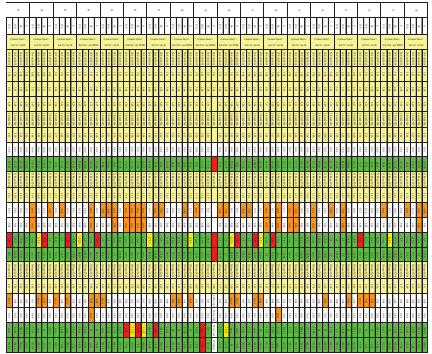
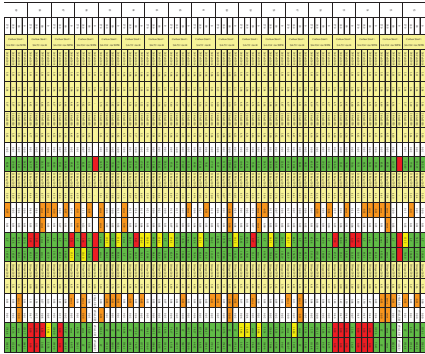
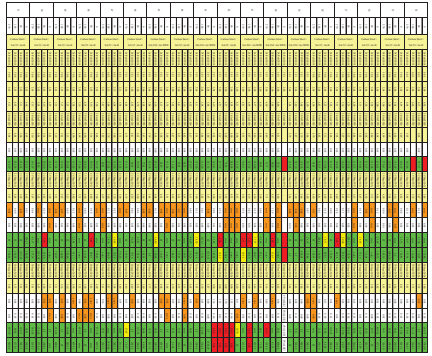
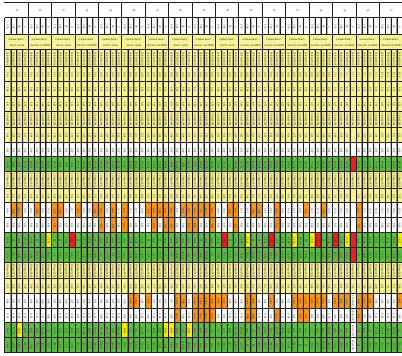
|  | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | | | Report No.: ISB-24-04-0417-UTM-001 | | | |
|--|-----------------------------|---|------|----------------------------|------|----------------|------|--------|------|------------------------------------|-------------------------|-----------------|----------------|
| | | | | | | | | | | Prepared By: N/A | | | |
| | | | | | | | | | | Date of Test: 29-30 April 2024 | | | |
| Code: PR-SP/REC/27/000-02 | | Rev. 01 | | Effective date: 15/07/2017 | | Page: 12 of 28 | | Rev.00 | | | | | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Normal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remaining Life |
| | | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° | | | | |
| UTM 100 | PIPE | 5.09 | 5.05 | 4.89 | 4.72 | | | | | 5.08 | 4.62 | 0.46 | |
| | | 5.02 | 4.89 | 4.72 | 4.78 | | | | | | | | |
| | | 5.09 | 4.88 | 4.76 | 4.69 | | | | | | | | |
| | | 5.02 | 4.62 | 4.74 | 4.70 | | | | | | | | |
| UTM 101 | PIPE | 4.52 | 4.89 | 4.82 | 4.70 | | | | | 5.08 | 4.70 | 0.38 | |
| | | 5.02 | 4.81 | 4.86 | 4.72 | | | | | | | | |
| | | 4.52 | 4.89 | 4.80 | 4.75 | | | | | | | | |
| | | 4.74 | 4.84 | 5.17 | 4.82 | | | | | | | | |
| UTM 102 | PIPE | 4.76 | 4.87 | 5.12 | 4.86 | | | | | 5.08 | 4.74 | 0.34 | |
| | | 4.79 | 4.82 | 5.15 | 4.83 | | | | | | | | |
| | | 4.80 | 4.86 | 5.16 | 4.85 | | | | | | | | |
| | | 4.91 | 4.82 | 4.89 | 5.00 | | | | | | | | |
| UTM 103 | PIPE | 4.94 | 4.88 | 4.98 | 5.05 | | | | | 5.03 | 4.82 | 0.21 | |
| | | 4.85 | 4.91 | 4.88 | 5.04 | | | | | | | | |
| | | 4.92 | 4.86 | 4.93 | 5.02 | | | | | | | | |
| | | 4.92 | 4.86 | 4.91 | 5.02 | | | | | | | | |
| UTM 104 | PIPE | 3.82 | 3.80 | 3.86 | 3.86 | | | | | 3.91 | 3.75 | 0.16 | |
| | | 3.79 | 3.82 | 3.87 | 3.84 | | | | | | | | |
| | | 3.82 | 3.80 | 3.75 | 3.85 | | | | | | | | |
| | | 3.84 | 3.79 | 3.79 | 3.83 | | | | | | | | |
| UTM 105 | ELBOW | 4.43 | 3.93 | 4.40 | | | | | | 3.91 | 3.93 | -0.02 | |
| | | 4.50 | 4.28 | 4.88 | | | | | | | | | |
| | | 4.20 | 4.31 | 4.77 | | | | | | | | | |
| | | 4.53 | 4.18 | 4.77 | | | | | | | | | |
| UTM 106 | ELBOW | 4.26 | 4.48 | 4.11 | 4.53 | | | | | 3.91 | 4.07 | -0.16 | |
| | | 4.75 | 4.47 | 4.39 | 4.52 | | | | | | | | |
| | | 4.13 | 4.26 | 4.26 | 4.45 | | | | | | | | |
| | | 4.78 | 4.19 | 4.07 | 4.42 | | | | | | | | |
| UTM 107 | ELBOW | 4.88 | - | - | - | | | | | 3.91 | 4.34 | -0.43 | |
| | | 4.87 | - | - | - | | | | | | | | |
| | | 4.62 | - | - | - | | | | | | | | |
| | | 4.39 | - | - | - | | | | | | | | |
| UTM 108 | PIPE | 3.89 | 3.89 | 3.82 | 3.84 | | | | | 3.91 | 3.59 | 0.32 | |
| | | 3.89 | 3.84 | 3.90 | 3.72 | | | | | | | | |
| | | 3.84 | 3.82 | 3.92 | 3.79 | | | | | | | | |
| | | 3.82 | 3.74 | 3.94 | 3.84 | | | | | | | | |
| UTM 109 | ELBOW | 4.08 | 4.70 | 4.20 | 4.81 | | | | | 3.91 | 4.06 | -0.15 | |
| | | 4.13 | 4.62 | 4.12 | 4.79 | | | | | | | | |
| | | 4.17 | 4.68 | 4.18 | 4.82 | | | | | | | | |
| | | 4.12 | 4.64 | 4.14 | 4.80 | | | | | | | | |
| Remark : UTM 105 : 0° file support | | | | | | | | | | | | | |


|  | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | | | Report No.: ISB-24-04-0417-UTM-001 | | | |
|---|-----------------------------|---|------|----------------------------|------|----------------|------|--------|------|------------------------------------|-------------------------|-----------------|----------------|
| | | | | | | | | | | Prepared By: N/A | | | |
| | | | | | | | | | | Date of Test: 29-30 April 2024 | | | |
| Code: PR-SP/REC/27/000-02 | | Rev. 01 | | Effective date: 15/07/2017 | | Page: 13 of 28 | | Rev.00 | | | | | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Normal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remaining Life |
| | | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° | | | | |
| UTM 110 | PIPE | 3.75 | 3.73 | 3.81 | 3.74 | | | | | 3.91 | 3.68 | 0.23 | |
| | | 3.80 | 3.70 | 3.82 | 3.72 | | | | | | | | |
| | | 3.76 | 3.74 | 3.84 | 3.63 | | | | | | | | |
| | | 3.68 | 3.78 | 3.87 | 3.76 | | | | | | | | |
| UTM 111 | ELBOW | 4.18 | 3.90 | 4.12 | 4.88 | | | | | 3.91 | 3.87 | 0.04 | |
| | | 4.18 | 3.92 | 4.36 | 4.79 | | | | | | | | |
| | | 4.12 | 3.88 | 4.38 | 4.82 | | | | | | | | |
| | | 4.20 | 3.87 | 4.43 | 4.80 | | | | | | | | |
| UTM 112 | PIPE | 5.79 | 5.79 | 5.70 | 5.72 | | | | | 6.02 | 5.70 | 0.32 | |
| | | 5.60 | 5.78 | 5.78 | 5.74 | | | | | | | | |
| | | 5.74 | 5.82 | 5.82 | 5.72 | | | | | | | | |
| | | 5.75 | 5.80 | 5.72 | 5.78 | | | | | | | | |
| UTM 113 | PIPE | 4.93 | 4.78 | 4.89 | 4.91 | | | | | 5.08 | 4.78 | 0.30 | |
| | | 4.97 | 4.79 | 4.82 | 4.87 | | | | | | | | |
| | | 4.82 | 4.88 | 4.82 | 4.88 | | | | | | | | |
| | | 4.98 | 4.93 | 4.86 | 4.98 | | | | | | | | |
| UTM 114 | PIPE | 4.85 | 4.88 | 5.07 | 5.02 | | | | | 5.08 | 4.82 | 0.26 | |
| | | 4.82 | 4.88 | 5.10 | 5.08 | | | | | | | | |
| | | 4.88 | 4.93 | 5.08 | 5.12 | | | | | | | | |
| | | 4.83 | 4.86 | 5.02 | 5.03 | | | | | | | | |
| UTM 115 | PIPE | 4.97 | 4.88 | 5.02 | 4.98 | | | | | 5.08 | 4.82 | 0.26 | |
| | | 4.88 | 4.88 | 5.08 | 5.08 | | | | | | | | |
| | | 4.82 | 4.83 | 5.10 | 4.96 | | | | | | | | |
| | | 4.88 | 4.90 | 5.12 | 4.99 | | | | | | | | |
| UTM 116 | PIPE | 5.14 | 5.10 | 4.98 | 4.92 | | | | | 5.08 | 3.73 | 1.35 | |
| | | 5.08 | 5.12 | 5.12 | 4.82 | | | | | | | | |
| | | 5.01 | 5.08 | 5.18 | 4.88 | | | | | | | | |
| | | 5.00 | 5.09 | 5.09 | 3.73 | | | | | | | | |
| UTM 117 | PIPE | 3.79 | 3.78 | 3.72 | 3.79 | | | | | 3.91 | 3.65 | 0.26 | |
| | | 3.74 | 3.78 | 3.73 | 3.79 | | | | | | | | |
| | | 3.87 | 3.80 | 3.72 | 3.68 | | | | | | | | |
| | | 3.80 | 3.88 | 3.75 | 3.68 | | | | | | | | |
| UTM 118 | ELBOW | - | 4.53 | 3.80 | 4.87 | | | | | 3.91 | 4.53 | -0.42 | |
| | | - | 4.56 | 3.79 | 4.88 | | | | | | | | |
| | | - | 4.56 | 3.74 | 4.88 | | | | | | | | |
| | | - | 4.58 | 3.80 | 4.82 | | | | | | | | |
| UTM 119 | ELBOW | 4.20 | 4.48 | 4.44 | 4.32 | | | | | 3.91 | 4.05 | -0.14 | |
| | | 4.14 | 4.58 | 4.54 | 4.38 | | | | | | | | |
| | | 4.10 | 4.64 | 4.47 | 4.41 | | | | | | | | |
| | | 4.05 | 4.57 | 4.37 | 4.27 | | | | | | | | |
| Remark : UTM 116 : 0° file support | | | | | | | | | | | | | |

|  | | | | | | | | | | Report No.: ISB-24-04-0417-UTM-001 | | | |
|---|-----------------------------|---------------------------------|------|------|------|------|------|------|------|---|-----------------------------------|-----------------|----------------|
| | | | | | | | | | | Prepared By: N/A | | | |
| | | | | | | | | | | Date of Test: 29-30 April 2024 | | | |
| Code: PR-SP/REC/27/000-02 | | | | | | | | | | Rev. 01 | Effective date: 15/07/2017 | | |
| | | | | | | | | | | Page: 14 of 28 | Rev. 00 | | |
| ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | | | | | | | | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Normal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remaining Life |
| | | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° | | | | |
| UTM 120 | ELBOW | 3.68 | 4.05 | 4.92 | 4.47 | | | | | 3.91 | 3.68 | 0.23 | |
| | | 3.78 | 4.08 | 4.95 | 4.55 | | | | | | | | |
| | | 3.88 | 4.08 | 4.99 | 4.58 | | | | | | | | |
| | | 3.75 | 4.07 | 4.93 | 4.60 | | | | | | | | |
| UTM 121 | PIPE | 3.72 | 4.38 | 4.44 | 4.51 | | | | | 3.91 | 3.72 | 0.19 | |
| | | 3.79 | 4.30 | 4.31 | 5.00 | | | | | | | | |
| | | 3.62 | 4.32 | 4.32 | 4.48 | | | | | | | | |
| | | 3.74 | 4.47 | 4.36 | 4.42 | | | | | | | | |
| UTM 122 | ELBOW | 3.89 | 3.80 | 3.84 | 3.81 | | | | | 3.91 | 3.78 | 0.13 | |
| | | 3.85 | 3.92 | 3.80 | 3.89 | | | | | | | | |
| | | 3.92 | 3.86 | 3.82 | 3.82 | | | | | | | | |
| | | 3.89 | 3.88 | 3.81 | 3.78 | | | | | | | | |
| UTM 123 | PIPE | 4.09 | 4.53 | 4.80 | 4.70 | | | | | 3.91 | 4.09 | -0.18 | |
| | | 4.11 | 4.58 | 4.64 | 4.74 | | | | | | | | |
| | | 4.02 | 4.60 | 4.63 | 4.72 | | | | | | | | |
| | | 4.06 | 4.71 | 4.61 | 4.70 | | | | | | | | |
| UTM 124 | ELBOW | 3.85 | 3.74 | 3.72 | 3.74 | | | | | 3.91 | 3.70 | 0.21 | |
| | | 3.85 | 3.79 | 3.72 | 3.81 | | | | | | | | |
| | | 3.78 | 3.82 | 3.74 | 3.79 | | | | | | | | |
| | | 3.75 | 3.74 | 3.81 | 3.89 | | | | | | | | |
| UTM 125 | PIPE | 4.80 | 4.72 | 4.50 | 5.40 | | | | | 6.02 | 4.12 | 1.90 | |
| | | 4.12 | 4.78 | 4.50 | 5.32 | | | | | | | | |
| | | 4.20 | 4.68 | 4.18 | 5.16 | | | | | | | | |
| | | 4.18 | 4.83 | 4.68 | 5.28 | | | | | | | | |
| UTM 126 | PIPE | 6.11 | 5.94 | 6.10 | 6.25 | | | | | 5.08 | 5.82 | -0.74 | |
| | | 6.18 | 5.97 | 6.18 | 6.23 | | | | | | | | |
| | | 6.13 | 5.82 | 6.18 | 6.12 | | | | | | | | |
| | | 6.18 | 5.82 | 6.12 | 6.18 | | | | | | | | |
| UTM 127 | PIPE | 4.88 | 4.88 | 4.84 | 4.82 | | | | | 5.08 | 4.80 | 0.28 | |
| | | 4.92 | 4.92 | 4.91 | 4.86 | | | | | | | | |
| | | 4.98 | 4.86 | 4.98 | 4.83 | | | | | | | | |
| | | 4.88 | 4.91 | 4.92 | 4.88 | | | | | | | | |
| UTM 128 | PIPE | 4.92 | 4.97 | 4.92 | 4.82 | | | | | 5.08 | 4.80 | 0.2 | |
| | | 4.87 | 4.92 | 4.97 | 4.84 | | | | | | | | |
| | | 4.94 | 4.93 | 4.92 | 4.82 | | | | | | | | |
| | | 4.94 | 4.98 | 4.91 | 4.86 | | | | | | | | |
| UTM 129 | PIPE | 4.91 | 4.98 | 4.98 | 4.92 | | | | | 5.08 | 4.72 | 0.36 | |
| | | 4.72 | 4.91 | 5.05 | 5.08 | | | | | | | | |
| | | 4.76 | 4.95 | 4.88 | 5.12 | | | | | | | | |
| | | 4.78 | 5.02 | 4.82 | 5.16 | | | | | | | | |
| Remark : | | | | | | | | | | | | | |







| | | | | |
|--|---|---------|----------------|-------------------------|
|  Soudure THAILAND | ULTRASONIC THICKNESS MEASUREMENT | | Report No. | SL/9-24-06-0418-UTM-001 |
| | REPORT | | Report Name | N/A |
| | | | Date of Test | 13-14 May 2024 |
| | | | Page | 3 of 4 |
| Code: PS-UTM001/02-02 | | Rev: 01 | Revision Date: | 13/05/2024 |
| | | Rev: 01 | | |

DWG.

UTM Mapping













TOP HEAD


BOTTOM HEAD

UTM Mapping diagram showing measurement points A through J around the circumference of the vessel head. Dimensions and labels for various components are provided.


| | | | | |
|--------------------------|---------------------------------|---------------------------|---------------|---------------------------|
| | VISUAL INSPECTION REPORT | | Report No.: | 15/9-24-09-0518-1/170-071 |
| | | | Report No.: | N/A |
| | | | Date of Test: | 13-14 May 2024 |
| Code: 19-000001-0000-002 | Rev. 02 | Effective date: 1/07/2020 | Page: | 4 of 4 |
| | | | Rev.00 | |

| | |
|--|--|
| | |
| <p><i>Faint slight corrosion on top head.</i></p> | <p><i>Faint slight corrosion on top head.</i></p> |
| | |
| <p><i>Normal condition</i></p> | <p><i>Normal condition</i></p> |
| | |
| <p><i>Faint rust on flange of bottom head.</i></p> | <p><i>Faint rust on flange of bottom head.</i></p> |

|  | <h2 style="margin: 0;">ULTRASONIC THICKNESS MEASUREMENT REPORT</h2> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Request No.</td> <td>S/C-28-06-0415-UTMA-002</td> </tr> <tr> <td>Request Ref.</td> <td>N/A</td> </tr> <tr> <td>Date of Test</td> <td>13-14 May 2024</td> </tr> <tr> <td>Page</td> <td>1 of 4</td> </tr> <tr> <td>Rev. No</td> <td>Rev.00</td> </tr> </table> | Request No. | S/C-28-06-0415-UTMA-002 | Request Ref. | N/A | Date of Test | 13-14 May 2024 | Page | 1 of 4 | Rev. No | Rev.00 | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--------------------|----------------------------------|-----------------|--------------------------|--|-----------------------|---|--------------------------|------------------------------|-----------------------|-------------------|---|-------------------|---|-----------------|-------------|---|--------------|---|--------|--|--------|--|---|-------------|--|--------|--|--------|--|
| Request No. | S/C-28-06-0415-UTMA-002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Request Ref. | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of Test | 13-14 May 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Page | 1 of 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. No | Rev.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">CUSTOMER:</td> <td>S&L SPECIALTY POLYMERS CO., LTD.</td> </tr> <tr> <td>PROJECT:</td> <td>Chlorine Tank Inspection</td> </tr> <tr> <td>ITEM DESCRIPTION:</td> <td>Inspection of V13-2-A</td> </tr> <tr> <td>EXAMINATION STANDARD:</td> <td>ASME Section V Article 5</td> </tr> <tr> <td>ACCEPTANCE STANDARDS:</td> <td>Client Specifications</td> </tr> <tr> <td>PROCEDURE:</td> <td>SPR NDT-UTMA 001_Rev.01</td> </tr> </table> | | | CUSTOMER: | S&L SPECIALTY POLYMERS CO., LTD. | PROJECT: | Chlorine Tank Inspection | ITEM DESCRIPTION: | Inspection of V13-2-A | EXAMINATION STANDARD: | ASME Section V Article 5 | ACCEPTANCE STANDARDS: | Client Specifications | PROCEDURE: | SPR NDT-UTMA 001_Rev.01 | | | | | | | | | | | | | | | | | | |
| CUSTOMER: | S&L SPECIALTY POLYMERS CO., LTD. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT: | Chlorine Tank Inspection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITEM DESCRIPTION: | Inspection of V13-2-A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EXAMINATION STANDARD: | ASME Section V Article 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACCEPTANCE STANDARDS: | Client Specifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROCEDURE: | SPR NDT-UTMA 001_Rev.01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INSPECTION CONDITION <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Equipment Name :</td> <td>V13-2-A</td> <td style="width: 25%;">Inspection of :</td> <td>Top and Bottom</td> <td style="width: 25%;">Extent :</td> <td>CMS</td> </tr> <tr> <td>Material :</td> <td>CS</td> <td>Surface :</td> <td>External Surface</td> <td>Temperature :</td> <td>less than 52 C</td> </tr> </table> | | | Equipment Name : | V13-2-A | Inspection of : | Top and Bottom | Extent : | CMS | Material : | CS | Surface : | External Surface | Temperature : | less than 52 C | | | | | | | | | | | | | | | | | | |
| Equipment Name : | V13-2-A | Inspection of : | Top and Bottom | Extent : | CMS | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material : | CS | Surface : | External Surface | Temperature : | less than 52 C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEASUREMENT TOOL DATA <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Brand Name :</td> <td>Olympus</td> <td style="width: 33%;">Model :</td> <td>28 CX Plus</td> <td style="width: 33%;">Serial Number :</td> <td>162286704</td> </tr> <tr> <td>Probe Type :</td> <td>D-790 5M</td> <td>Probe Angle :</td> <td>0°</td> <td>Probe Number :</td> <td>1040364</td> </tr> <tr> <td>Probe Frequency :</td> <td>5 MHz</td> <td>Couplant Type :</td> <td>Gel</td> <td>Ref. Block :</td> <td>Step wedge</td> </tr> </table> | | | Brand Name : | Olympus | Model : | 28 CX Plus | Serial Number : | 162286704 | Probe Type : | D-790 5M | Probe Angle : | 0° | Probe Number : | 1040364 | Probe Frequency : | 5 MHz | Couplant Type : | Gel | Ref. Block : | Step wedge | | | | | | | | | | | | |
| Brand Name : | Olympus | Model : | 28 CX Plus | Serial Number : | 162286704 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Probe Type : | D-790 5M | Probe Angle : | 0° | Probe Number : | 1040364 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Probe Frequency : | 5 MHz | Couplant Type : | Gel | Ref. Block : | Step wedge | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V13-2-A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 33%;">TESTING OPERATOR</th> <th style="width: 33%;">REVIEWED</th> <th style="width: 33%;">MANUFACTURER</th> <th style="width: 33%;">OWNER</th> </tr> <tr> <td style="vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>TESTING OPERATOR :</td> <td>VJVF (1)</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> </td> <td style="vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td>NDT MANAGER</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> </td> <td style="vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> </td> <td style="vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> </td> </tr> </table> | | | TESTING OPERATOR | REVIEWED | MANUFACTURER | OWNER | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>TESTING OPERATOR :</td> <td>VJVF (1)</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> | SIGNATURE : |  | TESTING OPERATOR : | VJVF (1) | DATE : | 27 June 2024 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td>NDT MANAGER</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> | SIGNATURE : |  | NAME : | NDT MANAGER | DATE : | 27 June 2024 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> | NAME : | | DATE : | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> | SIGNATURE : | | NAME : | | DATE : | |
| TESTING OPERATOR | REVIEWED | MANUFACTURER | OWNER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>TESTING OPERATOR :</td> <td>VJVF (1)</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> | SIGNATURE : |  | TESTING OPERATOR : | VJVF (1) | DATE : | 27 June 2024 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td>NDT MANAGER</td> </tr> <tr> <td>DATE :</td> <td>27 June 2024</td> </tr> </table> | SIGNATURE : |  | NAME : | NDT MANAGER | DATE : | 27 June 2024 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> | NAME : | | DATE : | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SIGNATURE :</td> <td></td> </tr> <tr> <td>NAME :</td> <td></td> </tr> <tr> <td>DATE :</td> <td></td> </tr> </table> | SIGNATURE : | | NAME : | | DATE : | | | | | | | | |
| SIGNATURE : |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TESTING OPERATOR : | VJVF (1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE : | 27 June 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SIGNATURE : |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME : | NDT MANAGER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE : | 27 June 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SIGNATURE : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|-----------------------------|--|-------|---------|-------|---------------------------|-------|-------|------------------------------------|-------------------------|-------------------------|-----------------|--------|
|  | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | | | | Report No.: 078-24-04-0418-UTM-002 | | | | |
| | | | | | | | | | Request No.: N/A | | | | |
| | | | | | | | | | Date of Test: 13-14 May 2024 | | | | |
| | | | | | | | | | Page: 2 of 4 | | | | |
| | | | | | | | | | Rev. 00 | | | | |
| | | Code: IS-000001/000-02 | | Rev. 02 | | Effective date: 1/07/2024 | | | | | | | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Nominal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remark |
| | | A | B | C | D | E | F | G | H | | | | |
| V11-2-A | TOP Head | 26.60 | 29.32 | 29.08 | 29.02 | 28.94 | 28.71 | 28.21 | 29.01 | 30.00 | 28.21 | -1.79 | |
| | | 26.60 | 29.30 | 28.68 | 28.48 | 28.18 | 28.76 | 28.76 | 28.68 | 30.00 | 28.18 | -1.82 | |
| | | 26.60 | 28.67 | 28.23 | 29.26 | 28.98 | 28.79 | 28.98 | 28.23 | 30.00 | 28.23 | -1.77 | |
| | | 26.60 | 28.82 | 28.48 | 29.38 | 29.12 | 28.82 | 28.86 | 28.85 | 30.00 | 28.82 | -1.18 | |
| V11-2-A | Bottom Head | 26.41 | 26.94 | 26.94 | 26.39 | 26.70 | 26.60 | 27.07 | 27.00 | 30.00 | 26.41 | -3.59 | |
| | | 26.50 | 27.12 | 26.99 | 27.78 | 26.65 | 27.07 | 26.98 | 26.58 | 30.00 | 26.50 | -3.50 | |
| | | 27.00 | 26.50 | 26.00 | 26.40 | 27.00 | 26.91 | 27.00 | 26.52 | 30.00 | 26.00 | -3.92 | |
| | | 26.72 | 26.58 | 27.43 | 26.08 | 26.64 | 27.00 | 26.91 | 26.47 | 30.00 | 26.47 | -3.53 | |
| | | | | | | | | | | Nominal Thickness (mm.) | | | |
| | | | | | | | | | | Minimum Thickness (mm.) | | | |
| | | | | | | | | | | Wall Loss (mm.) | | | |
| | | | | | | | | | | Remark | | | |




| | | | | | |
|---|---|----------------------------|-------------------|---------------|-------------------------------|
|  | ULTRASONIC THICKNESS MEASUREMENT REPORT | | | | |
| | Report No. : 078-24-04-0418-UTM-002 | | Request No. : N/A | | Date of Test : 13-14 May 2024 |
| | Code : IS-000001/000-02 | | Rev. 02 | | |
| | | Effective date : 1/07/2024 | | Page : 4 of 4 | Rev. 00 |








DWG.



UTM Mapping




| | | | | | | | | | | | | | |
|--|-----------------------------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|-------------------------|---------------------------|--------|
| <div><div>ULTRASONIC THICKNESS MEASUREMENT REPORT</div></div> | | | | | | | | | | Report No.: 15/24-24-0418-UTM-003 | | | |
| | | | | | | | | | | Request No.: N/A | | | |
| | | | | | | | | | | Date of Test: 13-14 May 2024 | | | |
| | | | | | | | | | | Page: 2 of 4 | | | |
| | | | | | | | | | | Rev.00 | | | |
| Code: IS-000001/000-02 | | | | | | | | | | Rev. 02 | | Effective date: 1/07/2024 | |
| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Nominal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remark |
| | | A | B | C | D | E | F | G | H | | | | |
| V11-3-A | TOP Head | 26.26 | 26.19 | 26.48 | 26.48 | 26.69 | 26.43 | 26.18 | 26.61 | 26.20 | 25.16 | -3.24 | |
| | | 26.22 | 26.19 | 26.40 | 26.40 | 26.43 | 26.41 | 26.31 | 26.38 | 26.20 | 25.19 | -1.81 | |
| | | 26.30 | 26.48 | 26.32 | 26.32 | 26.46 | 26.48 | 26.49 | 26.32 | 26.20 | 25.82 | -1.68 | |
| | | 26.27 | 26.49 | 26.14 | 26.14 | 26.43 | 26.23 | 26.29 | 26.00 | 26.20 | 25.86 | -2.04 | |
| V11-3-A | Bottom Head | 26.12 | 25.96 | 26.94 | 26.44 | 26.80 | 26.34 | 26.74 | 26.37 | 26.20 | 25.60 | -4.20 | |
| | | 26.13 | 26.12 | 26.93 | 26.62 | 26.36 | 26.46 | 26.87 | 26.38 | 26.20 | 25.11 | -3.89 | |
| | | 26.50 | 26.00 | 26.00 | 26.00 | 26.61 | 27.00 | 26.00 | 26.40 | 26.20 | 25.86 | -4.24 | |
| | | 26.00 | 26.18 | 27.43 | 26.22 | 26.68 | 26.30 | 26.25 | 26.00 | 26.20 | 25.85 | -4.15 | |
| | | Nominal Thickness (mm.) | | | | | | | | | | | |
| | | Minimum Thickness (mm.) | | | | | | | | | | | |
| | | Wall Loss (mm.) | | | | | | | | | | | |
| | | Remark | | | | | | | | | | | |




| | | | | | | | |
|--|--|---|--|---------------------------|--|------------------------------------|--|
|  | | VISUAL INSPECTION REPORT | | | | Report No.: 078-24-04-0418-UTM-002 | |
| | | | | | | Request No.: N/A | |
| | | | | | | Date of Test: 13-14 May 2024 | |
| Code: IS-000001/000-02 | | Rev. 02 | | Effective date: 1/07/2024 | | Page: 3 of 4 | |
| | | | | | | Rev. 00 | |
|  | |  | | | | | |
| Found severe corrosion on top head. | | Found severe corrosion on top head.(Depth-3.7mm.) | | | | | |
|  | |  | | | | | |
| Found damage on insulation. | | Found rust on nozzle and flange. | | | | | |
|  | |  | | | | | |
| Found rust on nozzle and flange. | | Found rust on flange of bottom head. | | | | | |

| | | | |
|--|--|------------------------------------|---------------------------|
| <div><div></div><div>ULTRASONIC THICKNESS MEASUREMENT REPORT</div></div> | | Report No.: 078-24-04-0418-UTM-003 | |
| | | Request No.: N/A | |
| | | Date of Test: 13-14 May 2024 | |
| Code: IS-000001/000-02 | | Rev. 02 | Effective date: 1/07/2024 |
| Page: 1 of 4 | | Rev. 00 | |
| <div>CUSTOMER: S&L SPECIALTY POLYMERS CO., LTD.</div> <div>PROJECT: Chlorine Tank Inspection</div> <div>ITEM DESCRIPTION: Inspection of V11-3-A</div> <div>EXAMINATION STANDARD: ASME Section V Article 5</div> <div>ACCEPTANCE STANDARD: Client Specifications</div> <div>PROCEDURE: SPM-NET-UTM-001_Rev.00</div> | | | |
| <div>INSPECTION CONDITION</div> <div>Equipment Name: V11-3-A Inspection of: TOP and Bottom Extent: CSN</div> <div>Material: CS Surface: External Surface Temperature: Less than 52 C</div> | | | |
| <div>MEASUREMENT TOOL DATA</div> <div>Brand Name: Olympus Model: S8 DL Plus Serial Number: 1613307104</div> <div>Probe Type: D-790 DM Probe Angle: 0° Probe Number: 1080254</div> <div>Probe Frequency: 5 MHz Couplant Type: Gel Ref. Block: Step wedge</div> | | | |
| <div>V11-3-A</div> <div></div> | | | |
| <div>TESTING OPERATOR</div> <div>REVIEWED</div> <div>MANUFACTURER</div> <div>OWNER</div> | | | |
| <div>SIGNATURE: [Signature] CHONCHAI T... NUT N... [Signature] [Signature]</div> <div>OPERATOR: Chonchai T... NAME: NUT N... DATE: 27 June 2024</div> <div>DATE: 27 June 2024 DATE: 27 June 2024</div> | | | |

| | | | | | | | | | |
|--|--|---|--|---------------------------|--|------------------------------------|--|------------------|--|
|  | | VISUAL INSPECTION REPORT | | | | Report No.: 078-24-04-0418-UTM-003 | | Request No.: N/A | |
| Code: IS-000001/000-02 | | Rev. 02 | | Effective date: 1/07/2024 | | Date of Test: 13-14 May 2024 | | Page: 3 of 4 | |
| Rev. 00 | | | | | | | | | |
|  | |  | | | | | | | |
| Found severe corrosion on top head. | | Found severe corrosion on top head.(Depth-5mm.) | | | | | | | |
|  | |  | | | | | | | |
| Normal condition | | Found damage on insulation cover. | | | | | | | |
|  | |  | | | | | | | |
| Normal condition | | Found rust on flange of bottom head. | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|-------------|-----------------------------|-------|---------------------------------|-------|-------|-------|-------|-------|-------------------------------------|-------|----------------------------|--|-------------------------|--|-----------------|--|--------|--|
| <div><div><div><p>IS</p><p>INDUSTRIAL SONAR</p></div></div><div><p>ULTRASONIC THICKNESS MEASUREMENT REPORT</p></div></div> | | | | | | | | | | Report No. : 17P-24-04-0418-UTM-005 | | | | | | | | | |
| | | | | | | | | | | Request No. : N/A | | | | | | | | | |
| | | | | | | | | | | Date of Test : 13-14 May 2024 | | | | | | | | | |
| Code : 19-000001/000-02 | | | | | | | | | | Rev. 01 | | Revision date : 14/07/2024 | | Page : 2 of 4 | | Rev.02 | | | |
| Area | | Component Type and Position | | Direction Thickness Measurement | | | | | | | | Nominal Thickness (mm.) | | Minimum Thickness (mm.) | | Wall Loss (mm.) | | Remark | |
| | | A | B | C | D | E | F | G | H | | | | | | | | | | |
| V11-5-A | TOP Head | 27.50 | 27.72 | 27.84 | 27.79 | 28.12 | 28.02 | 27.94 | 27.63 | 80.00 | 77.56 | -2.46 | | | | | | | |
| | | 27.60 | 27.35 | 27.71 | 27.64 | 27.95 | 27.76 | 27.60 | 27.88 | 80.00 | 77.89 | -2.05 | | | | | | | |
| | | 27.70 | 27.18 | 27.76 | 27.53 | 27.67 | 27.58 | 27.58 | 28.04 | 80.00 | 77.43 | -2.57 | | | | | | | |
| | | 27.50 | 27.30 | 27.96 | 27.53 | 27.47 | 27.68 | 27.54 | 27.82 | 80.00 | 77.47 | -2.53 | | | | | | | |
| V11-5-A | Bottom Head | 26.41 | 27.33 | 27.32 | 26.29 | 26.25 | 26.91 | 27.01 | 27.53 | 80.00 | 26.21 | -0.20 | | | | | | | |
| | | 26.60 | 26.50 | 27.21 | 27.00 | 26.44 | 26.99 | 26.93 | 27.26 | 80.00 | 26.33 | -0.27 | | | | | | | |
| | | 27.33 | 26.61 | 26.79 | 26.80 | 26.53 | 27.08 | 26.79 | 26.57 | 80.00 | 26.51 | -0.82 | | | | | | | |
| | | 26.70 | 26.36 | 26.51 | 26.88 | 26.46 | 26.67 | 26.67 | 27.00 | 80.00 | 26.21 | -0.49 | | | | | | | |
| | | | | Nominal Thickness (mm.) | | | | | | | | Minimum Thickness (mm.) | | Wall Loss (mm.) | | | | | |



Soudure
 THAILAND
Welding & Fabrication

ULTRASONIC THICKNESS MEASUREMENT REPORT

Report No. : 15/24-04-0418-UTM-005

Request No. : N/A

Date of Test : 13-14 May 2024

Page : 1

4 of 4

Rev.00

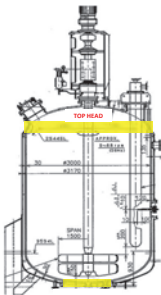
Code : 19-000001/000-02

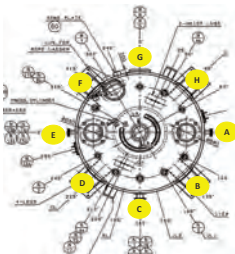
Rev. 01



Revision date : 14/07/2024

DWG.

UTM Mapping









| | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|---------------------------------------|-----------------------------|
| <div><div>ULTRASONIC THICKNESS MEASUREMENT REPORT</div></div> | | | | | | | | | | Report No. : 15/24-24-04 0418-UTM-006 | |
| | | | | | | | | | | Request No. : N/A | |
| <div><div>Engineer</div></div> | | | | | | | | | | Date of Test : 13-14 May 2024 | |
| Code : 19-000001/000-02 | | | | | | | | | | Rev. 01 | Effective date : 14/07/2024 |
| | | | | | | | | | | Page : 2 | Rev.03 |

| Area | Component Type and Position | Direction Thickness Measurement | | | | | | | | Nominal Thickness (mm.) | Minimum Thickness (mm.) | Wall Loss (mm.) | Remark |
|---------|-----------------------------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------------------------|-------------------------|-----------------|--------|
| | | A | B | C | D | E | F | G | H | | | | |
| V11-6-A | TOP Head | 28.20 | 27.72 | 28.42 | 27.87 | 28.12 | 27.38 | 28.12 | 27.85 | 80.00 | 77.88 | -2.84 | |
| | | 28.18 | 27.85 | 28.34 | 27.58 | 27.71 | 27.76 | 28.04 | 27.88 | 80.00 | 77.56 | -2.82 | |
| | | 28.12 | 27.58 | 28.68 | 27.72 | 27.53 | 28.03 | 28.34 | 27.82 | 80.00 | 75.53 | -2.47 | |
| | | 28.20 | 27.48 | 27.87 | 27.68 | 27.80 | 27.84 | 28.09 | 27.98 | 80.00 | 77.88 | -2.82 | |
| V11-6-A | Bottom Head | 25.71 | 25.99 | 26.04 | 27.00 | 25.64 | 25.43 | 25.43 | 25.55 | 80.00 | 25.43 | -0.57 | |
| | | 26.50 | 26.70 | 26.40 | 26.36 | 25.28 | 25.48 | 25.48 | 25.86 | 80.00 | 25.28 | -2.72 | |
| | | 25.50 | 26.00 | 26.66 | 26.28 | 25.60 | 25.56 | 25.58 | 25.80 | 80.00 | 25.58 | -0.84 | |
| | | 26.00 | 26.18 | 26.38 | 26.00 | 25.80 | 25.41 | 25.34 | 25.90 | 80.00 | 25.41 | -4.59 | |
| | | | | | | | | | | | | | |



INSTITUT
eSoudure
THAILAND

| | | | | | | | | | |
|--|--|---------------------------------|--|--------------------------------------|---|-------------------|--|-------------------------------|--|
|  | | VISUAL INSPECTION REPORT | | Report No. : 05/9-24-04-0418-UTM-005 | | Request No. : N/A | | Date of Test : 13-14 May 2024 | |
| Code : 19-000001/000-02 | | Rev. 01 | | Effective date : 14/07/2024 | | Page : 3 of 4 | | Rev.00 | |
|  | | | | |  | | | | |
| Found moderate corrosion on top head.[Depth= 1mm.] | | | | | Normal condition | | | | |
|  | | | | |  | | | | |
| Normal condition | | | | | Normal condition | | | | |
|  | | | | |  | | | | |
| Normal condition | | | | | Found rust on flange of bottom head. | | | | |

| | | | | | | | | | |
|---|--|--|--|-------------------------------------|--|-------------------|--|-------------------------------|--|
|  <div>INDUSTRIAL SPECIALITY SOLUTIONS</div> | | ULTRASONIC THICKNESS MEASUREMENT REPORT | | Report No. : 6/9-24-04-0418-UTM-006 | | Request No. : N/A | | Date of Test : 13-14 May 2024 | |
| Code : 19-000001/000-02 | | Rev. 01 | | Revision date : 14/07/2024 | | Page : 1 of 4 | | Rev.00 | |
| CUSTOMER : | | | | | | | | | |
| S&L SPECIALTY POLYMER CO., LTD. | | | | | | | | | |
| PROJECT : | | | | | | | | | |
| Chlorine Tank Inspection | | | | | | | | | |
| ITEM DESCRIPTION : | | | | | | | | | |
| Inspection of V11-6-A | | | | | | | | | |
| EXAMINATION STANDARD : | | | | | | | | | |
| ASME Section V Article 5 | | | | | | | | | |
| ACCEPTANCE STANDARD : | | | | | | | | | |
| Client Specifications. | | | | | | | | | |
| PROCEDURE : | | | | | | | | | |
| SPS-NOT-UTM-004-04 | | | | | | | | | |
| HOPEFICATION CONDITION | | | | | | | | | |
| TOP and Bottom | | | | | | | | | |
| Equipment Name : | | | | | | | | | |
| V11-6-A | | | | | | | | | |
| Inspection of : | | | | | | | | | |
| Internal | | | | | | | | | |
| Extent : | | | | | | | | | |
| CML | | | | | | | | | |
| Material : | | | | | | | | | |
| Surfaced | | | | | | | | | |
| Temperature : | | | | | | | | | |
| Not less 5.2 C | | | | | | | | | |
| MEASUREMENT TOOL DATA | | | | | | | | | |
| Brand Name : | | | | | | | | | |
| Olympus | | | | | | | | | |
| Model : | | | | | | | | | |
| 38 CL Pro | | | | | | | | | |
| Serial Number : | | | | | | | | | |
| 161288704 | | | | | | | | | |
| Probe Type : | | | | | | | | | |
| D-780 SM | | | | | | | | | |
| Probe Angle : | | | | | | | | | |
| 0° | | | | | | | | | |
| Serial Number : | | | | | | | | | |
| 12040164 | | | | | | | | | |
| Probe Frequency : | | | | | | | | | |
| 5 MHz | | | | | | | | | |
| Couplant Type : | | | | | | | | | |
| Gel | | | | | | | | | |
| Ref. Block : | | | | | | | | | |
| Stop wedge | | | | | | | | | |
| V11-6-A | | | | | | | | | |
|  | | | | | | | | | |
| TESTING OPERATOR | | | | | | | | | |
| REVIEWED | | | | | | | | | |
| MANUFACTURER | | | | | | | | | |
| OWNER | | | | | | | | | |
| SIGNATURE : | | | | | | | | | |
| NAME : | | | | | | | | | |
| DATE : | | | | | | | | | |
| TESTING : | | | | | | | | | |
| NAME : | | | | | | | | | |
| DATE : | | | | | | | | | |
| OPERATOR : | | | | | | | | | |
| NAME : | | | | | | | | | |
| DATE : | | | | | | | | | |

| | | | | | |
|--|--|---------------------------------|--|-------------------------------------|--|
|  | | VISUAL INSPECTION REPORT | | Report No. : 079-24-04-0418-UTM-006 | |
| | | | | Request No. : N/A | |
| | | | | Date of Test : 13-14 May 2024 | |
| Code : 19-000001/000-02 | | Rev. 01 | | Effective date : 14/07/2024 | |
| | | | | Page : 3 of 4 | |
| | | | | Rev.00 | |

| | |
|--|---|
|  |  |
| Normal condition | Normal condition |
|  |  |
| Normal condition | Normal condition |
|  |  |
| Normal condition | Found rust on flange of bottom head. |

ภาคผนวก ข-44

โครงการเข้าเยี่ยมชมโรงงาน และโครงการส่งเสริมการมีส่วนร่วม
ของประชาชนในการกำกับโรงงาน

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

วันที่ 24 กรกฎาคม 2566

เรียน ผู้อำนวยการโรงเรียนมาบชลูด

- กำหนดการโครงการเยี่ยมชมโรงงาน บริษัท เอส แอนด์ แอล สปเปเชียลตี โพลีเมอร์ จำกัด ประจำปี 2566
- แบบตอบรับการเข้าร่วมโครงการเยี่ยมชมโรงงาน (QR Code ด้านล่าง)

บริษัท เอส แอนด์ เอส เพปเปอร์ จำกัด ประกอบกิจการผลิตงานพีวีซี หรือ CPVC Resin (Chlorinated Polyvinyl Chloride Resin) ตั้งอยู่เลขที่ 5 ถนน มังละเมืองพานะ 3-1 ตำบลห้วยปือ อำเภอมือเืองระยอง จังหวัดระยอง นิคมอุตสาหกรรมดับบลิวเอชเอภาคตะวันออก (Mapa Zone) มีอาณาเขตที่ตั้งบริเวณเชิงเขาพระบาท ด้านบนพื้นที่ ๕๐๐ ไร่ และสภาพประกอบทางกายภาพของพื้นที่ซึ่งทางเข้าอยู่ตามฝั่งทางประกอบเนินเขา เอส แอนด์ เอส เพปเปอร์ จำกัด เพื่อให้บริการถึงขั้นตอนกระบวนการผลิต ซึ่งนำไปสู่ความเข้าใจในสภาพการดำเนินงานของบริษัทมากขึ้น

ทั้งนี้ บริษัทฯ จะจัดโปรแกรมเยี่ยมชมโรงงาน ในระหว่างวันที่ 29 – 30 สิงหาคม 2566 เวลา 09.30 – 12.00 น. โดยมีคณะ
ที่นำมา เป็นผู้ใดก็ตามที่บริษัทฯ อนุญาตขอยกเว้น ในการ บริษัทฯ ได้กำหนดให้ส่งแบบตอบรับการเข้าร่วมโครงการ **ภายในวันที่ 15 สิงหาคม**
2566 ผ่านทาง QR Code ดังตำแหน่งแนบมาพร้อมนี้ โดยสามารถส่งตัวแทนหรือผู้เข้าร่วมสูงสุดเพียง 2 ท่าน ต่อ 1 หน่วยงานเท่านั้น ทาง
บริษัทฯ หวังเป็นอย่างยิ่งว่า จะได้นำเสนอประสิทธิภาพ ด้านคุณภาพ ผู้แทนหน่วยงานราชการที่เกี่ยวข้อง และสถานประกอบการโดยรอบ
พื้นที่ประกอบกิจการในโครงการเยี่ยมชมโรงงานในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา



หมายเหตุ : ผู้ติดต่อและประสานงาน

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

วันที่ 24 กรกฎาคม 2566

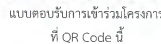
เรียน เจ้าอาวาสวัดมาบขลุ่ด

สิ่งที่ส่งมาด้วย 1. กำหนดการโครงการเยี่ยมชมโรงงาน บริษัท เอส แอนด์ แอล สปเปเชียลตี โพลีเมอร์ จำกัด ประจำปี 2566
2. แบบตอบรับการเข้าร่วมโครงการเยี่ยมชมโรงงาน (QR Code ด้านล่าง)

บริษัท เอส แอนด์ เอส ซีแอลที พลัสเมอร์ จำกัด ประกอบกิจการผลิตและจัดจำหน่าย หรือ CPVC Resin (Chlorinated Polyvinyl Chloride Resin) ตั้งอยู่เลขที่ 5 ถนน ห้างเอี่ยมเก่า 3-1 ตำบลหนองโสน อำเภอเมืองระยอง จังหวัดระยอง โดยมีลูกค้าหลักประกอบไปด้วยองค์กรนอก (Non-Local) มีความยินดีที่จะเรียนรู้เชิญปะชาชน ผู้มีชุมชน ผู้มีหน่วยงานราชการที่เกี่ยวข้อง และสถาบันการศึกษาที่เกี่ยวข้องทั้งในระดับจังหวัดและระดับประเทศของบริษัท เอส แอนด์ เอส ซีแอลที พลัสเมอร์ จำกัด เพื่อให้ทราบถึงขั้นตอนกระบวนการผลิต ซึ่งนำไปสู่ความเข้าใจในแนวทางการดำเนินงานของบริษัทมากยิ่งขึ้น

ทั้งนี้ บริษัทฯ จะจัดให้มีการเยี่ยมชมโรงงาน ในระหว่างวันที่ 29 - 30 สิงหาคม 2566 เวลา 09.30 - 12.00 น. โดยมีคณะ
ที่นำมา เป็นผู้มีการติดต่อและแนะนำข้อมูล ในการ บริษัทฯ ได้กำหนดให้ส่งแบบขอรับการเข้าร่วมโครงการภายในวันที่ 15 สิงหาคม
2566 ผ่านทาง QR Code ดังล่างที่แนบมาพร้อมนี้ โดยสามารถส่งตัวแทนหรือผู้ซึ่งมีคุณสมบัติ 2 ท่าน ต่อ 1 หน่วยงานเท่านั้น ทาง
บริษัทฯ เหนียวแน่นอย่างจริงจังที่ได้จัดขึ้นเพื่อประชาชน ผู้มีสุขภาพ ผู้แทนหน่วยงานราชการที่เกี่ยวข้อง และสถานประกอบการโดยอา
ยัติทั้งที่โรงงานภายในโครงการเยี่ยมชมโรงงานในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา



หมายเหตุ : ผู้ติดต่อและประสานงาน

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

วันที่ 24 กรกฎาคม 2566

เรียน ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมร่วมดำเนินการกลุ่มมาตาบุตร

- กำหนดการโครงการเยี่ยมชมโรงงาน บริษัท เอส แอนด์ แอล สปเชียลตี้ โพลีเมอร์ จำกัด ประจำปี 2566
- แบบตอบรับการเข้าร่วมโครงการเยี่ยมชมโรงงาน (QR Code ด้านล่าง)

บริษัท เอส แอนด์ เอส โพลีเมอร์ โพลีเมอร์ จำกัด ประกอบกิจการผลิตสังกะสีหรือ CPVC Resin (Chlorinated Polyvinyl Chloride Resin) ตัวย่อเลขที่ 5 บนถังเมื่อเวลาประมาณ 3-1 คาบหว่ายไปยังอ่างเก็บน้ำของโรงเรียน จังหัดระยอง นิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (บางตาพัน) เข้ามายังดินที่จะเรียนเชิญประชาชน ผู้ค้าขาย ผู้แทนหน่วยงานราชการที่เกี่ยวข้อง และสถาบันประกอบการโดยรอบ (มาทาง) เข้ามาชมแบบจำลองของบ่อน้ำทิ้ง เอส แอนด์ เอส โพลีเมอร์ โพลีเมอร์ จำกัด เพื่อให้ทราบถึงขั้นตอนการประกอบกิจการ ซึ่งยังไม่สามารถเข้าถึงสภาพการดำเนินงานของบ่อน้ำทิ้งมากนัก

ทั้งนี้ บริษัทฯ จะจัดให้มีการเยี่ยมชมโรงงาน ในระหว่างวันที่ 29 – 30 สิงหาคม 2566 เวลา 09.30 – 12.00 น. โดยมีคณะทีมงาน เป็นผู้ให้การต้อนรับและนำเสนอข้อมูล ในกรณี บริษัทฯ ได้กำหนดให้ส่งแบบตอบรับการเข้าร่วมโครงการภายในวันที่ 15 สิงหาคม 2566 ผ่านทาง QR Code ดังตำแหน่งแนบมาพร้อมนี้ โดยสามารถส่งวันหรือผู้ใดเข้าร่วมสูงสุดเพียง 2 ท่าน ต่อ 1 หน่วยงานเท่านั้น ทางบริษัทฯ หวังเป็นอย่างยิ่งว่า จะได้อิทธิพลประจักษ์ ผู้มีคุณงาม ผู้หนึ่งทรงงานราชการที่เกี่ยวข้อง และสถานประกอบการโดยรอบ ที่ทั้งโรงงานพบเห็นในการเยี่ยมชมโรงงานในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา



หมายเหตุ : ผัดติดต่อและประสานงาน

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

วันที่ 24 กรกฎาคม 2566

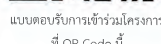
เรียน ผู้อำนวยการโรงเรียนบ้านหนองหญ้า

สิ่งที่ส่งมาด้วย 1. กำหนดการโครงการเยี่ยมชมโรงงาน บริษัท เอส แอนด์ แอล สปเปเชียลตี โพลีเมอร์ จำกัด ประจำปี 2566
2. แบบตอบรับการเข้าร่วมโครงการเยี่ยมชมโรงงาน (OR Code ด้านล่าง)

บริษัท เอส แอนด์ เอส เพคเกจจิง โพลีเมอร์ จำกัด ประกอบกิจการผลิตผลิตภัณฑ์ หรือ CPVC Resin (Chlorinated Polyvinyl Chloride Resin) ตั้งอยู่เลขที่ 5 ถนน มีเนื้อที่เฉพาะ 3-1 ตำบลห้วยบึง อำเภอเมืองระยอง จังหวัดระยอง นิคมอุตสาหกรรมตำบลบ่อชะเอมตะวันออก (นาพาหุ) มีกรรมสิทธิ์ที่ดินเป็นลักษณะราชทาน ภูิกัญชาม ภูผามั่นหมายรนาราชการที่เกี่ยวข้อง และสถานการณ์การโคโรนาซึ่งได้โรงงานเข้าเยี่ยมชมของพนักงาน เอส แอนด์ เอส เพคเกจจิง โพลีเมอร์ จำกัด เพื่อให้ความรู้และสถานการณ์การเกิด ซึ่งไปสู่ความเข้าใจในภาพการดำเนินการของบริษัทร่วมกันดังนี้

ทั้งนี้ บริษัทฯ จะจัดให้มีการเยี่ยมชมโรงงาน ในระหว่างวันที่ 29 – 30 สิงหาคม 2566 เวลา 09.30 – 12.00 น. โดยมีคณะที่ปรึกษา เป็นผู้ให้การต้อนรับและนำเสนอข้อมูล ในกรณี บริษัทฯ ได้กำหนดให้ส่งแบบตอบรับการเข้าร่วมโครงการภายในวันที่ 15 สิงหาคม 2566 ผ่านทาง QR Code ดังตำแหน่งภาพพร้อม โดยสามารถส่งตัวแทนหรือผู้เข้าร่วมสูงสุดเพียง 2 ท่าน ต่อ 1 หน่วยงานเท่านั้น ทางบริษัทฯ หวังเป็นอย่างยิ่งว่า จะได้อธิบายประกอบชี้แจง นำผู้เข้าชม ผู้แทนหน่วยงานราชการที่เกี่ยวข้อง และสถานประกอบการที่รอบรู้ถึงโรงงานพัฒนาโรงงานสีเขียวโรงงานแห่งนี้

ตั้งรับแบบฉบับที่โรงประตูลิลาภ



หมายเหตุ : ผู้ติดต่อและประสานงาน

5 Phang-Muang Chapoh 3-1 Rd., Huaypong, Muang-Rayong, Rayong 21150
Tel: 038-010210 Fax: 038-010205

ภาคผนวก ข-45

แผนการนำเสนอผลการดำเนินการตามมาตรการติดตามฯ
ในกลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด ประจำปี พ.ศ. 2566

ที่ อก 5106.5/0360



สำนักงานนิคมอุตสาหกรรมมาบตาพุด
เลขที่ 1 ถนนไอ-1 ตำบลมาบตาพุด
อำเภอเมืองระยอง จังหวัดระยอง 21150

18 เมษายน 2567

เรื่อง แจ้งกำหนดการนำเสนอผลการดำเนินงานตามมาตรการติดตาม ตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรม พื้นที่มาบตาพุด ประจำปี 2567

เรียน กรรมการ/ผู้จัดการโรงงาน

อ้างถึง คำสั่ง กนอ. ที่ 121/2566 เรื่อง แต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (EIA Monitoring Committee) โครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ 2) ลงวันที่ 14 กุมภาพันธ์ 2566

สิ่งที่ส่งมาด้วย แผนการนำเสนอผลการดำเนินงานตามมาตรการติดตาม ตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรม พื้นที่มาบตาพุด ประจำปี 2567

ตามที่ การนิคมอุตสาหกรรมแห่งประเทศไทย (กนอ.) ได้ดำเนินการจัดประชุมเพื่อรายงานผลการดำเนินงานตามมาตรการติดตาม ตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรม พื้นที่มาบตาพุด ตั้งแต่ปี 2553 และอย่างต่อเนื่องทุกปี โดยร่วมกับผู้แทนชุมชนเทศบาลเมืองมาบตาพุด ผู้แทนชุมชนเทศบาลตำบลบ้านฉาง ผู้แทนกลุ่มประมงเรือเล็กพื้นที่มาบตาพุดและบ้านฉาง ผู้แทนหน่วยราชการ และหน่วยงานที่เกี่ยวข้องในพื้นที่ เพื่อประเมินศักยภาพการบริหารจัดการสิ่งแวดล้อมและความปลอดภัย รวมถึงความรับผิดชอบต่อสังคมของโรงงาน นั้น

สำนักงานนิคมอุตสาหกรรมมาบตาพุด (สนพ.) ขอแจ้งกำหนดการนำเสนอผลการดำเนินงานตามมาตรการติดตาม ตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรม พื้นที่มาบตาพุด ประจำปี 2567 ซึ่งประกอบไปด้วยโรงงานที่ต้องจัดทำรายงานวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA) และโรงงานที่ต้องจัดทำรายงานวิเคราะห์ผลกระทบสิ่งแวดล้อมเบื้องต้น (IEE) **ตั้งแต่วันที่ 20 มิถุนายน - วันที่ 6 กันยายน 2567 ณ ห้องประชุมอุทัย สำนักงานนิคมอุตสาหกรรมมาบตาพุด จังหวัดระยอง** ทั้งนี้ท่านสามารถ Download กำหนดการนำเสนอ และหัวข้อการนำเสนอของโรงงานพร้อมตัวอย่าง ได้ทาง [website : www.mtpie.com](http://www.mtpie.com) โดยมอบหมายให้นางสาว ธัญญพร ชาดิกำแหง อีเมล thanyaporn.ch@yahoo.com โทรศัพท์ 089 7777070 เป็นผู้ประสานงาน

จึงเรียนมาเพื่อโปรดทราบ และกรุณาจัดเตรียมเจ้าหน้าที่และข้อมูลเพื่อประกอบการดำเนินงานตามวันและเวลาในกำหนดการนำเสนอของโรงงานดังกล่าว จะขอบคุณยิ่ง

ขอแสดงความนับถือ

(นายฉกาจ พัฒนศรี)

ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมมาบตาพุด

งานปฏิบัติการสิ่งแวดล้อมและความปลอดภัย

โทร 038 683127 โทรสาร 038 683941



กำหนดการ คำสั่ง กนอ.



คำสั่งการนิคมอุตสาหกรรมแห่งประเทศไทย

ที่ อ ๒๒ /๒๕๖๖

เรื่อง แต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (EIA Monitoring Committee) โครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑)

ตามที่ได้มีคำสั่งการนิคมอุตสาหกรรมแห่งประเทศไทย ที่ ๒๙๑/๒๕๖๓ เรื่อง แต่งตั้งคณะกรรมการติดตามตรวจสอบการดำเนินงานตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด จังหวัดระยอง ลงวันที่ ๒๒ มิถุนายน ๒๕๖๓ และโดยที่คณะกรรมการผู้ชำนาญการพิจารณารายงานการประเมินผลกระทบสิ่งแวดล้อมโครงการอุตสาหกรรมและระบบสาธารณูปโภคที่สนับสนุน ในการประชุมครั้งที่ ๑๑/๒๕๖๕ เมื่อวันที่ ๗ เมษายน ๒๕๖๕ ได้มีมติให้ความเห็นชอบรายงานการประเมินผลกระทบสิ่งแวดล้อมสำหรับโครงการ กิจการหรือการดำเนินการที่อาจมีผลกระทบต่อทรัพยากรธรรมชาติ คุณภาพสิ่งแวดล้อม สุขภาพ อนามัย คุณภาพชีวิตของประชาชนในชุมชนอย่างรุนแรงโครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑) โดยให้ปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมที่สำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อมกำหนดโดยเคร่งครัด นั้น

อาศัยอำนาจตามความในมาตรา ๒๘ แห่งพระราชบัญญัติการนิคมอุตสาหกรรมแห่งประเทศไทย พ.ศ. ๒๕๒๒ จึงให้ยกเลิกคำสั่งดังกล่าวข้างต้น และแต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (EIA Monitoring Committee) โครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑) ขึ้นใหม่ โดยมีองค์ประกอบ หน้าที่และอำนาจ ดังต่อไปนี้

/(๗) ผู้อำนวยการ...

| | |
|---|-------------------------|
| (๗) ผู้อำนวยการโรงพยาบาลเฉลิมพระเกียรติ สมเด็จพระเทพรัตนราชสุดาฯ สยามบรมราชกุมารี ระยอง | กรรมการ |
| (๘) นายกเทศมนตรีเมืองมาบตาพุด | กรรมการ |
| (๙) นายกเทศมนตรีเมืองบ้านฉาง | กรรมการ |
| (๑๐) นายกเทศมนตรีตำบลบ้านฉาง | กรรมการ |
| ๑.๒ ภาคประชาชน | |
| (๑) ผู้แทนประชาชนในเขตเทศบาลเมืองมาบตาพุด จำนวน ๖ คน | กรรมการ |
| (๒) ผู้แทนประชาชนในเขตเทศบาลตำบลบ้านฉาง จำนวน ๓ คน | กรรมการ |
| (๓) ผู้แทนประชาชนในเขตเทศบาลเมืองบ้านฉาง จำนวน ๒ คน | กรรมการ |
| (๔) ผู้แทนประชาชนกลุ่มประมงเรือเล็กพื้นที่มาบตาพุด จำนวน ๑ คน | กรรมการ |
| (๕) ผู้แทนประชาชนกลุ่มประมงเรือเล็กพื้นที่บ้านฉาง จำนวน ๑ คน | กรรมการ |
| ๑.๓ ผู้แทนโครงการ | |
| (๑) พนักงานสำนักงานนิคมอุตสาหกรรมมาบตาพุด ที่ได้รับมอบหมาย | กรรมการ และเลขานุการ |
| (๒) พนักงานสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด) ที่ได้รับมอบหมาย | กรรมการ และเลขานุการ |

ให้กรรมการมีวาระการดำรงตำแหน่งคราวละ ๔ ปี นับแต่วันที่ได้รับการแต่งตั้ง โดยมี
ระยะเวลาในการดำรงตำแหน่งติดต่อกันไม่เกิน ๒ วาระ สำหรับการพ้นจากตำแหน่ง และการประชุม
คณะกรรมการฯ ให้เป็นไปตามที่กำหนดในมาตราฯ

๒. หน้าที่และอำนาจ

๒.๑ รับรู้กระบวนการตรวจวัดคุณภาพสิ่งแวดล้อมและผลการตรวจวัดตามมาตรการ
ติดตามตรวจสอบผลกระทบสิ่งแวดล้อมของโครงการ รวมถึงมีส่วนร่วมปรึกษาหารือและให้ข้อเสนอแนะ
ต่อผลการดำเนินการ และเผยแพร่ประชาสัมพันธ์ให้ชุมชนและหน่วยงานที่เกี่ยวข้องทราบ เพื่อแสดงความ
โปร่งใสในการบริหารจัดการด้านสิ่งแวดล้อม

๒.๒ ติดตามตรวจสอบการดำเนินงานของโครงการ รวมถึงโรงงานอุตสาหกรรมในพื้นที่
โครงการ ให้ดำเนินการสอดคล้องกับระเบียบ มาตรฐาน กฎหมายที่เกี่ยวข้อง และเป็นตัวแทนของชุมชน
ในการตรวจเยี่ยมโครงการ

๒.๓ รับฟังความคิดเห็น พิจารณาข้อขัดแย้ง ปัญหา หรือข้อพิพาทที่มีสาเหตุมาจากการ
ดำเนินโครงการ ตลอดจนหาแนวทางในการป้องกันหรือแก้ไขปัญหาร่วมกันเพื่อหาข้อสรุป ยุติความขัดแย้ง
และสร้างความสมานฉันท์ โดยคำนึงถึงประโยชน์ที่แท้จริงของชุมชน และเป็นเวทีกลางในการแลกเปลี่ยน
ข้อมูลข่าวสาร

๒.๔ แต่งตั้งบุคคลหรือคณะบุคคลเพื่อดำเนินการเฉพาะกิจจากเรื่องร้องเรียน
เกี่ยวกับปัญหาและผลกระทบที่ได้รับจากการดำเนินโครงการ รวมทั้งตรวจสอบข้อเท็จจริงและสรุป
แนวทางการป้องกันและแก้ไข

๒.๕ เป็นที่ปรึกษาหรือมีส่วนร่วมในการเจรจาไกล่เกลี่ยและหาข้อยุติ กรณีมีข้อพิพาท
ปัญหาสิ่งแวดล้อมระหว่างโครงการกับชุมชน รวมทั้งพิจารณาค่าชดเชยกรณีเกิดผลกระทบสิ่งแวดล้อม
ระหว่างชุมชนกับโครงการ ติดตาม ดูแลการจ่ายค่าชดเชยจนแล้วเสร็จหากพิสูจน์ได้ว่าผลกระทบที่เกิดขึ้น
เกิดมาจากโครงการ

๒.๖ จัดให้มีโครงการหรือกิจกรรมให้ความรู้ด้านสิ่งแวดล้อมแก่ชุมชน

๒.๗ สรุปผลการดำเนินงานของโครงการ และรายงานให้ผู้ว่าการทราบ หรือพิจารณา
เป็นระยะ

ทั้งนี้ ตั้งแต่บัดนี้เป็นต้นไป

สั่ง ณ วันที่ ๑๔ กุมภาพันธ์ พ.ศ. ๒๕๖๖



(นายวิรัช อัมระपाल)
ผู้ว่าการการนิคมอุตสาหกรรมแห่งประเทศไทย

ตารางกำหนดการนำเสนอผลการดำเนินงานตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (EIA Monitoring)

กลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด ประจำปี 2567

| ลำดับ | ชื่อผู้ประกอบการ | นิคมฯ | EIA | IEE | Risk | ชื่อโครงการ | วัน-เวลา | | ผู้แทนภาพประชาชน ตามคำสั่ง กอ.ที่ 212/2566 ชุมชน ทม.มาบตาพุด (6) ทบ.บ้านฉาง (2) ทค.บ้านฉาง (3) กลุ่มประมง มาบตาพุด (1) กลุ่มประมง บ้านฉาง (1) |
|-------|--|-------|-----|-----|------|--|------------|----------------|---|
| 1 | นิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (มาบตาพุด) | WHA | ✓ | | | | 25 ก.ค. 67 | 09:00-10:30 น. | โชติหิมนิรภาพ ขอยศิริ อิสลาม หัวหน้าักพัฒนา โชติหิณ2 ขอย |
| 2 | นิคมอุตสาหกรรมเอเชีย | AIE | ✓ | | | | | 10:30-12:00 น. | ประปา ชมวิหเหนือ ปกป้องสถาบัน เน้นสำเหร2 |
| 3 | นิคมอุตสาหกรรมอาร์ โอ แอล | RIL | ✓ | | | | | 13:00-14:30 น. | เนินกระปรอก1 ประมงพูน4 ประมงบ้านพลา |
| 4 | นิคมอุตสาหกรรมผาแดง | PDP | ✓ | | | | | 14:30-16:30 น. | |
| 5 | บริษัท ไมเนทพี เทอร์ฟอร์แมนซ์ แมททีเรียลส์ (ประเทศไทย) จำกัด | AIE | | ✓ | | โครงการโรงงานผลิตซีโตน (ส่วนขยาย ครั้งที่ 1) | 26 ก.ค. 67 | 09:00-10:30 น. | บ้านบน เขาไผ่ นองแปบ มาบชุต-ซากกลาง ตลาดห้วยโป่ง มาบ |
| 6 | บริษัท ชิน-เอชยู ซีอีโตนส์ (ประเทศไทย) จำกัด | AIE | | ✓ | | โครงการส่วนขยายของ บจก. ชินเอชยู ซีอีโตนส์ (ประเทศไทย) จำกัด | | 10:30-12:00 น. | ข้า-สำนักอัยยอน เทพมงคล มรุรส เนินกระปรอก2 แผ่นดินไท |
| 7 | บริษัท ชิน-เอชยู นิวแมทีเรียลส์ (ประเทศไทย) จำกัด เดิมชื่อ บริษัท อีวอน ไทย แอโรจือ จำกัด | AIE | | ✓ | | โครงการผลิตหุ้ซีอีทีไคโดยอิดส์ | | 13:00-14:30 น. | พูน3 ประมงกัยออด ประมงหนองแปบ |
| 8 | บริษัท เอเชีย ซีอีโตนส์ ไมเนเมอร์ จำกัด | AIE | | ✓ | | โครงการผลิตซีอีโตนส์ไมเนเมอร์ ระยะก่อสร้างและระยะดำเนินการ | | 14:30-16:30 น. | |
| 9 | บริษัท โกลว์ พลังงาน จำกัด (มหาชน) | AIE | | ✓ | | โครงการโรงไฟฟ้าพลังงานแสงอาทิตย์ | 1 ส.ค. 67 | 09:00-10:30 น. | เกาะกก มาบยา กรอถายชา เนินพยอม วัดห้วยโป่ง |
| 10 | บริษัท พีพีที เอ็มซีซี ปิโอบีเอ็ม จำกัด | AIE | | ✓ | | ผลิตพลาสติกชีวภาพพรีโอบีทีวีทีเอ็นซีซินเนต หรือพีบีเอส (PBS) | | 10:30-12:00 น. | มาบข้า-มาบโน สามัคคีน้ำชัย บ้านฉาง-พลาใหม่ ล้อเกวียน ประชุม |
| 11 | บริษัท พูนกร (ประเทศไทย) จำกัด | AIE | | ✓ | | โครงการโรงงานผลิตกรดแลคติก | | 13:00-14:30 น. | มิตร พูนน1 ประมงกันปัสสามัคคี ประมงพลา-อุ้ตะเภาสามัคคี |
| 12 | บริษัท โทพาล คอร์ปอเรชั่น (ประเทศไทย) จำกัด | AIE | | ✓ | | โครงการผลิตแลคทีค และโพลิแลคติกแอซิด (Polylactic Acid หรือ PLA) | | 14:30-16:30 น. | |
| 13 | บริษัท อินโดรามา โปไทรเมก จำกัด | AIE | | ✓ | | โครงการโรงงานผลิต Purified Terephthalic Acid (PTA) | 2 ส.ค. 67 | 09:00-10:30 น. | หนองแดงเม วัดโสกถ นองบัวแดง บ้านพลง ห้วยโป่งโน1 วัดมบ |
| 14 | บริษัท เอ็นวีโค จำกัด | AIE | | ✓ | | โครงการโรงงานผลิตเม็ดพลาสติกหมุนเวียนคุณภาพสูง | | 10:30-12:00 น. | ตาพุด หองบ่วงใหม่ ร่มสุพัฒนา สีกัก พูน2 บ่ออก ประมงปาก |
| 15 | บริษัท จีซี เอสเตท จำกัด | AIE | | ✓ | | โครงการโรงผลิตน้ำอุตสาหกรรม | | 13:00-14:30 น. | คลองตากวน ประมงพูน |
| 16 | บริษัท เซอร์คูลาร์ พลาส จำกัด | RIL | | ✓ | | โครงการนำพลาสติกใช้แล้วกลับมาเป็นวัตถุดิบและเชื้อเพลิง | | 14:30-16:30 น. | |
| 17 | บริษัท แกนตรัสสยามคอมโพสิต จำกัด | RIL | | ✓ | | โครงการผลิตเม็ดพลาสติกโพลิโพรไพน์คอมพาวด์ | 8 ส.ค. 67 | 09:00-10:30 น. | มาบชุต สำนักกระบก ขอยร่วมพัฒนา นองน้ำเย็น ห้วยโป่งโน2 |
| 18 | บริษัท มาบตาพุดโอเลฟินส์ จำกัด | RIL | | ✓ | | โครงการผลิตโอเลฟินส์เกรดเอทีเอ็นและเกรดโพรโพลีน | | 10:30-12:00 น. | ตลาดมาบตาพุด มณียา-สายสมเย็น โรงเรียนเทศบาล3 ห้วยมะหาด |
| 19 | บริษัท ไทยเอ็นเอ็มเอ จำกัด | RIL | | ✓ | | โครงการโรงงานผลิตแผ่นอะคริลิกแบบต่อเนื่อง | | 13:00-14:30 น. | บ้านกุศ เนินสำเหร1 ประมงบ้านตากวน ประมงบ้านพลา |
| 20 | บริษัท ไทยโพลีเอททีเอ็น จำกัด (Site 7) | RIL | | ✓ | | 1) โครงการผลิตเม็ดพลาสติกโพลิเอททีเอ็น ชนิดความหนาแน่นสูง (HDPE) 2) โครงการผลิตเม็ดพลาสติกโพลิโพรไพลีน (PP) | | 14:30-16:30 น. | |
| 21 | บริษัท พีพีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขาที่ 5 (โรงระโม่คัลส์ 2) | RIL | | ✓ | | โครงการโรงงานระโม่คัลส์ หน่วยที่ 2 | 9 ส.ค. 67 | 09:00-10:30 น. | วัดซากลูกหญ้า คลองน้ำหู้ บ้านล่าง ตากวน-อ่าวประตุ้ |
| 22 | บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี่ จำกัด (ศูนย์สาธาณูปโภคกลาง แห่งที่ 4) | AIE | | ✓ | | โครงการศูนย์สาธาณูปการแห่งที่ 4 | | 10:30-12:00 น. | ห้วยโป่งโน-สะพานน้ำท่วม นองหวายโสม เนินสน-สวนน้ำโชค ฟ้า |
| 23 | บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี่ จำกัด (ศูนย์สาธาณูปโภคกลาง แห่งที่ 1) | WHA | | ✓ | | โครงการส่วนขยายและเปลี่ยนแปลงรายละเอียดโครงการศูนย์สาธาณูปโภคกลาง 1 ครั้งที่ 2 | | 13:00-14:30 น. | ใหม่-มิราเคิล เนินสำเหร2 เนินกระปรอก1 พูน4 ประมงตากวน- |
| 24 | บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี่ จำกัด (ศูนย์สาธาณูปโภคกลาง แห่งที่ 3) | WHA | | ✓ | | โครงการศูนย์สาธาณูปการแห่งที่ 3 | | 14:30-16:30 น. | อ่าวประตุ้ ประมงหนองแปบ |
| 25 | บริษัท สยามสเปทิลเซอร์กอนต์เคมีคอลส์ จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตพีวีซีเคปโบลเซอร์ (การเปลี่ยนแปลงรายละเอียดโครงการ ครั้งที่ 1) | 15 ส.ค. 67 | 09:00-10:30 น. | ซากลูกหญ้า มาบชุต-ซากกลาง วัดโสกถ ขอยประปา |
| 26 | บริษัท เอ็นแอล-สยามคูโบต้าเคมิคัลส์ จำกัด โรงงาน 1 และ 2 | WHA | | ✓ | | โครงการโรงงานผลิตเหล็กแผ่นรีดเย็น | | 10:30-12:00 น. | นองน้ำเย็น บ้านพลง ชมวิได้ สามัคคี-ชัยสมบุรณ์ |
| 27 | | | | ✓ | | โครงการโรงงานผลิตเหล็กแผ่นชุบสังกะสีแบบต่อเนื่อง | | | เนินกระปรอก2 แผ่นดินไท พูน3 ประมงหาดแสงเงิน |
| 28 | บริษัท โกลบอลกรีนเคมิคอล จำกัด (มหาชน) | WHA | | ✓ | | โครงการผลิตเมททีแอลเทอร์และเพคทีแอลออลอ์ | | 13:00-14:30 น. | ประมงพลา-อุ้ตะเภาสามัคคี |
| 29 | บริษัท วันชัย เคมิคอล อินดิทรีส์ จำกัด | WHA | | ✓ | | โครงการขยายกำลังการผลิตพรีโอดีไคและยูเรียฟอรัลดีไคไค | | 14:30-16:30 น. | |

ตารางกำหนดการนำเสนอผลการดำเนินงานตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (EIA Monitoring)

กลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด ประจำปี 2567

| ลำดับ | ชื่อผู้ประกอบการ | นิคมฯ | EIA | IEE | Risk | ชื่อโครงการ | วัน-เวลา | | ผู้แทนภาพประชาชน ตามคำสั่ง กอ.ที่ 212/2566 ชุมชน ทม.มาบตาพุด (6) ทบ.บ้านฉาง (2) ทค.บ้านฉาง (3) กลุ่มประมง มาบตาพุด (1) กลุ่มประมง บ้านฉาง (1) |
|-------|--|-------|-----|-----|------|---|------------|----------------|---|
| 30 | บริษัท ไชยเวร (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตมีลซ์ขึ้น | 16 ส.ค. 67 | 09:00-10:30 น. | ซากลูกหญ้า มาบชุต-ซากกลาง วัดโสกถ ขอยประปา |
| 31 | บริษัท เอลเน็กซ์ (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตเซิน | | 10:30-12:00 น. | นองน้ำเย็น บ้านพลง ชมวิได้ สามัคคี-ชัยสมบุรณ์ |
| 32 | บริษัท เอ็มซีแอลเอส เอเชีย จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตเมอลทีทอล | | 13:00-14:30 น. | เนินกระปรอก2 แผ่นดินไท พูน3 ประมงหาดแสงเงิน |
| 33 | บริษัท อารคาวา เคมีคัลส์ (ไทยแลนด์) จำกัด | WHA | | ✓ | | โครงการพัฒนาผลิตภัณฑ์ สารเคมีสำหรับผลิตกระดาษและเรซินสำหรับสี | | 14:30-16:30 น. | ประมงพลา-อุ้ตะเภาสามัคคี |
| 34 | บริษัท อติดยา เบอร์ล่า เคมีคัลส์ (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการขยายกำลังการผลิตคอม-อัลคาลี และอีพีโคลไโรไครีน | 22 ส.ค. 67 | 09:00-10:30 น. | ตลาดห้วยโป่ง มาบข้า-สำนักอัยยอน เกาะกก มาบยา กรอถายชา |
| 35 | บริษัท เซออน เคมีคัลส์ (ไทยแลนด์) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตไอโซคราบ่อนเรซิน (ส่วนขยาย) | | 10:30-12:00 น. | เนินพยอม บ้านเนินกระปรอก ตะวันออกเนินกระปรอกประชุมมิตร |
| 36 | บริษัท เอ็ชเอ็มซี โปลิเมอร์ จำกัด (PDH Plant) | WHA | | ✓ | | โรงงานผลิตสารโพรพิลีน | | 13:00-14:30 น. | ห้วยมะหาด บ้านกุศ เนินสำเหร1 |
| 37 | บริษัท เอ็นแอล บลูโคป (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการผลิตเหล็กแผ่นรีดเย็นและเคลือบผิว | | 14:30-16:30 น. | ประมงปากคลองตากวน ประมงหนองแปบ |
| 38 | บริษัท ไทยอียอกซ์นิสท จำกัด | WHA | | ✓ | | โครงการผลิตสารอียอกซ์นิสท | 23 ส.ค. 67 | 09:00-10:30 น. | วัดห้วยโป่ง มาบข้า-มาบโน นองแดงเม วัดโสกถ |
| 39 | บริษัท ปักหม เทาเวอร์ (เอโอจี-เอ็มทีที) จำกัด | WHA | | ✓ | | โครงการโรงไฟฟ้าพลังความร้อนร่วม ส่วนขยาย | | 10:30-12:00 น. | นองบัวแดง บ้านพลง บ้านฉาง-พลา นองใหญ่ |
| 40 | บริษัท เคแอลเจ ออร์แกนิก (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตลอรีนเตพพรพินเวอร์ช | | 13:00-14:30 น. | เนินสำเหร2 เนินกระปรอก1 พูน4 ประมงบ้านตากวน |
| 41 | บริษัท ร็อควูล (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการ Rockwool & Pipe Insulation | | 14:30-16:30 น. | ประมงพลา-อุ้ตะเภาสามัคคี |
| 42 | บริษัท เอส แอนด์ แอล สเปชีเอลตี โพลีเมอร์ จำกัด | WHA | | ✓ | | ผลิตซีพีวีซี | 29 ส.ค. 67 | 09:00-10:30 น. | ห้วยโป่งโน1 วัดมบตาพุด มาบชุต สำนักกระบก |
| 43 | บริษัท เซกซุย สเปชีเอลตี เคมิคอลส์ (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิต Chlorinated Polyvinyl Chloride compound | | 10:30-12:00 น. | ขอยร่วมพัฒนา นองน้ำเย็น ไหวา ฟาสีทอง |
| 44 | บริษัท อีฮารานิกเกอิ เคมีคัลส์ (ประเทศไทย) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตไอโซพลาออยด์ คลอไรด์ | | 13:00-14:30 น. | เนินกระปรอก2 แผ่นดินไท พูน3 ประมงพูน |
| 45 | บริษัท อี-โคทีลิ่ง เอเชีย จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตสารเคลือบบอร์ด | | 14:30-16:30 น. | ประมงตากวน-อ่าวประตุ้ |
| 46 | บริษัท ไทย เท็ท เรซิน จำกัด | WHA | | ✓ | | โครงการโรงงานผลิต Polyethylene Terephthalate (PET) (ส่วนขยายครั้งที่ 2) | 30 ส.ค. 67 | 09:00-10:30 น. | ห้วยโป่งโน2 ตลาดมบตาพุด วัดซากลูกหญ้า คลองน้ำหู้ |
| 47 | บริษัท ซีซี-เอ็ม ทีทีเอ จำกัด (เดิมชื่อ บจก. สยามมิชซู พรีทีเอ) | WHA | | ✓ | | โครงการโรงงานผลิต Purified Terephthalic Acid (PTA) | | 10:30-12:00 น. | บ้านล่าง ตากวน-อ่าวประตุ้ ทรัพย์สมบุรณ์ |
| 48 | บริษัท วันทอกร (ไทยแลนด์) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตสารตั้งต้นของสังเคือบรอนต์HDI Derivative | | 13:00-14:30 น. | นองบัวแดง บ้านพลง บ้านฉาง-พลา นองใหญ่ |
| 49 | บริษัท บางกอกอินดัสเทรียลแก๊ส จำกัด (น.89-1/2551-ญุหอ) บริษัท บางกอกอินดัสเทรียลแก๊ส จำกัด (น.89-1/2554-ญุหอ) | WHA | | ✓ | | โครงการโรงงานผลิตก๊าซคาร์บอนไดออกไซด์เหลว (LCO2) โครงการโรงงานผลิตก๊าซไฮโดรเจน (H2PSA) | | 14:30-16:30 น. | ประมงหาดแสงเงิน ประมงบ้านพลา |
| 50 | บริษัท พีพีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 19 | WHA | | ✓ | | โครงการโรงงานผลิตโพรพิลีนออกไซด์ | 5 ก.ย. 67 | 09:00-10:30 น. | ห้วยโป่งโน-สะพานน้ำท่วม นองหวายโสม เจริญพัฒนา ซากลูกหญ้า |
| 51 | บริษัท จีซี โพลิเอลล์ จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตโพลิเอลล์ | | 10:30-12:00 น. | โชติหิมนิรภาพ ขอยศิริ วัดศิริกรามารณ วัดบ้านฉาง สีกัก พูน2 |
| 52 | บริษัท พีพีที อาซาฮิ เคมิคอล จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตสารอะครีโลไนไตรล์และสารเนทีลเมตะเรคเตด | | 13:00-14:30 น. | บ่ออก ประมงหตุลซาดา ประมงหนองแปบ |
| 53 | บริษัท เหล็กสยามยามาโตะ จำกัด (โรงงาน 2) | WHA | | ✓ | | โครงการเหล็กโครงสร้างรูปพรรณรีดร้อนและเข็ทเหล็กกล้ารีดร้อน | | 14:30-16:30 น. | |
| 54 | บริษัท พีพีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 18 เดิมชื่อบริษัท พีพีที ฟีนอล จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตสารฟีนอล โครงการโรงงานผลิตสารฟีนอล | 6 ก.ย. 67 | 09:00-10:30 น. | อิสลาม หัวหน้าักพัฒนา โชติหิณ2 ขอยประปา บ้านบน เขาไผ่ นอง |
| 55 | บริษัท พีพีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 16 เดิมชื่อบริษัท จีซี โกลคอลล จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตเอทีเอ็นออกไซด์และเอทีเอ็นโกลคอลล โครงการผลิตเอทานอลเอมีน | | 10:30-12:00 น. | ม่วง มิ่งมงคล ห้วยมะหาด บ้านกุศ |
| 56 | บริษัท อีเอ ไบโอ อินโนเวชัน จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตเออร์มอลพรพินและสารเปลี่ยนแปลงสถานะ | | 13:00-15:00 น. | เนินสำเหร1 ประมงกัยออด ประมงพลา-อุ้ตะเภาสามัคคี |
| 57 | บริษัท เซวเมิน ซิลิกา (ไทยแลนด์) จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตซิลิกา | | 15:00-16:30 น. | |

ตารางกำหนดการนำเสนอผลการดำเนินงานตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (EIA Monitoring)
กลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด ประจำปี 2567

| ลำดับ | ชื่อผู้ประกอบการ | นิคมฯ | EIA | IEE | Risk | ชื่อโครงการ | วัน-เวลา | | ผู้แทนภาคประชาชน ตามคำสั่ง กอ.ที่ 212/2566 ชุมชน หนองตาพุด (6) หนองอ่าง (2) หนองจาง (3) กลุ่มประมง มาบตาพุด (1) กลุ่มประมง บ้านจาง (1) |
|-------|---|-------|-----|-----|------|---|------------|----------------|--|
| 58 | บริษัท เอซีซี วัฒนา จำกัด (มหาชน) (MTP2) เดิมชื่อ เมจ.ไทยอาซิติกและเคมีภัณฑ์ | WHA | ✓ | | | โครงการโรงงานผลิตคลอรีน-แอลกอฮอล์ (ครั้งที่ 5) | 12 ก.ย. 67 | 09.00-12.00 น. | หนองแฟบ มาบตาพุด-ซากกลาง ตลาดห้วยโป่ง มาบตา-สำนักอ้ายงอน |
| 59 | บริษัท เซออน เคมีภัณฑ์ เอเชีย จำกัด | WHA | | ✓ | | โครงการโรงงานผลิตยางพารา-โพลีเอทรีเลท | | 10.30-12.00 น. | เกาะกอก มาบตา จ.สุ |
| 60 | บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 11 (โรงโม่หิน 3) | PDP | ✓ | ✓ | | 1) โครงการอีเทนแครกกเกอร์ 2) โครงการแอลกอฮอล์ดีพีอี 3) โครงการแอลดีพีอี | | 13.00-16.30 น. | ศูนย์การค้าวิรัตน์พัฒนา เป็นลำห้วย2 เป็นกระบอก1 พญาน4 ประมง กันปึกสามัคคี ประมงพญาน |
| 61 | บริษัท ไทยโพลีคาร์บอนเต จำกัด | PDP | ✓ | | | โครงการขยายกำลังการผลิตโพลีคาร์บอนเต | 13 ก.ย. 67 | 09.00-10.30 น. | กรอกยายชา เป็นพยอม วัดห้วยโป่ง มาบตา-มาบโน หนองแดงเม วัดโกลน |
| 62 | บริษัท ไทยโพลีเอทีแอล จำกัด | PDP | ✓ | | | โครงการปรับปรุงและขยายกำลังการผลิตโรงงานผลิตโพลีเอทีแอล | | 10.30-12.00 น. | เทพจินดา โต้งตั้ง เป็นกระบอก2 แผ่นดินไท พญาน3 ประมงปากคลองตากวน ประมงบ้านปลา |

ภาคผนวก ข-46

เอกสารแต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม



คำสั่งการนิคมอุตสาหกรรมแห่งประเทศไทย

ที่ ๑๒๑ /๒๕๖๖

เรื่อง แต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (EIA Monitoring Committee) โครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑)

ตามที่ได้มีคำสั่งการนิคมอุตสาหกรรมแห่งประเทศไทย ที่ ๒๙๑/๒๕๖๓ เรื่อง แต่งตั้งคณะกรรมการติดตามตรวจสอบการดำเนินงานตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อมของโรงงาน (Environmental Monitoring) ในกลุ่มนิคมอุตสาหกรรมพื้นที่มาบตาพุด จังหวัดระยอง ลงวันที่ ๒๒ มิถุนายน ๒๕๖๓ และโดยที่คณะกรรมการผู้ชำนาญการพิจารณารายงานการประเมินผลกระทบสิ่งแวดล้อมโครงการอุตสาหกรรมและระบบสาธารณูปโภคที่สนับสนุน ในการประชุมครั้งที่ ๑๑/๒๕๖๕ เมื่อวันที่ ๗ เมษายน ๒๕๖๕ ได้มีมติให้ความเห็นชอบรายงานการประเมินผลกระทบสิ่งแวดล้อมสำหรับโครงการ กิจการหรือการดำเนินการที่อาจมีผลกระทบต่อทรัพยากรธรรมชาติ คุณภาพสิ่งแวดล้อม สุขภาพ อนามัย คุณภาพชีวิตของประชาชนในชุมชนอย่างรุนแรงโครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑) โดยให้ปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมที่สำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อมกำหนดโดยเคร่งครัด นั้น

อาศัยอำนาจตามความในมาตรา ๒๘ แห่งพระราชบัญญัติการนิคมอุตสาหกรรมแห่งประเทศไทย พ.ศ. ๒๕๒๒ จึงให้ยกเลิกคำสั่งดังกล่าวข้างต้น และแต่งตั้งคณะกรรมการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (EIA Monitoring Committee) โครงการนิคมอุตสาหกรรมมาบตาพุด (ส่วนขยายครั้งที่ ๑) ขึ้นใหม่ โดยมีองค์ประกอบ หน้าที่และอำนาจ ดังต่อไปนี้

๑. องค์ประกอบ

๑.๑ ภาคราชการ

- | | | |
|-----|--|------------------|
| (๑) | ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมมาบตาพุด | ประธานกรรมการ |
| (๒) | ผู้อำนวยการสำนักงานนิคมอุตสาหกรรม ดับบลิวเอชเอตะวันออก (มาบตาพุด) | รองประธานกรรมการ |
| (๓) | ผู้ทรงคุณวุฒิ | กรรมการ |
| (๔) | ผู้ทรงคุณวุฒิ | กรรมการ |
| (๕) | ผู้อำนวยการศูนย์ควบคุมมลพิษจังหวัดระยอง | กรรมการ |
| (๖) | ผู้อำนวยการสำนักงานทรัพยากรธรรมชาติและสิ่งแวดล้อม จังหวัดระยอง | กรรมการ |

- | | |
|---|---------|
| (๗) ผู้อำนวยการโรงพยาบาลเฉลิมพระเกียรติ สมเด็จพระเทพรัตนราชสุดาฯ สยามบรมราชกุมารี ระยอง | กรรมการ |
| (๘) นายกเทศมนตรีเมืองมาบตาพุด | กรรมการ |
| (๙) นายกเทศมนตรีเมืองบ้านฉาง | กรรมการ |
| (๑๐) นายกเทศมนตรีตำบลบ้านฉาง | กรรมการ |

๑.๒ ภาคประชาชน

- | | |
|--|---------|
| (๑) ผู้แทนประชาชนในเขตเทศบาลเมืองมาบตาพุด จำนวน ๖ คน | กรรมการ |
| (๒) ผู้แทนประชาชนในเขตเทศบาลตำบลบ้านฉาง จำนวน ๓ คน | กรรมการ |
| (๓) ผู้แทนประชาชนในเขตเทศบาลเมืองบ้านฉาง จำนวน ๒ คน | กรรมการ |
| (๔) ผู้แทนประชาชนกลุ่มประมงเรือเล็กพื้นที่มาบตาพุด จำนวน ๑ คน | กรรมการ |
| (๕) ผู้แทนประชาชนกลุ่มประมงเรือเล็กพื้นที่บ้านฉาง จำนวน ๑ คน | กรรมการ |

๑.๓ ผู้แทนโครงการ

- | | |
|---|-------------------------|
| (๑) พนักงานสำนักงานนิคมอุตสาหกรรมมาบตาพุด ที่ได้รับมอบหมาย | กรรมการ และเลขานุการ |
| (๒) พนักงานสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด) ที่ได้รับมอบหมาย | กรรมการ และเลขานุการ |

ให้กรรมการมีวาระการดำรงตำแหน่งคราวละ ๔ ปี นับแต่วันที่ได้รับการแต่งตั้ง โดยมีระยะเวลาในการดำรงตำแหน่งติดต่อกันไม่เกิน ๒ วาระ สำหรับการพ้นจากตำแหน่ง และการประชุม คณะกรรมการฯ ให้เป็นไปตามที่กำหนดในมาตรการฯ

๒. หน้าที่และอำนาจ

๒.๑ รับรู้กระบวนการตรวจวัดคุณภาพสิ่งแวดล้อมและผลการตรวจวัดตามมาตรการ ติดตามตรวจสอบผลกระทบสิ่งแวดล้อมของโครงการ รวมถึงมีส่วนร่วมปรึกษาหารือและให้ข้อเสนอแนะ ต่อผลการดำเนินการ และเผยแพร่ประชาสัมพันธ์ให้ชุมชนและหน่วยงานที่เกี่ยวข้องทราบ เพื่อแสดงความ โปร่งใสในการบริหารจัดการด้านสิ่งแวดล้อม

๒.๒ ติดตามตรวจสอบการดำเนินงานของโครงการ รวมถึงโรงงานอุตสาหกรรมในพื้นที่ โครงการ ให้ดำเนินการสอดคล้องกับระเบียบ มาตรฐาน กฎหมายที่เกี่ยวข้อง และเป็นตัวแทนของชุมชน ในการตรวจเยี่ยมโครงการ

๒.๓ รับฟังความคิดเห็น พิจารณาข้อขัดแย้ง ปัญหา หรือข้อพิพาทที่มีสาเหตุมาจากการดำเนินโครงการ ตลอดจนหาแนวทางในการป้องกันหรือแก้ไขปัญหาร่วมกันเพื่อหาข้อสรุป ยุติความขัดแย้ง และสร้างความสมานฉันท์ โดยคำนึงถึงประโยชน์ที่แท้จริงของชุมชน และเป็นเวทีกลางในการแลกเปลี่ยนข้อมูลข่าวสาร

๒.๔ แต่งตั้งบุคคลหรือคณะบุคคลเพื่อดำเนินการเฉพาะกิจจากเรื่องร้องเรียนเกี่ยวกับปัญหาและผลกระทบที่ได้รับจากการดำเนินโครงการ รวมทั้งตรวจสอบข้อเท็จจริงและสรุปแนวทางการป้องกันและแก้ไข

๒.๕ เป็นที่ปรึกษาหรือมีส่วนร่วมในการเจรจาไกล่เกลี่ยและหาข้อยุติ กรณีมีข้อพิพาทปัญหาสิ่งแวดล้อมระหว่างโครงการกับชุมชน รวมทั้งพิจารณาค่าชดเชยกรณีเกิดผลกระทบสิ่งแวดล้อมระหว่างชุมชนกับโครงการ ติดตาม ดูแลการจ่ายค่าชดเชยจนแล้วเสร็จหากพิสูจน์ได้ว่าผลกระทบที่เกิดขึ้นเกิดมาจากโครงการ

๒.๖ จัดให้มีโครงการหรือกิจกรรมให้ความรู้ด้านสิ่งแวดล้อมแก่ชุมชน

๒.๗ สรุปผลการดำเนินงานของโครงการ และรายงานให้ผู้ว่าการทราบ หรือพิจารณาเป็นระยะ

ทั้งนี้ ตั้งแต่บัดนี้เป็นต้นไป

สั่ง ณ วันที่ ๑๔ กุมภาพันธ์ พ.ศ. ๒๕๖๖



(นายวิรัช อัมระपाल)

ผู้ว่าการการนิคมอุตสาหกรรมแห่งประเทศไทย

ภาคผนวก ข-47

แผนผังแสดงระดับเสียง (Noise Contour Map)



รายงานผลการตรวจวัดและจัดทำเส้นระดับความดังของเสียง (Noise Contour) ในสถานประกอบการ

บริษัท เอส แอนด์ แอล สเปนเชียลตี้ โพลีเมอร์ จำกัด ได้มอบหมายให้ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ดำเนินการตรวจวัดและจัดทำเส้นระดับความดังของเสียง (Noise Contour) ในสถานประกอบการ ดำเนินการตรวจวัด เมื่อวันที่ 24 กรกฎาคม พ.ศ. 2566 โดยมีรายละเอียดดังต่อไปนี้

1. วัตถุประสงค์

- 1.1 เพื่อตรวจวัดและจัดทำเส้นระดับความดังของเสียง (Noise Contour) ภายในสถานประกอบการ
- 1.2 เพื่อนำผลการตรวจวัดที่ได้ ไปเปรียบเทียบกับค่ามาตรฐานของหน่วยงานราชการ หรือหน่วยงานที่เกี่ยวข้องและเป็นแนวทางในการวางแผนการจัดการคุณภาพสิ่งแวดล้อมต่อไป
- 1.3 เพื่อเป็นข้อมูลนำเสนอต่อหน่วยงานราชการ หรือหน่วยงานอื่น ๆ ที่เกี่ยวข้อง

2. ขอบเขตการดำเนินงาน

การดำเนินงานตรวจวัดและจัดทำระดับความดังของเสียง (Noise Contour) ในสถานประกอบการของบริษัท เอส แอนด์ แอล สเปนเชียลตี้ โพลีเมอร์ จำกัด เมื่อวันที่ 24 กรกฎาคม พ.ศ. 2566 โดยสามารถสรุปรายละเอียดการตรวจวัดได้ ดังตารางที่ 1

ตารางที่ 1 รายละเอียดการตรวจวัด

| สถานี | เลขที่ตัวอย่าง | พารามิเตอร์ | วันที่ตรวจวัด |
|---|----------------|---------------|---------------|
| Air Compressor House No.2 (ตรวจวัดแบบปกติ) | 2385083-1 | Noise Contour | 24 ก.ค. 66 |
| Air Compressor House No.2 (ตรวจวัดแบบปิดประตูอาคาร) | 2385184-1 | | |
| Air Compressor House No.1 (ตรวจวัดแบบปกติ) | 2385185-1 | | |
| Air Compressor House No.1 (ตรวจวัดแบบปิดประตูอาคาร) | 2385186-1 | | |



3. วิธีการเก็บและการตรวจวัด

บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ได้ยึดถือปฏิบัติตามมาตรฐานที่หน่วยงานราชการกำหนดหรือวิธีที่ได้รับการยอมรับจากหน่วยงานราชการ สำหรับการตรวจวัดเสียงเพื่อจัดทำผังแสดงเส้นระดับเสียง (Noise Contour) ดำเนินการโดยใช้มาตรวัดระดับเสียง (Integrate Sound Level Meter) ตามมาตรฐาน IEC 60804 และ IEC 61672 ของคณะกรรมการระหว่างประเทศว่าด้วยเทคนิคไฟฟ้า (International Electro technical Commission) จากนั้นนำข้อมูลการตรวจวัดเสียงที่ได้ มาจัดทำแผนผังแสดงระดับเสียงโดยใช้โปรแกรม Surfer Version 12

4. บุคลากร

การดำเนินงานในครั้งนี้ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ได้จัดสรรบุคลากรผู้มีประสบการณ์ในการติดตามตรวจสอบระดับความดังของเสียง ดังนี้

1) การเก็บตัวอย่าง

- | | | | |
|------------------|--------------|---------|-------------------------|
| - นายประสานมิตร | เชื่อนเพชร | ตำแหน่ง | เจ้าหน้าที่เก็บตัวอย่าง |
| - นายสุทธิดำรงค์ | โชคปิตินันท์ | ตำแหน่ง | เจ้าหน้าที่เก็บตัวอย่าง |
| - นายคุณากร | มันชื่น | ตำแหน่ง | เจ้าหน้าที่เก็บตัวอย่าง |
| - นายจรัสระวี | ศรีรักษา | ตำแหน่ง | เจ้าหน้าที่เก็บตัวอย่าง |

2) การจัดทำรายงาน

- | | | | |
|-----------------|-------|---------|-----------------------|
| - นางสาวทัศนีย์ | โททอง | ตำแหน่ง | นักวิชาการสิ่งแวดล้อม |
|-----------------|-------|---------|-----------------------|



5. สรุปผลการตรวจวัดและจัดทำแผนผังแสดงระดับเสียง (Noise Contour Map)

1) ผลการตรวจวัด

จากการตรวจวัดระดับเสียงโดยรอบพื้นที่โครงการและจัดทำแผนผังแสดงระดับเสียง (Noise Contour Map) ในวันที่ 24 กรกฎาคม พ.ศ. 2566 แสดงดังภาพที่ 1 และรูปที่ 1 ถึงรูปที่ 4

2) สรุปผลการตรวจวัด

จากการตรวจวัดและจัดทำเส้นระดับความดังของเสียงในสถานประกอบการ (Noise Contour) ในวันที่ 24 กรกฎาคม พ.ศ. 2566 จำนวน 4 พื้นที่ พบว่า มีระดับความดังของเสียง ดังนี้

- บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปกติ) มีระดับความดังของเสียงอยู่ในช่วงระหว่าง 61.6-77.8 เดซิเบล (เอ)
- บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปิดประตูอาคาร) มีระดับความดังของเสียงอยู่ในช่วงระหว่าง 63.8-77.9 เดซิเบล (เอ)
- บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปกติ) มีระดับความดังของเสียงอยู่ในช่วงระหว่าง 62-91.9 เดซิเบล (เอ)
- บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปิดประตูอาคาร) มีระดับความดังของเสียงอยู่ในช่วงระหว่าง 61.7-92.4 เดซิเบล (เอ)

จากการจัดทำแผนผังแสดงระดับเสียง ทำให้ทราบถึงลักษณะการกระจายของเสียงในแต่ละบริเวณอย่างชัดเจน สามารถนำผังแสดงเส้นระดับเสียงดังกล่าวไปใช้ในการวางแผนจัดการ และควบคุมเสียงบอกระดับเสียง และเตือนให้ระวังอันตรายจากเสียงดังในแต่ละพื้นที่ได้เป็นอย่างดี ซึ่งตามประกาศกรมสวัสดิการคุ้มครองแรงงาน เรื่อง หลักเกณฑ์และวิธีการจัดทำมาตรการอนุรักษ์การได้ยินในสถานประกอบการ (พ.ศ. 2561) กำหนดให้นายจ้างจัดทำมาตรการอนุรักษ์การได้ยินในสถานประกอบกิจการเป็นลายลักษณ์อักษร ในกรณีที่สภาวะการทำงานในสถานประกอบกิจการมีระดับเสียงที่ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานแปดชั่วโมงตั้งแต่ 85 เดซิเบล (เอ) ขึ้นไป ตามหลักเกณฑ์และวิธีการที่อธิบดีประกาศกำหนด



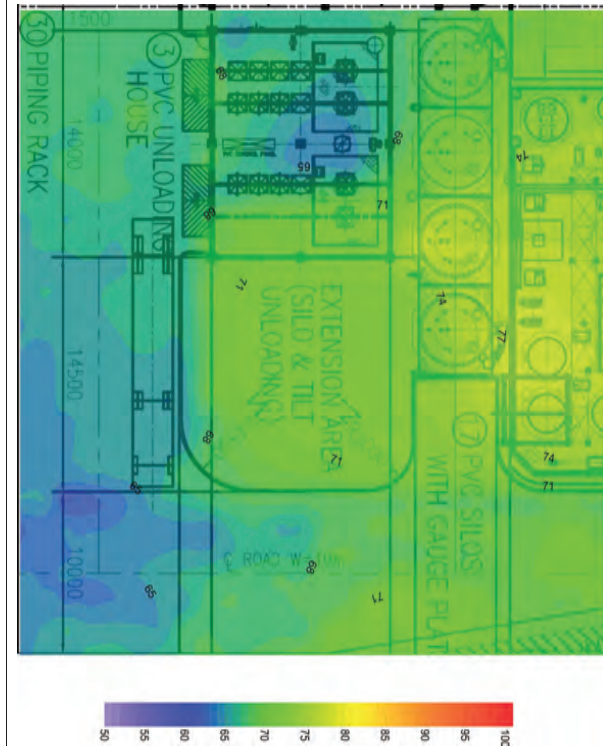
ข้อเสนอแนะเพิ่มเติม

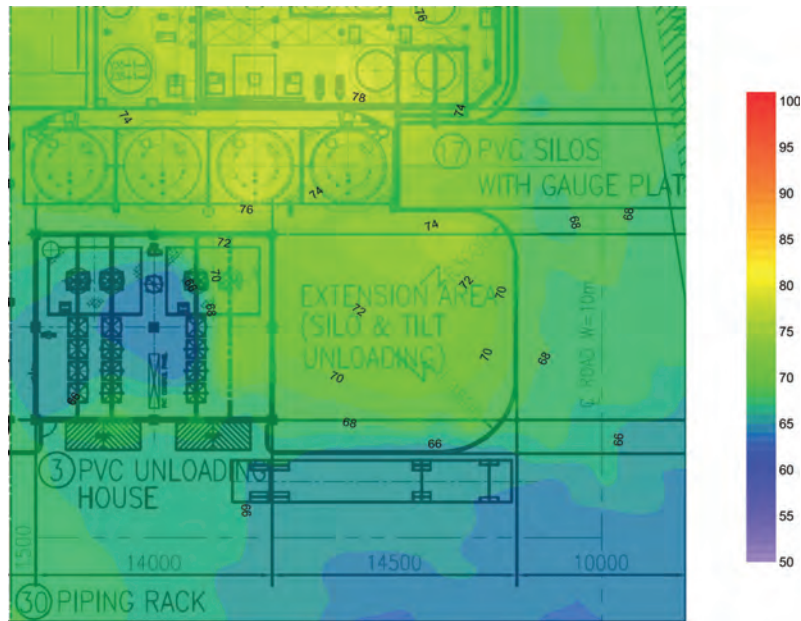
- นำแผนผังแสดงเส้นระดับเสียงของแต่ละพื้นที่ไปติดหรือแสดงไว้ในบริเวณที่เห็นได้ชัด
- จัดให้ลูกจ้างสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคลที่สามารถลดระดับเสียงที่ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานแปดชั่วโมงเหลือน้อยกว่า 85 เดซิเบล (เอ)
- จัดอบรมให้ความรู้ความเข้าใจเกี่ยวกับมาตรการอนุรักษ์การได้ยิน ความสำคัญของการทดสอบสมรรถภาพการได้ยิน อันตรายของเสียงดัง การควบคุมป้องกันและการอุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคลแก่ลูกจ้างที่ทำงานในบริเวณที่มีระดับเสียงดังที่ได้รับเฉลี่ยตลอดระยะเวลาการทำงานแปดชั่วโมงตั้งแต่ 85 เดซิเบล (เอ) ขึ้นไป และลูกจ้างที่เกี่ยวข้องในสถานประกอบการ
- ควรมีการทบทวนผังแสดงการกระจายเสียงใหม่หากพบว่ามีกรณีเคลื่อนย้าย ปรับปรุง หรือติดตั้งเครื่องจักรที่เป็นแหล่งกำเนิดเสียงเพิ่มเติม ทั้งนี้ เพื่อให้มีผังแสดงระดับเสียงมีความทันสมัยสามารถใช้อ้างอิงได้ หรืออาจกำหนดให้มีการทบทวนลักษณะการกระจายของเสียงอยู่เป็นระยะทุก 3 ปี หรือ 5 ปี เป็นต้น
- ให้ความสนใจต่อสุขภาพอนามัยด้านการได้ยินของพนักงานที่ปฏิบัติงานในส่วนที่มีเสียงดังเกินมาตรฐานเป็นพิเศษ โดยพนักงานส่วนนี้ต้องได้รับการตรวจสอบสมรรถภาพการได้ยินเป็นประจำทุกปี และควรเปรียบเทียบผลการตรวจสุขภาพในปัจจุบันเทียบกับผลในอดีตด้วย



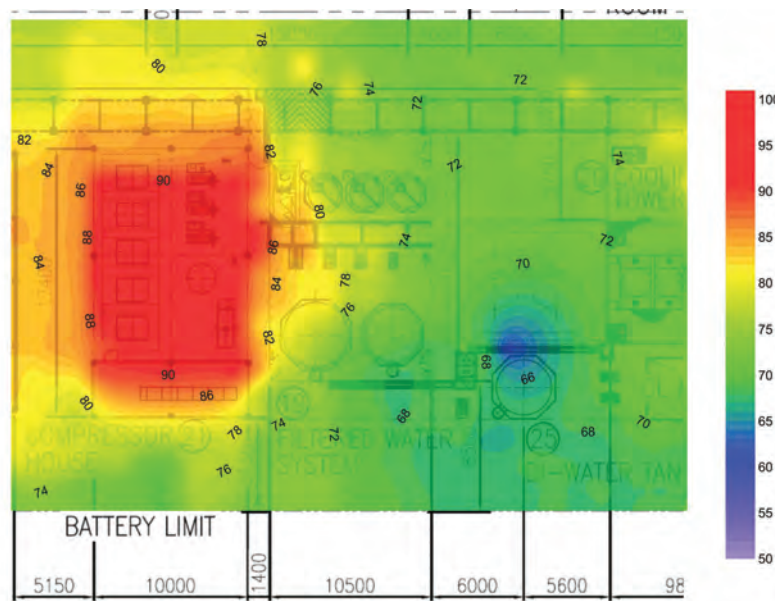
ภาพที่ 1 แสดงการตรวจวัดระดับเสียงเพื่อจัดทำแผนผังแสดงระดับเสียง (Noise Contour Map)

รูปที่ 1 แผนผังแสดงระดับเสียง บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปกติ)





รูปที่ 2 แผนผังแสดงระดับเสียง บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปิดประตูอาคาร)

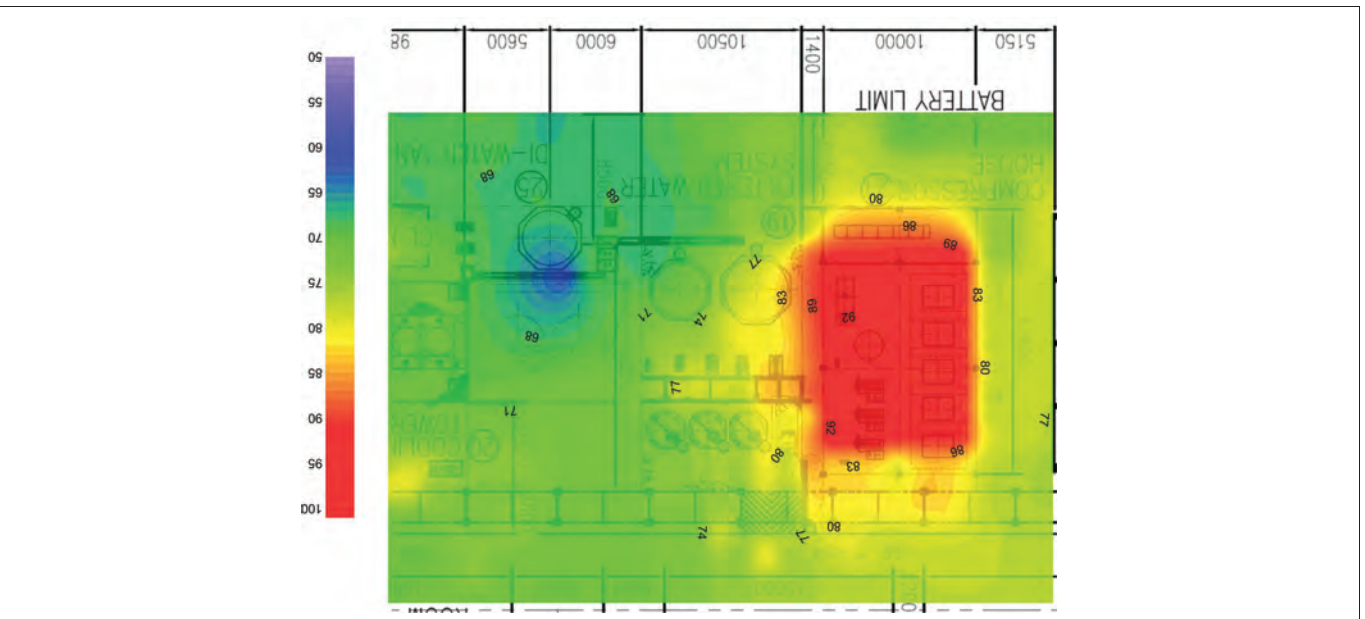


รูปที่ 3 แผนผังแสดงระดับเสียง บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปกติ)

ภาคผนวก ก

ใบรับรองผลการตรวจวัด

รูปที่ 4 แผนที่แสดงระดับเสียง บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปีตปรตอาคาร)





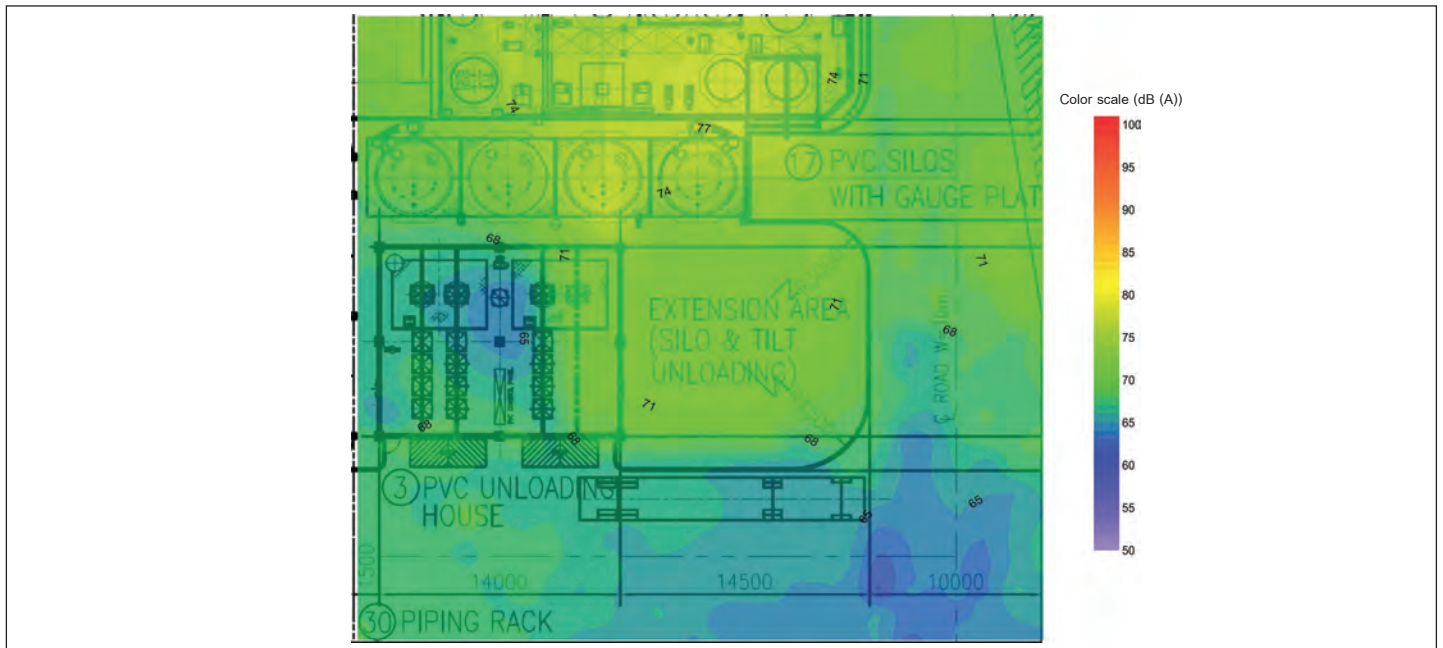
Noise Contour Map

S and L Specialty Polymers Co., Ltd.

บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปกติ)

Reference Number : Lot 2385083-1

Measurement Date : Jul 24, 2023



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Suan Luang, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2715 8700 | FAX +66 0 2715 8799
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



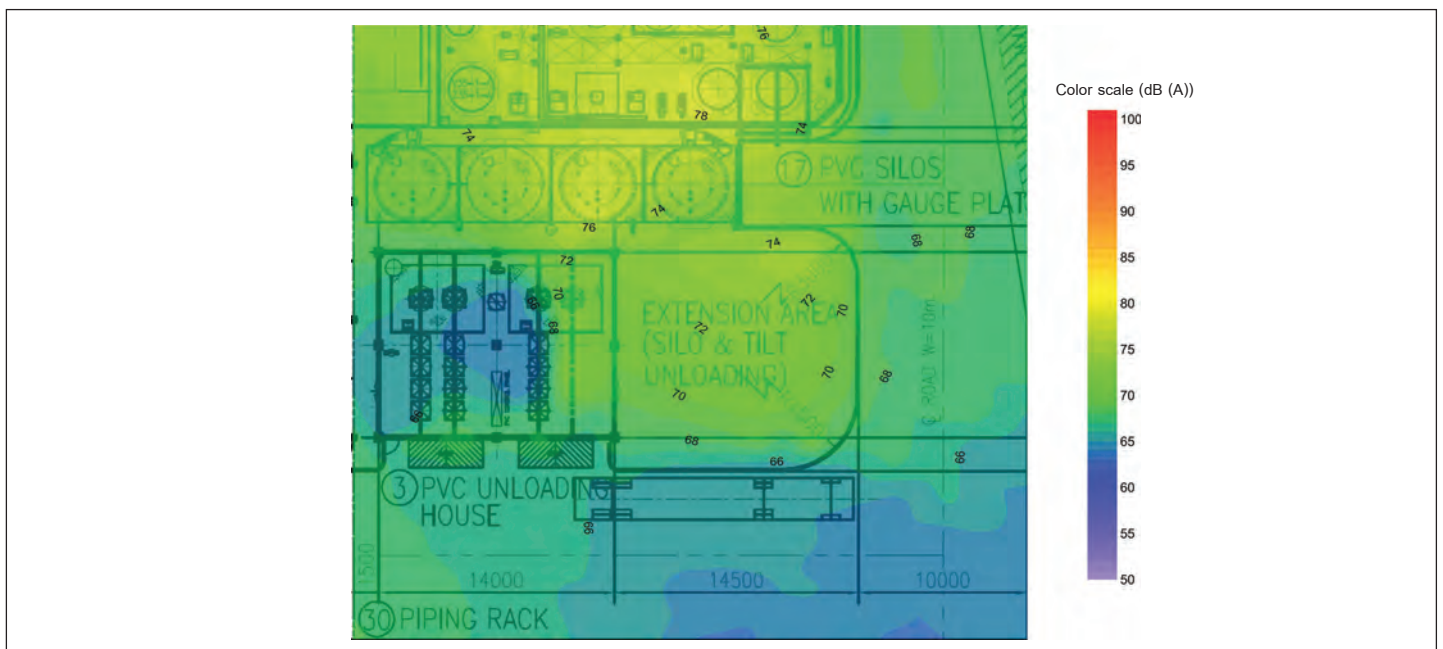
Noise Contour Map

S and L Specialty Polymers Co., Ltd.

บริเวณ Air Compressor House No.2 (ตรวจวัดแบบปิดประตูอาคาร)

Reference Number : Lot 2385184-1

Measurement Date : Jul 24, 2023



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Suan Luang, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2715 8700 | FAX +66 0 2715 8799
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



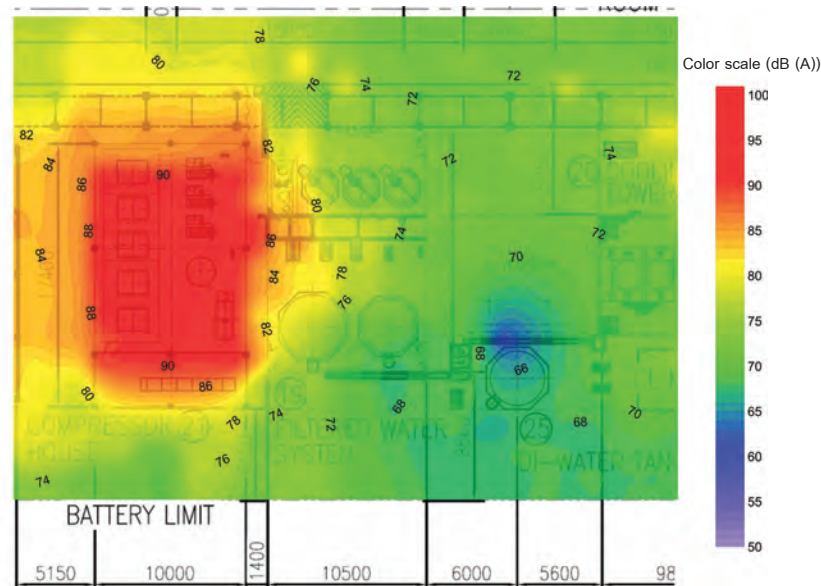
Noise Contour Map

S and L Specialty Polymers Co., Ltd.

บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปกติ)

Reference Number : Lot 2385185-1

Measurement Date : Jul 24, 2023



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Suan Luang, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2715 8700 | FAX +66 0 2715 8799
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



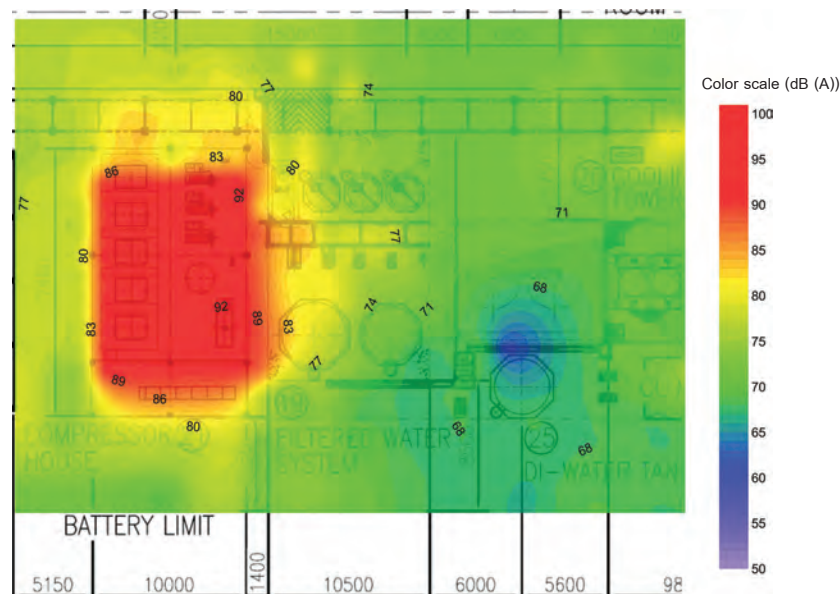
Noise Contour Map

S and L Specialty Polymers Co., Ltd.

บริเวณ Air Compressor House No.1 (ตรวจวัดแบบปิดประตูอาคาร)

Reference Number : Lot 2385186-1

Measurement Date : Jul 24, 2023



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Suan Luang, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2715 8700 | FAX +66 0 2715 8799
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ภาคผนวก ง

แผนผังแสดงจุดตรวจวัด

แผนผังแสดงจุดตรวจวัด

ภาคผนวก ข-48

แผนการจัดกิจกรรมส่งเสริมสุขภาพ

Better Health 2024

You are what you Do!

ลงทะเบียนได้ตั้งแต่วันที่ 1-15 ส.ค. 2567
ระยะเวลากิจกรรม 30 ส.ค.-30 ต.ค. 2567

บรรยายความรู้เกี่ยวกับ **”เคล็ดลับสุขภาพดี”**
และแจ้งรายละเอียดกิจกรรมของโครงการ
รวมถึงเกณฑ์การแบ่งชั้นและการแจกรางวัล
วันที่ 30 ส.ค. นี้ เวลา 13.30 เป็นต้นไป
ณ โรงอาหารบริษัทฯ

Register
for get free!!
Smart watch



ภาคผนวก ข-49

หนังสือเชิญเข้าร่วมพิธีมอบรางวัลธรรมาภิบาลสิ่งแวดล้อม
และความปลอดภัย ประจำปี พ.ศ. 2565

ที่ กค ๕๑๐๖.๕/๐๕๘๘



สำนักงานนิคมอุตสาหกรรมมาบตาพุด
เลขที่ ๑ ถนนโอ-๑ ตำบลมาบตาพุด
อำเภอเมือง จังหวัดระยอง ๒๑๑๕๐

๑๕ มิถุนายน ๒๕๖๖

เรื่อง ขอเชิญเข้าร่วมพิธีมอบรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย ประจำปี ๒๕๖๕

เรียน กรรมการ/ผู้จัดการโรงงาน

สิ่งที่ส่งมาด้วย ๑. กำหนดการ จำนวน ๑ หน้า

๒. แบบตอบรับ จำนวน ๑ หน้า

ตามที่ การนิคมอุตสาหกรรมแห่งประเทศไทย (กนอ.) ได้แต่งตั้งคณะทำงานซึ่งประกอบด้วย กนอ. ผู้แทนชุมชน ส่วนราชการในพื้นที่ สื่อมวลชนท้องถิ่น เพื่อดำเนินการตรวจประเมินโรงงาน ตามแผนสลดและ จัดมลพิษของโรงงานอุตสาหกรรมในกลุ่มนิคมอุตสาหกรรมและท่าเรืออุตสาหกรรมพื้นที่มาบตาพุด โดยนำผลการตรวจประเมินโรงงานมาประเมินศักยภาพการบริหารจัดการสิ่งแวดล้อม ความปลอดภัย และการรับผิดชอบต่อสังคม (CSR) ในช่วงระยะเวลา ๑ ปี เพื่อมอบรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัยให้กับโรงงานที่ผ่านเกณฑ์ดีเยี่ยม นั้น

ในปี ๒๕๖๕ มีโรงงานที่ผ่านเกณฑ์เข้ารับรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย (ธงขาว - ดาวเขียว) จำนวน ๑๒๗ โรงงาน และ โรงงานที่ผ่านเกณฑ์เข้ารับรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัยต่อเนื่อง ๖ ปี (ธงขาว - ดาวทอง) จำนวน ๘๑ โรงงาน ในการนี้ กนอ. กำหนดให้มีพิธีมอบรางวัล ธงธรรมาภิบาลสิ่งแวดล้อมทั้ง ๒ ประเภท ในวันพุธที่ ๙ สิงหาคม ๒๕๖๖ เวลา ๐๙.๓๐-๑๒.๐๐ น. ณ โรงแรม โนวเทล ระยอง สตาร์ คอนเวนชั่น เซ็นเตอร์ จังหวัดระยอง ทั้งนี้ท่านสามารถ Download กำหนดการ แบบตอบรับ และรายชื่อโรงงานที่ได้รับรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัยทั้งสองประเภท ได้ทาง [website: www.mtpe.com](http://www.mtpe.com)

จึงขอเรียนเชิญท่านหรือผู้แทนเข้าร่วมเป็นเกียรติในพิธีมอบรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย ประจำปี ๒๕๖๕ ตามวัน เวลา และสถานที่ดังกล่าวข้างต้น รายละเอียดปรากฏดังสิ่งที่ส่งมาด้วย พร้อมกันนี้ขอความร่วมมือแจ้งรายชื่อผู้แทนของหน่วยงาน ภายในวันที่ ๒๐ กรกฎาคม ๒๕๖๖ ทั้งนี้ได้มอบหมาย นางสาวธัญพร ขาดิก้าแห่ง วิศวกร ๕ อีเมล thanyaporn.ch@yahoo.com โทรศัพท์ ๐๘๙ ๗๙๗๗๗๗๐๗๐ เป็นผู้ประสานงานต่อไป

ขอแสดงความนับถือ

(นายเอกจ วัฒนศิริ)

ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมมาบตาพุด

งานปฏิบัติการสิ่งแวดล้อมและความปลอดภัย

โทร ๐๓๘ ๖๘๓๑๒๗

โทรสาร ๐๓๘ ๖๘๓๔๔๑



กำหนดการ

พิธีมอบรางวัลธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย ประจำปี ๒๕๖๕

วันพุธที่ ๙ สิงหาคม ๒๕๖๖ เวลา ๐๙.๓๐ - ๑๒.๐๐ น.

ณ โรงแรมโนโวเทล ระยอง สตาร์ คอนเวนชั่น เซ็นเตอร์ จังหวัดระยอง

เวลา ๐๙.๓๐ - ๑๐.๐๐ น. ลงทะเบียน และชมวีดิทัศน์ / รับประทานอาหารว่าง

เวลา ๑๐.๐๐ - ๑๒.๐๐ น. พิธีมอบธงธรรมาภิบาลสิ่งแวดล้อม ประจำปี ๒๕๖๕

- นายพรเทพ ภูมิพัฒน์ รองผู้ว่าการ กนอ. สายงานปฏิบัติการ 3 กล่าวรายงาน
- นายวิรัช อัมระपाल ผู้ว่าการ กนอ. ประธานในพิธี กล่าวแสดงความยินดีต่อผู้รับรางวัล
 - พิธีมอบธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย ประจำปี ๒๕๖๕ (ธงขาว-ดาวเขียว : Green Star Award) จำนวน 127 โรงงาน
 - พิธีมอบธงธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัยยอดเยี่ยม ประจำปี ๒๕๕๙ - ๒๕๖๕ (ธงขาว-ดาวทอง : Gold Star Award) จำนวน 81 โรงงาน
- ถ่ายภาพร่วมกับผู้ได้รับรางวัล
- เสริจพิธี /เชิญรับประทานอาหารกลางวัน

หมายเหตุ : - กำหนดการอาจมีการเปลี่ยนแปลงตามความเหมาะสม

- ผู้เข้าร่วมงานแต่งกายชุดสุภาพ หรือยูนิฟอร์มของบริษัท

- กนอ. ขอสงวนสิทธิ์ในการจำกัดจำนวนผู้เข้ารับรางวัล โรงงานละ 2 ท่าน

สรุปรายชื่อโรงงานที่ผ่านเกณฑ์เข้ารับรางวัล ธรรมมาภิบาลสิ่งแวดล้อมและความปลอดภัย

(ธงขาว-ดาวเขียว) ประจำปี 2565 จำนวนทั้งสิ้น 127 โรงงาน

นิคมฯ มาบตาพุด 51 โรงงาน จำนวน 47 ธง

1. บริษัท ไทยโพลิเอททีลีน จำกัด (Site 1)
2. บริษัท ไทยโพลิเอททีลีน จำกัด (Site 3)
3. บริษัท เอสซีจี ไอโค พอลิเมอร์ จำกัด
4. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 17 โรงโพลีสไตรีน
5. บริษัท ทาทาสตีลการผลิต (ประเทศไทย) จำกัด (มหาชน)
6. บริษัท กรุงเทพ ซินติติกส์ จำกัด (โรงงาน 1 : BST)
7. บริษัท กรุงเทพ ซินติติกส์ จำกัด (โรงงาน 2 : NBL)
8. บริษัท บีเอสที อีลาสโตเมอร์ส จำกัด
9. บริษัท บีเอสที เอนออส อีลาสโตเมอร์ จำกัด
10. บริษัท อีวอนิก ยูไนเต็ด ซิลิกา (สยาม) จำกัด
11. บริษัท ไทย-สแกนดิค สตีล จำกัด
12. บริษัท เอจีซี วีนิไทย จำกัด (มหาชน) (MTP1)
13. บริษัท แอดวานซ์ ไปโอเคมิคอล (ประเทศไทย) จำกัด
14. บริษัท โอเอสซี สยามซิลิกา จำกัด (โรงงาน1)
15. บริษัท บางกอกอินดัสเตรียลแก๊ส จำกัด (โรงงาน 1)
16. บริษัท บางกอกอินดัสเตรียลแก๊ส จำกัด (โรงงาน 2)
17. บริษัท ลินด์ ไฮโดร จำกัด
18. บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)
19. บริษัท ไทยจีซีโอ เรซิ่น จำกัด
20. บริษัท ไทยไวร์ โปรดักต์ จำกัด (มหาชน)
21. กลุ่มบริษัท ดาว ประเทศไทย พื้นที่นิคมอุตสาหกรรมมาบตาพุด 5 โรงงาน ประกอบด้วย
 - บริษัท ดาว เคมิคอล ประเทศไทย จำกัด
 - บริษัท สยามโพลีสไตรีน จำกัด
 - บริษัท สยามโพลิเอททีลีน จำกัด
 - บริษัท สยามเลทเท็กซ์สังเคราะห์ จำกัด
 - บริษัท สยามสไตรีนโมโนเมอร์ จำกัด
22. บริษัท เหล็กสยามยามาโตะ จำกัด (โรงงาน 1)
23. บริษัท โกลว์พลังงาน จำกัด มหาชน (I-4)
24. บริษัท ศักดิ์ไชยสิทธิ์ จำกัด
25. บริษัท พีทีที บีโตร์เคมิคอลส์ จำกัด (มหาชน)
26. บริษัท บริหารและพัฒนาเพื่อการอนุรักษ์สิ่งแวดล้อม จำกัด (มหาชน)
27. บริษัท บางกอกโคเจนเนอเรชั่น จำกัด
28. บริษัท แอร์ ลิควิด (ประเทศไทย) จำกัด

29. บริษัท เอ็ชเอ็มซี โพลีเมอร์ จำกัด
30. บริษัท แกรนด์สยามคอมโพสิต จำกัด
31. บริษัท ระยองไวร์ อินดัสตรี จำกัด (มหาชน)
32. บริษัท อีเอส ไฟเบอร์ วิชั่นส์ (ประเทศไทย) จำกัด
33. บริษัท เพ็ทฟอร์ม (ไทยแลนด์) จำกัด
34. บริษัท อินนิออส สไตรลูชั่น จำกัด
35. บริษัท ทานีโอบิส จำกัด
36. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 2 (โรงโพลิเอททีลีน 1)
37. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 2 (โรงโพลิเอททีลีน ชนิดความหนาแน่นสูง)
38. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 3 (โรงโพลิเอททีลีน 2)
39. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 4 (โรงอะโรเมติกส์ 1) และ
 - บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 8 (คลังสำรอง)
40. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 12 (โรงโพลิเอททีลีน)
41. บริษัท ไทยพลาสติกและเคมีภัณฑ์ จำกัด (มหาชน)
42. บริษัท ทีพีซี เพลส์ เรซิน จำกัด
43. บริษัท ไทยเอ็มเอฟซี จำกัด
44. บริษัท ระยองโอเลฟินส์ จำกัด
45. บริษัท เอ็นเอส-สยามยูไนเต็ดสตีล จำกัด โรงงาน 3
46. บริษัท อติดยา เบอร์ล่า เคมีคัลส์ (ประเทศไทย) จำกัด (แอดวานซ์ แมททีเรียลส์)
47. บริษัท ไทยเอ็มเอ็มเอ จำกัด

นิคมฯ ตับปลิวเอชเอ ตะวันออก (มาบตาพุด) 41 โรงงาน จำนวน 41 ธง

1. บริษัท จีซี-เอ็ม พีทีเอ จำกัด
2. บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน) : G-14
3. บริษัท เวนครอกซ์ (ไทยแลนด์) จำกัด
4. บริษัท เซกิซุย สเปเชียลตี้ เคมิคอลส์ (ประเทศไทย) จำกัด
5. บริษัท คาร์โบด์ เคมิคอล (ประเทศไทย) จำกัด
6. บริษัท เม็คเคมาเคมิคอลส์ (ประเทศไทย) จำกัด
7. บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด
8. บริษัท สยามสเตปิไลเซอร์สแอนด์เคมิคอลส์ จำกัด
9. บริษัท เอจีซี วีนิไทย จำกัด (มหาชน) (MTP2)
10. บริษัท พีทีที อาซาฮิ เคมิคอล จำกัด
11. บริษัท ไทย อีทอกซิเลท จำกัด
12. บริษัท เอ็มไอจี โปรดักชั่น จำกัด
13. บริษัท ออลเน็กซ์ (ประเทศไทย) จำกัด
14. บริษัท โซลเวย์ (ประเทศไทย) จำกัด
15. บริษัท โพลาร์เชิร์ฟ (ประเทศไทย) จำกัด

16. บริษัท เอ็มซีแอลเอส เอเชีย จำกัด
17. บริษัท เหล็กสยามยามาโตะ จำกัด (โรงงาน 2)
18. บริษัท ปิกิริม เพาเวอร์ (เอไอจี-เอ็มทีพี) จำกัด
19. บริษัท แพคเคลต้า จำกัด
20. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 18
21. บริษัท เซออน เคมิคัลส์ (ไทยแลนด์) จำกัด
22. บริษัท อาราคาวา เคมิคัล (ไทยแลนด์) จำกัด
23. บริษัท เอ็กซ์เอ็มซี โพลีเมอร์ จำกัด (PDH Plant)
24. บริษัท เอ็นเอส บลูสโคป (ประเทศไทย) จำกัด
25. บริษัท เอ็นเอส บลูสโคป ไลสาร์ท (ประเทศไทย) จำกัด
26. บริษัท อิติตยา เบอร์ล่า เคมิคัลส์ (ประเทศไทย) จำกัด (คลออัลคาลี่ ดิวชั่น)
27. บริษัท ร็อควูล (ประเทศไทย) จำกัด
28. บริษัท เคแอลเจ ออร์แกนิก (ประเทศไทย) จำกัด
29. บริษัท เอ็มเออาร์ซี (ไทยแลนด์) จำกัด
30. บริษัท เอ็นเอส-สยามยูไนเต็ดสตีล จำกัด โรงงาน 1
31. บริษัท เอ็นเอส-สยามยูไนเต็ดสตีล จำกัด โรงงาน 2
32. บริษัท วนชัย เคมิคอล อินดัสทรีส์ จำกัด
33. บริษัท โกลบอลกรีนเคมิคอล จำกัด (มหาชน)
34. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 16
35. บริษัท ไทยเพ็ท เรซิน จำกัด
36. บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี จำกัด (มหาชน) (ศูนย์สาธารณูปการ แห่งที่ 1)
37. บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี จำกัด (มหาชน) (ศูนย์สาธารณูปการ แห่งที่ 3)
38. บริษัท ไฟโร เอนเนอร์ยี จำกัด
39. บริษัท อี-โคทติ้ง เอเชีย จำกัด
40. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 19
41. บริษัท จีซี โพลีออลส์ จำกัด

นิคมฯ ผาแดง 2 โรงงาน จำนวนรวม 2 โรง

1. บริษัท ไทยโพลีอะซีทิล จำกัด
2. บริษัท ไทยโพลีคาร์บอนเนต จำกัด

นิคมฯ อาร์โอแอล 5 โรงงาน จำนวนรวม 5 โรง

1. บริษัท มาบตาพุดโอเลฟินส์ จำกัด
2. บริษัท แกรนด์ สยาม คอมโพลีต จำกัด
3. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 5 (โรงอะโรเมติกส์ 2)
4. บริษัท ไทยโพลีเอททีลีน จำกัด (Site 7)
5. บริษัท ไทยเอ็มเอ็มเอ จำกัด

ท่าเรืออุตสาหกรรมมาบตาพุด 13 โรงงาน จำนวนรวม 13 โรง

1. บริษัท เก็คโค-วัน จำกัด
2. บริษัท โกลว์ พลังงาน จำกัด (มหาชน) ถนนไอ-5
3. บริษัท โกลว์ เอสพีพี 2 จำกัด
4. บริษัท โกลว์ เอสพีพี 3 จำกัด
5. บริษัท ระยอง เทอร์มินัล จำกัด
6. บริษัท มาบตาพุด แทงค์ เทอร์มินัล จำกัด
7. บริษัท บีแอลซีพี เพาเวอร์ จำกัด
8. บริษัท ไทยแทงค์ เทอร์มินัล จำกัด
9. บริษัท พีทีที แทงค์ เทอร์มินัล จำกัด
10. บริษัท พีทีที แอลเอ็นจี จำกัด
11. บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน) สาขา 6 (โรงกลั่นน้ำมัน และทำเทียบเรือ)
12. บริษัท เอสซีจี ซิเมนต์ จำกัด (โครงการกำจัดกากและหน่วยผลิตไฟฟ้า)
13. บริษัท มาบตาพุดแอร์โปรดักส์ จำกัด

นิคมฯ เอเชีย 15 โรงงาน จำนวนรวม 13 โรง

1. บริษัท ชิน-เอทซู นิวเมททีเรียลส์ (ประเทศไทย) จำกัด
2. บริษัท โมเมนทีฟ เพอร์ฟอร์แมนซ์ เมททีเรียลส์ (ประเทศไทย) จำกัด
3. บริษัท พีทีที เอ็มซีซี ไปโอเค จำกัด
4. บริษัท เอ็มทีพี เอชพี เจวี (ประเทศไทย) จำกัด
5. บริษัท โซลเวย์ เพอรอกซิไทย จำกัด
6. บริษัท ชิน-เอทซู ซิลิโคนส์ (ประเทศไทย) จำกัด
7. บริษัท พูแรค (ประเทศไทย) จำกัด
8. บริษัท โททาลเอนเนอร์ยีส์ คอร์เบียน จำกัด
9. บริษัท โกลว์พลังงาน จำกัด (พลังงานแสงอาทิตย์)
10. บริษัท เอเชีย ซิลิโคนส์ โมโนเมอร์ จำกัด
11. บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี จำกัด (มหาชน) แห่งที่ 4
12. บริษัท อินโดรามา โปไตรเคม จำกัด
13. กลุ่มบริษัท ดาว ประเทศไทย พื้นที่นิคมอุตสาหกรรมเอเชีย 3 โรงงาน ประกอบด้วย
 - บริษัท สยามเลเท็กซ์สังเคราะห์ จำกัด
 - บริษัท เอ็มทีพี เอชพีทีโอ แมนูแฟคเจอร์ จำกัด
 - บริษัท ดาว เคมิคอล ประเทศไทย จำกัด

ภาคผนวก ข-50

หนังสือแจ้งแผนการตรวจวัดคุณภาพสิ่งแวดล้อม ประจำปี พ.ศ.2567
ต่อสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด)

COPY

ที่ S&L(RY) 010/2567

วันที่ 19 มีนาคม 2567

เรื่อง แจ้งแผนการดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม โครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1) ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ประจำปี 2567

เรียน ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (มาตาพุด)

- สิ่งที่ส่งมาด้วย 1. หนังสือเห็นชอบโครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1)
2. ขอบเขตการบริการ และแผนงานด้านสิ่งแวดล้อม

อ้างถึงหนังสือเลขที่ ทส 1010.8/17675 ลงวันที่ 5 พฤศจิกายน 2564 กำหนดให้เจ้าของโครงการต้องว่าจ้างหน่วยงานกลาง (Third Party) ดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมของโครงการ และแจ้งแผนการดำเนินการดังกล่าวให้หน่วยงานอนุญาตรับทราบ

บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ตั้งอยู่เลขที่ 5 ถนนผังเมืองเฉพาะ 3-1 ตำบลห้วยโป่ง อำเภอเมืองระยอง จังหวัดระยอง ได้ว่าจ้าง บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เป็นผู้ดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกัน และแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมให้เป็นไปตามข้อกำหนดของโครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1) พร้อมทั้งนำเสนอแผนปฏิบัติการดังกล่าว ประจำปี 2567 ตามสิ่งที่แนบมาด้วย 2 แจ้งต่อสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (มาตาพุด) ให้รับทราบ

20 มี.ค. 2567



หมายเหตุ : ผู้ติดต่อและประสานงาน

ที่ S&L(RY) 010/2567

วันที่ 19 มีนาคม 2567

เรื่อง แจ้งแผนการดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม โครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1) ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ประจำปี 2567

เรียน ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (มาตาพุด)

- สิ่งที่ส่งมาด้วย 1. หนังสือเห็นชอบโครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1)
2. ขอบเขตการบริการ และแผนงานด้านสิ่งแวดล้อม

อ้างถึงหนังสือเลขที่ ทส 1010.8/17675 ลงวันที่ 5 พฤศจิกายน 2564 กำหนดให้เจ้าของโครงการต้องว่าจ้างหน่วยงานกลาง (Third Party) ดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมของโครงการ และแจ้งแผนการดำเนินการดังกล่าวให้หน่วยงานอนุญาตรับทราบ

บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ตั้งอยู่เลขที่ 5 ถนนผังเมืองเฉพาะ 3-1 ตำบลห้วยโป่ง อำเภอเมืองระยอง จังหวัดระยอง ได้ว่าจ้าง บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เป็นผู้ดำเนินการตรวจสอบผลการปฏิบัติตามมาตรการป้องกัน และแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมให้เป็นไปตามข้อกำหนดของโครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1) พร้อมทั้งนำเสนอแผนปฏิบัติการดังกล่าว ประจำปี 2567 ตามสิ่งที่แนบมาด้วย 2 แจ้งต่อสำนักงานนิคมอุตสาหกรรมดับบลิวเอชเอตะวันออก (มาตาพุด) ให้รับทราบ



หมายเหตุ : ผู้ติดต่อและประสานงาน

สิ่งที่ส่งมาด้วย 1

หนังสือเห็นชอบโครงการโรงงานผลิตซีพีวีซี (ส่วนขยายครั้งที่ 1) บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด



ที่ ทส ๑๐๑๐.๘/ ๑๗ ๖๗ ๕

สำนักงานนโยบายและแผน
ทรัพยากรธรรมชาติและสิ่งแวดล้อม
๑๑๘/๑ อาคารทิปโก้ ๒ ถนนพระรามที่ ๖
แขวงพญาไท เขตพญาไท
กรุงเทพฯ ๑๐๕๐๐

๕๖ พฤศจิกายน ๒๕๖๔

เรื่อง แจ้งผลการพิจารณารายงานการประเมินผลกระทบสิ่งแวดล้อม โครงการโรงงานผลิตซีพีวีซี (Chlorinated Polyvinyl Chloride Resin) (ส่วนขยาย ครั้งที่ ๑) ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด

เรียน กรรมการผู้จัดการบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด

อ้างถึง ๑. หนังสือบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ที่ S&L(RY) 209-2564
ลงวันที่ ๑๘ สิงหาคม ๒๕๖๔

๒. หนังสือบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ที่ S&L(RY) 221-2564
ลงวันที่ ๒๐ ตุลาคม ๒๕๖๔

สิ่งที่ส่งมาด้วย มาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม ที่โครงการโรงงานผลิตซีพีวีซี (Chlorinated Polyvinyl Chloride Resin) (ส่วนขยาย ครั้งที่ ๑) ตั้งอยู่ที่นิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด) ตำบลห้วยโป่ง อำเภอมือแร่ จังหวัดระยอง ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ต้องยึดถือปฏิบัติอย่างเคร่งครัด

ตามหนังสือที่อ้างถึง ๑ และ ๒ บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ได้เสนอรายงานการประเมินผลกระทบสิ่งแวดล้อม โครงการโรงงานผลิตซีพีวีซี (Chlorinated Polyvinyl Chloride Resin) (ส่วนขยาย ครั้งที่ ๑) ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ตั้งอยู่ที่นิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด) ตำบลห้วยโป่ง อำเภอมือแร่ จังหวัดระยอง จัดทำรายงานโดยบริษัท เทคนิคสิ่งแวดล้อมไทย จำกัด ให้สำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อม ดำเนินการตามขั้นตอนการพิจารณา รายงาน ความละเอียดแจ้งแล้ว นั้น

สำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อม ได้เสนอรายงานการประเมินผลกระทบสิ่งแวดล้อมดังกล่าว ให้คณะกรรมการผู้ชำนาญการพิจารณารายงานการประเมินผลกระทบสิ่งแวดล้อม โครงการอุตสาหกรรมปิโตรเลียม ปิโตรเคมี และเคมี พิจารณาในการประชุมครั้งที่ ๘/๒๕๖๔ เมื่อวันที่ ๑ พฤศจิกายน ๒๕๖๔ คณะกรรมการผู้ชำนาญการฯ มีมติให้ความเห็นชอบรายงานการประเมินผลกระทบสิ่งแวดล้อม โครงการโรงงานผลิตซีพีวีซี (Chlorinated Polyvinyl Chloride Resin) (ส่วนขยาย ครั้งที่ ๑) ของบริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด ตั้งอยู่ที่นิคมอุตสาหกรรมดับบลิวเอชเอ ตะวันออก (มาบตาพุด) ตำบลห้วยโป่ง

อำเภอ...

อำเภอเมืองระยอง จังหวัดระยอง โดยให้ปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบต่อสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อมอย่างเคร่งครัด รายละเอียดตามสิ่งที่ส่งมาด้วย และให้ประสานบริษัทที่ปรึกษาเพื่อจัดทำรายงานที่ได้รวบรวมรายละเอียดข้อมูลทั้งหมดเรียงตามลำดับการพิจารณา จำนวน ๑ ฉบับ และรายงานฉบับสมบูรณ์ที่ได้แก้ไขเพิ่มเติมตามที่คณะกรรมการผู้ชำนาญการกำหนดแล้ว จำนวน ๑ ฉบับ พร้อมทั้งจัดทำแผ่นบันทึกข้อมูลในรูปแบบ Portable Document Format (PDF File) จำนวน ๑ แผ่น และ ๘ แผ่นตามลำดับ เสนอต่อสำนักงานโยบยาฯ ภายในเวลา ๔๕ วัน เพื่อใช้เป็นเอกสารอ้างอิงและส่งให้หน่วยงานที่เกี่ยวข้องต่อไป และหากได้รับอนุญาตจากหน่วยงานอนุญาตแล้ว ขอความร่วมมือส่งสำเนาใบอนุญาตพร้อมเงื่อนไขให้สำนักงานโยบยาฯ ทราบด้วย ทั้งนี้ สำนักงานโยบยาฯ ได้มีหนังสือแจ้งบริษัท เทคนิคสิ่งแวดล้อมไทย จำกัด เพื่อดำเนินการในส่วนที่เกี่ยวข้องต่อไปด้วยแล้ว

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

นิกรสินธุ์.

(นายประเสริฐ ศิริมาพร)

รองเลขาธิการฯ รักษาการแทน

เลขาธิการสำนักงานนโยบายและแผนทรัพยากรธรรมชาติและสิ่งแวดล้อม

กองวิเคราะห์ผลกระทบสิ่งแวดล้อม

โทรศัพท์ ๐ ๒๒๖๕ ๖๕๐๐ ต่อ ๖๖๘๒

โทรสาร ๐ ๒๒๖๕ ๖๖๑๖

ไปรษณีย์อิเล็กทรอนิกส์ sarabun@onep.go.th

สิ่งที่ส่งมาด้วย 2

ขอบเขตการบริการ และแผนงานด้านสิ่งแวดล้อม
บริษัท เอส แอนด์ แอล สเปเชียลตี้ โพลีเมอร์ จำกัด

[illegible]

ALS Laboratory Group (Thailand) Co., Ltd.
104 Phatthanakan 40, Phatthanakan Rd.,
Khwaeng Phatthanakan, Khet Suan Luang
Bangkok 10250 Thailand
T +66 2 760 3000 F +66 2 760 3197



MKT-RYG2024-04

18 มีนาคม พ.ศ. 2567

เรื่อง ขอบเขตการบริการ และแผนงานด้านสิ่งแวดล้อม บริษัท S and L Specialty Polymers Co., Ltd.

เรียน บริษัท S and L Specialty Polymers Co., Ltd.

สิ่งที่ส่งมาด้วย แผนการดำเนินงานตรวจวัด

เนื่องจาก บริษัท S and L Specialty Polymers Co., Ltd. ได้จ้างบริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ให้ดำเนินการตรวจวัดตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม ประจำปี 2567 โดยเริ่มตั้งแต่วันที่ 9 มกราคม 2567 ถึง 31 ธันวาคม 2567

ในการนี้ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ได้ดำเนินการจัดทำแผนตรวจวัดตามมาตรฐานป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม ประจำปี 2567 โดยมีรายละเอียด ดังสิ่งที่ส่งมาด้วย

จึงเรียนมาเพื่อทราบและโปรดพิจารณา

ขอแสดงความนับถือ

Patthararath K.

ภัทรรัตน์ โกสิทธี
Sales and Client Service
ALS Laboratory Group (Thailand) Co., Ltd.

| Description | Parameter | Location / Area | Freq. | Month | | | | | | | | | | | |
|-----------------------------|---|--|--|-------|-----|-----|-----|-------|-----|-----|-----|-----|-------|-----|-----|
| | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Soil | pH aqueous phase 50% | 1. บ่อสังเกตรณ S1 2. บ่อสังเกตรณ S2 3. บ่อสังเกตรณ S3 | ปีละ 2 ครั้ง | | | | | 16 | | | | | | 22 | |
| Soil** | VOCs_S_DIW | 1. บ่อสังเกตรณ S1 2. บ่อสังเกตรณ S2 3. บ่อสังเกตรณ S3 | 1 ครั้ง ครั้งปีหลัง (ช่วงเดียวกันน้ำใต้ดิน) | | | | | | | | | | | 22 | |
| | VOCs_S_DIW,pH aqueous phase 50% | 1. บ่อสังเกตรณ S4 | 1 ครั้ง ครั้งปีหลัง (ช่วงเดียวกันน้ำใต้ดิน) | | | | | | | | | | | 22 | |
| Noise | Noise (Leq 24 hrs.) Report : 1. Leq 24 hrs. 2. Leq 1 hr. 3. L90 4. Lmax | 1. บริเวณด้านที่ตเหนือ | ปีละ 2 ครั้ง (7 วัน ต่อเนื่อง) | | | | | 24-31 | | | | | 24-31 | | |
| | Noise (Leq 24 hrs.) Report : 1. Leq 24 hrs. 2. Leq 1 hr. 3. L90 4. Lmax | 1. บริเวณชุมชนมาบขุด-ซากกลาง | ปีละ 2 ครั้ง (7 วัน ต่อเนื่อง) | | | | | 24-31 | | | | | 24-31 | | |
| | Leq 5 min | | | | | | | | | | | | | | |
| | Leq 12 hr. | 1. Compressor House 2. Drying Unit | ปีละ 4 ครั้ง | | 6 | | | 27-30 | | | 15 | | 29 | | |
| | Leq 12 hr. **Report : Lmax | Location : 17 Points | ปีละ 1 ครั้ง | | | | | 27-30 | | | | | | | |
| | Noise Dose **Sampling 12 hr. (08.30-20.45 น.)** | 1. พื้นที่กระบวนการผลิต | ปีละ 4 ครั้ง | | 6 | | | 27-30 | | | 15 | | 29 | | |
| Heat Stress | Noise Dose **Sampling 12 hr.** | Location : 6 Points | ปีละ 1 ครั้ง | | | | | 27-30 | | | | | | | |
| | Heat Stress | Location : 13 Points | ปีละ 1 ครั้ง (Within Apr.) | | | | 29 | | | | | | | | |
| Air Quality in Working area | Chlorine | 1. บริเวณหอกำจัดกลิ่น | ปีละ 4 ครั้ง | | 6 | | | 27-30 | | | 15 | | 28-29 | | |
| | Total Dust (ฝุ่นทุกขนาด) Respirable Dust (ฝุ่นขนาดเล็กที่สามารถเข้าถึง และสะสมในถุงลมปอดได้) | 1. คลังเก็บสินค้า 1 2. คลังเก็บสินค้า 2 3. PVC Loading | ปีละ 4 ครั้ง | | 6 | | | 27-30 | | | 15 | | 28-29 | | |

| Description | Parameter | Location / Area | Freq. | Month | | | | | | | | | | | |
|-----------------------------|--------------------------|--|---------------------------------|-------|-----|-----|-----|-------|-----|-----|-----|-----|-------|-----|-----|
| | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Air Quality in Working area | Chlorine | Location : 22 Points | ปีละ 1 ครั้ง (ช่วง Shutdown) | | | | | | | | | | | | 16 |
| Air Quality in Working area | Chlorine | 1. Warehouse 1 | ปีละ 2 ครั้ง | | | | | 27-30 | | | | | 28-29 | | |
| | Hydrogen chloride | 2. Warehouse 2 | | | | | | | | | | | | | |
| | Total Dust | 3. Warehouse 3 (Unloading PVC) | ปีละ 1 ครั้ง | | | | | 27-30 | | | | | | | |
| | Chlorine | Location : 19 Points | | | | | | | | | | | | | |
| | Hydrogen chloride | Location : 17 Points | ปีละ 2 ครั้ง | | | | | 27-30 | | | | | 28-29 | | |
| | Chlorine | 1. QC room (Inspection room) | ปีละ 2 ครั้ง | | | | | 27-30 | | | | | 28-29 | | |
| | Mercury | | | | | | | | | | | | | | |
| | Chlorine | 1. QC room (Temp. Control room) | ปีละ 2 ครั้ง | | | | | 27-30 | | | | | 28-29 | | |
| | Hydrogen chloride | | | | | | | | | | | | | | |
| Light | Acetone | 1. Waste house (Chemical storage room) 2. V36-1-A (BQ agent tank) | ปีละ 2 ครั้ง | | | | | 27-30 | | | | | 28-29 | | |
| | Mercury | | | | | | | | | | | | | | |
| Light | Illuminance (Day time) | 1. Area : 25 Areas (75 points) 2. Spot : 19 points | ปีละ 1 ครั้ง | | | | | 27-30 | | | | | | | |
| | Illuminance (Night time) | 1. Area : 4 Areas (12 points) | ปีละ 1 ครั้ง | | | | | 27-30 | | | | | | | |

**หมายเหตุ : แผนการตรวจวัดอาจมีการเปลี่ยนแปลงตามความเหมาะสม

ภาคผนวก ข-51

เอกสารการจัดเตรียมอุปกรณ์และอะไหล่สำรองสำหรับหอกำจัดคลอรีน

Electrical & Instrument Spare part Report

Update 1/04/2024

| No. | PO No. | Store code | Discription | Status (Q'ty) | | | | | Inventory Value | | | | |
|-----|-----------------|------------|---|---------------|---------|-----------|---------|------|-----------------|------------|---------|-----------|------------|
| | | | | Stock | Receive | With draw | Balance | Unit | Unit price | Stock | Receive | With draw | Balance |
| 155 | SALPO21/06-0019 | 1ED0004 | Bionics CL2 Sensor Model:GS-100DX Range 0-1.5ppm with cat | 2 | - | - | 2 | PCS | 35,500.00 | 71,000.00 | - | - | 71,000.00 |
| 236 | SALPO23/02-0026 | 1ED0003 | Bionics CL2 Sensor Model:GS-100DX Range 0-1.5ppm | 5 | - | - | 5 | PCS | 34,435.00 | 172,175.00 | - | - | 172,175.00 |
| 310 | SALPO23/10-0050 | 1ED0006 | Bionics Electrolyte Model: EL-160-1 (for CL2 sensor) | 1 | - | - | 1 | PCS | 4,850.00 | 4,850.00 | - | - | 4,850.00 |