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|---------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|-----------------|------------------------|
|  | <b>Confederación Hidrográfica del Guadiana</b> | <b>Gestión de laboratorios</b>                     | <b>Informes</b> | <b>Report: R030412</b> |
|                                                                                 | <b>Fecha: 15-12-2017</b>                       | <b>Resultados de análisis por punto de control</b> |                 | <b>Página: 1</b>       |

|                                         |                                                                    |                                                            |
|-----------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| <b>Código:</b> GN00000018               | <b>Nombre del punto:</b> RIO BULLAQUE - R. Bullaque - E.A. Luciana | <b>Cauce:</b> RIO BULLAQUE                                 |
| <b>Código de la masa de agua:</b> 13450 | <b>Nombre de la masa de agua:</b> RIO BULLAQUE                     |                                                            |
| <b>Localidad:</b> Luciana               | <b>Provincia:</b> Ciudad Real                                      | <b>UTM X:</b> 388612 <b>UTM Y:</b> 4316120 <b>Huso:</b> 30 |

|                                          |       | ENERO<br>25-01-2017 | FEBRERO<br>20-02-2017 | MARZO<br>16-03-2017 | ABRIL<br>25-04-2017 | MAYO<br>16-05-2017 | JUNIO | JULIO | AGOSTO<br>10-08-2017 | SEPTIEMBRE<br>14-09-2017 | OCTUBRE<br>18-10-2017 | NOVIEMBRE<br>08-11-2017 | DICIEMBRE |
|------------------------------------------|-------|---------------------|-----------------------|---------------------|---------------------|--------------------|-------|-------|----------------------|--------------------------|-----------------------|-------------------------|-----------|
| % Oxígeno (in situ)                      | % SAT | 105,9               | 98,1                  | 93,2                | 126,6               | 126,2              | ---   | ---   | ---                  | 84,7                     | 55                    | 58,8                    | ---       |
| Cloro residual total (in situ)           | mg/L  | ---                 | ---                   | ---                 | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | ---                     | ---       |
| Conductividad a 20 °C (in situ)          | µS/cm | 515                 | 459                   | 438                 | 455                 | 474                | ---   | ---   | ---                  | 593                      | 644                   | 593                     | ---       |
| Nitritos (in situ)                       | mg/L  | ---                 | ---                   | ---                 | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | ---                     | ---       |
| Oxígeno disuelto (in situ)               | mg/L  | 12,2                | 10,3                  | 9,3                 | 10,6                | 10,8               | ---   | ---   | ---                  | 6,9                      | 5,1                   | 5,8                     | ---       |
| pH (in situ)                             | pH    | 7,6                 | 7,8                   | 7,9                 | 8,6                 | 8,6                | ---   | ---   | ---                  | 8,5                      | 8,6                   | 7,5                     | ---       |
| Temperatura del agua "in situ" (in situ) | °C    | 7                   | 11                    | 12,3                | 20,7                | 20,5               | ---   | ---   | ---                  | 21,4                     | 15,5                  | 13,1                    | ---       |
| Alcalinidad total                        | mg/L  | 62,7                | 62,9                  | 71,6                | 93,5                | 120,7              | ---   | ---   | ---                  | 135,1                    | 138,5                 | 143,6                   | ---       |
| Aluminio                                 | mg/L  | < 0,1000            | < 0,1000              | < 0,1000            | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Amonio total                             | mg/L  | < 0,05              | < 0,05                | 0,14                | 0,06                | 0,05               | ---   | ---   | ---                  | < 0,05                   | 0,12                  | 0,12                    | ---       |
| Arsénico                                 | µg/L  | < 1,000             | < 1,000               | < 1,000             | < 1,000             | < 1,000            | ---   | ---   | ---                  | < 1,000                  | 1,205                 | ---                     | ---       |
| Aspecto                                  | ----- | 1                   | 1                     | 1                   | 1                   | 1                  | ---   | ---   | ---                  | 1                        | 1                     | 1                       | ---       |
| Bario                                    | mg/L  | 0,0909              | 0,0763                | 0,0742              | 0,0698              | 0,0624             | ---   | ---   | ---                  | 0,1016                   | 0,0884                | 0,2855                  | ---       |
| Bicarbonatos                             | mg/L  | 62,7                | 62,9                  | 71,6                | 93,5                | 114,4              | ---   | ---   | ---                  | 135,1                    | 138,5                 | 143,6                   | ---       |
| Boro                                     | mg/L  | < 0,1000            | < 0,1000              | < 0,1000            | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Cadmio                                   | µg/L  | < 0,100             | < 0,100               | < 0,100             | < 0,100             | < 0,100            | ---   | ---   | ---                  | < 0,100                  | < 0,100               | ---                     | ---       |
| Calcio                                   | mg/L  | 44,5400             | 36,6900               | 33,1000             | 36,6800             | 37,0000            | ---   | ---   | ---                  | 45,8300                  | 49,4500               | 46,2500                 | ---       |
| Carbonatos                               | mg/L  | < 0,1               | < 0,1                 | < 0,1               | < 0,1               | 6,3                | ---   | ---   | ---                  | < 0,1                    | < 0,1                 | < 0,1                   | ---       |
| Cianuro Total                            | mg/L  | < 0,010             | < 0,010               | < 0,010             | < 0,010             | < 0,010            | ---   | ---   | ---                  | < 0,010                  | < 0,010               | < 0,010                 | ---       |
| Cinc                                     | mg/L  | < 0,1000            | < 0,1000              | < 0,1000            | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Cloruros                                 | mg/L  | 65,8                | 60,7                  | 61,8                | 62,4                | 62,6               | ---   | ---   | ---                  | 84,2                     | 99,9                  | 87,6                    | ---       |
| Cobalto                                  | mg/L  | < 0,0500            | < 0,0500              | < 0,0500            | < 0,0500            | < 0,0500           | ---   | ---   | ---                  | < 0,0500                 | < 0,0500              | < 0,0500                | ---       |
| Cobre                                    | µg/L  | < 1,000             | < 1,000               | < 1,000             | < 1,000             | 1,076              | ---   | ---   | ---                  | 1,089                    | 33,440                | ---                     | ---       |
| Cobre                                    | mg/L  | ---                 | ---                   | ---                 | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | < 0,1000                | ---       |
| Color                                    | mg/L  | 6,2                 | 9,2                   | 10,9                | 8,4                 | 11,5               | ---   | ---   | ---                  | 11,9                     | 18,8                  | 11,7                    | ---       |
| Conductividad a 20 °C                    | µS/cm | 453                 | 422                   | 403                 | 413                 | 447                | ---   | ---   | ---                  | 561                      | 592                   | 570                     | ---       |
| Cromo                                    | µg/L  | < 5,000             | < 5,000               | < 5,000             | < 5,000             | < 5,000            | ---   | ---   | ---                  | 5,065                    | < 5,000               | ---                     | ---       |
| D.B.O. 5d                                | mg/L  | 1,4                 | 1,6                   | 1,2                 | 2,1                 | 3,9                | ---   | ---   | ---                  | 3,4                      | 3,8                   | 1,4                     | ---       |

|                                                                                 |                                                |                                                    |                 |                        |
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|                                                                                 | <b>Fecha: 15-12-2017</b>                       | <b>Resultados de análisis por punto de control</b> |                 | <b>Página: 2</b>       |

|                                         |                                                                    |                                                            |
|-----------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| <b>Código:</b> GN00000018               | <b>Nombre del punto:</b> RIO BULLAQUE - R. Bullaque - E.A. Luciana | <b>Cauce:</b> RIO BULLAQUE                                 |
| <b>Código de la masa de agua:</b> 13450 | <b>Nombre de la masa de agua:</b> RIO BULLAQUE                     |                                                            |
| <b>Localidad:</b> Luciana               | <b>Provincia:</b> Ciudad Real                                      | <b>UTM X:</b> 388612 <b>UTM Y:</b> 4316120 <b>Huso:</b> 30 |

|                                       |      | ENERO<br>25-01-2017 | FEBRERO<br>20-02-2017 | MARZO<br>16-03-2017 | ABRIL<br>25-04-2017 | MAYO<br>16-05-2017 | JUNIO | JULIO | AGOSTO<br>10-08-2017 | SEPTIEMBRE<br>14-09-2017 | OCTUBRE<br>18-10-2017 | NOVIEMBRE<br>08-11-2017 | DICIEMBRE |
|---------------------------------------|------|---------------------|-----------------------|---------------------|---------------------|--------------------|-------|-------|----------------------|--------------------------|-----------------------|-------------------------|-----------|
| D.Q.O. 10min (Índice de Permanganato) | mg/L | 2,0                 | 3,4                   | 3,6                 | 4,5                 | 6,8                | ---   | ---   | ---                  | 8,4                      | 9,6                   | 5,2                     | ---       |
| Dureza total                          | mg/L | 178,6               | 146,4                 | 133,6               | 151,4               | 157,4              | ---   | ---   | ---                  | 192,7                    | 207,6                 | 200,4                   | ---       |
| Estaño                                | mg/L | < 0,1000            | < 0,1000              | < 0,1000            | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Estroncio                             | mg/L | < 0,5000            | < 0,5000              | < 0,5000            | < 0,5000            | < 0,5000           | ---   | ---   | ---                  | < 0,5000                 | < 0,5000              | < 0,5000                | ---       |
| Fenoles                               | mg/L | < 0,050             | < 0,050               | < 0,050             | < 0,050             | < 0,050            | ---   | ---   | ---                  | < 0,050                  | < 0,050               | < 0,050                 | ---       |
| Fluoruros                             | mg/L | < 0,10              | < 0,10                | 0,10                | < 0,10              | 0,23               | ---   | ---   | ---                  | 0,11                     | 0,13                  | 0,12                    | ---       |
| Fosfatos                              | mg/L | < 0,05              | < 0,05                | 0,06                | < 0,05              | 0,08               | ---   | ---   | ---                  | < 0,05                   | < 0,05                | < 0,05                  | ---       |
| Fósforo total                         | mg/L | < 0,1000            | < 0,1000              | < 0,1000            | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Hidróxidos                            | mg/L | < 0,1               | < 0,1                 | < 0,1               | < 0,1               | < 0,1              | ---   | ---   | ---                  | < 0,1                    | < 0,1                 | < 0,1                   | ---       |
| Hierro                                | mg/L | < 0,1000            | < 0,1000              | 0,1016              | 0,1280              | 0,1652             | ---   | ---   | ---                  | 0,1831                   | 0,2197                | < 0,1000                | ---       |
| Magnesio                              | mg/L | 16,3200             | 13,2600               | 12,3400             | 14,5000             | 15,7500            | ---   | ---   | ---                  | 18,9600                  | 20,3800               | 20,5800                 | ---       |
| Manganeso                             | µg/L | 3,052               | 7,955                 | 14,310              | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | ---                     | ---       |
| Manganeso                             | mg/L | ---                 | ---                   | ---                 | < 0,1000            | < 0,1000           | ---   | ---   | ---                  | < 0,1000                 | < 0,1000              | < 0,1000                | ---       |
| Mercurio                              | µg/L | ---                 | ---                   | < 0,050             | < 0,050             | < 0,020            | ---   | ---   | ---                  | < 0,020                  | < 0,020               | < 0,020                 | ---       |
| Mercurio                              | mg/L | < 0,000050          | < 0,000050            | ---                 | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | ---                     | ---       |
| Níquel                                | µg/L | 9,985               | < 5,000               | < 5,000             | < 5,000             | < 5,000            | ---   | ---   | ---                  | < 5,000                  | < 5,000               | ---                     | ---       |
| Níquel                                | mg/L | ---                 | ---                   | ---                 | ---                 | ---                | ---   | ---   | ---                  | ---                      | ---                   | < 0,0500                | ---       |
| Nitratos                              | mg/L | 45,0                | 28,9                  | 24,3                | 8,5                 | 3,3                | ---   | ---   | ---                  | < 1,0                    | < 1,0                 | < 1,0                   | ---       |
| Oxígeno disuelto                      | mg/L | 11,6                | 10,0                  | 9,0                 | 9,5                 | 10,1               | ---   | ---   | ---                  | 7,4                      | 4,8                   | 6,5                     | ---       |
| pH                                    | pH   | 7,9                 | 7,9                   | 8,0                 | 8,0                 | 8,5                | ---   | ---   | ---                  | 8,1                      | 7,6                   | 7,9                     | ---       |
| Plomo                                 | µg/L | < 1,000             | < 1,000               | < 1,000             | < 1,000             | < 1,000            | ---   | ---   | ---                  | < 1,000                  | 2,315                 | ---                     | ---       |
| Potasio                               | mg/L | 4,0220              | 3,7660                | 3,9170              | 4,2810              | 5,5280             | ---   | ---   | ---                  | 6,2850                   | 10,4400               | 7,3610                  | ---       |
| Selenio                               | µg/L | 1,033               | < 1,000               | < 1,000             | < 1,000             | < 1,000            | ---   | ---   | ---                  | 1,741                    | < 1,000               | ---                     | ---       |
| Sílice                                | mg/L | 1,0750              | 1,9190                | 3,2850              | 4,7880              | 8,3010             | ---   | ---   | ---                  | 7,1290                   | 2,3600                | < 0,8560                | ---       |
| Sodio                                 | mg/L | 28,1100             | 32,1900               | 24,9400             | 26,9300             | 30,5900            | ---   | ---   | ---                  | 38,8800                  | 42,2800               | 45,9000                 | ---       |
| Sólidos en Suspensión                 | mg/L | < 10                | < 10                  | < 10,0              | < 10,0              | 12,6               | ---   | ---   | ---                  | 10,8                     | < 10,0                | < 10,0                  | ---       |
| Sulfatos                              | mg/L | 36,3                | 33,1                  | 32,6                | 31,0                | 29,4               | ---   | ---   | ---                  | 40,3                     | 43,8                  | 37,9                    | ---       |