

### Matrix Spike/Matrix Spike Duplicate Summary

SW-846

|                 |                                               |                           |                   |
|-----------------|-----------------------------------------------|---------------------------|-------------------|
| <b>SDG No.:</b> | <u>Q3310</u>                                  | <b>Analytical Method:</b> | <u>8081B</u>      |
| <b>Client:</b>  | <u>Langan Engineering and Environmental S</u> | <b>DataFile :</b>         | <u>PL097602.D</u> |

|                | Parameter                | Spike             | Sample |             | Units | Rec | Rec Qual | RPD | RPD Qual | Low | Limits |     |
|----------------|--------------------------|-------------------|--------|-------------|-------|-----|----------|-----|----------|-----|--------|-----|
|                |                          |                   | Result |             |       |     |          |     |          |     | High   | RPD |
| Lab Sample ID: | Q3310-01MS<br>(Column 1) | Client Sample ID: |        | SS-01-0-1MS |       |     |          |     |          |     |        |     |
|                | alpha-BHC                | 25.51             | 0      | 19.8        | ug/kg | 78  |          |     |          | 60  | 144    |     |
|                | beta-BHC                 | 25.51             | 0      | 18.3        | ug/kg | 72  |          |     |          | 54  | 143    |     |
|                | delta-BHC                | 25.51             | 0      | 21.0        | ug/kg | 82  |          |     |          | 29  | 151    |     |
|                | gamma-BHC (Lindane)      | 25.51             | 0      | 19.9        | ug/kg | 78  |          |     |          | 61  | 140    |     |
|                | Heptachlor               | 25.51             | 0      | 19.9        | ug/kg | 78  |          |     |          | 63  | 135    |     |
|                | Aldrin                   | 25.51             | 0      | 19.6        | ug/kg | 77  |          |     |          | 49  | 139    |     |
|                | Heptachlor epoxide       | 25.51             | 0      | 20.5        | ug/kg | 80  |          |     |          | 41  | 156    |     |
|                | Endosulfan I             | 25.51             | 0      | 20.5        | ug/kg | 80  |          |     |          | 56  | 142    |     |
|                | Dieldrin                 | 25.51             | 3.10   | 24.6        | ug/kg | 84  |          |     |          | 47  | 161    |     |
|                | 4,4'-DDE                 | 25.51             | 0.94   | 20.3        | ug/kg | 76  |          |     |          | 55  | 136    |     |
|                | Endrin                   | 25.51             | 0.65   | 19.7        | ug/kg | 75  |          |     |          | 57  | 139    |     |
|                | Endosulfan II            | 25.51             | 0      | 17.9        | ug/kg | 70  |          |     |          | 40  | 163    |     |
|                | 4,4'-DDD                 | 25.51             | 1.90   | 23.9        | ug/kg | 86  |          |     |          | 47  | 163    |     |
|                | Endosulfan sulfate       | 25.51             | 0      | 23.3        | ug/kg | 91  |          |     |          | 62  | 139    |     |
|                | 4,4'-DDT                 | 25.51             | 0.92   | 22.9        | ug/kg | 86  |          |     |          | 51  | 146    |     |
|                | Methoxychlor             | 25.51             | 0      | 25.8        | ug/kg | 101 |          |     |          | 54  | 136    |     |
|                | Endrin ketone            | 25.51             | 0      | 22.8        | ug/kg | 89  |          |     |          | 60  | 129    |     |
|                | Endrin aldehyde          | 25.51             | 0      | 19.7        | ug/kg | 77  |          |     |          | 59  | 132    |     |
|                | alpha-Chlordane          | 25.51             | 3.60   | 23.6        | ug/kg | 78  |          |     |          | 39  | 166    |     |
|                | gamma-Chlordane          | 25.51             | 4.10   | 24.6        | ug/kg | 80  |          |     |          | 44  | 175    |     |
| Lab Sample ID: | Q3310-01MS<br>(Column 2) | Client Sample ID: |        | SS-01-0-1MS |       |     |          |     |          |     |        |     |
|                | alpha-BHC                | 25.51             | 0      | 17.4        | ug/kg | 68  |          |     |          | 60  | 144    |     |
|                | beta-BHC                 | 25.51             | 0      | 16.0        | ug/kg | 63  |          |     |          | 54  | 143    |     |
|                | delta-BHC                | 25.51             | 0      | 17.3        | ug/kg | 68  |          |     |          | 29  | 151    |     |
|                | gamma-BHC (Lindane)      | 25.51             | 0      | 18.6        | ug/kg | 73  |          |     |          | 61  | 140    |     |
|                | Heptachlor               | 25.51             | 0      | 16.7        | ug/kg | 65  |          |     |          | 63  | 135    |     |
|                | Aldrin                   | 25.51             | 0      | 17.1        | ug/kg | 67  |          |     |          | 49  | 139    |     |
|                | Heptachlor epoxide       | 25.51             | 0      | 16.7        | ug/kg | 65  |          |     |          | 41  | 156    |     |
|                | Endosulfan I             | 25.51             | 0      | 16.1        | ug/kg | 63  |          |     |          | 56  | 142    |     |
|                | Dieldrin                 | 25.51             | 4.00   | 19.0        | ug/kg | 59  |          |     |          | 47  | 161    |     |
|                | 4,4'-DDE                 | 25.51             | 0.59   | 16.2        | ug/kg | 61  |          |     |          | 55  | 136    |     |
|                | Endrin                   | 25.51             | 0.67   | 15.4        | ug/kg | 58  |          |     |          | 57  | 139    |     |
|                | Endosulfan II            | 25.51             | 0      | 16.3        | ug/kg | 64  |          |     |          | 40  | 163    |     |
|                | 4,4'-DDD                 | 25.51             | 0.69   | 15.8        | ug/kg | 59  |          |     |          | 47  | 163    |     |
|                | Endosulfan sulfate       | 25.51             | 0      | 21.8        | ug/kg | 85  |          |     |          | 62  | 139    |     |

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|-----------------|-----------------------------------------------|---------------------------|-------------------|
| <b>SDG No.:</b> | <u>Q3310</u>                                  | <b>Analytical Method:</b> | <u>8081B</u>      |
| <b>Client:</b>  | <u>Langan Engineering and Environmental S</u> | <b>DataFile :</b>         | <u>PL097602.D</u> |

| Parameter       | Spike | Sample |        | Units | Rec | Rec Qual | RPD | RPD Qual | Low | Limits |     |
|-----------------|-------|--------|--------|-------|-----|----------|-----|----------|-----|--------|-----|
|                 |       | Result | Result |       |     |          |     |          |     | High   | RPD |
| 4,4'-DDT        | 25.51 | 3.20   | 18.1   | ug/kg | 58  |          |     |          | 51  | 146    |     |
| Methoxychlor    | 25.51 | 0      | 18.2   | ug/kg | 71  |          |     |          | 54  | 136    |     |
| Endrin ketone   | 25.51 | 0      | 13.1   | ug/kg | 51  | *        |     |          | 60  | 129    |     |
| Endrin aldehyde | 25.51 | 0      | 15.5   | ug/kg | 61  |          |     |          | 59  | 132    |     |
| alpha-Chlordane | 25.51 | 3.00   | 17.8   | ug/kg | 58  |          |     |          | 39  | 166    |     |
| gamma-Chlordane | 25.51 | 3.40   | 20.8   | ug/kg | 68  |          |     |          | 44  | 175    |     |