

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                             |        |
|-----------------------------|--------|
| <b>C Number:</b>            | C01956 |
| <b>Cage Range:</b>          | All    |
| <b>Date Range:</b>          | All    |
| <b>Reasons For Removal:</b> | All    |
| <b>Removal Date Range:</b>  | All    |
| <b>Treatment Groups:</b>    | All    |
| <b>Study Gender:</b>        | Female |

|                        |               |                             |              |
|------------------------|---------------|-----------------------------|--------------|
| ANIMAL ID: 1_001       | TRT#: 1       | SEX: Female                 | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Scheduled Sacrifice   | HISTO:       |
| OBSERVATIONS           |               |                             |              |
| Liver                  | Bile Duct     | Hyperplasia, Nos            |              |
| Mammary gland          |               | Hyperplasia, Nos            |              |
| Pancreas               |               | Inflammation, Acute/Chronic |              |
| Trachea                |               | Inflammation, Acute/Chronic |              |
| PRIMARY CAUSE OF DEATH |               |                             |              |
| -                      |               |                             |              |

\* PROTOCOL REQUIRED TISSUE

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**Test Type:** Long-Term

**Route:** Dosed-Feed

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**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:50

**First Dose M/F:** NA / NA

**Lab:** NA

**ANIMAL ID:** 1\_002

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Intestine Large

Trachea

Colon

Nematodiasis

Inflammation, Acute/Chronic

**PRIMARY CAUSE OF DEATH**

-

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**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
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**CAS Number:** 86-57-7

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**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_003       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Adrenal gland                 |                                        | Pheochromocytoma                                       |                                      |
| Kidney                        |                                        | Glomerulonephritis, Subacute                           |                                      |
| Liver                         |                                        | Metamorphosis, Fatty                                   |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        |                                                        |                                      |
| -                             |                                        |                                                        |                                      |

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**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
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**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
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**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                        |                                                        |                                      |
|-------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_004 | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                        |                                                        |                                      |
| Liver                   | Bile Duct                              | Hyperplasia, Nos                                       |                                      |
| PRIMARY CAUSE OF DEATH  | -                                      |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| ANIMAL ID: 1_005       | TRT#: 1       | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |               |                              |              |
| Kidney                 |               | Glomerulonephritis, Subacute |              |
| Trachea                |               | Inflammation, Acute/Chronic  |              |
| PRIMARY CAUSE OF DEATH |               | -                            |              |

\* PROTOCOL REQUIRED TISSUE

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| ANIMAL ID: 1_006       | TRT#: 1       | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |               |                              |              |
| Bone                   | Skull         | Osteopetrosis                |              |
|                        | Sternum       | Osteopetrosis                |              |
| Kidney                 |               | Glomerulonephritis, Subacute |              |
| Liver                  |               | Hyperplasia, Focal           |              |
|                        | Bile Duct     | Hyperplasia, Nos             |              |
| Mammary gland          |               | Fibroadenoma                 |              |
| Ovary                  |               | Abscess, Nos                 |              |
| Trachea                |               | Inflammation, Chronic        |              |
| Uterus                 | Endometrium   | Hemorrhage                   |              |
|                        | Endometrium   | Hyperplasia, Cystic          |              |
| PRIMARY CAUSE OF DEATH | -             |                              |              |

\* PROTOCOL REQUIRED TISSUE

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| ANIMAL ID: 1_007       | TRT#: 1       | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |               |                              |              |
| Kidney                 |               | Glomerulonephritis, Subacute |              |
| Liver                  |               | Hyperplasia, Focal           |              |
| Mammary gland          |               | Hyperplasia, Nos             |              |
| Ovary                  |               | Cyst, Nos                    |              |
| Uterus                 | Cervix Uteri  | Fibrosis                     |              |
|                        | Endometrium   | Inflammation, Acute          |              |
| PRIMARY CAUSE OF DEATH |               |                              |              |
| -                      |               |                              |              |

\* PROTOCOL REQUIRED TISSUE



|                        |                     |                              |              |
|------------------------|---------------------|------------------------------|--------------|
| ANIMAL ID: 1_008       | TRT#: 1             | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM       | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                     |                              |              |
| Adrenal gland          | Cortex Nos          | Hyperplasia, Focal           |              |
|                        | Medulla             | Hyperplasia, Focal           |              |
| Kidney                 |                     | Glomerulonephritis, Subacute |              |
| Lung                   | Pleura Nos          | Inflammation, Acute/Chronic  |              |
| Pancreas               |                     | Inflammation, Acute/Chronic  |              |
| Unspecified            | Multiple Organs Nos | Leukemia, Myelomonocytic     |              |
| Uterus                 |                     | Endometrial Stromal Polyp    |              |
| PRIMARY CAUSE OF DEATH |                     |                              |              |
|                        | -                   |                              |              |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:50

**First Dose M/F:** NA / NA

**Lab:** NA

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_009       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Liver                         |                                        | Hyperplasia, Focal                                     |                                      |
| Mammary gland                 |                                        | Adenoma, Nos                                           |                                      |
|                               |                                        | Galactoceles                                           |                                      |
|                               |                                        | Hyperplasia, Nos                                       |                                      |
| Pancreas                      |                                        | Inflammation, Acute/Chronic                            |                                      |
| Stomach                       | Omentum Nos                            | Necrosis, Focal                                        |                                      |
| Trachea                       |                                        | Inflammation, Acute/Chronic                            |                                      |
| Unspecified                   | Multiple Organs Nos                    | Leukemia, Myelomonocytic                               |                                      |
| Uterus                        |                                        | Endometrial Stromal Polyp                              |                                      |
|                               | Fallopian Tube                         | Inflammation, Acute                                    |                                      |
|                               | Endometrium                            | Inflammation, Focal                                    |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> | -                                      |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                               |                                        |                                                       |                                      |
|-------------------------------|----------------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_010       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                       |                                      |
| Kidney                        |                                        | Glomerulonephritis, Subacute                          |                                      |
| Mammary gland                 |                                        | Fibroadenoma                                          |                                      |
|                               |                                        | Hyperplasia, Nos                                      |                                      |
| Trachea                       |                                        | Inflammation, Acute/Chronic                           |                                      |
| Uterus                        | Endometrium                            | Inflammation, Acute                                   |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        | -                                                     |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_011       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Diffuse                        |                        |
| Intestine Large        | Colon                    | Nematodiasis                             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Mammary gland          |                          | Adenoma, Nos                             |                        |
|                        |                          | Galactoceles                             |                        |
| Pancreas               |                          | Inflammation, Acute/Chronic              |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Endometrium              | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_012       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Mammary gland          |                          | Hyperplasia, Nos                         |                        |
| Trachea                |                          | Polyp, Inflammatory                      |                        |
| Uterus                 |                          | Endometrial Stromal Polyp                |                        |
|                        | Endometrium              | Hyperplasia, Cystic                      |                        |
|                        | Endometrium              | Hyperplasia, Stromal                     |                        |
|                        |                          | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                    |                        |
|------------------------|--------------------------|------------------------------------|------------------------|
| ANIMAL ID: 1_013       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                    |                        |
| Lung                   |                          | Hemorrhage                         |                        |
| Mammary gland          |                          | Hyperplasia, Nos                   |                        |
| Trachea                |                          | Inflammation, Acute/Chronic        |                        |
| PRIMARY CAUSE OF DEATH |                          | -                                  |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                     |                              |              |
|------------------------|---------------------|------------------------------|--------------|
| ANIMAL ID: 1_014       | TRT#: 1             | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM       | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                     |                              |              |
| Blood vessel           | Coronary Artery Nos | Inflammation, Acute          |              |
| Heart                  | Myocardium Nos      | Fibrosis, Diffuse            |              |
| Kidney                 |                     | Glomerulonephritis, Subacute |              |
| Liver                  |                     | Hyperplasia, Nodular         |              |
| Mammary gland          |                     | Hyperplasia, Nos             |              |
| Stomach                | Omentum Nos         | Necrosis, Focal              |              |
| Trachea                |                     | Inflammation, Acute/Chronic  |              |
| Uterus                 | Endometrium         | Hyperplasia, Cystic          |              |
|                        | Endometrium         | Inflammation, Acute          |              |
| PRIMARY CAUSE OF DEATH |                     |                              |              |
| -                      |                     |                              |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                              |              |
|------------------------|----------------|------------------------------|--------------|
| ANIMAL ID: 1_015       | TRT#: 1        | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM  | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                |                              |              |
| Heart                  | Myocardium Nos | Fibrosis, Diffuse            |              |
| Kidney                 |                | Glomerulonephritis, Subacute |              |
| Liver                  |                | Hyperplasia, Focal           |              |
| Mammary gland          |                | Galactoceles                 |              |
|                        |                | Hyperplasia, Nos             |              |
| Trachea                |                | Inflammation, Acute/Chronic  |              |
|                        |                | Polyp, Inflammatory          |              |
| Uterus                 | Endometrium    | Hyperplasia, Cystic          |              |
| PRIMARY CAUSE OF DEATH | -              |                              |              |

\* PROTOCOL REQUIRED TISSUE



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**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                    |                                        |                                                        |                                      |
|------------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_016            | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Unspecified |                                        | Leiomyosarcoma                                         |                                      |
| PRIMARY CAUSE OF DEATH             |                                        | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

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|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_017       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Focal                       |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  | Bile Duct                | Hyperplasia, Focal                       |                        |
|                        |                          | Hyperplasia, Focal                       |                        |
| Mammary gland          |                          | Adenoma, Nos                             |                        |
|                        |                          | Galactoceles                             |                        |
| Pituitary gland        |                          | Adenoma, Nos                             |                        |
|                        |                          | Carcinoma, Nos                           |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Fallopian Tube           | Abscess, Nos                             |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_018       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Kidney                        |                                        | Glomerulonephritis, Subacute                           |                                      |
| Liver                         |                                        | Hyperplasia, Focal                                     |                                      |
| Lung                          |                                        | Alveolar/Bronchiolar Adenoma                           |                                      |
| Uterus                        | Endometrium                            | Hyperplasia, Cystic                                    |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                        |                                                  |                                      |
|-------------------------|----------------------------------------|--------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_019 | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Natural Death | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                        |                                                  |                                      |
| Brain                   | Cerebellum Nos                         | Infarct, Hemorrhagic                             |                                      |
| Liver                   | Bile Duct                              | Hyperplasia, Nos                                 |                                      |
|                         |                                        | Metamorphosis, Fatty                             |                                      |
| Mammary gland           |                                        | Hyperplasia, Nos                                 |                                      |
| Stomach                 | Mucosa                                 | Necrosis, Focal                                  |                                      |
| Trachea                 |                                        | Inflammation, Acute/Chronic                      |                                      |
| Unspecified             | Multiple Organs Nos                    | Leukemia, Myelomonocytic                         |                                      |
| PRIMARY CAUSE OF DEATH  | -                                      |                                                  |                                      |

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**Species/Strain:** Rat/F344

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**First Dose M/F:** NA / NA  
**Lab:** NA

|                                              |                                        |                                                        |                                      |
|----------------------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_020                      | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Adrenal gland<br>Skin | Cortex Nos<br>Face                     | Metamorphosis, Fatty<br>Squamous Cell Carcinoma        |                                      |
| PRIMARY CAUSE OF DEATH                       | -                                      |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_021       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Intestine Small        | Ileum, Ileum             | Hyperplasia, Lymphoid                    |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Mammary gland          |                          | Fibroadenoma                             |                        |
|                        |                          | Galactoceles                             |                        |
|                        |                          | Hyperplasia, Nos                         |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Endometrium              | Abscess, Nos                             |                        |
|                        | Endometrium              | Hyperplasia, Cystic                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_022       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Kidney                        |                                        | Glomerulonephritis, Subacute                           |                                      |
| Liver                         |                                        | Hyperplasia, Focal                                     |                                      |
| Trachea                       |                                        | Inflammation, Acute/Chronic                            |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        | -                                                      |                                      |

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**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_023       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Pancreas                      |                                        | Inflammation, Acute/Chronic                            |                                      |
| Uterus                        |                                        | Endometrial Stromal Polyp                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE



|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_024       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Endometrium              | Hyperplasia, Cystic                      |                        |
| PRIMARY CAUSE OF DEATH |                          | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_025       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Nodular                     |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Uterus                 | Endometrium              | Endometrial Stromal Polyp                |                        |
|                        |                          | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                              |              |
|------------------------|----------------|------------------------------|--------------|
| ANIMAL ID: 1_026       | TRT#: 1        | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM  | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                |                              |              |
| Kidney                 |                | Glomerulonephritis, Subacute |              |
| Liver                  |                | Hyperplasia, Focal           |              |
| Ovary                  |                | Fibrosis, Focal              |              |
| Pituitary gland        |                | Cyst, Hemorrhagic            |              |
| Thyroid                |                | C-Cell Carcinoma             |              |
| Uterus                 | Endometrium    | Abscess, Nos                 |              |
|                        | Fallopian Tube | Inflammation, Acute          |              |
| PRIMARY CAUSE OF DEATH |                |                              |              |
| -                      |                |                              |              |

\* PROTOCOL REQUIRED TISSUE

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| ANIMAL ID: 1_027       | TRT#: 1       | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Moribund Sacrifice     | HISTO:       |
| OBSERVATIONS           |               |                              |              |
| Kidney                 |               | Glomerulonephritis, Subacute |              |
| Liver                  |               | Hyperplasia, Focal           |              |
| Mammary gland          |               | Adenoma, Nos                 |              |
| Trachea                |               | Inflammation, Acute/Chronic  |              |
| Uterus                 | Endometrium   | Hyperplasia, Nos             |              |
|                        | Endometrium   | Inflammation, Acute/Chronic  |              |
| PRIMARY CAUSE OF DEATH |               |                              |              |
| -                      |               |                              |              |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                        |                                                        |                                      |
|-------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_028 | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                        |                                                        |                                      |
| Kidney                  |                                        | Glomerulonephritis, Subacute                           |                                      |
| Pituitary gland         |                                        | Adenoma, Nos                                           |                                      |
| PRIMARY CAUSE OF DEATH  | -                                      |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_030       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Pituitary gland        |                          | Adenoma, Nos                             |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Endometrium              | Hyperplasia, Cystic                      |                        |
|                        | Endometrium              | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH |                          |                                          |                        |
| -                      |                          |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                               |                                                                          |                        |
|------------------------|-------------------------------|--------------------------------------------------------------------------|------------------------|
| ANIMAL ID: 1_031       | TRT#: 1<br>DOSE: 500 PPM      | SEX: Female<br>DISP: Scheduled Sacrifice                                 | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                               |                                                                          |                        |
| Adrenal gland          | Cortex Nos<br>Cortex Nos      | Hyperplasia, Nos<br>Metamorphosis, Fatty<br>Glomerulonephritis, Subacute |                        |
| Kidney                 |                               | Cyst, Nos                                                                |                        |
| Ovary                  |                               | Inflammation, Acute/Chronic                                              |                        |
| Pancreas               |                               | Adenoma, Nos                                                             |                        |
| Pituitary gland        |                               | Hyperplasia, Cystic                                                      |                        |
| Uterus                 | Endometrium<br>Fallopian Tube | Inflammation, Acute/Chronic                                              |                        |
| PRIMARY CAUSE OF DEATH | -                             |                                                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                        |                                                        |                                      |
|-------------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_032       | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                        |                                                        |                                      |
| Liver                         |                                        | Hyperplasia, Focal                                     |                                      |
| Pancreas                      |                                        | Inflammation, Acute/Chronic                            |                                      |
| Pituitary gland               |                                        | Adenoma, Nos                                           |                                      |
| Trachea                       |                                        | Inflammation, Acute/Chronic                            |                                      |
| Uterus                        |                                        | Hydrometra                                             |                                      |
| Endometrium                   |                                        | Inflammation, Acute                                    |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                        |                                                        |                                      |
| -                             |                                        |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                                        |                                        |                                                         |                                      |
|--------------------------------------------------------|----------------------------------------|---------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_033                                | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice   | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Lymph node<br>Trachea<br>Uterus | Mediastinal Lymph Node                 | Hemorrhage<br>Inflammation, Acute/Chronic<br>Hydrometra |                                      |
| PRIMARY CAUSE OF DEATH                                 | -                                      |                                                         |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_034       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Metamorphosis, Fatty                     |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
|                        | Bile Duct                | Hyperplasia, Nos                         |                        |
| Lung                   |                          | Alveolar/Bronchiolar Adenoma             |                        |
| Uterus                 | Fallopian Tube           | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_035       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Metamorphosis, Fatty                     |                        |
| Mammary gland          |                          | Fibroadenoma                             |                        |
|                        | Mammary Duct             | Hyperplasia, Nos                         |                        |
| Ovary                  |                          | Cyst, Nos                                |                        |
| Uterus                 |                          | Endometrial Stromal Polyp                |                        |
|                        | Endometrium              | Hyperplasia, Nos                         |                        |
|                        | Endometrium              | Inflammation, Acute                      |                        |
|                        | Fallopian Tube           | Inflammation, Acute                      |                        |
|                        | Fallopian Tube           | Retention Fluid                          |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                             |              |
|------------------------|----------------|-----------------------------|--------------|
| ANIMAL ID: 1_036       | TRT#: 1        | SEX: Female                 | DAY ON TEST: |
|                        | DOSE: 500 PPM  | DISP: Scheduled Sacrifice   | HISTO:       |
| OBSERVATIONS           |                |                             |              |
| Heart                  | Myocardium Nos | Fibrosis, Diffuse           |              |
|                        | Myocardium Nos | Inflammation, Acute/Chronic |              |
| Liver                  | Bile Duct      | Hyperplasia, Focal          |              |
|                        |                | Hyperplasia, Focal          |              |
| Ovary                  |                | Cyst, Nos                   |              |
|                        |                | Granulosa-Cell Tumor        |              |
| Uterus                 | Endometrium    | Inflammation, Acute         |              |
| PRIMARY CAUSE OF DEATH | -              |                             |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                              |              |
|------------------------|----------------|------------------------------|--------------|
| ANIMAL ID: 1_038       | TRT#: 1        | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM  | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                |                              |              |
| Heart                  | Myocardium Nos | Fibrosis, Focal              |              |
| Intestine Large        | Colon          | Nematodiasis                 |              |
| Kidney                 |                | Glomerulonephritis, Subacute |              |
| Liver                  | Bile Duct      | Hyperplasia, Focal           |              |
|                        |                | Hyperplasia, Focal           |              |
| Pituitary gland        |                | Hyperplasia, Focal           |              |
| Trachea                |                | Inflammation, Acute/Chronic  |              |
| Uterus                 | Endometrium    | Hyperplasia, Nos             |              |
|                        | Endometrium    | Inflammation, Acute          |              |
| PRIMARY CAUSE OF DEATH | -              |                              |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_039       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Focal                       |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Diffuse                        |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Pituitary gland        |                          | Adenoma, Nos                             |                        |
| Uterus                 | Endometrium              | Inflammation, Acute                      |                        |
|                        | Fallopian Tube           | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                         |                                        |                                                        |                                      |
|-------------------------|----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 1_040 | <b>TRT#:</b> 1<br><b>DOSE:</b> 500 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                        |                                                        |                                      |
| Adrenal gland           | Cortex Nos                             | Hyperplasia, Nos                                       |                                      |
| Pancreas                |                                        | Inflammation, Acute/Chronic                            |                                      |
| Trachea                 |                                        | Inflammation, Acute/Chronic                            |                                      |
| Uterus                  | Endometrium                            | Hyperplasia, Cystic                                    |                                      |
| PRIMARY CAUSE OF DEATH  | -                                      |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_041       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Focal                          |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  | Bile Duct                | Hyperplasia, Focal                       |                        |
|                        |                          | Necrosis, Focal                          |                        |
| Mammary gland          |                          | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                          | Adenoma, Nos                             |                        |
| Uterus                 |                          | Endometrial Stromal Polyp                |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                          |                                    |                        |
|------------------------|--------------------------|------------------------------------|------------------------|
| ANIMAL ID: 1_042       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                    |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Nodular               |                        |
|                        | Cortex Nos               | Metamorphosis, Fatty               |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Diffuse                  |                        |
|                        | Myocardium Nos           | Inflammation, Acute/Chronic        |                        |
|                        |                          | Necrosis, Focal                    |                        |
| Kidney                 |                          | Necrosis, Focal                    |                        |
| Liver                  | Bile Duct                | Hyperplasia, Focal                 |                        |
|                        |                          | Metamorphosis, Fatty               |                        |
|                        |                          | Necrosis, Hemorrhagic              |                        |
| Lung                   |                          | Hemorrhage                         |                        |
| Ovary                  |                          | Inflammation, Acute Necrotizing    |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                    |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                         |                        |
|------------------------|--------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 1_043       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                         |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute            |                        |
| Lung                   |                          | Inflammation, Focal                     |                        |
| Pituitary gland        |                          | Adenoma, Nos                            |                        |
| Trachea                |                          | Inflammation, Acute/Chronic             |                        |
| Uterus                 |                          | Endometrial Stromal Polyp               |                        |
|                        | Endometrium              | Inflammation, Acute Necrotizing         |                        |
| PRIMARY CAUSE OF DEATH |                          |                                         |                        |
| -                      |                          |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |               |                           |              |
|------------------------|---------------|---------------------------|--------------|
| ANIMAL ID: 1_044       | TRT#: 1       | SEX: Female               | DAY ON TEST: |
|                        | DOSE: 500 PPM | DISP: Natural Death       | HISTO:       |
| OBSERVATIONS           |               |                           |              |
| Unspecified            |               | Fibroma                   |              |
| Uterus                 |               | Abscess, Nos              |              |
|                        |               | Endometrial Stromal Polyp |              |
|                        |               | Hyperplasia, Adenomatous  |              |
| PRIMARY CAUSE OF DEATH |               |                           |              |
| -                      |               |                           |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_045       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Nodular                     |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
|                        | Bile Duct                | Hyperplasia, Nos                         |                        |
| Mammary gland          |                          | Fibroadenoma                             |                        |
|                        |                          | Galactoceles                             |                        |
|                        |                          | Hyperplasia, Nos                         |                        |
| Uterus                 | Endometrium              | Inflammation, Acute                      |                        |
|                        | Cervix Uteri             | Inflammation, Acute Focal                |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                              |              |
|------------------------|----------------|------------------------------|--------------|
| ANIMAL ID: 1_046       | TRT#: 1        | SEX: Female                  | DAY ON TEST: |
|                        | DOSE: 500 PPM  | DISP: Scheduled Sacrifice    | HISTO:       |
| OBSERVATIONS           |                |                              |              |
| Adrenal gland          |                | Cortical Adenoma             |              |
| Heart                  | Myocardium Nos | Fibrosis, Focal              |              |
| Kidney                 |                | Glomerulonephritis, Subacute |              |
| Liver                  |                | Hyperplasia, Focal           |              |
|                        | Bile Duct      | Hyperplasia, Nos             |              |
| Mammary gland          |                | Dilatation, Ducts            |              |
|                        |                | Fibroadenoma                 |              |
| Skin                   |                | Lipoma                       |              |
| Trachea                |                | Inflammation, Acute/Chronic  |              |
| Urinary bladder        |                | Hyperplasia, Epithelial      |              |
|                        |                | Transitional-Cell Papilloma  |              |
| Uterus                 | Endometrium    | Hyperplasia, Cystic          |              |
| PRIMARY CAUSE OF DEATH |                |                              |              |
| -                      |                |                              |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_047       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Focal                          |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  | Bile Duct                | Hyperplasia, Focal                       |                        |
|                        |                          | Hyperplasia, Focal                       |                        |
| Mammary gland          |                          | Fibroadenoma                             |                        |
|                        |                          | Galactoceles                             |                        |
|                        |                          | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                          | Adenoma, Nos                             |                        |
| Trachea                |                          | Hyperplasia, Epithelial                  |                        |
|                        |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 | Endometrium              | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_048       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Adrenal gland          | Cortex Nos               | Hyperplasia, Focal                       |                        |
| Heart                  | Myocardium Nos           | Fibrosis, Diffuse                        |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Pancreas               |                          | Inflammation, Acute/Chronic              |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 |                          | Hydrometra                               |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                          |                                          |                        |
|------------------------|--------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 1_050       | TRT#: 1<br>DOSE: 500 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                          |                                          |                        |
| Intestine Large        | Colon                    | Nematodiasis                             |                        |
| Kidney                 |                          | Glomerulonephritis, Subacute             |                        |
| Liver                  |                          | Hyperplasia, Focal                       |                        |
| Mammary gland          |                          | Fibroadenoma                             |                        |
|                        |                          | Hyperplasia, Nos                         |                        |
| Trachea                |                          | Inflammation, Acute/Chronic              |                        |
| Uterus                 |                          | Adenocarcinoma, Nos                      |                        |
|                        | Endometrium              | Inflammation, Acute                      |                        |
| PRIMARY CAUSE OF DEATH | -                        |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_001       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Inflammation, Chronic                    |                        |
| Lung                   | Bronchus           | Inflammation, Chronic                    |                        |
|                        |                    | Perivascularitis                         |                        |
| Trachea                |                    | Inflammation, Chronic                    |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_002       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
|                        | Bile Duct          | Inflammation, Nos                        |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_003       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   |                    | Inflammation, Focal                      |                        |
| Thyroid                |                    | Adenoma, Nos                             |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| Uterus                 | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_004       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   |                    | Inflammation, Focal                      |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
|                        | Endometrium        | Hyperplasia, Nos                         |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                         |                                  |                                                        |                                      |
|-------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_005 | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                  |                                                        |                                      |
| Kidney                  |                                  | Glomerulonephritis, Nos                                |                                      |
| Liver                   | Bile Duct                        | Hyperplasia, Nos                                       |                                      |
| Pancreas                | Acinus                           | Atrophy, Nos                                           |                                      |
|                         |                                  | Inflammation, Nos                                      |                                      |
| PRIMARY CAUSE OF DEATH  | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                  |                                                        |                                      |
|-------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_006 | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                  |                                                        |                                      |
| Lung                    | Bronchus                         | Inflammation, Chronic<br>Perivascularitis              |                                      |
| Trachea                 |                                  | Inflammation, Chronic                                  |                                      |
| PRIMARY CAUSE OF DEATH  | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_007       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   |                    | Inflammation, Focal                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_008       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Cortex Nos         | Hyperplasia, Nos                         |                        |
|                        | Medulla            | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Uterus                 | Endometrium        | Inflammation, Focal                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_009       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Hyperplasia, Nos                         |                        |
| Spleen                 |                    | Hyperplasia, Reticulum Cell              |                        |
| Uterus                 |                    | Adenocarcinoma, Nos                      |                        |
|                        | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 2_010       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial              |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                        |                        |
| Kidney                 |                    | Glomerulonephritis, Membranous          |                        |
| Liver                  |                    | Fibrosis                                |                        |
|                        |                    | Hepatocellular Carcinoma                |                        |
| Lymph node             |                    | Hyperplasia, Plasma Cell                |                        |
|                        |                    | Inflammation, Nos                       |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                     |                        |
| Trachea                |                    | Inflammation, Nos                       |                        |
| Uterus                 |                    | Abscess, Nos                            |                        |
|                        | Endometrium        | Inflammation, Nos                       |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

|                         |                                  |                                                        |                                      |
|-------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_011 | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                  |                                                        |                                      |
| Lung                    | Bronchus                         | Inflammation, Chronic<br>Perivascularitis              |                                      |
| Trachea                 |                                  | Inflammation, Chronic                                  |                                      |
| PRIMARY CAUSE OF DEATH  | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_012       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Cortex Nos         | Nodule                                   |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                    |                        |
|------------------------|--------------------|------------------------------------|------------------------|
| ANIMAL ID: 2_013       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                    |                        |
| Liver                  |                    | Adenocarcinoma, Nos, Metastatic    |                        |
| Lung                   |                    | Adenocarcinoma, Nos, Metastatic    |                        |
| Lymph node             | Renal Lymph Node   | Adenocarcinoma, Nos, Metastatic    |                        |
| Uterus                 |                    | Adenocarcinoma, Nos                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                    |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_014       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lymph node             |                    | Hyperplasia, Nos                         |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Uterus                 | Endometrium        | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 2_015       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial              |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                 |                        |
| Liver                  |                    | Hyperplasia, Focal                      |                        |
|                        | Bile Duct          | Hyperplasia, Nos                        |                        |
|                        | Bile Duct          | Inflammation, Nos                       |                        |
| Mammary gland          |                    | Fibroadenoma                            |                        |
| Uterus                 | Endometrium        | Hyperplasia, Adenomatous                |                        |
|                        | Endometrium        | Inflammation, Nos                       |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                  |                                                        |                                      |
|-------------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_016       | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                  |                                                        |                                      |
| Lung                          | Bronchus                         | Inflammation, Chronic<br>Perivascularitis              |                                      |
| Trachea                       |                                  | Inflammation, Chronic                                  |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE



|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 2_017       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Heart                  | Myocardium Nos     | Fibrosis                                |                        |
|                        | Myocardium Nos     | Inflammation, Interstitial              |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                        |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                 |                        |
| Liver                  |                    | Hyperplasia, Focal                      |                        |
|                        | Bile Duct          | Hyperplasia, Nos                        |                        |
| Mammary gland          |                    | Adenocarcinoma, Nos                     |                        |
|                        |                    | Hyperplasia, Nos                        |                        |
| Pancreas               |                    | Inflammation, Nos                       |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                  |                        |
| Stomach                |                    | Inflammation, Nos                       |                        |
| Uterus                 | Endometrium        | Hyperplasia, Cystic                     |                        |
|                        | Endometrium        | Inflammation, Nos                       |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:50  
First Dose M/F: NA / NA  
Lab: NA

|                        |                     |                                      |                        |
|------------------------|---------------------|--------------------------------------|------------------------|
| ANIMAL ID: 2_018       | TRT#: 2<br>DOSE: 0  | SEX: Female<br>DISP: Natural Death   | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                     |                                      |                        |
| Pituitary gland        |                     | Chromophobe Adenoma                  |                        |
| Unspecified            | Multiple Organs Nos | Lymphoma, Lymphocytic-Malignant Type |                        |
| PRIMARY CAUSE OF DEATH | -                   |                                      |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_019       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Necrosis, Focal                          |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Stomach                |                    | Inflammation, Nos                        |                        |
| Thyroid                |                    | C-Cell Adenoma                           |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| Uterus                 | Endometrium        | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_020       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
| Mammary gland          |                    | Fibroadenoma                             |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Trachea                |                    | Polyp, Inflammatory                      |                        |
| Uterus                 |                    | Hydrometra                               |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:50  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                  |                                                        |                                      |
|-------------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_021       | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                  |                                                        |                                      |
| Lung                          | Bronchus                         | Inflammation, Chronic<br>Perivascularitis              |                                      |
| Trachea                       |                                  | Inflammation, Chronic                                  |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_022       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Fibrosis                                 |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
|                        | Bile Duct          | Inflammation, Nos                        |                        |
|                        |                    | Perivascularitis                         |                        |
| Lymph node             |                    | Hyperplasia, Nos                         |                        |
|                        |                    | Inflammation, Nos                        |                        |
| Pituitary gland        |                    | Hyperplasia, Chromophobe Cell            |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| Uterus                 |                    | Hyperplasia, Adenomatous                 |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_023       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Angiectasis                              |                        |
|                        |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lymph node             |                    | Plasmacytosis                            |                        |
| Mammary gland          |                    | Galactoceles                             |                        |
|                        |                    | Hyperplasia, Nos                         |                        |
|                        |                    | Hyperplasia, Papillary                   |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Thyroid                |                    | Adenocarcinoma, Nos                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

|                               |                                  |                                                       |                                      |
|-------------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_024       | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                  |                                                       |                                      |
| Kidney                        |                                  | Nephrosis, Hydro                                      |                                      |
| Liver                         |                                  | Hepatocellular Carcinoma                              |                                      |
| Lung                          |                                  | Hepatocellular Carcinoma, Metastatic                  |                                      |
| Unspecified                   | Body Cavities                    | Mesothelioma, Malignant                               |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                  | -                                                     |                                      |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 2_025       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial              |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                 |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                        |                        |
|                        |                    | Necrosis, Focal                         |                        |
| Lung                   |                    | Inflammation, Interstitial              |                        |
|                        | Bronchus           | Inflammation, Nos                       |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                     |                        |
| Trachea                |                    | Inflammation, Nos                       |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

**ANIMAL ID:** 2\_026

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

|         |          |                       |
|---------|----------|-----------------------|
| Lung    | Bronchus | Inflammation, Chronic |
| Trachea |          | Inflammation, Chronic |

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                    |                        |
|------------------------|--------------------|------------------------------------|------------------------|
| ANIMAL ID: 2_027       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                    |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial         |                        |
| Kidney                 |                    | Inflammation, Interstitial         |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                   |                        |
|                        |                    | Necrosis, Focal                    |                        |
| Lung                   |                    | Inflammation, Nos                  |                        |
| Uterus                 |                    | Endometrial Stromal Polyp          |                        |
|                        | Endometrium        | Inflammation, Nos                  |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                    |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_028       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Fibrosis                                 |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                         |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Hyperplasia, Nos                         |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
|                        |                    | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_029       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lymph node             |                    | Plasmacytosis                            |                        |
| Pancreas               | Duct Nos           | Hyperplasia, Nos                         |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Urinary bladder        |                    | Inflammation, Nos                        |                        |
| Uterus                 |                    | Hyperplasia, Adenomatous                 |                        |
|                        | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH |                    |                                          |                        |
| -                      |                    |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

| <b>ANIMAL ID:</b> 2_030       | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
|-------------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>OBSERVATIONS</b>           |                                  |                                                       |                                      |
| Adrenal gland                 | Cortex Nos                       | Hyperplasia, Nos                                      |                                      |
|                               | Medulla                          | Hyperplasia, Nos                                      |                                      |
| Blood vessel                  | Portal Vein                      | Thrombus, Mural                                       |                                      |
| Ear                           | Canal                            | Fibroma                                               |                                      |
| Heart                         | Myocardium Nos                   | Inflammation, Nos                                     |                                      |
| Kidney                        |                                  | Glomerulonephritis, Nos                               |                                      |
| Liver                         |                                  | Hyperplasia, Focal                                    |                                      |
|                               | Bile Duct                        | Hyperplasia, Nos                                      |                                      |
|                               | Bile Duct                        | Inflammation, Nos                                     |                                      |
|                               |                                  | Necrosis, Coagulative                                 |                                      |
| Mammary gland                 |                                  | Fibroadenoma                                          |                                      |
|                               |                                  | Hyperplasia, Nos                                      |                                      |
| Ovary                         |                                  | Cyst, Nos                                             |                                      |
| Pituitary gland               |                                  | Chromophobe Adenoma                                   |                                      |
| Unspecified                   | Multiple Organs Nos              | Leukemia, Monocytic                                   |                                      |
| Uterus                        | Endometrium                      | Hyperplasia, Cystic                                   |                                      |
|                               | Endometrium                      | Inflammation, Nos                                     |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                  |                                                       |                                      |
| -                             |                                  |                                                       |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_031       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Intestine Large        | Colon              | Nematodiasis                             |                        |
| Lung                   | Bronchus           | Inflammation, Chronic                    |                        |
| Ovary                  |                    | Inflammation, Granulomatous Focal        |                        |
| Trachea                |                    | Inflammation, Chronic                    |                        |
| Uterus                 |                    | Hydrometra                               |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 2_032       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial              |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                 |                        |
| Liver                  |                    | Hyperplasia, Focal                      |                        |
|                        | Bile Duct          | Hyperplasia, Nos                        |                        |
| Lung                   |                    | Inflammation, Focal                     |                        |
| Pancreas               | Acinus             | Atrophy, Nos                            |                        |
|                        |                    | Inflammation, Nos                       |                        |
| Pituitary gland        |                    | Adenoma, Nos                            |                        |
| Uterus                 |                    | Abscess, Nos                            |                        |
|                        |                    | Adenocarcinoma, Nos                     |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_033       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
|                        |                    | Necrosis, Coagulative                    |                        |
| Lung                   |                    | Inflammation, Focal                      |                        |
| Mammary gland          |                    | Galactoceles                             |                        |
|                        |                    | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Adenoma, Nos                             |                        |
| Spleen                 |                    | Hyperplasia, Nos                         |                        |
| Thyroid                |                    | Hyperplasia, Follicular Cell             |                        |
| Uterus                 |                    | Adenocarcinoma, Nos                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_034       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Necrosis, Focal                          |                        |
| Mammary gland          |                    | Fibroadenoma                             |                        |
|                        |                    | Galactoceles                             |                        |
|                        |                    | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Hematopoietic               |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| Uterus                 | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_035       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Cortex Nos         | Hyperplasia, Nos                         |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Nodular                     |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| Pancreas               |                    | Inflammation, Nos                        |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                                   |                                  |                                                        |                                      |
|---------------------------------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_036                           | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Intestine Large<br>Trachea | Colon                            | Nematodiasis<br>Inflammation, Chronic                  |                                      |
| PRIMARY CAUSE OF DEATH                            | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_037       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Cortex Nos         | Hyperplasia, Nos                         |                        |
| Heart                  | Myocardium Nos     | Fibrosis                                 |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
| Lung                   |                    | Alveolar/Bronchiolar Adenoma             |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
|                        |                    | Papillary Cystadenocarcinoma Nos         |                        |
| Pancreas               |                    | Inflammation, Nos                        |                        |
| Pituitary gland        |                    | Adenocarcinoma, Nos                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Hematopoietic               |                        |
| Trachea                |                    | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_039       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   | Bronchus           | Bronchiectasis                           |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Pancreas               |                    | Inflammation, Nos                        |                        |
| Pituitary gland        |                    | Adenoma, Nos                             |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
| Stomach                |                    | Hyperplasia, Epithelial                  |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
|                        |                    | Hyperplasia, Adenomatous                 |                        |
|                        | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                  |                                                  |                                      |
|-------------------------------|----------------------------------|--------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 2_040       | <b>TRT#:</b> 2<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Natural Death | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                  |                                                  |                                      |
| Liver                         |                                  | Metamorphosis, Fatty                             |                                      |
| Mammary gland                 |                                  | Galactoceles                                     |                                      |
| Uterus                        |                                  | Hyperplasia, Nos                                 |                                      |
|                               |                                  | Endometrial Stromal Polyp                        |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                  | -                                                |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_041       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Lung                   | Bronchus           | Inflammation, Chronic                    |                        |
| Trachea                |                    | Inflammation, Chronic                    |                        |
| Uterus                 |                    | Hydrometra                               |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_042       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Medulla            | Hyperplasia, Nos                         |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lymph node             |                    | Plasmacytosis                            |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                     |                            |              |
|------------------------|---------------------|----------------------------|--------------|
| ANIMAL ID: 2_043       | TRT#: 2             | SEX: Female                | DAY ON TEST: |
|                        | DOSE: 0             | DISP: Scheduled Sacrifice  | HISTO:       |
| OBSERVATIONS           |                     |                            |              |
| Adrenal gland          |                     | Pheochromocytoma           |              |
| Heart                  | Myocardium Nos      | Inflammation, Interstitial |              |
| Kidney                 |                     | Glomerulonephritis, Nos    |              |
| Lymph node             |                     | Inflammation, Nos          |              |
| Mammary gland          |                     | Galactoceles               |              |
|                        |                     | Hyperplasia, Nos           |              |
| Pancreas               |                     | Inflammation, Nos          |              |
| Pituitary gland        |                     | Chromophobe Adenoma        |              |
| Unspecified            | Multiple Organs Nos | Leukemia, Monocytic        |              |
| Uterus                 | Endometrium         | Inflammation, Nos          |              |
| PRIMARY CAUSE OF DEATH |                     |                            |              |
|                        | -                   |                            |              |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

| ANIMAL ID: 2_044       |  | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
|------------------------|--|--------------------|------------------------------------------|------------------------|
| OBSERVATIONS           |  |                    |                                          |                        |
| Adrenal gland          |  | Cortex Nos         | Hyperplasia, Nos                         |                        |
|                        |  | Medulla            | Hyperplasia, Nos                         |                        |
| Heart                  |  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |  |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |  |                    | Hyperplasia, Focal                       |                        |
|                        |  | Bile Duct          | Hyperplasia, Nos                         |                        |
|                        |  | Bile Duct          | Inflammation, Nos                        |                        |
| Lung                   |  |                    | Inflammation, Focal                      |                        |
| Pituitary gland        |  |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |  |                    | Hyperplasia, Erythroid                   |                        |
|                        |  |                    | Hyperplasia, Plasma Cell                 |                        |
| Uterus                 |  |                    | Endometrial Stromal Polyp                |                        |
|                        |  |                    | Hyperplasia, Adenomatous                 |                        |
|                        |  | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH |  | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_045       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
| Ovary                  |                    | Hyperplasia, Interstitial Cell           |                        |
| Pituitary gland        |                    | Adenocarcinoma, Nos                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Hematopoietic               |                        |
| Stomach                |                    | Inflammation, Focal                      |                        |
| Uterus                 | Fallopian Tube     | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_046       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Intestine Large        | Colon              | Nematodiasis                             |                        |
| Lung                   | Bronchus           | Inflammation, Chronic                    |                        |
|                        |                    | Perivascularitis                         |                        |
| Trachea                |                    | Inflammation, Chronic                    |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_047       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          | Cortex Nos         | Hyperplasia, Nos                         |                        |
| Heart                  | Myocardium Nos     | Fibrosis                                 |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
| Lung                   |                    | Inflammation, Interstitial               |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Stomach                |                    | Inflammation, Focal                      |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
|                        | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_048       | TRT#: 2<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Inflammation, Interstitial               |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   | Bronchiole         | Inflammation, Nos                        |                        |
| Mammary gland          |                    | Adenoma, Nos                             |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Reticulum Cell              |                        |
| Stomach                | Mucosa             | Hyperplasia, Nos                         |                        |
| Thyroid                |                    | Adenocarcinoma, Nos                      |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |           |                             |              |
|------------------------|-----------|-----------------------------|--------------|
| ANIMAL ID: 2_049       | TRT#: 2   | SEX: Female                 | DAY ON TEST: |
|                        | DOSE: 0   | DISP: Scheduled Sacrifice   | HISTO:       |
| OBSERVATIONS           |           |                             |              |
| Kidney                 |           | Glomerulonephritis, Nos     |              |
| Liver                  |           | Hyperplasia, Focal          |              |
|                        | Bile Duct | Hyperplasia, Nos            |              |
| Lung                   |           | Inflammation, Focal         |              |
| Mammary gland          |           | Hyperplasia, Nos            |              |
| Pancreas               | Islets    | Hyperplasia, Nos            |              |
| Pituitary gland        |           | Chromophobe Adenoma         |              |
| Spleen                 |           | Hyperplasia, Erythroid      |              |
|                        |           | Hyperplasia, Reticulum Cell |              |
| Trachea                |           | Inflammation, Nos           |              |
| Uterus                 |           | Endometrial Stromal Polyp   |              |
|                        |           | Hyperplasia, Adenomatous    |              |
| PRIMARY CAUSE OF DEATH | -         |                             |              |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                     |                                          |                        |
|------------------------|---------------------|------------------------------------------|------------------------|
| ANIMAL ID: 2_050       | TRT#: 2<br>DOSE: 0  | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                     |                                          |                        |
| Adrenal gland          | Cortex Nos          | Hyperplasia, Nos<br>Pheochromocytoma     |                        |
| Kidney                 |                     | Glomerulonephritis, Nos                  |                        |
| Liver                  | Bile Duct           | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                     | Chromophobe Adenoma                      |                        |
| Unspecified            | Multiple Organs Nos | Lymphoma, Lymphocytic-Malignant Type     |                        |
| Uterus                 | Endometrium         | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH | -                   |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                         |                                  |                                                       |                                      |
|-------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 3_002 | <b>TRT#:</b> 3<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                  |                                                       |                                      |
| Kidney                  |                                  | Nephrosis, Nos                                        |                                      |
| Larynx                  |                                  | Inflammation, Chronic                                 |                                      |
| Liver                   |                                  | Neoplastic Nodule                                     |                                      |
| Mammary gland           |                                  | Lactation                                             |                                      |
| Pituitary gland         |                                  | Chromophobe Adenoma                                   |                                      |
| PRIMARY CAUSE OF DEATH  | -                                |                                                       |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                     |                                         |                        |
|------------------------|---------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 3_003       | TRT#: 3<br>DOSE: 0  | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                     |                                         |                        |
| Brain                  |                     | Hemorrhage                              |                        |
|                        |                     | Hydrocephalus, Nos                      |                        |
| Heart                  | Myocardium Nos      | Degeneration, Nos                       |                        |
| Kidney                 |                     | Nephrosis, Nos                          |                        |
| Liver                  |                     | Metamorphosis, Fatty                    |                        |
| Mammary gland          |                     | Lactation                               |                        |
| Pituitary gland        |                     | Chromophobe Adenoma                     |                        |
| Spleen                 |                     | Hematoma, Nos                           |                        |
| Unspecified            | Multiple Organs Nos | Leukemia, Undifferentiated              |                        |
| PRIMARY CAUSE OF DEATH |                     |                                         |                        |
| -                      |                     |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_004       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Lung                   |                    | Inflammation, Interstitial               |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 3_005       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Liver                  |                    | Cytoplasmic Change, Basophilic          |                        |
| Lung                   |                    | Pneumonia, Chronic Murine               |                        |
| Mammary gland          |                    | Adenocarcinoma, Nos                     |                        |
| Uterus                 |                    | Endometrial Stromal Polyp               |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                       |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                                      |                        |
|------------------------|--------------------|------------------------------------------------------|------------------------|
| ANIMAL ID: 3_006       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice             | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                                      |                        |
| Lung                   |                    | Granuloma, Foreign Body<br>Pneumonia, Chronic Murine |                        |
| Mammary gland          |                    | Lactation                                            |                        |
| Pituitary gland        |                    | Hyperplasia, Focal                                   |                        |
| Thyroid                |                    | C-Cell Adenoma                                       |                        |
| Follicle               |                    | Papillary Cystadenocarcinoma Nos                     |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                                    |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                    |                        |
|------------------------|--------------------|------------------------------------|------------------------|
| ANIMAL ID: 3_007       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                    |                        |
| Kidney                 |                    | Nephrosis, Nos                     |                        |
| Liver                  |                    | Congestion, Chronic Passive        |                        |
| Mammary gland          |                    | Lactation                          |                        |
| Spleen                 |                    | Hematopoiesis                      |                        |
| Uterus                 |                    | Endometrial Stromal Polyp          |                        |
|                        |                    | Pyometra                           |                        |
| PRIMARY CAUSE OF DEATH |                    |                                    |                        |
| -                      |                    |                                    |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_008       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Nephrosis, Nos                           |                        |
| Pituitary gland        |                    | Adenoma, Nos                             |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
|                        | Fallopian Tube     | Inflammation, Acute                      |                        |
|                        |                    | Pyometra                                 |                        |
| PRIMARY CAUSE OF DEATH |                    |                                          |                        |
| -                      |                    |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_009       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Intestine Large        | Colon              | Parasitism                               |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Hematopoietic               |                        |
| Thyroid                |                    | Hyperplasia, C Cell                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                         |                        |
|------------------------|--------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 3_011       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                         |                        |
| Kidney                 | Tubule             | Necrosis, Nos                           |                        |
| Larynx                 |                    | Inflammation, Acute/Chronic             |                        |
| Mammary gland          |                    | Adenocarcinoma, Nos                     |                        |
|                        |                    | Lactation                               |                        |
| Spleen                 |                    | Hematopoiesis                           |                        |
| Uterus                 | Fallopian Tube     | Abscess, Nos                            |                        |
|                        |                    | Endometrial Stromal Polyp               |                        |
|                        | Endometrium        | Hyperplasia, Cystic                     |                        |
|                        | Endometrium        | Inflammation, Chronic                   |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_012       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          |                    | Pheochromocytoma, Malignant              |                        |
| Liver                  |                    | Cytoplasmic Change, Basophilic           |                        |
| Lung                   |                    | Pneumonia, Chronic Murine                |                        |
| Mammary gland          |                    | Lactation                                |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| Skin                   |                    | Sebaceous Adenocarcinoma                 |                        |
| Thyroid                |                    | C-Cell Adenoma                           |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_013       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
|                        | Bile Duct          | Hyperplasia, Nos                         |                        |
| Spleen                 |                    | Hyperplasia, Erythroid                   |                        |
|                        |                    | Hyperplasia, Hematopoietic               |                        |
| Uterus                 | Endometrium        | Hyperplasia, Nos                         |                        |
|                        | Endometrium        | Inflammation, Nos                        |                        |
| PRIMARY CAUSE OF DEATH |                    |                                          |                        |
| -                      |                    |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_014       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Pyelonephritis, Chronic                  |                        |
| Liver                  |                    | Cytoplasmic Change, Basophilic           |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hematopoiesis                            |                        |
| Uterus                 |                    | Endometrial Stromal Polyp                |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_015       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Adrenal gland          |                    | Pheochromocytoma                         |                        |
| Brain                  |                    | Calcification, Focal                     |                        |
| Kidney                 |                    | Nephrosis, Nos                           |                        |
| Lung                   |                    | Calcification, Focal                     |                        |
|                        |                    | Pneumonia, Chronic Murine                |                        |
| Mammary gland          |                    | Lactation                                |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Thyroid                |                    | Hyperplasia, C Cell                      |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                  |                                                       |                                      |
|-------------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 3_016       | <b>TRT#:</b> 3<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                  |                                                       |                                      |
| Kidney                        |                                  | Calcification, Focal                                  |                                      |
| Liver                         |                                  | Metamorphosis, Fatty                                  |                                      |
| Lung                          |                                  | Alveolar/Bronchiolar Adenoma                          |                                      |
| Mammary gland                 |                                  | Infiltrating Duct Carcinoma                           |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                  | -                                                     |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

**ANIMAL ID:** 3\_017

**TRT#:** 3

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

**OBSERVATIONS**

Kidney

Mammary gland

Pituitary gland

Nephrosis, Nos

Fibroadenoma

Lactation

Chromophobe Adenoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

**ANIMAL ID:** 3\_018

**TRT#:** 3

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

**OBSERVATIONS**

Lung

Uterus

Pneumonia, Chronic Murine

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_019       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Intestine Large        | Colon              | Parasitism                               |                        |
| Intestine Small        | Peyers Patch       | Hyperplasia, Nos                         |                        |
| Kidney                 |                    | Glomerulonephritis, Nos                  |                        |
| Liver                  |                    | Hyperplasia, Focal                       |                        |
| Lung                   |                    | Inflammation, Interstitial               |                        |
| Mammary gland          |                    | Hyperplasia, Nos                         |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Spleen                 |                    | Hemosiderosis                            |                        |
|                        |                    | Hyperplasia, Erythroid                   |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_020       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Degeneration, Nos                        |                        |
| Kidney                 |                    | Nephrosis, Nos                           |                        |
| Lung                   |                    | Pneumonia, Chronic Murine                |                        |
| Thyroid                |                    | C-Cell Carcinoma                         |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_021       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Kidney                 |                    | Nephrosis, Nos<br>Pyelonephritis, Acute  |                        |
| Lung                   |                    | Pneumonia, Chronic Murine                |                        |
| Mammary gland          |                    | Fibroadenoma<br>Galactocoele             |                        |
| Ovary                  |                    | Cyst, Nos                                |                        |
| PRIMARY CAUSE OF DEATH |                    | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                  |                                                        |                                      |
|-------------------------|----------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 3_022 | <b>TRT#:</b> 3<br><b>DOSE:</b> 0 | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                  |                                                        |                                      |
| Heart                   | Myocardium Nos                   | Inflammation, Interstitial                             |                                      |
| Intestine Small         | Peyers Patch                     | Hyperplasia, Nos                                       |                                      |
| Lung                    |                                  | Hyperplasia, Epithelial                                |                                      |
|                         |                                  | Inflammation, Interstitial                             |                                      |
| Spleen                  |                                  | Hemosiderosis                                          |                                      |
|                         |                                  | Hyperplasia, Erythroid                                 |                                      |
|                         |                                  | Hyperplasia, Hematopoietic                             |                                      |
| PRIMARY CAUSE OF DEATH  | -                                |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_023       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Degeneration, Nos                        |                        |
| Kidney                 |                    | Nephrosis, Nos                           |                        |
| Larynx                 |                    | Inflammation, Chronic                    |                        |
| Mammary gland          |                    | Fibroadenoma                             |                        |
|                        |                    | Lactation                                |                        |
| Pituitary gland        |                    | Cyst, Hemorrhagic                        |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                     |                                          |                        |
|------------------------|---------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_024       | TRT#: 3<br>DOSE: 0  | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                     |                                          |                        |
| Adrenal gland          |                     | Pheochromocytoma                         |                        |
| Bone marrow            |                     | Hyperplasia, Hematopoietic               |                        |
| Liver                  |                     | Cytoplasmic Change, Basophilic           |                        |
|                        |                     | Fibrosis, Cholangio                      |                        |
| Unspecified            | Multiple Organs Nos | Leukemia, Undifferentiated               |                        |
| Uterus                 |                     | Pyometra                                 |                        |
| PRIMARY CAUSE OF DEATH | -                   |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                    |                                          |                        |
|------------------------|--------------------|------------------------------------------|------------------------|
| ANIMAL ID: 3_025       | TRT#: 3<br>DOSE: 0 | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                    |                                          |                        |
| Heart                  | Myocardium Nos     | Degeneration, Nos                        |                        |
| Kidney                 |                    | Nephrosis, Nos                           |                        |
| Larynx                 |                    | Inflammation, Chronic                    |                        |
| Liver                  |                    | Neoplastic Nodule                        |                        |
| Lung                   |                    | Pneumonia, Chronic Murine                |                        |
| Mammary gland          |                    | Fibroadenoma                             |                        |
| Pituitary gland        |                    | Chromophobe Adenoma                      |                        |
| Thyroid                |                    | Hyperplasia, C Cell                      |                        |
| PRIMARY CAUSE OF DEATH | -                  |                                          |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                |                           |              |
|------------------------|----------------|---------------------------|--------------|
| ANIMAL ID: 4_001       | TRT#: 4        | SEX: Female               | DAY ON TEST: |
|                        | DOSE: 1800 PPM | DISP: Moribund Sacrifice  | HISTO:       |
| OBSERVATIONS           |                |                           |              |
| Kidney                 |                | Nephrosis, Nos            |              |
| Lung                   | Bronchus       | Bronchiectasis            |              |
|                        |                | Pneumonia, Chronic Murine |              |
| Mammary gland          |                | Fibroadenoma              |              |
| Skin                   |                | Basal-Cell Tumor          |              |
|                        |                | Trichoepithelioma         |              |
| Trachea                |                | Inflammation, Chronic     |              |
| PRIMARY CAUSE OF DEATH |                |                           |              |
| -                      |                |                           |              |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: 1-Nitronaphthalene

CAS Number: 86-57-7

Date Report Requested: 10/26/2014

Time Report Requested: 11:35:51

First Dose M/F: NA / NA

Lab: NA

|                        |                |                           |              |
|------------------------|----------------|---------------------------|--------------|
| ANIMAL ID: 4_002       | TRT#: 4        | SEX: Female               | DAY ON TEST: |
|                        | DOSE: 1800 PPM | DISP: Scheduled Sacrifice | HISTO:       |
| OBSERVATIONS           |                |                           |              |
| Esophagus              |                | Squamous Cell Papilloma   |              |
| PRIMARY CAUSE OF DEATH |                | -                         |              |

\* PROTOCOL REQUIRED TISSUE

|                        |                       |                            |              |
|------------------------|-----------------------|----------------------------|--------------|
| ANIMAL ID: 4_003       | TRT#: 4               | SEX: Female                | DAY ON TEST: |
|                        | DOSE: 1800 PPM        | DISP: Scheduled Sacrifice  | HISTO:       |
| OBSERVATIONS           |                       |                            |              |
| Kidney                 | Capsule               | Carcinoma, Nos, Metastatic |              |
|                        |                       | Nephrosis, Nos             |              |
| Liver                  |                       | Carcinoma, Nos, Metastatic |              |
| Lung                   |                       | Carcinoma, Nos, Metastatic |              |
| Lymph node             | Mesenteric Lymph Node | Carcinoma, Nos, Metastatic |              |
| Ovary                  |                       | Carcinoma, Nos             |              |
| Pancreas               |                       | Carcinoma, Nos, Metastatic |              |
| PRIMARY CAUSE OF DEATH | -                     |                            |              |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_004       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                    |                        |
|------------------------|---------------------------|------------------------------------|------------------------|
| ANIMAL ID: 4_005       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                    |                        |
| Brain                  |                           | Astrocytoma                        |                        |
| Kidney                 |                           | Nephrosis, Nos                     |                        |
| Trachea                |                           | Inflammation, Chronic              |                        |
| Uterus                 |                           | Endometrial Stromal Polyp          |                        |
|                        | Cervix Uteri              | Inflammation, Suppurative          |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                  |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                           |              |
|------------------------|----------------|---------------------------|--------------|
| ANIMAL ID: 4_006       | TRT#: 4        | SEX: Female               | DAY ON TEST: |
|                        | DOSE: 1800 PPM | DISP: Scheduled Sacrifice | HISTO:       |
| OBSERVATIONS           |                |                           |              |
| Adrenal gland          |                | Pheochromocytoma          |              |
| Kidney                 |                | Nephrosis, Nos            |              |
| Ovary                  |                | Cyst, Nos                 |              |
| Trachea                |                | Inflammation, Chronic     |              |
| PRIMARY CAUSE OF DEATH |                | -                         |              |

\* PROTOCOL REQUIRED TISSUE

|                              |                                         |                                                  |                                      |
|------------------------------|-----------------------------------------|--------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_007      | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Natural Death | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Ovary |                                         | Cyst, Nos<br>Inflammation, Suppurative           |                                      |
| Unspecified                  | Multiple Organs Nos                     | Leukemia, Myelomonocytic                         |                                      |
| PRIMARY CAUSE OF DEATH       | -                                       |                                                  |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_008 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| Unspecified             |                                         | Fibroma                                                |                                      |
| PRIMARY CAUSE OF DEATH  |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE



|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_009       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Pituitary gland               |                                         | Adenoma, Nos                                           |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| Uterus                        | Endometrium                             | Undifferentiated Carcinoma                             |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_010 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| Mammary gland           |                                         | Fibroadenoma                                           |                                      |
| Pituitary gland         |                                         | Adenoma, Nos                                           |                                      |
| PRIMARY CAUSE OF DEATH  | -                                       |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                         |                        |
|------------------------|---------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 4_011       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                         |                        |
| Kidney                 |                           | Nephrosis, Nos                          |                        |
| Liver                  |                           | Neoplastic Nodule                       |                        |
| Lymph node             | Mandibular Lymph Node     | Hyperplasia, Plasma Cell                |                        |
| Unspecified            | Head                      | Squamous Cell Carcinoma                 |                        |
| Uterus                 |                           | Endometrial Stromal Polyp               |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                         |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 1-Nitronaphthalene

**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 11:35:51

**First Dose M/F:** NA / NA

**Lab:** NA

**ANIMAL ID:** 4\_012

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 1800 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney

Nephrosis, Nos

Ovary

Cyst, Nos

Trachea

Inflammation, Chronic

Uterus

Endometrium

Inflammation, Suppurative

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                         |                        |
|------------------------|---------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 4_013       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                         |                        |
| Kidney                 |                           | Nephrosis, Nos                          |                        |
| Pituitary gland        |                           | Carcinoma, Nos                          |                        |
| Spleen                 |                           | Hemosiderosis                           |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                       |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_014       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_015       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Ovary                         |                                         | Granulosa-Cell Tumor                                   |                                      |
| Uterus                        |                                         | Endometrial Stromal Polyp                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                              |                                         |                                                  |                                      |
|----------------------------------------------|-----------------------------------------|--------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_016                      | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Natural Death | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Adrenal gland<br>Lung | Alveoli                                 | Cortical Adenoma<br>Hemorrhage                   |                                      |
| PRIMARY CAUSE OF DEATH                       | -                                       |                                                  |                                      |

\* PROTOCOL REQUIRED TISSUE



|                        |                           |                                    |                        |
|------------------------|---------------------------|------------------------------------|------------------------|
| ANIMAL ID: 4_018       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                    |                        |
| Liver                  | Centrilobular             | Congestion, Passive                |                        |
| Lung                   |                           | Sarcoma, Nos                       |                        |
| Unspecified            | Mediastinum Nos           | Sarcoma, Nos                       |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                    |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_019       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Adrenal gland                 |                                         | Pheochromocytoma                                       |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                         |                        |
|------------------------|---------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 4_020       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                         |                        |
| Kidney                 |                           | Nephrosis, Nos                          |                        |
| Spleen                 |                           | Erythropoiesis                          |                        |
| Trachea                |                           | Inflammation, Chronic                   |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                       |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_021 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Trachea                 |                                         | Inflammation, Chronic                                  |                                      |
| PRIMARY CAUSE OF DEATH  |                                         |                                                        |                                      |
| -                       |                                         |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_022       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Mammary gland          |                           | Fibroadenoma                             |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| Uterus                 | Endometrium               | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH |                           |                                          |                        |
| -                      |                           |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_023       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Heart                  | Apex                      | Scar                                     |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Liver                  |                           | Angiectasis                              |                        |
|                        |                           | Neoplastic Nodule                        |                        |
| Ovary                  |                           | Cyst, Nos                                |                        |
| Pituitary gland        |                           | Adenoma, Nos                             |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| Uterus                 | Endometrium               | Hyperplasia, Nos                         |                        |
|                        | Endometrium               | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_024       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Pituitary gland               |                                         | Adenoma, Nos                                           |                                      |
| Uterus                        |                                         | Endometrial Stromal Polyp                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_025 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| Pituitary gland         |                                         | Adenoma, Nos                                           |                                      |
| Trachea                 |                                         | Inflammation, Chronic                                  |                                      |
| PRIMARY CAUSE OF DEATH  | -                                       |                                                        |                                      |

\* PROTOCOL REQUIRED TISSUE



|                               |                                         |                                                       |                                      |
|-------------------------------|-----------------------------------------|-------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_026       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Moribund Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                       |                                      |
| Liver                         |                                         | Cytoplasmic Change, Basophilic                        |                                      |
| Mammary gland                 |                                         | Fibroadenoma                                          |                                      |
| Pituitary gland               |                                         | Adenoma, Nos                                          |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                 |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                     |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                           |              |
|------------------------|----------------|---------------------------|--------------|
| ANIMAL ID: 4_027       | TRT#: 4        | SEX: Female               | DAY ON TEST: |
|                        | DOSE: 1800 PPM | DISP: Scheduled Sacrifice | HISTO:       |
| OBSERVATIONS           |                |                           |              |
| Kidney                 |                | Nephrosis, Nos            |              |
| Pituitary gland        |                | Adenoma, Nos              |              |
| Thyroid                |                | C-Cell Adenoma            |              |
| PRIMARY CAUSE OF DEATH |                | -                         |              |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                                         |                        |
|------------------------|---------------------------|---------------------------------------------------------|------------------------|
| ANIMAL ID: 4_028       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Natural Death                      | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                                         |                        |
| Liver                  | Capsule                   | Adenocarcinoma, Nos, Metastatic<br>Metamorphosis, Fatty |                        |
|                        | Centrilobular             | Necrosis, Nos                                           |                        |
| Lung                   |                           | Adenocarcinoma, Nos, Metastatic                         |                        |
| Lymph node             | Mediastinal Lymph Node    | Adenocarcinoma, Nos, Metastatic                         |                        |
| Ovary                  |                           | Adenocarcinoma, Nos                                     |                        |
| Spleen                 | Capsule                   | Adenocarcinoma, Nos, Metastatic                         |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                                         |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                         |                        |
|------------------------|---------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 4_029       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                         |                        |
| Kidney                 |                           | Nephrosis, Nos                          |                        |
| Preputial gland        |                           | Squamous Cell Carcinoma                 |                        |
| Spleen                 |                           | Erythropoiesis                          |                        |
| Thyroid                |                           | Hyperplasia, C Cell                     |                        |
| Trachea                |                           | Inflammation, Chronic                   |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                       |                        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_030       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Ovary                  |                           | Inflammation, Suppurative                |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| Uterus                 | Endometrium               | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_031 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Trachea                 |                                         | Inflammation, Chronic                                  |                                      |
| PRIMARY CAUSE OF DEATH  |                                         |                                                        |                                      |
|                         |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_032       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Lung                   |                           | Alveolar/Bronchiolar Adenoma             |                        |
| Salivary gland         | Parotid Gland Nos         | Inflammation, Chronic                    |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| Uterus                 | Endometrium               | Hyperplasia, Epithelial                  |                        |
|                        | Endometrium               | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH |                           |                                          |                        |
| -                      |                           |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_033       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Pituitary gland        |                           | Adenoma, Nos                             |                        |
| Uterus                 |                           | Endometrial Stromal Polyp                |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE



|                        |                           |                                    |                        |
|------------------------|---------------------------|------------------------------------|------------------------|
| ANIMAL ID: 4_034       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Natural Death | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                    |                        |
| Mammary gland          |                           | Fibroadenoma                       |                        |
| Pituitary gland        |                           | Adenoma, Nos                       |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                  |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_035       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_036 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| Mammary gland           |                                         | Fibroadenoma                                           |                                      |
| Pituitary gland         |                                         | Adenoma, Nos                                           |                                      |
| Uterus                  |                                         | Endometrial Stromal Polyp                              |                                      |
| PRIMARY CAUSE OF DEATH  |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                        |                           |                                         |                        |
|------------------------|---------------------------|-----------------------------------------|------------------------|
| ANIMAL ID: 4_038       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Moribund Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                         |                        |
| Liver                  |                           | Metamorphosis, Fatty                    |                        |
| Lung                   |                           | Bronchopneumonia Necrotizing            |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                       |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_039       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Trachea                |                           | Inflammation, Chronic                    |                        |
| PRIMARY CAUSE OF DEATH |                           | -                                        |                        |

\* PROTOCOL REQUIRED TISSUE

|                               |                                         |                                                                   |                                      |
|-------------------------------|-----------------------------------------|-------------------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_040       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice            | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                                   |                                      |
| Kidney                        |                                         | Nephrosis, Hydro<br>Nephrosis, Nos<br>Tubular-Cell Adenocarcinoma |                                      |
| Urinary bladder               |                                         | Hyperplasia, Epithelial                                           |                                      |
| Uterus                        |                                         | Endometrial Stromal Polyp                                         |                                      |
|                               | Endometrium                             | Hyperplasia, Cystic                                               |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         |                                                                   |                                      |
| -                             |                                         |                                                                   |                                      |

\* PROTOCOL REQUIRED TISSUE

|                        |                |                                       |              |
|------------------------|----------------|---------------------------------------|--------------|
| ANIMAL ID: 4_041       | TRT#: 4        | SEX: Female                           | DAY ON TEST: |
|                        | DOSE: 1800 PPM | DISP: Scheduled Sacrifice             | HISTO:       |
| OBSERVATIONS           |                |                                       |              |
| Kidney                 |                | Nephrosis, Nos                        |              |
| Lung                   |                | Follicular-Cell Carcinoma, Metastatic |              |
| Thyroid                |                | Follicular-Cell Carcinoma             |              |
| PRIMARY CAUSE OF DEATH |                | -                                     |              |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_042 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| PRIMARY CAUSE OF DEATH  |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C01956  
Test Type: Long-Term  
Route: Dosed-Feed  
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: 1-Nitronaphthalene  
CAS Number: 86-57-7

Date Report Requested: 10/26/2014  
Time Report Requested: 11:35:51  
First Dose M/F: NA / NA  
Lab: NA

|                        |                           |                                          |                        |
|------------------------|---------------------------|------------------------------------------|------------------------|
| ANIMAL ID: 4_043       | TRT#: 4<br>DOSE: 1800 PPM | SEX: Female<br>DISP: Scheduled Sacrifice | DAY ON TEST:<br>HISTO: |
| OBSERVATIONS           |                           |                                          |                        |
| Kidney                 |                           | Nephrosis, Nos                           |                        |
| Uterus                 | Endometrium               | Inflammation, Suppurative                |                        |
| PRIMARY CAUSE OF DEATH | -                         |                                          |                        |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_044       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Uterus                        |                                         | Endometrial Stromal Polyp                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                         |                                         |                                                        |                                      |
|-------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_045 | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>     |                                         |                                                        |                                      |
| Kidney                  |                                         | Nephrosis, Nos                                         |                                      |
| Pituitary gland         |                                         | Adenoma, Nos                                           |                                      |
| PRIMARY CAUSE OF DEATH  |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_046       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Thyroid                       |                                         | Hyperplasia, C Cell                                    |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| Uterus                        | Endometrium                             | Inflammation, Suppurative                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_047       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Ovary                         |                                         | Cyst, Nos                                              |                                      |
| Uterus                        |                                         | Endometrial Stromal Polyp                              |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

|                               |                                         |                                                        |                                      |
|-------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_048       | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b>           |                                         |                                                        |                                      |
| Kidney                        |                                         | Nephrosis, Nos                                         |                                      |
| Ovary                         |                                         | Cyst, Nos                                              |                                      |
| Thyroid                       |                                         | Hyperplasia, C Cell                                    |                                      |
| Trachea                       |                                         | Inflammation, Chronic                                  |                                      |
| Uterus                        | Endometrium                             | Hyperplasia, Cystic                                    |                                      |
| <b>PRIMARY CAUSE OF DEATH</b> |                                         | -                                                      |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                    |                                         |                                                  |                                      |
|------------------------------------|-----------------------------------------|--------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_049            | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Natural Death | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Unspecified | Multiple Organs Nos                     | Lymphoma, Nos-Malignant                          |                                      |
| PRIMARY CAUSE OF DEATH             | -                                       |                                                  |                                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C01956  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 1-Nitronaphthalene  
**CAS Number:** 86-57-7

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 11:35:51  
**First Dose M/F:** NA / NA  
**Lab:** NA

|                                              |                                         |                                                        |                                      |
|----------------------------------------------|-----------------------------------------|--------------------------------------------------------|--------------------------------------|
| <b>ANIMAL ID:</b> 4_050                      | <b>TRT#:</b> 4<br><b>DOSE:</b> 1800 PPM | <b>SEX:</b> Female<br><b>DISP:</b> Scheduled Sacrifice | <b>DAY ON TEST:</b><br><b>HISTO:</b> |
| <b>OBSERVATIONS</b><br>Unspecified<br>Uterus | Abdominal Cavity                        | Steatitis<br>Endometrial Stromal Polyp                 |                                      |
| PRIMARY CAUSE OF DEATH                       | -                                       |                                                        |                                      |

**\*\* END OF REPORT \*\***

\* PROTOCOL REQUIRED TISSUE