

## **APPENDIX I**

RAGS Part D Table 9s

**TABLE I-1**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADOLESCENT

| MEDIUM         | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1)       |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|----------------|-----------------------|----------------------|------------------------|-----------------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                |                       |                      |                        | INGESTION                   | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL           | SURFACE SOIL          | AREA 1               | Benzo(a)anthracene     | 7.7E-08                     | NA         | 3.3E-08 | NA                   | 1.1E-07               | Kidney                               | 8.2E-06   | NA         | 3.5E-06 | 1.2E-05               |
|                |                       |                      | Benzo(a)pyrene         | 8.1E-07                     | NA         | 3.5E-07 | NA                   | 1.2E-06               | Kidney                               | 8.7E-06   | NA         | 3.7E-06 | 1.2E-05               |
|                |                       |                      | Benzo(b)fluoranthene   | 1.1E-07                     | NA         | 4.6E-08 | NA                   | 1.5E-07               | Kidney                               | 1.1E-05   | NA         | 4.9E-06 | 1.6E-05               |
|                |                       |                      | Benzo(k)fluoranthene   | 4.1E-09                     | NA         | 1.8E-09 | NA                   | 5.9E-09               | Kidney                               | 4.4E-06   | NA         | 1.9E-06 | 6.2E-06               |
|                |                       |                      | Carbazole              | 1.4E-10                     | NA         | 4.7E-11 | NA                   | 1.9E-10               |                                      | --        | NA         | --      |                       |
|                |                       |                      | Chrysene               | 8.7E-10                     | NA         | 3.7E-10 | NA                   | 1.2E-09               | Kidney                               | 9.2E-06   | NA         | 4.0E-06 | 1.3E-05               |
|                |                       |                      | Dibenz(a,h)anthracene  | 2.2E-07                     | NA         | 9.4E-08 | NA                   | 3.1E-07               | Kidney                               | 2.3E-06   | NA         | 1.0E-06 | 3.3E-06               |
|                |                       |                      | Indeno(1,2,3-cd)pyrene | 6.0E-08                     | NA         | 2.6E-08 | NA                   | 8.6E-08               | Kidney                               | 6.4E-06   | NA         | 2.7E-06 | 9.1E-06               |
|                |                       |                      | Aluminum               | NC                          | NA         | NC      | NA                   |                       | Nervous System                       | 3.7E-03   | NA         | --      | 3.7E-03               |
|                |                       |                      |                        |                             |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                |                       |                      | Antimony               | NC                          | NA         | NC      | NA                   |                       | Hematological                        | 3.1E-03   | NA         | --      | 3.1E-03               |
|                |                       |                      | Arsenic                | 7.4E-07                     | NA         | 7.4E-08 | NA                   |                       | Skin                                 | 1.2E-02   | NA         | 1.1E-03 | 1.3E-02               |
|                |                       |                      | Barium                 | NC                          | NA         | NC      | NA                   |                       | Kidney                               | 6.3E-04   | NA         | --      | 6.3E-04               |
|                |                       |                      | Cadmium                | NC                          | NA         | NC      | NA                   |                       | Kidney                               | 6.7E-04   | NA         | 8.9E-05 | 7.6E-04               |
|                |                       |                      | Chromium               | NC                          | NA         | NC      | NA                   |                       | NOAEL                                | 3.9E-03   | NA         | --      | 3.9E-03               |
|                |                       |                      | Cobalt                 | NC                          | NA         | NC      | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |
|                |                       |                      | Copper                 | NC                          | NA         | NC      | NA                   |                       | Undetermined                         | 1.9E-03   | NA         | --      | 1.9E-03               |
|                |                       |                      | Lead                   | --                          | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                |                       |                      | Manganese              | NC                          | NA         | NC      | NA                   |                       | Nervous System                       | 3.6E-03   | NA         | --      | 3.6E-03               |
|                |                       |                      | Mercury                | NC                          | NA         | NC      | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |
|                |                       |                      | Thallium               | NC                          | NA         | NC      | NA                   |                       | NOAEL                                | 7.7E-03   | NA         | --      | 7.7E-03               |
|                |                       |                      | Vanadium               | NC                          | NA         | NC      | NA                   |                       | Kidney                               | 2.5E-03   | NA         | --      | 2.5E-03               |
|                |                       |                      | CHEMICAL TOTAL         | 2.0E-06                     | --         | 6.2E-07 | --                   | 3E-06                 |                                      | 5.2E-02   | --         | 1.3E-03 | 5E-02                 |
|                |                       | EXPOSURE POINT TOTAL |                        |                             |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-02                 |
|                | EXPOSURE MEDIUM TOTAL |                      |                        |                             |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-02                 |
| SOIL TOTAL     |                       |                      |                        |                             |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-02                 |
| RECEPTOR TOTAL |                       |                      |                        |                             |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-02                 |
|                |                       |                      |                        | TOTAL RISK ACROSS ALL MEDIA |            |         |                      | 3E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 5E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.1E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-03 |
| TOTAL KIDNEY HI =           | 4.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 7.2E-03 |
| TOTAL NOAEL HI =            | 1.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.3E-02 |
|                             | --      |

**TABLE I-2**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 1               | Benzo(a)anthracene     | 1.1E-08               | NA         | 5.0E-09 | NA                   | 1.6E-08               | Kidney                               | 2.6E-06   | NA         | 1.1E-06 | 3.7E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 1.2E-07               | NA         | 5.3E-08 | NA                   | 1.7E-07               | Kidney                               | 2.7E-06   | NA         | 1.2E-06 | 3.9E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.6E-08               | NA         | 6.9E-09 | NA                   | 2.3E-08               | Kidney                               | 3.6E-06   | NA         | 1.6E-06 | 5.2E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 6.0E-10               | NA         | 2.7E-10 | NA                   | 8.7E-10               | Kidney                               | 1.4E-06   | NA         | 6.1E-07 | 2.0E-06               |
|                             |                       |                      | Carbazole              | 6.3E-11               | NA         | 2.1E-11 | NA                   | 8.4E-11               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 1.3E-10               | NA         | 5.6E-11 | NA                   | 1.8E-10               | Kidney                               | 2.9E-06   | NA         | 1.3E-06 | 4.2E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.2E-08               | NA         | 1.4E-08 | NA                   | 4.6E-08               | Kidney                               | 7.4E-07   | NA         | 3.2E-07 | 1.1E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 8.8E-09               | NA         | 3.9E-09 | NA                   | 1.3E-08               | Kidney                               | 2.0E-06   | NA         | 8.9E-07 | 2.9E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 9.9E-04   | NA         | --      | 9.9E-04               |
|                             |                       |                      | Arsenic                | 3.3E-07               | NA         | 3.3E-08 | NA                   | 3.6E-07               | Skin                                 | 3.6E-03   | NA         | 3.7E-04 | 4.0E-03               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.1E-04   | NA         | 2.9E-05 | 2.4E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.4E-03   | NA         | --      | 3.4E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 6.1E-04   | NA         | --      | 6.1E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 6.3E-04   | NA         | --      | 6.3E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.4E-03   | NA         | --      | 2.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.9E-04   | NA         | --      | 7.9E-04               |
|                             |                       |                      | CHEMICAL TOTAL         | 5.1E-07               | --         | 1.2E-07 | --                   | 6E-07                 |                                      | 1.6E-02   | --         | 4.0E-04 | 2E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 6E-07                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 6E-07                 |                                      |           |            |         | 2E-02                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 6E-07                 |                                      |           |            |         | 2E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 6E-07                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 6E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 6.3E-04 |
| TOTAL KIDNEY HI =           | 1.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.3E-03 |
| TOTAL NOAEL HI =            | 4.3E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 4.0E-03 |
|                             | --      |

**TABLE I-3**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1)            |           |            |         |                       |       |         |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|-------------------------------------------------|-----------|------------|---------|-----------------------|-------|---------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                            | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |         |       |
| SOIL                        | SURFACE SOIL    | AREA 1                | Benzo(a)anthracene     | 1.8E-08               | NA         | 1.6E-08        | NA                   | 3.4E-08               | Kidney                                          | 2.3E-06   | NA         | 2.0E-06 | 4.3E-06               |       |         |       |
|                             |                 |                       | Benzo(a)pyrene         | 1.9E-07               | NA         | 1.6E-07        | NA                   | 3.6E-07               | Kidney                                          | 2.5E-06   | NA         | 2.1E-06 | 4.6E-06               |       |         |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 2.5E-08               | NA         | 2.2E-08        | NA                   | 4.7E-08               | Kidney                                          | 3.2E-06   | NA         | 2.8E-06 | 6.0E-06               |       |         |       |
|                             |                 |                       | Benzo(k)fluoranthene   | 9.7E-10               | NA         | 8.3E-10        | NA                   | 1.8E-09               | Kidney                                          | 1.2E-06   | NA         | 1.1E-06 | 2.3E-06               |       |         |       |
|                             |                 |                       | Carbazole              | 1.0E-10               | NA         | 6.6E-11        | NA                   | 1.7E-10               |                                                 | --        | NA         | --      |                       |       |         |       |
|                             |                 |                       | Chrysene               | 2.0E-10               | NA         | 1.8E-10        | NA                   | 3.8E-10               | Kidney                                          | 2.6E-06   | NA         | 2.2E-06 | 4.9E-06               |       |         |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 5.2E-08               | NA         | 4.4E-08        | NA                   | 9.6E-08               | Kidney                                          | 6.6E-07   | NA         | 5.7E-07 | 1.2E-06               |       |         |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 1.4E-08               | NA         | 1.2E-08        | NA                   | 2.6E-08               | Kidney                                          | 1.8E-06   | NA         | 1.6E-06 | 3.4E-06               |       |         |       |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System General Toxicity / Hematological | 1.0E-03   | NA         | --      | 1.0E-03               |       |         |       |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | Skin                                            | 8.9E-04   | NA         | --      | 8.9E-04               |       |         |       |
|                             |                 |                       | Arsenic                | 5.2E-07               | NA         | 1.0E-07        | NA                   | 6.3E-07               | Kidney                                          | 3.3E-03   | NA         | 6.5E-04 | 3.9E-03               |       |         |       |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                                          | 1.8E-04   | NA         | --      | 1.8E-04               |       |         |       |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                                          | 1.9E-04   | NA         | 5.0E-05 | 2.4E-04               |       |         |       |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                           | 1.1E-03   | NA         | --      | 1.1E-03               |       |         |       |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                                       | 3.1E-03   | NA         | --      | 3.1E-03               |       |         |       |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                                    | 5.5E-04   | NA         | --      | 5.5E-04               |       |         |       |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                                 | --        | NA         | --      |                       |       |         |       |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                                  | 1.0E-03   | NA         | --      | 1.0E-03               |       |         |       |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                                   | 5.6E-04   | NA         | --      | 5.6E-04               |       |         |       |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                           | 2.2E-03   | NA         | --      | 2.2E-03               |       |         |       |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                                          | 7.1E-04   | NA         | --      | 7.1E-04               |       |         |       |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 8.3E-07              | --                    | 3.6E-07                                         | --        | 1E-06      |         | 1.5E-02               | --    | 7.1E-04 | 2E-02 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |            |                |                      |                       |                                                 |           | 1E-06      |         |                       |       |         | 2E-02 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      |                       | 1E-06                                           |           |            |         |                       | 2E-02 |         |       |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 1E-06                 |                                                 |           |            |         | 2E-02                 |       |         |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 1E-06                 |                                                 |           |            |         | 2E-02                 |       |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA                   |           |            |         | 2E-02                 |       |         |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 5.6E-04 |
| TOTAL KIDNEY HI =           | 1.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.1E-03 |
| TOTAL NOAEL HI =            | 3.8E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.9E-03 |
|                             | --      |

**TABLE I-4**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 1               | Benzo(a)anthracene     | 1.1E-07               | NA         | 9.7E-08 | NA                   | 2.1E-07               | Kidney                               | 1.4E-05   | NA         | 1.2E-05 | 2.7E-05               |
|            |                       |                      | Benzo(a)pyrene         | 1.2E-06               | NA         | 1.0E-06 | NA                   | 2.2E-06               | Kidney                               | 1.5E-05   | NA         | 1.3E-05 | 2.8E-05               |
|            |                       |                      | Benzo(b)fluoranthene   | 1.6E-07               | NA         | 1.4E-07 | NA                   | 2.9E-07               | Kidney                               | 2.0E-05   | NA         | 1.7E-05 | 3.7E-05               |
|            |                       |                      | Benzo(k)fluoranthene   | 6.0E-09               | NA         | 5.2E-09 | NA                   | 1.1E-08               | Kidney                               | 7.7E-06   | NA         | 6.6E-06 | 1.4E-05               |
|            |                       |                      | Carbazole              | 6.3E-10               | NA         | 4.2E-10 | NA                   | 1.0E-09               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 1.3E-09               | NA         | 1.1E-09 | NA                   | 2.4E-09               | Kidney                               | 1.6E-05   | NA         | 1.4E-05 | 3.0E-05               |
|            |                       |                      | Dibenz(a,h)anthracene  | 3.2E-07               | NA         | 2.8E-07 | NA                   | 6.0E-07               | Kidney                               | 4.1E-06   | NA         | 3.6E-06 | 7.7E-06               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 8.8E-08               | NA         | 7.6E-08 | NA                   | 1.6E-07               | Kidney                               | 1.1E-05   | NA         | 9.7E-06 | 2.1E-05               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.5E-03   | NA         | --      | 6.5E-03               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 5.6E-03   | NA         | --      | 5.6E-03               |
|            |                       |                      | Arsenic                | 3.3E-06               | NA         | 6.5E-07 | NA                   | 3.9E-06               | Skin                                 | 2.0E-02   | NA         | 4.0E-03 | 2.4E-02               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.2E-03   | NA         | 3.1E-04 | 1.5E-03               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.9E-03   | NA         | --      | 6.9E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.9E-02   | NA         | --      | 1.9E-02               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.4E-03   | NA         | --      | 3.4E-03               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.4E-03   | NA         | --      | 6.4E-03               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.5E-03   | NA         | --      | 3.5E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.5E-03   | NA         | --      | 4.5E-03               |
|            |                       |                      | CHEMICAL TOTAL         | 5.2E-06               | --         | 2.3E-06 | --                   | 7E-06                 |                                      | 9.2E-02   | --         | 4.4E-03 | 1E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 1E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 1E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 1       | Benzo(a)anthracene     | NA                    | 2.9E-12    | NA      | NA                   | 2.9E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 3.1E-11    | NA      | NA                   | 3.1E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 4.1E-12    | NA      | NA                   | 4.1E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 1.6E-12    | NA      | NA                   | 1.6E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 3.3E-13    | NA      | NA                   | 3.3E-13               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 9.1E-12    | NA      | NA                   | 9.1E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 2.3E-12    | NA      | NA                   | 2.3E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.2E-04    | NA      | 2.2E-04               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 1.6E-09    | NA      | NA                   | 1.6E-09               | Cardiovascular / Nervous             | NA        | 7.0E-05    | NA      | 7.0E-05               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 7.6E-05    | NA      | 7.6E-05               |
|            |                       |                      | Cadmium                | NA                    | 1.3E-10    | NA      | NA                   | 1.3E-10               | Kidney / Respiratory                 | NA        | 1.0E-05    | NA      | 1.0E-05               |
|            |                       |                      | Chromium               | NA                    | 1.5E-08    | NA      | NA                   | 1.5E-08               | Respiratory                          | NA        | 3.5E-05    | NA      | 3.5E-05               |
|            |                       |                      | Cobalt                 | NA                    | 3.2E-09    | NA      | NA                   | 3.2E-09               | Respiratory                          | NA        | 1.6E-04    | NA      | 1.6E-04               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.0E-03    | NA      | 1.0E-03               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 6.1E-07    | NA      | 6.1E-07               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 3.9E-05    | NA      | 3.9E-05               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 2.0E-08    | --      | --                   | 2E-08                 |                                      | --        | 1.6E-03    | --      | 2E-03                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-08                 |                                      |           |            |         | 2E-03                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-08                 |                                      |           |            |         | 2E-03                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 1E-01                 |

TABLE I-4  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|--------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|        |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |

|                       |  |  |  |  |  |  |  |              |  |  |  |  |              |
|-----------------------|--|--|--|--|--|--|--|--------------|--|--|--|--|--------------|
| <b>RECEPTOR TOTAL</b> |  |  |  |  |  |  |  | <b>7E-06</b> |  |  |  |  | <b>1E-01</b> |
|                       |  |  |  |  |  |  |  | <b>7E-06</b> |  |  |  |  | <b>1E-01</b> |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.6E-03 |
| TOTAL CARDIOVASCULAR HI =   | 7.0E-05 |
| TOTAL DEVELOPMENTAL HI =    | 1.5E-04 |
| TOTAL ENDOCRINE HI =        | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.6E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 3.5E-03 |
| TOTAL KIDNEY HI =           | 7.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.4E-02 |
| TOTAL NOAEL HI =            | 2.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.4E-02 |
| TOTAL RESPIRATORY HI =      | 2.1E-04 |

**TABLE I-5**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SURFACE SOIL          | AREA 1         | Benzo(a)anthracene     | 6.3E-08               | NA         | 1.1E-07        | NA                   | 1.7E-07               | Kidney                               | 8.0E-06   | NA         | 1.4E-05 | 2.2E-05               |       |
|                             |                       |                | Benzo(a)pyrene         | 6.7E-07               | NA         | 1.1E-06        | NA                   | 1.8E-06               | Kidney                               | 8.5E-06   | NA         | 1.5E-05 | 2.3E-05               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 8.8E-08               | NA         | 1.5E-07        | NA                   | 2.4E-07               | Kidney                               | 1.1E-05   | NA         | 1.9E-05 | 3.0E-05               |       |
|                             |                       |                | Benzo(k)fluoranthene   | 3.4E-09               | NA         | 5.8E-09        | NA                   | 9.1E-09               | Kidney                               | 4.3E-06   | NA         | 7.4E-06 | 1.2E-05               |       |
|                             |                       |                | Carbazole              | 3.5E-10               | NA         | 4.6E-10        | NA                   | 8.1E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Chrysene               | 7.1E-10               | NA         | 1.2E-09        | NA                   | 1.9E-09               | Kidney                               | 9.1E-06   | NA         | 1.6E-05 | 2.5E-05               |       |
|                             |                       |                | Dibenz(a,h)anthracene  | 1.8E-07               | NA         | 3.1E-07        | NA                   | 4.9E-07               | Kidney                               | 2.3E-06   | NA         | 3.9E-06 | 6.2E-06               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 4.9E-08               | NA         | 8.4E-08        | NA                   | 1.3E-07               | Kidney                               | 6.3E-06   | NA         | 1.1E-05 | 1.7E-05               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.6E-03   | NA         | --      | 3.6E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.1E-03   | NA         | --      | 3.1E-03               |       |
|                             |                       |                | Arsenic                | 1.8E-06               | NA         | 7.2E-07        | NA                   | 2.5E-06               | Skin                                 | 1.1E-02   | NA         | 4.5E-03 | 1.6E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.2E-04   | NA         | --      | 6.2E-04               |       |
|                             |                       |                | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.6E-04   | NA         | 3.5E-04 | 1.0E-03               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.8E-03   | NA         | --      | 3.8E-03               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.9E-03   | NA         | --      | 1.9E-03               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.5E-03   | NA         | --      | 3.5E-03               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |       |
|                             |                       |                | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 7.6E-03   | NA         | --      | 7.6E-03               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.5E-03   | NA         | --      | 2.5E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 2.9E-06              | --                    | 2.5E-06                              | --        | 5E-06      |         | 5.1E-02               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 5E-06                                |           |            |         |                       | 6E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 5E-06                |                       |                                      |           |            | 6E-02   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 6E-02                 |       |
|                             |                       |                |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 6E-02                 |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 6E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 6E-02                 |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.1E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-03 |
| TOTAL KIDNEY HI =           | 4.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 7.1E-03 |
| TOTAL NOAEL HI =            | 1.3E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.6E-02 |
|                             | --      |

**TABLE I-6**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 1               | Benzo(a)anthracene     | 1.7E-08               | NA         | 6.5E-09 | NA                   | 2.3E-08               | Kidney                               | 5.3E-06   | NA         | 2.1E-06 | 7.4E-06               |
|            |                       |                      | Benzo(a)pyrene         | 1.8E-07               | NA         | 6.9E-08 | NA                   | 2.4E-07               | Kidney                               | 5.6E-06   | NA         | 2.2E-06 | 7.8E-06               |
|            |                       |                      | Benzo(b)fluoranthene   | 2.3E-08               | NA         | 9.0E-09 | NA                   | 3.2E-08               | Kidney                               | 7.4E-06   | NA         | 2.9E-06 | 1.0E-05               |
|            |                       |                      | Benzo(k)fluoranthene   | 8.9E-10               | NA         | 3.5E-10 | NA                   | 1.2E-09               | Kidney                               | 2.8E-06   | NA         | 1.1E-06 | 3.9E-06               |
|            |                       |                      | Carbazole              | 9.2E-11               | NA         | 2.8E-11 | NA                   | 1.2E-10               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 1.9E-10               | NA         | 7.3E-11 | NA                   | 2.6E-10               | Kidney                               | 6.0E-06   | NA         | 2.3E-06 | 8.3E-06               |
|            |                       |                      | Dibenz(a,h)anthracene  | 4.7E-08               | NA         | 1.9E-08 | NA                   | 6.6E-08               | Kidney                               | 1.5E-06   | NA         | 5.9E-07 | 2.1E-06               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 1.3E-08               | NA         | 5.1E-09 | NA                   | 1.8E-08               | Kidney                               | 4.1E-06   | NA         | 1.6E-06 | 5.8E-06               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.4E-02   | NA         | --      | 2.4E-02               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.0E-02   | NA         | --      | 2.0E-02               |
|            |                       |                      | Arsenic                | 4.8E-07               | NA         | 4.3E-08 | NA                   | 5.2E-07               | Skin                                 | 7.5E-02   | NA         | 6.7E-03 | 8.1E-02               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.1E-03   | NA         | --      | 4.1E-03               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       |                                      | 8.7E-03   | NA         | 1.0E-03 | 9.7E-03               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.8E-03   | NA         | --      | 3.8E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.0E-03   | NA         | --      | 7.0E-03               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 5.0E-02   | NA         | --      | 5.0E-02               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.3E-02   | NA         | --      | 2.3E-02               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.9E-03   | NA         | --      | 1.9E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-02   | NA         | --      | 1.0E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.2E-03   | NA         | --      | 8.2E-03               |
|            |                       |                      | CHEMICAL TOTAL         | 7.6E-07               | --         | 1.5E-07 | --                   | 9E-07                 |                                      | 2.4E-01   | --         | 7.8E-03 | 2E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 9E-07                 |                                      |           |            |         | 2E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 9E-07                 |                                      |           |            |         | 2E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 1       | Benzo(a)anthracene     | NA                    | 3.7E-11    | NA      | NA                   | 3.7E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 3.9E-10    | NA      | NA                   | 3.9E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 5.1E-11    | NA      | NA                   | 5.1E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 2.0E-11    | NA      | NA                   | 2.0E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 4.2E-12    | NA      | NA                   | 4.2E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 1.2E-10    | NA      | NA                   | 1.2E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 2.9E-11    | NA      | NA                   | 2.9E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 7.0E-02    | NA      | 7.0E-02               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 2.0E-08    | NA      | NA                   | 2.0E-08               | Cardiovascular / Nervous             | NA        | 2.2E-02    | NA      | 2.2E-02               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 2.4E-03    | NA      | 2.4E-03               |
|            |                       |                      | Cadmium                | NA                    | 1.6E-09    | NA      | NA                   | 1.6E-09               | Kidney / Respiratory                 | NA        | 3.2E-03    | NA      | 3.2E-03               |
|            |                       |                      | Chromium               | NA                    | 1.9E-07    | NA      | NA                   | 1.9E-07               | Respiratory                          | NA        | 2.2E-01    | NA      | 2.2E-01               |
|            |                       |                      | Cobalt                 | NA                    | 4.0E-08    | NA      | NA                   | 4.0E-08               | Respiratory                          | NA        | 1.6E-02    | NA      | 1.6E-02               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 3.2E-01    | NA      | 3.2E-01               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.9E-04    | NA      | 1.9E-04               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 1.2E-02    | NA      | 1.2E-02               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 2.5E-07    | --      | --                   | 3E-07                 |                                      | --        | 6.7E-01    | --      | 7E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 7E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 7E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 1E-06                 |                                      |           |            |         |                       |



TABLE I-6  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|--------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|        |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |

|                       |  |  |  |  |  |  |  |  |              |  |  |  |  |              |
|-----------------------|--|--|--|--|--|--|--|--|--------------|--|--|--|--|--------------|
| <b>RECEPTOR TOTAL</b> |  |  |  |  |  |  |  |  | <b>1E-06</b> |  |  |  |  | <b>9E-01</b> |
|                       |  |  |  |  |  |  |  |  | <b>1E-06</b> |  |  |  |  | <b>9E-01</b> |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.0E-02 |
| TOTAL CARDIOVASCULAR HI =   | 2.2E-02 |
| TOTAL DEVELOPMENTAL HI =    | 2.4E-02 |
| TOTAL ENDOCRINE HI =        | 7.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.0E-02 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.6E-01 |
| TOTAL NOAEL HI =            | 8.6E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 8.1E-02 |
| TOTAL RESPIRATORY HI =      | 2.4E-01 |

**TABLE I-7**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE<br>RECEPTOR POPULATION: RECREATIONAL<br>RECEPTOR AGE: CHILD (AGES 1-7) |
|---------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL    | AREA 1                | Benzo(a)anthracene     | 2.5E-07               | NA                   | 8.9E-08        | NA                   | 3.4E-07               | Kidney                               | 3.1E-05   | NA         | 1.1E-05 | 4.2E-05               |    |         |       |
|                             |                 |                       | Benzo(a)pyrene         | 2.6E-06               | NA                   | 9.5E-07        | NA                   | 3.6E-06               | Kidney                               | 3.3E-05   | NA         | 1.2E-05 | 4.5E-05               |    |         |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 3.4E-07               | NA                   | 1.2E-07        | NA                   | 4.7E-07               | Kidney                               | 4.3E-05   | NA         | 1.6E-05 | 5.9E-05               |    |         |       |
|                             |                 |                       | Benzo(k)fluoranthene   | 1.3E-08               | NA                   | 4.8E-09        | NA                   | 1.8E-08               | Kidney                               | 1.7E-05   | NA         | 6.1E-06 | 2.3E-05               |    |         |       |
|                             |                 |                       | Carbazole              | 3.3E-10               | NA                   | 9.1E-11        | NA                   | 4.2E-10               |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                       | Chrysene               | 2.8E-09               | NA                   | 1.0E-09        | NA                   | 3.8E-09               | Kidney                               | 3.5E-05   | NA         | 1.3E-05 | 4.8E-05               |    |         |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 7.0E-07               | NA                   | 2.6E-07        | NA                   | 9.6E-07               | Kidney                               | 8.9E-06   | NA         | 3.2E-06 | 1.2E-05               |    |         |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 1.9E-07               | NA                   | 7.0E-08        | NA                   | 2.6E-07               | Kidney                               | 2.4E-05   | NA         | 8.9E-06 | 3.3E-05               |    |         |       |
|                             |                 |                       | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |    |         |       |
|                             |                 |                       |                        |                       |                      |                |                      |                       | General Toxicity /                   |           |            |         |                       |    |         |       |
|                             |                 |                       | Antimony               | NC                    | NA                   | NC             | NA                   |                       | Hematological                        | 1.2E-02   | NA         | --      | 1.2E-02               |    |         |       |
|                             |                 |                       | Arsenic                | 1.7E-06               | NA                   | 1.4E-07        | NA                   | 1.8E-06               | Skin                                 | 4.4E-02   | NA         | 3.7E-03 | 4.8E-02               |    |         |       |
|                             |                 |                       | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 2.4E-03   | NA         | --      | 2.4E-03               |    |         |       |
|                             |                 |                       | Cadmium                | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 2.6E-03   | NA         | 2.9E-04 | 2.8E-03               |    |         |       |
|                             |                 |                       | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 1.5E-02   | NA         | --      | 1.5E-02               |    |         |       |
|                             |                 |                       | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                            | 4.1E-02   | NA         | --      | 4.1E-02               |    |         |       |
|                             |                 |                       | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                         | 7.4E-03   | NA         | --      | 7.4E-03               |    |         |       |
|                             |                 |                       | Lead                   | --                    | NA                   | --             | NA                   |                       |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                       | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |    |         |       |
|                             |                 |                       | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                        | 7.6E-03   | NA         | --      | 7.6E-03               |    |         |       |
|                             |                 |                       | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 2.9E-02   | NA         | --      | 2.9E-02               |    |         |       |
|                             |                 |                       | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 9.6E-03   | NA         | --      | 9.6E-03               |    |         |       |
|                             |                 |                       |                        |                       |                      |                |                      |                       |                                      |           |            | --      |                       |    |         |       |
|                             |                 |                       |                        |                       |                      | CHEMICAL TOTAL | 5.8E-06              | --                    | 1.6E-06                              | --        | 7E-06      |         | 2.0E-01               | -- | 4.1E-03 | 2E-01 |
|                             |                 |                       |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                      |           | 7E-06      |         |                       |    |         | 2E-01 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |                      |                |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |    |         |       |
| SOIL TOTAL                  |                 |                       |                        |                       |                      |                |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |    |         |       |
|                             |                 |                       |                        |                       |                      |                |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |    |         |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |                      |                |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |                      |                |                      | 7E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |    |         |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.2E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 7.6E-03 |
| TOTAL KIDNEY HI =           | 1.5E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.8E-02 |
| TOTAL NOAEL HI =            | 5.2E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.8E-02 |
|                             | --      |

**TABLE I-8**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 1               | Benzo(a)anthracene     | 4.7E-08               | NA         | 2.2E-08 | NA                   | 6.9E-08               | Kidney                               | 3.6E-06   | NA         | 1.7E-06 | 5.3E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 5.0E-07               | NA         | 2.3E-07 | NA                   | 7.3E-07               | Kidney                               | 3.8E-06   | NA         | 1.8E-06 | 5.6E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 6.6E-08               | NA         | 3.1E-08 | NA                   | 9.6E-08               | Kidney                               | 5.0E-06   | NA         | 2.3E-06 | 7.3E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 2.5E-09               | NA         | 1.2E-09 | NA                   | 3.7E-09               | Kidney                               | 1.9E-06   | NA         | 8.9E-07 | 2.8E-06               |
|                             |                       |                      | Carbazole              | 1.5E-10               | NA         | 5.4E-11 | NA                   | 2.0E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 5.3E-10               | NA         | 2.5E-10 | NA                   | 7.8E-10               | Kidney                               | 4.1E-06   | NA         | 1.9E-06 | 5.9E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.4E-07               | NA         | 6.3E-08 | NA                   | 2.0E-07               | Kidney                               | 1.0E-06   | NA         | 4.8E-07 | 1.5E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.7E-08               | NA         | 1.7E-08 | NA                   | 5.4E-08               | Kidney                               | 2.8E-06   | NA         | 1.3E-06 | 4.1E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-03   | NA         | --      | 1.6E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                      | Arsenic                | 7.8E-07               | NA         | 8.4E-08 | NA                   | 8.7E-07               | Skin                                 | 5.1E-03   | NA         | 5.4E-04 | 5.6E-03               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.8E-04   | NA         | --      | 2.8E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.9E-04   | NA         | 4.2E-05 | 3.4E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.7E-03   | NA         | --      | 1.7E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.8E-03   | NA         | --      | 4.8E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 8.5E-04   | NA         | --      | 8.5E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-03   | NA         | --      | 1.6E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 8.8E-04   | NA         | --      | 8.8E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.4E-03   | NA         | --      | 3.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 1.6E-06               | --         | 4.5E-07 | --                   | 2E-06                 |                                      | 2.3E-02   | --         | 5.9E-04 | 2E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.4E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 8.8E-04 |
| TOTAL KIDNEY HI =           | 1.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.2E-03 |
| TOTAL NOAEL HI =            | 6.0E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 5.6E-03 |
|                             | --      |

**TABLE I-9**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |  |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|--|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |  |
| SOIL   | SURFACE SOIL    | AREA 1         | Benzo(a)anthracene     | 1.7E-06               | NA         | 6.0E-07 | NA                   | 2.3E-06               | Kidney                               | 2.1E-04   | NA         | 7.6E-05 | 2.9E-04               |  |
|        |                 |                | Benzo(a)pyrene         | 1.8E-05               | NA         | 6.4E-06 | NA                   | 2.4E-05               | Kidney                               | 2.2E-04   | NA         | 8.1E-05 | 3.0E-04               |  |
|        |                 |                | Benzo(b)fluoranthene   | 2.3E-06               | NA         | 8.4E-07 | NA                   | 3.1E-06               | Kidney                               | 2.9E-04   | NA         | 1.1E-04 | 4.0E-04               |  |
|        |                 |                | Benzo(k)fluoranthene   | 8.8E-08               | NA         | 3.2E-08 | NA                   | 1.2E-07               | Kidney                               | 1.1E-04   | NA         | 4.1E-05 | 1.5E-04               |  |
|        |                 |                | Carbazole              | 2.2E-09               | NA         | 6.1E-10 | NA                   | 2.8E-09               |                                      | --        | NA         | --      |                       |  |
|        |                 |                | Chrysene               | 1.9E-08               | NA         | 6.8E-09 | NA                   | 2.5E-08               | Kidney                               | 2.4E-04   | NA         | 8.6E-05 | 3.2E-04               |  |
|        |                 |                | Dibenz(a,h)anthracene  | 4.7E-06               | NA         | 1.7E-06 | NA                   | 6.5E-06               | Kidney                               | 6.0E-05   | NA         | 2.2E-05 | 8.2E-05               |  |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 1.3E-06               | NA         | 4.7E-07 | NA                   | 1.8E-06               | Kidney                               | 1.6E-04   | NA         | 6.0E-05 | 2.2E-04               |  |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System<br>General Toxicity / | 9.4E-02   | NA         | --      | 9.4E-02               |  |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 8.1E-02   | NA         | --      | 8.1E-02               |  |
|        |                 |                | Arsenic                | 1.1E-05               | NA         | 9.6E-07 | NA                   | 1.2E-05               | Skin                                 | 3.0E-01   | NA         | 2.5E-02 | 3.2E-01               |  |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.6E-02   | NA         | --      | 1.6E-02               |  |
|        |                 |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.7E-02   | NA         | 1.9E-03 | 1.9E-02               |  |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-01   | NA         | --      | 1.0E-01               |  |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.8E-01   | NA         | --      | 2.8E-01               |  |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 5.0E-02   | NA         | --      | 5.0E-02               |  |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |  |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.2E-02   | NA         | --      | 9.2E-02               |  |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.1E-02   | NA         | --      | 5.1E-02               |  |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.0E-01   | NA         | --      | 2.0E-01               |  |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.5E-02   | NA         | --      | 6.5E-02               |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.8E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.1E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 5.1E-02 |
| TOTAL KIDNEY HI =           | 1.0E-01 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.9E-01 |
| TOTAL NOAEL HI =            | 3.5E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.2E-01 |
|                             | --      |

**TABLE I-10**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 1         | Benzo(a)anthracene     | 3.2E-07               | NA         | 1.5E-07 | NA                   | 4.7E-07               | Kidney                               | 2.4E-05   | NA         | 1.1E-05 | 3.5E-05               |
|                             |                       |                | Benzo(a)pyrene         | 3.4E-06               | NA         | 1.6E-06 | NA                   | 4.9E-06               | Kidney                               | 2.6E-05   | NA         | 1.2E-05 | 3.8E-05               |
|                             |                       |                | Benzo(b)fluoranthene   | 4.4E-07               | NA         | 2.1E-07 | NA                   | 6.5E-07               | Kidney                               | 3.4E-05   | NA         | 1.6E-05 | 4.9E-05               |
|                             |                       |                | Benzo(k)fluoranthene   | 1.7E-08               | NA         | 7.9E-09 | NA                   | 2.5E-08               | Kidney                               | 1.3E-05   | NA         | 6.0E-06 | 1.9E-05               |
|                             |                       |                | Carbazole              | 1.0E-09               | NA         | 3.6E-10 | NA                   | 1.4E-09               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Chrysene               | 3.6E-09               | NA         | 1.7E-09 | NA                   | 5.3E-09               | Kidney                               | 2.7E-05   | NA         | 1.3E-05 | 4.0E-05               |
|                             |                       |                | Dibenz(a,h)anthracene  | 9.1E-07               | NA         | 4.2E-07 | NA                   | 1.3E-06               | Kidney                               | 6.9E-06   | NA         | 3.2E-06 | 1.0E-05               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 2.5E-07               | NA         | 1.2E-07 | NA                   | 3.6E-07               | Kidney                               | 1.9E-05   | NA         | 8.8E-06 | 2.8E-05               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Arsenic                | 5.3E-06               | NA         | 5.6E-07 | NA                   | 5.8E-06               | Hematological                        | 9.3E-03   | NA         | --      | 9.3E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 3.4E-02   | NA         | 3.7E-03 | 3.8E-02               |
|                             |                       |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.0E-03   | NA         | 2.8E-04 | 2.3E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.2E-02   | NA         | --      | 3.2E-02               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       | Undetermined                         | 5.7E-03   | NA         | --      | 5.7E-03               |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.9E-03   | NA         | --      | 5.9E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.3E-02   | NA         | --      | 2.3E-02               |
|                             |                       |                |                        |                       |            |         |                      |                       | Kidney                               | 7.5E-03   | NA         | --      | 7.5E-03               |
|                             |                       |                |                        | CHEMICAL TOTAL        | 1.1E-05    | --      | 3.0E-06              | --                    | 1E-05                                |           | 1.5E-01    | --      | 4.0E-03               |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.3E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 5.9E-03 |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.1E-02 |
| TOTAL NOAEL HI =            | 4.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.8E-02 |
|                             | --      |

**TABLE I-11**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: OUTDOOR WORKER</b><br><b>RECEPTOR AGE: ADULT</b> |
|----------------------------------------------------------------------------------------------------------------|

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 1         | Benzo(a)anthracene     | 2.1E-08               | NA         | 1.8E-08 | NA                   | 3.8E-08               | Kidney                               | 2.6E-06   | NA         | 2.3E-06 | 4.9E-06               |
|        |                 |                | Benzo(a)pyrene         | 2.1E-07               | NA         | 1.8E-07 | NA                   | 3.9E-07               | Kidney                               | 2.7E-06   | NA         | 2.3E-06 | 5.0E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 1.8E-08               | NA         | 1.5E-08 | NA                   | 3.3E-08               | Kidney                               | 2.3E-06   | NA         | 2.0E-06 | 4.3E-06               |
|        |                 |                | Carbazole              | 6.5E-11               | NA         | 4.3E-11 | NA                   | 1.1E-10               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 1.6E-10               | NA         | 1.4E-10 | NA                   | 2.9E-10               | Kidney                               | 2.0E-06   | NA         | 1.7E-06 | 3.8E-06               |
|        |                 |                | Dibenz(a,h)anthracene  | 2.5E-08               | NA         | 2.1E-08 | NA                   | 4.6E-08               | Kidney                               | 3.2E-07   | NA         | 2.7E-07 | 5.9E-07               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 1.7E-08               | NA         | 1.4E-08 | NA                   | 3.1E-08               | Kidney                               | 2.2E-06   | NA         | 1.9E-06 | 4.0E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.5E-03   | NA         | --      | 2.5E-03               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.1E-03   | NA         | --      | 3.1E-03               |
|        |                 |                | Arsenic                | 6.3E-07               | NA         | 1.2E-07 | NA                   | 7.5E-07               | Skin                                 | 3.9E-03   | NA         | 7.7E-04 | 4.7E-03               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.5E-04   | NA         | --      | 2.5E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.5E-03   | NA         | --      | 1.5E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.6E-03   | NA         | --      | 4.6E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 9.5E-04   | NA         | --      | 9.5E-04               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-03   | NA         | --      | 1.1E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 4.7E-04   | NA         | --      | 4.7E-04               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.8E-03   | NA         | --      | 1.8E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.7E-04   | NA         | --      | 8.7E-04               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/18/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.1E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 4.7E-04 |
| TOTAL KIDNEY HI =           | 1.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.5E-03 |
| TOTAL NOAEL HI =            | 4.3E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 4.7E-03 |
|                             | --      |

**TABLE I-12**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1)            |           |            |         |                       |         |         |       |
|------------|-----------------------|-----------------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|-------------------------------------------------|-----------|------------|---------|-----------------------|---------|---------|-------|
|            |                       |                       |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                            | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |         |         |       |
| SOIL       | SURFACE SOIL          | AREA 1                | Benzo(a)anthracene     | 1.3E-07               | NA                   | 1.1E-07        | NA                   | 2.4E-07               | Kidney                                          | 1.6E-05   | NA         | 1.4E-05 | 3.1E-05               |         |         |       |
|            |                       |                       | Benzo(a)pyrene         | 1.3E-06               | NA                   | 1.1E-06        | NA                   | 2.4E-06               | Kidney                                          | 1.7E-05   | NA         | 1.4E-05 | 3.1E-05               |         |         |       |
|            |                       |                       | Benzo(b)fluoranthene   | 1.1E-07               | NA                   | 9.7E-08        | NA                   | 2.1E-07               | Kidney                                          | 1.4E-05   | NA         | 1.2E-05 | 2.7E-05               |         |         |       |
|            |                       |                       | Carbazole              | 4.1E-10               | NA                   | 2.7E-10        | NA                   | 6.8E-10               |                                                 | --        | NA         | --      |                       |         |         |       |
|            |                       |                       | Chrysene               | 9.9E-10               | NA                   | 8.5E-10        | NA                   | 1.8E-09               | Kidney                                          | 1.3E-05   | NA         | 1.1E-05 | 2.3E-05               |         |         |       |
|            |                       |                       | Dibenz(a,h)anthracene  | 1.6E-07               | NA                   | 1.3E-07        | NA                   | 2.9E-07               | Kidney                                          | 2.0E-06   | NA         | 1.7E-06 | 3.7E-06               |         |         |       |
|            |                       |                       | Indeno(1,2,3-cd)pyrene | 1.1E-07               | NA                   | 9.1E-08        | NA                   | 2.0E-07               | Kidney                                          | 1.4E-05   | NA         | 1.2E-05 | 2.5E-05               |         |         |       |
|            |                       |                       | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System                                  | 1.5E-02   | NA         | --      | 1.5E-02               |         |         |       |
|            |                       |                       | Antimony               | NC                    | NA                   | NC             | NA                   |                       | General Toxicity / Hematological                | 2.0E-02   | NA         | --      | 2.0E-02               |         |         |       |
|            |                       |                       | Arsenic                | 3.9E-06               | NA                   | 7.8E-07        | NA                   | 4.7E-06               | Skin                                            | 2.4E-02   | NA         | 4.8E-03 | 2.9E-02               |         |         |       |
|            |                       |                       | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                                          | 1.6E-03   | NA         | --      | 1.6E-03               |         |         |       |
|            |                       |                       | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                           | 9.4E-03   | NA         | --      | 9.4E-03               |         |         |       |
|            |                       |                       | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                                       | 2.9E-02   | NA         | --      | 2.9E-02               |         |         |       |
|            |                       |                       | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                                    | 6.0E-03   | NA         | --      | 6.0E-03               |         |         |       |
|            |                       |                       | Lead                   | --                    | NA                   | --             | NA                   |                       |                                                 | --        | NA         | --      |                       |         |         |       |
|            |                       |                       | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                                  | 6.6E-03   | NA         | --      | 6.6E-03               |         |         |       |
|            |                       |                       | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                                   | 2.9E-03   | NA         | --      | 2.9E-03               |         |         |       |
|            |                       |                       | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                           | 1.1E-02   | NA         | --      | 1.1E-02               |         |         |       |
|            |                       |                       | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                                          | 5.4E-03   | NA         | --      | 5.4E-03               |         |         |       |
|            |                       |                       |                        |                       |                      | CHEMICAL TOTAL | 5.7E-06              | --                    | 2.3E-06                                         | --        | 8E-06      |         | 1.3E-01               | --      | 4.9E-03 | 1E-01 |
|            |                       |                       |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                                 |           | 8E-06      |         |                       |         |         | 1E-01 |
|            |                       | EXPOSURE MEDIUM TOTAL |                        |                       |                      |                |                      |                       | 8E-06                                           |           |            |         |                       | 1E-01   |         |       |
|            |                       |                       |                        |                       |                      |                |                      |                       |                                                 |           |            |         |                       |         |         |       |
| SOIL       | AIR                   | DUST AT AREA 1        | Benzo(a)anthracene     | NA                    | 3.3E-12              | NA             | NA                   | 3.3E-12               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Benzo(a)pyrene         | NA                    | 3.4E-11              | NA             | NA                   | 3.4E-11               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Benzo(b)fluoranthene   | NA                    | 2.9E-12              | NA             | NA                   | 2.9E-12               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Carbazole              | NA                    | NC                   | NA             | NA                   |                       |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Chrysene               | NA                    | 2.6E-13              | NA             | NA                   | 2.6E-13               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Dibenz(a,h)anthracene  | NA                    | 4.4E-12              | NA             | NA                   | 4.4E-12               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Indeno(1,2,3-cd)pyrene | NA                    | 2.7E-12              | NA             | NA                   | 2.7E-12               |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Aluminum               | NA                    | NC                   | NA             | NA                   |                       | Nervous System                                  | NA        | 5.3E-04    | NA      | 5.3E-04               |         |         |       |
|            |                       |                       | Antimony               | NA                    | NC                   | NA             | NA                   |                       |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       |                        |                       |                      |                |                      |                       | Developmental / Cardiovascular / Nervous system | NA        |            | NA      |                       |         |         |       |
|            |                       |                       | Arsenic                | NA                    | 1.9E-09              | NA             | NA                   | 1.9E-09               |                                                 | NA        | 8.4E-05    | NA      | 8.4E-05               |         |         |       |
|            |                       |                       | Barium                 | NA                    | NC                   | NA             | NA                   |                       | Developmental                                   | NA        | 1.1E-04    | NA      | 1.1E-04               |         |         |       |
|            |                       |                       | Chromium               | NA                    | 2.1E-08              | NA             | NA                   | 2.1E-08               | Respiratory                                     | NA        | 4.8E-05    | NA      | 4.8E-05               |         |         |       |
|            |                       |                       | Cobalt                 | NA                    | 4.8E-09              | NA             | NA                   | 4.8E-09               | Respiratory                                     | NA        | 2.5E-04    | NA      | 2.5E-04               |         |         |       |
|            |                       |                       | Copper                 | NA                    | NC                   | NA             | NA                   |                       |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Lead                   | NA                    | --                   | NA             | NA                   |                       |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Manganese              | NA                    | NC                   | NA             | NA                   |                       | Nervous System                                  | NA        | 1.1E-03    | NA      | 1.1E-03               |         |         |       |
|            |                       |                       | Mercury                | NA                    | NC                   | NA             | NA                   |                       | Nervous System                                  | NA        | 5.0E-07    | NA      | 5.0E-07               |         |         |       |
|            |                       |                       | Thallium               | NA                    | NC                   | NA             | NA                   |                       |                                                 | NA        | --         | NA      |                       |         |         |       |
|            |                       |                       | Vanadium               | NA                    | NC                   | NA             | NA                   |                       |                                                 | NA        | 4.7E-05    | NA      | 4.7E-05               |         |         |       |
|            |                       |                       |                        |                       |                      | CHEMICAL TOTAL | --                   | 2.8E-08               | --                                              | --        | 3E-08      |         | --                    | 2.1E-03 | --      | 2E-03 |
|            |                       |                       | EXPOSURE POINT TOTAL   |                       |                      |                |                      |                       | 3E-08                                           |           |            |         |                       | 2E-03   |         |       |
|            | EXPOSURE MEDIUM TOTAL |                       |                        |                       |                      |                |                      | 3E-08                 |                                                 |           |            |         | 2E-03                 |         |         |       |
|            |                       |                       |                        |                       |                      |                |                      |                       |                                                 |           |            |         |                       |         |         |       |
| SOIL TOTAL |                       |                       |                        |                       |                      |                |                      | 8E-06                 |                                                 |           |            |         | 1E-01                 |         |         |       |





**TABLE I-13**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 1               | Benzo(a)anthracene     | 7.1E-08               | NA         | 1.2E-07 | NA                   | 1.9E-07               | Kidney                               | 9.1E-06   | NA         | 1.6E-05 | 2.5E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 7.3E-07               | NA         | 1.2E-06 | NA                   | 2.0E-06               | Kidney                               | 9.3E-06   | NA         | 1.6E-05 | 2.5E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 6.3E-08               | NA         | 1.1E-07 | NA                   | 1.7E-07               | Kidney                               | 8.0E-06   | NA         | 1.4E-05 | 2.2E-05               |
|                             |                       |                      | Carbazole              | 2.3E-10               | NA         | 3.0E-10 | NA                   | 5.3E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 5.5E-10               | NA         | 9.4E-10 | NA                   | 1.5E-09               | Kidney                               | 7.0E-06   | NA         | 1.2E-05 | 1.9E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 8.7E-08               | NA         | 1.5E-07 | NA                   | 2.4E-07               | Kidney                               | 1.1E-06   | NA         | 1.9E-06 | 3.0E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.9E-08               | NA         | 1.0E-07 | NA                   | 1.6E-07               | Kidney                               | 7.5E-06   | NA         | 1.3E-05 | 2.0E-05               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.6E-03   | NA         | --      | 8.6E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                      | Arsenic                | 2.2E-06               | NA         | 8.6E-07 | NA                   | 3.0E-06               | Skin                                 | 1.4E-02   | NA         | 5.4E-03 | 1.9E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.8E-04   | NA         | --      | 8.8E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.2E-03   | NA         | --      | 5.2E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.6E-02   | NA         | --      | 1.6E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.3E-03   | NA         | --      | 3.3E-03               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.7E-03   | NA         | --      | 3.7E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.6E-03   | NA         | --      | 1.6E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.4E-03   | NA         | --      | 6.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.0E-03   | NA         | --      | 3.0E-03               |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 3.2E-06    | --      | 2.6E-06              | --                    | 6E-06                                |           | 7.3E-02    | --      | 5.4E-03               |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 6E-06                                |           |            |         | 8E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            | 8E-02   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            | 8E-02   |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            | 8E-02   |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 6E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            | 8E-02   |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.6E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.1E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 1.6E-03 |
| TOTAL KIDNEY HI =           | 4.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.2E-02 |
| TOTAL NOAEL HI =            | 1.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.9E-02 |
|                             | --      |

**TABLE I-14**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 1         | Benzo(a)anthracene     | 1.9E-08               | NA         | 7.4E-09 | NA                   | 2.6E-08               | Kidney                               | 6.0E-06   | NA         | 2.4E-06 | 8.4E-06               |
|        |                 |                | Benzo(a)pyrene         | 1.9E-07               | NA         | 7.5E-08 | NA                   | 2.7E-07               | Kidney                               | 6.1E-06   | NA         | 2.4E-06 | 8.5E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 1.7E-08               | NA         | 6.4E-09 | NA                   | 2.3E-08               | Kidney                               | 5.3E-06   | NA         | 2.1E-06 | 7.3E-06               |
|        |                 |                | Carbazole              | 6.0E-11               | NA         | 1.8E-11 | NA                   | 7.8E-11               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 1.4E-10               | NA         | 5.6E-11 | NA                   | 2.0E-10               | Kidney                               | 4.6E-06   | NA         | 1.8E-06 | 6.4E-06               |
|        |                 |                | Dibenz(a,h)anthracene  | 2.3E-08               | NA         | 8.9E-09 | NA                   | 3.2E-08               | Kidney                               | 7.3E-07   | NA         | 2.9E-07 | 1.0E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 1.5E-08               | NA         | 6.0E-09 | NA                   | 2.2E-08               | Kidney                               | 5.0E-06   | NA         | 1.9E-06 | 6.9E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.7E-02   | NA         | --      | 5.7E-02               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 7.2E-02   | NA         | --      | 7.2E-02               |
|        |                 |                | Arsenic                | 5.7E-07               | NA         | 5.2E-08 | NA                   | 6.3E-07               | Skin                                 | 8.9E-02   | NA         | 8.0E-03 | 9.7E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.8E-03   | NA         | --      | 5.8E-03               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.2E-03   | NA         | --      | 5.2E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 8.8E-02   | NA         | --      | 8.8E-02               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.4E-02   | NA         | --      | 2.4E-02               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.6E-03   | NA         | --      | 1.6E-03               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.4E-03   | NA         | --      | 8.4E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.0E-02   | NA         | --      | 1.0E-02               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       | </         |         |                      |                       |                                      |           |            |         |                       |

TABLE I-14  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                               |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|-------------------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION)          | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       |            | 1E-06  |                               |                       |                                      |           | 1E+00      |        |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            | 1E-06  | TOTAL HAZARD ACROSS ALL MEDIA |                       |                                      |           | 1E+00      |        |                       |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BRJ 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 7.2E-02 |
| TOTAL CARDIOVASCULAR HI =   | 2.6E-02 |
| TOTAL DEVELOPMENTAL HI =    | 3.0E-02 |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 7.2E-02 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 6.1E-01 |
| TOTAL NOAEL HI =            | 1.2E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 9.7E-02 |
| TOTAL RESPIRATORY HI =      | 3.3E-01 |

**TABLE I-15**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 1               | Benzo(a)anthracene     | 2.8E-07               | NA         | 1.0E-07        | NA                   | 3.8E-07               | Kidney                               | 3.5E-05   | NA         | 1.3E-05 | 4.8E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 2.8E-06               | NA         | 1.0E-06        | NA                   | 3.9E-06               | Kidney                               | 3.6E-05   | NA         | 1.3E-05 | 4.9E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.4E-07               | NA         | 8.9E-08        | NA                   | 3.3E-07               | Kidney                               | 3.1E-05   | NA         | 1.1E-05 | 4.2E-05               |       |
|                             |                       |                      | Carbazole              | 2.1E-10               | NA         | 5.9E-11        | NA                   | 2.7E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 2.1E-09               | NA         | 7.8E-10        | NA                   | 2.9E-09               | Kidney                               | 2.7E-05   | NA         | 9.9E-06 | 3.7E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.4E-07               | NA         | 1.2E-07        | NA                   | 4.6E-07               | Kidney                               | 4.3E-06   | NA         | 1.6E-06 | 5.9E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.3E-07               | NA         | 8.4E-08        | NA                   | 3.1E-07               | Kidney                               | 2.9E-05   | NA         | 1.1E-05 | 4.0E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.3E-02   | NA         | --      | 3.3E-02               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 4.2E-02   | NA         | --      | 4.2E-02               |       |
|                             |                       |                      | Arsenic                | 2.0E-06               | NA         | 1.7E-07        | NA                   | 2.2E-06               | Skin                                 | 5.3E-02   | NA         | 4.4E-03 | 5.7E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 3.4E-03   | NA         | --      | 3.4E-03               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.0E-02   | NA         | --      | 2.0E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 6.3E-02   | NA         | --      | 6.3E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 6.3E-03   | NA         | --      | 6.3E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.5E-02   | NA         | --      | 2.5E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.2E-02   | NA         | --      | 1.2E-02               |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 6.0E-06              | --                    | 1.6E-06                              | --        | 8E-06      |         | 2.8E-01               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 8E-06                                |           |            |         |                       | 3E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 8E-06                 |                                      |           |            |         | 3E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 8E-06                 |                                      |           |            |         | 3E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 8E-06                 |                                      |           |            |         | 3E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 8E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 6.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.2E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 6.3E-03 |
| TOTAL KIDNEY HI =           | 1.5E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.7E-02 |
| TOTAL NOAEL HI =            | 5.8E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 5.7E-02 |
|                             | --      |

**TABLE I-16**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RECREATIONAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 1         | Benzo(a)anthracene     | 5.4E-08               | NA         | 2.5E-08 | NA                   | 7.9E-08               | Kidney                               | 4.1E-06   | NA         | 1.9E-06 | 6.0E-06               |
|                             |                       |                | Benzo(a)pyrene         | 5.5E-07               | NA         | 2.5E-07 | NA                   | 8.0E-07               | Kidney                               | 4.2E-06   | NA         | 1.9E-06 | 6.1E-06               |
|                             |                       |                | Benzo(b)fluoranthene   | 4.7E-08               | NA         | 2.2E-08 | NA                   | 6.9E-08               | Kidney                               | 3.6E-06   | NA         | 1.7E-06 | 5.2E-06               |
|                             |                       |                | Carbazole              | 9.8E-11               | NA         | 3.5E-11 | NA                   | 1.3E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Chrysene               | 4.1E-10               | NA         | 1.9E-10 | NA                   | 6.0E-10               | Kidney                               | 3.1E-06   | NA         | 1.5E-06 | 4.6E-06               |
|                             |                       |                | Dibenz(a,h)anthracene  | 6.5E-08               | NA         | 3.0E-08 | NA                   | 9.6E-08               | Kidney                               | 5.0E-07   | NA         | 2.3E-07 | 7.3E-07               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 4.4E-08               | NA         | 2.0E-08 | NA                   | 6.5E-08               | Kidney                               | 3.4E-06   | NA         | 1.6E-06 | 4.9E-06               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.8E-03   | NA         | --      | 3.8E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 4.9E-03   | NA         | --      | 4.9E-03               |
|                             |                       |                | Arsenic                | 9.4E-07               | NA         | 1.0E-07 | NA                   | 1.0E-06               | Skin                                 | 6.1E-03   | NA         | 6.5E-04 | 6.7E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.9E-04   | NA         | --      | 3.9E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.2E-03   | NA         | --      | 7.2E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.5E-03   | NA         | --      | 1.5E-03               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-03   | NA         | --      | 1.6E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 7.3E-04   | NA         | --      | 7.3E-04               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.8E-03   | NA         | --      | 2.8E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                |                        | CHEMICAL TOTAL        | 1.7E-06    | --      | 4.5E-07              | --                    | 2E-06                                |           | 3.3E-02    | --      | 6.6E-04               |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 7.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.9E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 7.3E-04 |
| TOTAL KIDNEY HI =           | 1.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.5E-03 |
| TOTAL NOAEL HI =            | 6.7E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 6.7E-03 |
|                             | --      |

**TABLE I-17**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 1               | Benzo(a)anthracene     | 1.9E-06               | NA         | 6.8E-07 | NA                   | 2.6E-06               | Kidney                               | 2.4E-04   | NA         | 8.7E-05 | 3.3E-04               |       |
|                             |                       |                      | Benzo(a)pyrene         | 1.9E-05               | NA         | 7.0E-06 | NA                   | 2.6E-05               | Kidney                               | 2.4E-04   | NA         | 8.8E-05 | 3.3E-04               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.6E-06               | NA         | 6.0E-07 | NA                   | 2.2E-06               | Kidney                               | 2.1E-04   | NA         | 7.6E-05 | 2.8E-04               |       |
|                             |                       |                      | Carbazole              | 1.4E-09               | NA         | 4.0E-10 | NA                   | 1.8E-09               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 1.4E-08               | NA         | 5.3E-09 | NA                   | 2.0E-08               | Kidney                               | 1.8E-04   | NA         | 6.7E-05 | 2.5E-04               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 2.3E-06               | NA         | 8.3E-07 | NA                   | 3.1E-06               | Kidney                               | 2.9E-05   | NA         | 1.1E-05 | 4.0E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.5E-06               | NA         | 5.6E-07 | NA                   | 2.1E-06               | Kidney                               | 2.0E-04   | NA         | 7.1E-05 | 2.7E-04               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.2E-01   | NA         | --      | 2.2E-01               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.8E-01   | NA         | --      | 2.8E-01               |       |
|                             |                       |                      | Arsenic                | 1.4E-05               | NA         | 1.1E-06 | NA                   | 1.5E-05               | Skin                                 | 3.5E-01   | NA         | 3.0E-02 | 3.8E-01               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.3E-02   | NA         | --      | 2.3E-02               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-01   | NA         | --      | 1.4E-01               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.2E-01   | NA         | --      | 4.2E-01               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 8.7E-02   | NA         | --      | 8.7E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.6E-02   | NA         | --      | 9.6E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 4.3E-02   | NA         | --      | 4.3E-02               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.7E-01   | NA         | --      | 1.7E-01               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.9E-02   | NA         | --      | 7.9E-02               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 4.0E-05    | --      | 1.1E-05              | --                    | 5E-05                                |           | 1.9E+00    | --      | 3.0E-02               | 2E+00 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 5E-05                                |           |            |         |                       | 2E+00 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 2E+00                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 2E+00                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 2E+00                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 5E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E+00                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.8E-01 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.2E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.8E-01 |
| TOTAL IMMUNE SYSTEM HI =    | 4.3E-02 |
| TOTAL KIDNEY HI =           | 1.0E-01 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.2E-01 |
| TOTAL NOAEL HI =            | 3.9E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.8E-01 |
|                             | --      |

**TABLE I-18**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 1 - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RESIDENTIAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 1               | Benzo(a)anthracene     | 3.6E-07               | NA         | 1.7E-07 | NA                   | 5.3E-07               | Kidney                               | 2.8E-05   | NA         | 1.3E-05 | 4.0E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 3.7E-06               | NA         | 1.7E-06 | NA                   | 5.4E-06               | Kidney                               | 2.8E-05   | NA         | 1.3E-05 | 4.1E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.2E-07               | NA         | 1.5E-07 | NA                   | 4.6E-07               | Kidney                               | 2.4E-05   | NA         | 1.1E-05 | 3.5E-05               |       |
|                             |                       |                      | Carbazole              | 6.6E-10               | NA         | 2.3E-10 | NA                   | 8.9E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 2.8E-09               | NA         | 1.3E-09 | NA                   | 4.1E-09               | Kidney                               | 2.1E-05   | NA         | 9.8E-06 | 3.1E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 4.4E-07               | NA         | 2.0E-07 | NA                   | 6.4E-07               | Kidney                               | 3.3E-06   | NA         | 1.5E-06 | 4.9E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.0E-07               | NA         | 1.4E-07 | NA                   | 4.3E-07               | Kidney                               | 2.3E-05   | NA         | 1.0E-05 | 3.3E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.6E-02   | NA         | --      | 2.6E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.3E-02   | NA         | --      | 3.3E-02               |       |
|                             |                       |                      | Arsenic                | 6.3E-06               | NA         | 6.7E-07 | NA                   | 7.0E-06               | Skin                                 | 4.1E-02   | NA         | 4.4E-03 | 4.5E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.6E-03   | NA         | --      | 2.6E-03               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.6E-02   | NA         | --      | 1.6E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.9E-02   | NA         | --      | 4.9E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 4.9E-03   | NA         | --      | 4.9E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.9E-02   | NA         | --      | 1.9E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.1E-03   | NA         | --      | 9.1E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 1.1E-05    | --      | 3.0E-06              | --                    | 1E-05                                |           | 2.2E-01    | --      | 4.4E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 1E-05                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.3E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 4.9E-03 |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.7E-02 |
| TOTAL NOAEL HI =            | 4.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.5E-02 |
|                             | --      |

**TABLE I-19**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADOLESCENT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 6.6E-08               | NA         | 2.8E-08 | NA                   | 9.4E-08               | Kidney                               | 7.0E-06   | NA         | 3.0E-06 | 1.0E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 6.7E-07               | NA         | 2.9E-07 | NA                   | 9.6E-07               | Kidney                               | 7.2E-06   | NA         | 3.1E-06 | 1.0E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 9.6E-08               | NA         | 4.1E-08 | NA                   | 1.4E-07               | Kidney                               | 1.0E-05   | NA         | 4.4E-06 | 1.5E-05               |
|                             |                       |                      | Benzo(k)fluoranthene   | 3.8E-09               | NA         | 1.6E-09 | NA                   | 5.4E-09               | Kidney                               | 4.0E-06   | NA         | 1.7E-06 | 5.7E-06               |
|                             |                       |                      | Carbazole              | 9.9E-11               | NA         | 3.3E-11 | NA                   | 1.3E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 1.1E-09               | NA         | 4.6E-10 | NA                   | 1.5E-09               | Kidney                               | 1.1E-05   | NA         | 4.9E-06 | 1.6E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.6E-07               | NA         | 6.9E-08 | NA                   | 2.3E-07               | Kidney                               | 1.7E-06   | NA         | 7.4E-07 | 2.4E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 8.0E-08               | NA         | 3.4E-08 | NA                   | 1.1E-07               | Kidney                               | 8.5E-06   | NA         | 3.7E-06 | 1.2E-05               |
|                             |                       |                      | Heptachlor epoxide     | 7.8E-08               | NA         | --      | NA                   | 7.8E-08               | Liver                                | 4.6E-03   | NA         | --      | 4.6E-03               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.5E-03   | NA         | --      | 4.5E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity / Hematological     | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 9.3E-03   | NA         | 9.2E-04 | 1.0E-02               |
|                             |                       |                      | Arsenic                | 6.0E-07               | NA         | 5.9E-08 | NA                   | 6.6E-07               | Kidney                               | 3.0E-04   | NA         | --      | 3.0E-04               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.5E-04   | NA         | 4.6E-05 | 3.9E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.2E-03   | NA         | --      | 3.2E-03               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.9E-02   | NA         | --      | 2.9E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       | Nervous System                       | 3.8E-03   | NA         | --      | 3.8E-03               |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.5E-03   | NA         | --      | 7.5E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.2E-03   | NA         | --      | 3.2E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 1.8E-06               | --         | 5.2E-07 | --                   | 2E-06                 |                                      | 8.0E-02   | --         | 9.9E-04 | 8E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 8E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 8E-02                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 8E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 8E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 8E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012

Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.3E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-03 |
| TOTAL KIDNEY HI =           | 3.9E-03 |
| TOTAL LIVER HI =            | 4.6E-03 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 8.2E-03 |
| TOTAL NOAEL HI =            | 4.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.0E-02 |
|                             | --      |



**TABLE I-20**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADULT

| MEDIUM         | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                             | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                               |
|----------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------------|--------------------------------------|-----------|------------|---------|-------------------------------|
|                |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL       | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL         |
| SOIL           | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 9.7E-09               | NA         | 4.3E-09 | NA                   | 1.4E-08                     | Kidney                               | 2.2E-06   | NA         | 9.8E-07 | 3.2E-06                       |
|                |                       |                      | Benzo(a)pyrene         | 9.9E-08               | NA         | 4.3E-08 | NA                   | 1.4E-07                     | Kidney                               | 2.2E-06   | NA         | 9.9E-07 | 3.2E-06                       |
|                |                       |                      | Benzo(b)fluoranthene   | 1.4E-08               | NA         | 6.2E-09 | NA                   | 2.0E-08                     | Kidney                               | 3.2E-06   | NA         | 1.4E-06 | 4.6E-06                       |
|                |                       |                      | Benzo(k)fluoranthene   | 5.5E-10               | NA         | 2.4E-10 | NA                   | 7.9E-10                     | Kidney                               | 1.3E-06   | NA         | 5.5E-07 | 1.8E-06                       |
|                |                       |                      | Carbazole              | 4.4E-11               | NA         | 1.5E-11 | NA                   | 5.8E-11                     |                                      | --        | NA         | --      |                               |
|                |                       |                      | Chrysene               | 1.6E-10               | NA         | 7.0E-11 | NA                   | 2.3E-10                     | Kidney                               | 3.6E-06   | NA         | 1.6E-06 | 5.2E-06                       |
|                |                       |                      | Dibenz(a,h)anthracene  | 2.4E-08               | NA         | 1.0E-08 | NA                   | 3.4E-08                     | Kidney                               | 5.4E-07   | NA         | 2.4E-07 | 7.7E-07                       |
|                |                       |                      | Indeno(1,2,3-cd)pyrene | 1.2E-08               | NA         | 5.2E-09 | NA                   | 1.7E-08                     | Kidney                               | 2.7E-06   | NA         | 1.2E-06 | 3.9E-06                       |
|                |                       |                      | Heptachlor epoxide     | 3.4E-08               | NA         | --      | NA                   | 3.4E-08                     | Liver                                | 1.4E-03   | NA         | --      | 1.4E-03                       |
|                |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                             | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03                       |
|                |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                             | General Toxicity / Hematological     | 7.2E-04   | NA         | --      | 7.2E-04                       |
|                |                       |                      | Arsenic                | 2.6E-07               | NA         | 2.7E-08 | NA                   | 2.9E-07                     | Skin                                 | 2.9E-03   | NA         | 3.0E-04 | 3.2E-03                       |
|                |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 9.3E-05   | NA         | --      | 9.3E-05                       |
|                |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 1.1E-04   | NA         | 1.5E-05 | 1.2E-04                       |
|                |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                             | NOAEL                                | 1.0E-03   | NA         | --      | 1.0E-03                       |
|                |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                             | Endocrine                            | 3.2E-03   | NA         | --      | 3.2E-03                       |
|                |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                             | Undetermined                         | 9.1E-03   | NA         | --      | 9.1E-03                       |
|                |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                             |                                      | --        | NA         | --      |                               |
|                |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                             | Nervous System                       | 1.2E-03   | NA         | --      | 1.2E-03                       |
|                |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                             | Immune system                        | 6.2E-04   | NA         | --      | 6.2E-04                       |
|                |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                             | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03                       |
|                |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 9.9E-04   | NA         | --      | 9.9E-04                       |
|                |                       |                      | CHEMICAL TOTAL         | 4.6E-07               | --         | 9.7E-08 | --                   | 6E-07                       |                                      | 2.5E-02   | --         | 3.2E-04 | 3E-02                         |
|                |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 6E-07                       |                                      |           |            |         | 3E-02                         |
|                | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 6E-07                       |                                      |           |            |         | 3E-02                         |
| SOIL TOTAL     |                       |                      |                        |                       |            |         |                      | 6E-07                       |                                      |           |            |         | 3E-02                         |
| RECEPTOR TOTAL |                       |                      |                        |                       |            |         |                      | 6E-07                       |                                      |           |            |         | 3E-02                         |
|                |                       |                      |                        |                       |            |         |                      | TOTAL RISK ACROSS ALL MEDIA |                                      |           |            |         | 6E-07                         |
|                |                       |                      |                        |                       |            |         |                      |                             |                                      |           |            |         | TOTAL HAZARD ACROSS ALL MEDIA |
|                |                       |                      |                        |                       |            |         |                      |                             |                                      |           |            |         | 3E-02                         |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012

Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 7.2E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 7.2E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 6.2E-04 |
| TOTAL KIDNEY HI =           | 1.2E-03 |
| TOTAL LIVER HI =            | 1.4E-03 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.6E-03 |
| TOTAL NOAEL HI =            | 1.2E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.2E-03 |
|                             | --      |

**TABLE I-21**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |         |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|---------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |         |       |
| SOIL                        | SURFACE SOIL    | AREA 2                | Benzo(a)anthracene     | 1.6E-08               | NA         | 1.3E-08        | NA                   | 2.9E-08               | Kidney                               | 2.0E-06   | NA         | 1.7E-06 | 3.7E-06               |       |         |       |
|                             |                 |                       | Benzo(a)pyrene         | 1.6E-07               | NA         | 1.4E-07        | NA                   | 2.9E-07               | Kidney                               | 2.0E-06   | NA         | 1.7E-06 | 3.8E-06               |       |         |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 2.3E-08               | NA         | 1.9E-08        | NA                   | 4.2E-08               | Kidney                               | 2.9E-06   | NA         | 2.5E-06 | 5.4E-06               |       |         |       |
|                             |                 |                       | Benzo(k)fluoranthene   | 8.9E-10               | NA         | 7.6E-10        | NA                   | 1.6E-09               | Kidney                               | 1.1E-06   | NA         | 9.7E-07 | 2.1E-06               |       |         |       |
|                             |                 |                       | Carbazole              | 7.0E-11               | NA         | 4.6E-11        | NA                   | 1.2E-10               | --                                   | NA        | --         | --      | --                    |       |         |       |
|                             |                 |                       | Chrysene               | 2.5E-10               | NA         | 2.2E-10        | NA                   | 4.7E-10               | Kidney                               | 3.3E-06   | NA         | 2.8E-06 | 6.0E-06               |       |         |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 3.8E-08               | NA         | 3.2E-08        | NA                   | 7.0E-08               | Kidney                               | 4.8E-07   | NA         | 4.2E-07 | 9.0E-07               |       |         |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 1.9E-08               | NA         | 1.6E-08        | NA                   | 3.5E-08               | Kidney                               | 2.4E-06   | NA         | 2.1E-06 | 4.5E-06               |       |         |       |
|                             |                 |                       | Heptachlor epoxide     | 5.5E-08               | NA         | --             | NA                   | 5.5E-08               | Liver                                | 1.3E-03   | NA         | --      | 1.3E-03               |       |         |       |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.3E-03   | NA         | --      | 1.3E-03               |       |         |       |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | General Toxicity / Hematological     | 6.5E-04   | NA         | --      | 6.5E-04               |       |         |       |
|                             |                 |                       | Arsenic                | 4.2E-07               | NA         | 8.4E-08        | NA                   | 5.1E-07               | Skin                                 | 2.6E-03   | NA         | 5.2E-04 | 3.2E-03               |       |         |       |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.4E-05   | NA         | --      | 8.4E-05               |       |         |       |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 9.8E-05   | NA         | 2.6E-05 | 1.2E-04               |       |         |       |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 9.0E-04   | NA         | --      | 9.0E-04               |       |         |       |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 2.9E-03   | NA         | --      | 2.9E-03               |       |         |       |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 8.2E-03   | NA         | --      | 8.2E-03               |       |         |       |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      | --                    |       |         |       |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.1E-03   | NA         | --      | 1.1E-03               |       |         |       |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 5.6E-04   | NA         | --      | 5.6E-04               |       |         |       |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.1E-03   | NA         | --      | 2.1E-03               |       |         |       |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.9E-04   | NA         | --      | 8.9E-04               |       |         |       |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 7.3E-07              | --                    | 3.0E-07                              | --        | 1E-06      |         | 2.3E-02               | --    | 5.6E-04 | 2E-02 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |            |                |                      |                       |                                      |           | 1E-06      |         |                       |       |         | 2E-02 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      |                       | 1E-06                                |           |            |         |                       | 2E-02 |         |       |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 1E-06                 |                                      |           |            |         | 2E-02                 |       |         |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 1E-06                 |                                      |           |            |         | 2E-02                 |       |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |       |         |       |

**TABLE I-22**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1)            |           |            |         |                       |
|--------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|-------------------------------------------------|-----------|------------|---------|-----------------------|
|        |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                            | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 9.7E-08               | NA         | 8.4E-08 | NA                   | 1.8E-07               | Kidney                                          | 1.2E-05   | NA         | 1.1E-05 | 2.3E-05               |
|        |                       |                      | Benzo(a)pyrene         | 9.9E-07               | NA         | 8.5E-07 | NA                   | 1.8E-06               | Kidney                                          | 1.3E-05   | NA         | 1.1E-05 | 2.4E-05               |
|        |                       |                      | Benzo(b)fluoranthene   | 1.4E-07               | NA         | 1.2E-07 | NA                   | 2.6E-07               | Kidney                                          | 1.8E-05   | NA         | 1.6E-05 | 3.4E-05               |
|        |                       |                      | Benzo(k)fluoranthene   | 5.5E-09               | NA         | 4.7E-09 | NA                   | 1.0E-08               | Kidney                                          | 7.1E-06   | NA         | 6.1E-06 | 1.3E-05               |
|        |                       |                      | Carbazole              | 4.4E-10               | NA         | 2.9E-10 | NA                   | 7.3E-10               |                                                 | --        | NA         | --      |                       |
|        |                       |                      | Chrysene               | 1.6E-09               | NA         | 1.4E-09 | NA                   | 3.0E-09               | Kidney                                          | 2.0E-05   | NA         | 1.7E-05 | 3.8E-05               |
|        |                       |                      | Dibenz(a,h)anthracene  | 2.4E-07               | NA         | 2.0E-07 | NA                   | 4.4E-07               | Kidney                                          | 3.0E-06   | NA         | 2.6E-06 | 5.6E-06               |
|        |                       |                      | Indeno(1,2,3-cd)pyrene | 1.2E-07               | NA         | 1.0E-07 | NA                   | 2.2E-07               | Kidney                                          | 1.5E-05   | NA         | 1.3E-05 | 2.8E-05               |
|        |                       |                      | Heptachlor epoxide     | 3.4E-07               | NA         | --      | NA                   | 3.4E-07               | Liver                                           | 8.1E-03   | NA         | --      | 8.1E-03               |
|        |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                                  | 7.9E-03   | NA         | --      | 7.9E-03               |
|        |                       |                      |                        |                       |            |         |                      |                       | General Toxicity / Hematological                | 4.1E-03   | NA         | --      | 4.1E-03               |
|        |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Skin                                            | 1.6E-02   | NA         | 3.3E-03 | 2.0E-02               |
|        |                       |                      | Arsenic                | 2.6E-06               | NA         | 5.2E-07 | NA                   | 3.2E-06               | Kidney                                          | 5.3E-04   | NA         | --      | 5.3E-04               |
|        |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 6.1E-04   | NA         | 1.6E-04 | 7.8E-04               |
|        |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | NOAEL                                           | 5.6E-03   | NA         | --      | 5.6E-03               |
|        |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | Endocrine                                       | 1.8E-02   | NA         | --      | 1.8E-02               |
|        |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                                    | 5.1E-02   | NA         | --      | 5.1E-02               |
|        |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       |                                                 | --        | NA         | --      |                       |
|        |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       | Nervous System                                  | 6.6E-03   | NA         | --      | 6.6E-03               |
|        |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Immune system                                   | 3.5E-03   | NA         | --      | 3.5E-03               |
|        |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | NOAEL                                           | 1.3E-02   | NA         | --      | 1.3E-02               |
|        |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 5.6E-03   | NA         | --      | 5.6E-03               |
|        |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       |                                                 | --        |            |         |                       |
|        |                       |                      | CHEMICAL TOTAL         | 4.6E-06               | --         | 1.9E-06 | --                   | 6E-06                 |                                                 | 1.4E-01   | --         | 3.5E-03 | 1E-01                 |
|        |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 6E-06                 |                                                 |           |            |         | 1E-01                 |
|        | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 6E-06                 |                                                 |           |            |         | 1E-01                 |
|        |                       |                      |                        |                       |            |         |                      |                       |                                                 |           |            |         |                       |
| SOIL   | AIR                   | DUST AT AREA 2       | Benzo(a)anthracene     | NA                    | 2.5E-12    | NA      | NA                   | 2.5E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(a)pyrene         | NA                    | 2.6E-11    | NA      | NA                   | 2.6E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(b)fluoranthene   | NA                    | 3.7E-12    | NA      | NA                   | 3.7E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(k)fluoranthene   | NA                    | 1.4E-12    | NA      | NA                   | 1.4E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Chrysene               | NA                    | 4.1E-13    | NA      | NA                   | 4.1E-13               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Dibenz(a,h)anthracene  | NA                    | 6.7E-12    | NA      | NA                   | 6.7E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 3.0E-12    | NA      | NA                   | 3.0E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Heptachlor epoxide     | NA                    | 1.7E-11    | NA      | NA                   | 1.7E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 2.7E-04    | NA      | 2.7E-04               |
|        |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      |                        |                       |            |         |                      |                       | Developmental / Cardiovascular / Nervous system | NA        |            | NA      |                       |
|        |                       |                      | Arsenic                | NA                    | 1.3E-09    | NA      | NA                   | 1.3E-09               |                                                 | NA        | 5.7E-05    | NA      | 5.7E-05               |
|        |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                                   | NA        | 3.6E-05    | NA      | 3.6E-05               |
|        |                       |                      | Cadmium                | NA                    | 6.8E-11    | NA      | NA                   | 6.8E-11               | Kidney / Respiratory                            | NA        | 5.3E-06    | NA      | 5.3E-06               |
|        |                       |                      | Chromium               | NA                    | 1.2E-08    | NA      | NA                   | 1.2E-08               | Respiratory                                     | NA        | 2.9E-05    | NA      | 2.9E-05               |
|        |                       |                      | Cobalt                 | NA                    | 3.0E-09    | NA      | NA                   | 3.0E-09               | Respiratory                                     | NA        | 1.5E-04    | NA      | 1.5E-04               |
|        |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 1.1E-03    | NA      | 1.1E-03               |
|        |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 6.0E-07    | NA      | 6.0E-07               |
|        |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | 4.8E-05    | NA      | 4.8E-05               |
|        |                       |                      | CHEMICAL TOTAL         | --                    | 1.7E-08    | --      | --                   | 2E-08                 |                                                 | --        | 1.7E-03    | --      | 2E-03                 |

TABLE I-22  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM         | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|----------------|-----------------------|----------------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                |                       |                      |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| SOIL           | AIR                   | EXPOSURE POINT TOTAL |          |                       |            |        | 2E-08                |                       |                                      |           |            | 2E-03  |                       |
|                | EXPOSURE MEDIUM TOTAL |                      |          |                       |            | 2E-08  |                      |                       |                                      |           | 2E-03      |        |                       |
| SOIL TOTAL     |                       |                      |          |                       |            |        | 6E-06                |                       |                                      |           |            | 1E-01  |                       |
|                |                       |                      |          |                       |            |        |                      |                       |                                      |           |            |        |                       |
| RECEPTOR TOTAL |                       |                      |          |                       |            |        | 6E-06                |                       |                                      |           |            | 1E-01  |                       |
|                |                       |                      |          |                       |            |        | 6E-06                |                       |                                      |           |            | 1E-01  |                       |

**TABLE I-23**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |
| SOIL                        | SURFACE SOIL    | AREA 2                | Benzo(a)anthracene     | 5.4E-08               | NA         | 9.3E-08        | NA                   | 1.5E-07               | Kidney                               | 6.9E-06   | NA         | 1.2E-05 | 1.9E-05               |    |         |
|                             |                 |                       | Benzo(a)pyrene         | 5.5E-07               | NA         | 9.4E-07        | NA                   | 1.5E-06               | Kidney                               | 7.0E-06   | NA         | 1.2E-05 | 1.9E-05               |    |         |
|                             |                 |                       | Benzo(b)fluoranthene   | 7.9E-08               | NA         | 1.3E-07        | NA                   | 2.1E-07               | Kidney                               | 1.0E-05   | NA         | 1.7E-05 | 2.7E-05               |    |         |
|                             |                 |                       | Benzo(k)fluoranthene   | 3.1E-09               | NA         | 5.3E-09        | NA                   | 8.3E-09               | Kidney                               | 3.9E-06   | NA         | 6.7E-06 | 1.1E-05               |    |         |
|                             |                 |                       | Carbazole              | 2.4E-10               | NA         | 3.2E-10        | NA                   | 5.6E-10               | --                                   | NA        | --         | --      | --                    |    |         |
|                             |                 |                       | Chrysene               | 8.8E-10               | NA         | 1.5E-09        | NA                   | 2.4E-09               | Kidney                               | 1.1E-05   | NA         | 1.9E-05 | 3.1E-05               |    |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | 1.3E-07               | NA         | 2.3E-07        | NA                   | 3.6E-07               | Kidney                               | 1.7E-06   | NA         | 2.9E-06 | 4.6E-06               |    |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 6.5E-08               | NA         | 1.1E-07        | NA                   | 1.8E-07               | Kidney                               | 8.3E-06   | NA         | 1.4E-05 | 2.3E-05               |    |         |
|                             |                 |                       | Heptachlor epoxide     | 1.9E-07               | NA         | --             | NA                   | 1.9E-07               | Liver                                | 4.5E-03   | NA         | --      | 4.5E-03               |    |         |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 4.4E-03   | NA         | --      | 4.4E-03               |    |         |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | General Toxicity / Hematological     | 2.3E-03   | NA         | --      | 2.3E-03               |    |         |
|                             |                 |                       | Arsenic                | 1.5E-06               | NA         | 5.8E-07        | NA                   | 2.1E-06               | Skin                                 | 9.2E-03   | NA         | 3.6E-03 | 1.3E-02               |    |         |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.9E-04   | NA         | --      | 2.9E-04               |    |         |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 3.4E-04   | NA         | 1.8E-04 | 5.2E-04               |    |         |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.1E-03   | NA         | --      | 3.1E-03               |    |         |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |    |         |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.8E-02   | NA         | --      | 2.8E-02               |    |         |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      | --                    |    |         |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.7E-03   | NA         | --      | 3.7E-03               |    |         |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |    |         |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 7.3E-03   | NA         | --      | 7.3E-03               |    |         |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 3.1E-03   | NA         | --      | 3.1E-03               |    |         |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 2.5E-06              | --                    | 2.1E-06                              | --        | 5E-06      |         | 7.9E-02               | -- | 3.9E-03 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |            |                |                      |                       |                                      | 5E-06     |            |         |                       |    | 8E-02   |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 8E-02                 |    |         |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 8E-02                 |    |         |
|                             |                 |                       |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |    |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 8E-02                 |    |         |
|                             |                 |                       |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |    |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 8E-02                 |    |         |

**TABLE I-24**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1)            |           |            |         |                       |
|--------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|-------------------------------------------------|-----------|------------|---------|-----------------------|
|        |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                            | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 1.4E-08               | NA         | 5.6E-09 | NA                   | 2.0E-08               | Kidney                                          | 4.6E-06   | NA         | 1.8E-06 | 6.3E-06               |
|        |                       |                      | Benzo(a)pyrene         | 1.5E-07               | NA         | 5.7E-08 | NA                   | 2.0E-07               | Kidney                                          | 4.6E-06   | NA         | 1.8E-06 | 6.4E-06               |
|        |                       |                      | Benzo(b)fluoranthene   | 2.1E-08               | NA         | 8.1E-09 | NA                   | 2.9E-08               | Kidney                                          | 6.6E-06   | NA         | 2.6E-06 | 9.2E-06               |
|        |                       |                      | Benzo(k)fluoranthene   | 8.1E-10               | NA         | 3.2E-10 | NA                   | 1.1E-09               | Kidney                                          | 2.6E-06   | NA         | 1.0E-06 | 3.6E-06               |
|        |                       |                      | Carbazole              | 6.4E-11               | NA         | 1.9E-11 | NA                   | 8.3E-11               |                                                 | --        | NA         | --      |                       |
|        |                       |                      | Chrysene               | 2.3E-10               | NA         | 9.1E-11 | NA                   | 3.2E-10               | Kidney                                          | 7.4E-06   | NA         | 2.9E-06 | 1.0E-05               |
|        |                       |                      | Dibenz(a,h)anthracene  | 3.5E-08               | NA         | 1.4E-08 | NA                   | 4.8E-08               | Kidney                                          | 1.1E-06   | NA         | 4.3E-07 | 1.5E-06               |
|        |                       |                      | Indeno(1,2,3-cd)pyrene | 1.7E-08               | NA         | 6.7E-09 | NA                   | 2.4E-08               | Kidney                                          | 5.5E-06   | NA         | 2.1E-06 | 7.7E-06               |
|        |                       |                      | Heptachlor epoxide     | 5.0E-08               | NA         | --      | NA                   | 5.0E-08               | Liver                                           | 3.0E-02   | NA         | --      | 3.0E-02               |
|        |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                                  | 2.9E-02   | NA         | --      | 2.9E-02               |
|        |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological                | 1.5E-02   | NA         | --      | 1.5E-02               |
|        |                       |                      | Arsenic                | 3.9E-07               | NA         | 3.5E-08 | NA                   | 4.2E-07               | Skin                                            | 6.0E-02   | NA         | 5.4E-03 | 6.6E-02               |
|        |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 1.9E-03   | NA         | --      | 1.9E-03               |
|        |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       |                                                 | 4.5E-03   | NA         | 5.4E-04 | 5.0E-03               |
|        |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                           | 3.1E-03   | NA         | --      | 3.1E-03               |
|        |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                                       | 6.6E-03   | NA         | --      | 6.6E-03               |
|        |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                                    | 7.5E-01   | NA         | --      | 7.5E-01               |
|        |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                                 | --        | NA         | --      |                       |
|        |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                                  | 2.4E-02   | NA         | --      | 2.4E-02               |
|        |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 1.9E-03   | NA         | --      | 1.9E-03               |
|        |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                           | 9.7E-03   | NA         | --      | 9.7E-03               |
|        |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 1.0E-02   | NA         | --      | 1.0E-02               |
|        |                       |                      | CHEMICAL TOTAL         | 6.7E-07               | --         | 1.3E-07 | --                   | 8E-07                 |                                                 | 9.4E-01   | --         | 6.0E-03 | 1E+00                 |
|        |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 8E-07                 |                                                 |           |            |         | 1E+00                 |
|        | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 8E-07                 |                                                 |           |            |         | 1E+00                 |
|        |                       |                      |                        |                       |            |         |                      |                       |                                                 |           |            |         |                       |
| SOIL   | AIR                   | DUST AT AREA 2       | Benzo(a)anthracene     | NA                    | 3.2E-11    | NA      | NA                   | 3.2E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(a)pyrene         | NA                    | 3.2E-10    | NA      | NA                   | 3.2E-10               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(b)fluoranthene   | NA                    | 4.6E-11    | NA      | NA                   | 4.6E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Benzo(k)fluoranthene   | NA                    | 1.8E-11    | NA      | NA                   | 1.8E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Chrysene               | NA                    | 5.2E-12    | NA      | NA                   | 5.2E-12               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Dibenz(a,h)anthracene  | NA                    | 8.4E-11    | NA      | NA                   | 8.4E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 3.8E-11    | NA      | NA                   | 3.8E-11               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Heptachlor epoxide     | NA                    | 2.1E-10    | NA      | NA                   | 2.1E-10               |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 8.6E-02    | NA      | 8.6E-02               |
|        |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      |                        |                       |            |         |                      |                       | Developmental / Cardiovascular / Nervous system | NA        |            | NA      |                       |
|        |                       |                      | Arsenic                | NA                    | 1.6E-08    | NA      | NA                   | 1.6E-08               |                                                 | NA        | 1.8E-02    | NA      | 1.8E-02               |
|        |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                                   | NA        | 1.1E-03    | NA      | 1.1E-03               |
|        |                       |                      | Cadmium                | NA                    | 8.6E-10    | NA      | NA                   | 8.6E-10               | Kidney / Respiratory                            | NA        | 1.7E-03    | NA      | 1.7E-03               |
|        |                       |                      | Chromium               | NA                    | 1.6E-07    | NA      | NA                   | 1.6E-07               | Respiratory                                     | NA        | 1.8E-01    | NA      | 1.8E-01               |
|        |                       |                      | Cobalt                 | NA                    | 3.7E-08    | NA      | NA                   | 3.7E-08               | Respiratory                                     | NA        | 1.5E-02    | NA      | 1.5E-02               |
|        |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 3.4E-01    | NA      | 3.4E-01               |
|        |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 1.9E-04    | NA      | 1.9E-04               |
|        |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|        |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | 1.5E-02    | NA      | 1.5E-02               |
|        |                       |                      | CHEMICAL TOTAL         | --                    | 2.1E-07    | --      | --                   | 2E-07                 |                                                 | --        | 6.5E-01    | --      | 7E-01                 |

TABLE I-24  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------------|----------------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                       |                      |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| SOIL                        | AIR                   | EXPOSURE POINT TOTAL |          |                       |            |        |                      | 2E-07                 |                                      |           |            | 7E-01  |                       |
|                             | EXPOSURE MEDIUM TOTAL |                      |          |                       |            |        | 2E-07                |                       |                                      |           | 7E-01      |        |                       |
| SOIL TOTAL                  |                       |                      |          |                       |            |        |                      | 1E-06                 |                                      |           |            | 2E+00  |                       |
|                             |                       |                      |          |                       |            |        |                      |                       |                                      |           |            |        |                       |
| RECEPTOR TOTAL              |                       |                      |          |                       |            |        |                      | 1E-06                 |                                      |           |            | 2E+00  |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |          |                       |            |        |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            | 2E+00  |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.5E-02 |
| TOTAL CARDIOVASCULAR HI =   | 1.8E-02 |
| TOTAL DEVELOPMENTAL HI =    | 1.9E-02 |
| TOTAL ENDOCRINE HI =        | 6.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.5E-02 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.6E-02 |
| TOTAL LIVER HI =            | 3.0E-02 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.9E-01 |
| TOTAL NOAEL HI =            | 7.8E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 6.6E-02 |
| TOTAL RESPIRATORY HI =      | 2.0E-01 |

**TABLE I-25**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                    |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|--------------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL             | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 2.1E-07               | NA         | 7.7E-08            | NA                   | 2.9E-07               | Kidney                               | 2.7E-05   | NA         | 9.8E-06 | 3.7E-05               |    |         |       |
|                             |                       |                      | Benzo(a)pyrene         | 2.2E-06               | NA         | 7.8E-07            | NA                   | 2.9E-06               | Kidney                               | 2.7E-05   | NA         | 9.9E-06 | 3.7E-05               |    |         |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.1E-07               | NA         | 1.1E-07            | NA                   | 4.2E-07               | Kidney                               | 3.9E-05   | NA         | 1.4E-05 | 5.3E-05               |    |         |       |
|                             |                       |                      | Benzo(k)fluoranthene   | 1.2E-08               | NA         | 4.4E-09            | NA                   | 1.6E-08               | Kidney                               | 1.5E-05   | NA         | 5.6E-06 | 2.1E-05               |    |         |       |
|                             |                       |                      | Carbazole              | 2.3E-10               | NA         | 6.3E-11            | NA                   | 2.9E-10               | --                                   | NA        | --         | --      | --                    |    |         |       |
|                             |                       |                      | Chrysene               | 3.5E-09               | NA         | 1.3E-09            | NA                   | 4.7E-09               | Kidney                               | 4.4E-05   | NA         | 1.6E-05 | 6.0E-05               |    |         |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 5.1E-07               | NA         | 1.9E-07            | NA                   | 7.0E-07               | Kidney                               | 6.5E-06   | NA         | 2.4E-06 | 8.9E-06               |    |         |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.6E-07               | NA         | 9.3E-08            | NA                   | 3.5E-07               | Kidney                               | 3.2E-05   | NA         | 1.2E-05 | 4.4E-05               |    |         |       |
|                             |                       |                      | Heptachlor epoxide     | 1.8E-07               | NA         | --                 | NA                   | 1.8E-07               | Liver                                | 1.8E-02   | NA         | --      | 1.8E-02               |    |         |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC                 | NA                   |                       | Nervous System                       | 1.7E-02   | NA         | --      | 1.7E-02               |    |         |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC                 | NA                   |                       | General Toxicity / Hematological     | 8.8E-03   | NA         | --      | 8.8E-03               |    |         |       |
|                             |                       |                      | Arsenic                | 1.4E-06               | NA         | 1.2E-07            | NA                   | 1.5E-06               | Skin                                 | 3.6E-02   | NA         | 3.0E-03 | 3.9E-02               |    |         |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC                 | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |    |         |       |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC                 | NA                   |                       | Kidney                               | 1.3E-03   | NA         | 1.5E-04 | 1.5E-03               |    |         |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC                 | NA                   |                       | NOAEL                                | 1.2E-02   | NA         | --      | 1.2E-02               |    |         |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC                 | NA                   |                       | Endocrine                            | 3.9E-02   | NA         | --      | 3.9E-02               |    |         |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC                 | NA                   |                       | Undetermined                         | 1.1E-01   | NA         | --      | 1.1E-01               |    |         |       |
|                             |                       |                      | Lead                   | --                    | NA         | --                 | NA                   |                       | --                                   | --        | NA         | --      | --                    |    |         |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC                 | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |    |         |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC                 | NA                   |                       | Immune system                        | 7.6E-03   | NA         | --      | 7.6E-03               |    |         |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC                 | NA                   |                       | NOAEL                                | 2.8E-02   | NA         | --      | 2.8E-02               |    |         |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC                 | NA                   |                       | Kidney                               | 1.2E-02   | NA         | --      | 1.2E-02               |    |         |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL     | 5.0E-06              | --                    | 1.4E-06                              | --        | 6E-06      |         | 3.0E-01               | -- | 3.2E-03 | 3E-01 |
|                             |                       |                      |                        |                       |            | RADIONUCLIDE TOTAL |                      |                       |                                      |           |            |         |                       |    |         |       |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                    |                      | 6E-06                 |                                      |           |            |         | 3E-01                 |    |         |       |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                    | 6E-06                |                       |                                      |           |            | 3E-01   |                       |    |         |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                    |                      | 6E-06                 |                                      |           |            |         | 3E-01                 |    |         |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                    |                      | 6E-06                 |                                      |           |            |         | 3E-01                 |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                    |                      | 6E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-01                 |    |         |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.8E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 7.6E-03 |
| TOTAL KIDNEY HI =           | 1.5E-02 |
| TOTAL LIVER HI =            | 1.8E-02 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.1E-02 |
| TOTAL NOAEL HI =            | 1.5E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.9E-02 |
|                             | --      |



**TABLE I-26**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM         | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|----------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL           | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 4.1E-08               | NA         | 1.9E-08 | NA                   | 6.0E-08               | Kidney                               | 3.1E-06   | NA         | 1.4E-06 | 4.5E-06               |
|                |                       |                      | Benzo(a)pyrene         | 4.1E-07               | NA         | 1.9E-07 | NA                   | 6.1E-07               | Kidney                               | 3.1E-06   | NA         | 1.5E-06 | 4.6E-06               |
|                |                       |                      | Benzo(b)fluoranthene   | 5.9E-08               | NA         | 2.7E-08 | NA                   | 8.7E-08               | Kidney                               | 4.5E-06   | NA         | 2.1E-06 | 6.6E-06               |
|                |                       |                      | Benzo(k)fluoranthene   | 2.3E-09               | NA         | 1.1E-09 | NA                   | 3.4E-09               | Kidney                               | 1.8E-06   | NA         | 8.2E-07 | 2.6E-06               |
|                |                       |                      | Carbazole              | 1.0E-10               | NA         | 3.7E-11 | NA                   | 1.4E-10               |                                      | --        | NA         | --      |                       |
|                |                       |                      | Chrysene               | 6.6E-10               | NA         | 3.1E-10 | NA                   | 9.7E-10               | Kidney                               | 5.1E-06   | NA         | 2.3E-06 | 7.4E-06               |
|                |                       |                      | Dibenz(a,h)anthracene  | 9.9E-08               | NA         | 4.6E-08 | NA                   | 1.4E-07               | Kidney                               | 7.5E-07   | NA         | 3.5E-07 | 1.1E-06               |
|                |                       |                      | Indeno(1,2,3-cd)pyrene | 4.9E-08               | NA         | 2.3E-08 | NA                   | 7.2E-08               | Kidney                               | 3.7E-06   | NA         | 1.7E-06 | 5.5E-06               |
|                |                       |                      | Heptachlor epoxide     | 8.2E-08               | NA         | --      | NA                   | 8.2E-08               | Liver                                | 2.0E-03   | NA         | --      | 2.0E-03               |
|                |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.0E-03   | NA         | --      | 2.0E-03               |
|                |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 1.0E-03   | NA         | --      | 1.0E-03               |
|                |                       |                      | Arsenic                | 6.3E-07               | NA         | 6.8E-08 | NA                   | 7.0E-07               | Skin                                 | 4.1E-03   | NA         | 4.4E-04 | 4.5E-03               |
|                |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-04   | NA         | --      | 1.3E-04               |
|                |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-04   | NA         | 2.2E-05 | 1.7E-04               |
|                |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-03   | NA         | --      | 1.4E-03               |
|                |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.5E-03   | NA         | --      | 4.5E-03               |
|                |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.3E-02   | NA         | --      | 1.3E-02               |
|                |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.7E-03   | NA         | --      | 1.7E-03               |
|                |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 8.7E-04   | NA         | --      | 8.7E-04               |
|                |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.3E-03   | NA         | --      | 3.3E-03               |
|                |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.4E-03   | NA         | --      | 1.4E-03               |
|                |                       |                      | CHEMICAL TOTAL         | 1.4E-06               | --         | 3.8E-07 | --                   | 2E-06                 |                                      | 3.5E-02   | --         | 4.7E-04 | 4E-02                 |
|                |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
|                | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
| SOIL TOTAL     |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         |                       |
| RECEPTOR TOTAL |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         |                       |
|                |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         |                       |
|                |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 8.7E-04 |
| TOTAL KIDNEY HI =           | 1.7E-03 |
| TOTAL LIVER HI =            | 2.0E-03 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.6E-03 |
| TOTAL NOAEL HI =            | 1.7E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.5E-03 |
|                             | --      |

**TABLE I-27**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM         | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                             | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|----------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL       | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL           | SURFACE SOIL          | AREA 2               | Benzo(a)anthracene     | 1.4E-06               | NA         | 5.2E-07 | NA                   | 1.9E-06                     | Kidney                               | 1.8E-04   | NA         | 6.6E-05 | 2.5E-04               |
|                |                       |                      | Benzo(a)pyrene         | 1.4E-05               | NA         | 5.3E-06 | NA                   | 2.0E-05                     | Kidney                               | 1.8E-04   | NA         | 6.7E-05 | 2.5E-04               |
|                |                       |                      | Benzo(b)fluoranthene   | 2.1E-06               | NA         | 7.5E-07 | NA                   | 2.8E-06                     | Kidney                               | 2.6E-04   | NA         | 9.6E-05 | 3.6E-04               |
|                |                       |                      | Benzo(k)fluoranthene   | 8.1E-08               | NA         | 2.9E-08 | NA                   | 1.1E-07                     | Kidney                               | 1.0E-04   | NA         | 3.7E-05 | 1.4E-04               |
|                |                       |                      | Carbazole              | 1.5E-09               | NA         | 4.3E-10 | NA                   | 2.0E-09                     |                                      | --        | NA         | --      |                       |
|                |                       |                      | Chrysene               | 2.3E-08               | NA         | 8.5E-09 | NA                   | 3.2E-08                     | Kidney                               | 2.9E-04   | NA         | 1.1E-04 | 4.0E-04               |
|                |                       |                      | Dibenz(a,h)anthracene  | 3.5E-06               | NA         | 1.3E-06 | NA                   | 4.7E-06                     | Kidney                               | 4.4E-05   | NA         | 1.6E-05 | 6.0E-05               |
|                |                       |                      | Indeno(1,2,3-cd)pyrene | 1.7E-06               | NA         | 6.3E-07 | NA                   | 2.3E-06                     | Kidney                               | 2.2E-04   | NA         | 7.9E-05 | 3.0E-04               |
|                |                       |                      | Heptachlor epoxide     | 1.2E-06               | NA         | --      | NA                   | 1.2E-06                     | Liver                                | 1.2E-01   | NA         | --      | 1.2E-01               |
|                |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                             | Nervous System                       | 1.2E-01   | NA         | --      | 1.2E-01               |
|                |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                             | General Toxicity / Hematological     | 5.9E-02   | NA         | --      | 5.9E-02               |
|                |                       |                      | Arsenic                | 9.2E-06               | NA         | 7.8E-07 | NA                   | 1.0E-05                     | Skin                                 | 2.4E-01   | NA         | 2.0E-02 | 2.6E-01               |
|                |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 7.6E-03   | NA         | --      | 7.6E-03               |
|                |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 8.9E-03   | NA         | 1.0E-03 | 9.9E-03               |
|                |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                             | NOAEL                                | 8.1E-02   | NA         | --      | 8.1E-02               |
|                |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                             | Endocrine                            | 2.6E-01   | NA         | --      | 2.6E-01               |
|                |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                             | Undetermined                         | 7.4E-01   | NA         | --      | 7.4E-01               |
|                |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                             |                                      | --        | NA         | --      |                       |
|                |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                             | Nervous System                       | 9.6E-02   | NA         | --      | 9.6E-02               |
|                |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                             | Immune system                        | 5.1E-02   | NA         | --      | 5.1E-02               |
|                |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                             | NOAEL                                | 1.9E-01   | NA         | --      | 1.9E-01               |
|                |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                             | Kidney                               | 8.1E-02   | NA         | --      | 8.1E-02               |
|                |                       |                      | CHEMICAL TOTAL         | 3.4E-05               | --         | 9.2E-06 | --                   | 4E-05                       |                                      | 2.1E+00   | --         | 2.2E-02 | 2E+00                 |
|                |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 4E-05                       |                                      |           |            |         | 2E+00                 |
|                | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 4E-05                       |                                      |           |            |         | 2E+00                 |
| SOIL TOTAL     |                       |                      |                        |                       |            |         |                      | 4E-05                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL |                       |                      |                        |                       |            |         |                      | 4E-05                       |                                      |           |            |         |                       |
|                |                       |                      |                        |                       |            |         |                      | TOTAL RISK ACROSS ALL MEDIA | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         |                       |
|                |                       |                      |                        |                       |            |         |                      | 4E-05                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.6E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.9E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 5.1E-02 |
| TOTAL KIDNEY HI =           | 1.0E-01 |
| TOTAL LIVER HI =            | 1.2E-01 |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.1E-01 |
| TOTAL NOAEL HI =            | 1.0E+00 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-01 |
|                             | --      |

**TABLE I-28**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RESIDENTIAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL    | AREA 2                | Benzo(a)anthracene     | 2.7E-07               | NA                   | 1.3E-07        | NA                   | 4.0E-07               | Kidney                               | 2.1E-05   | NA         | 9.7E-06 | 3.1E-05               |    |         |       |
|                             |                 |                       | Benzo(a)pyrene         | 2.8E-06               | NA                   | 1.3E-06        | NA                   | 4.1E-06               | Kidney                               | 2.1E-05   | NA         | 9.8E-06 | 3.1E-05               |    |         |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 4.0E-07               | NA                   | 1.8E-07        | NA                   | 5.8E-07               | Kidney                               | 3.0E-05   | NA         | 1.4E-05 | 4.4E-05               |    |         |       |
|                             |                 |                       | Benzo(k)fluoranthene   | 1.6E-08               | NA                   | 7.2E-09        | NA                   | 2.3E-08               | Kidney                               | 1.2E-05   | NA         | 5.5E-06 | 1.7E-05               |    |         |       |
|                             |                 |                       | Carbazole              | 7.0E-10               | NA                   | 2.5E-10        | NA                   | 9.5E-10               | --                                   | NA        | --         | --      | --                    |    |         |       |
|                             |                 |                       | Chrysene               | 4.5E-09               | NA                   | 2.1E-09        | NA                   | 6.5E-09               | Kidney                               | 3.4E-05   | NA         | 1.6E-05 | 5.0E-05               |    |         |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 6.7E-07               | NA                   | 3.1E-07        | NA                   | 9.7E-07               | Kidney                               | 5.1E-06   | NA         | 2.3E-06 | 7.4E-06               |    |         |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 3.3E-07               | NA                   | 1.5E-07        | NA                   | 4.8E-07               | Kidney                               | 2.5E-05   | NA         | 1.2E-05 | 3.7E-05               |    |         |       |
|                             |                 |                       | Heptachlor epoxide     | 5.5E-07               | NA                   | --             | NA                   | 5.5E-07               | Liver                                | 1.4E-02   | NA         | --      | 1.4E-02               |    |         |       |
|                             |                 |                       | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.3E-02   | NA         | --      | 1.3E-02               |    |         |       |
|                             |                 |                       | Antimony               | NC                    | NA                   | NC             | NA                   |                       | General Toxicity / Hematological     | 6.8E-03   | NA         | --      | 6.8E-03               |    |         |       |
|                             |                 |                       | Arsenic                | 4.3E-06               | NA                   | 4.6E-07        | NA                   | 4.7E-06               | Skin                                 | 2.8E-02   | NA         | 3.0E-03 | 3.1E-02               |    |         |       |
|                             |                 |                       | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 8.8E-04   | NA         | --      | 8.8E-04               |    |         |       |
|                             |                 |                       | Cadmium                | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 1.0E-03   | NA         | 1.5E-04 | 1.2E-03               |    |         |       |
|                             |                 |                       | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 9.4E-03   | NA         | --      | 9.4E-03               |    |         |       |
|                             |                 |                       | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                            | 3.0E-02   | NA         | --      | 3.0E-02               |    |         |       |
|                             |                 |                       | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                         | 8.5E-02   | NA         | --      | 8.5E-02               |    |         |       |
|                             |                 |                       | Lead                   | --                    | NA                   | --             | NA                   |                       |                                      | --        | NA         | --      | --                    |    |         |       |
|                             |                 |                       | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |    |         |       |
|                             |                 |                       | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                        | 5.9E-03   | NA         | --      | 5.9E-03               |    |         |       |
|                             |                 |                       | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 2.2E-02   | NA         | --      | 2.2E-02               |    |         |       |
|                             |                 |                       | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 9.3E-03   | NA         | --      | 9.3E-03               |    |         |       |
|                             |                 |                       |                        |                       |                      | CHEMICAL TOTAL | 9.3E-06              | --                    | 2.5E-06                              | --        | 1E-05      |         | 2.4E-01               | -- | 3.2E-03 | 2E-01 |
|                             |                 |                       |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                      |           | 1E-05      |         |                       |    |         | 2E-01 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |                      |                |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |    |         |       |
| SOIL TOTAL                  |                 |                       |                        |                       |                      |                |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |    |         |       |
|                             |                 |                       |                        |                       |                      |                |                      | 1E-05                 |                                      |           |            |         |                       |    |         |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |                      |                |                      | 1E-05                 |                                      |           |            |         | 2E-01                 |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |                      |                |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |    |         |       |

**TABLE I-29**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 5.4E-09               | NA         | 4.6E-09 | NA                   | 1.0E-08               | Kidney                               | 6.9E-07   | NA         | 5.9E-07 | 1.3E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 6.8E-08               | NA         | 5.8E-08 | NA                   | 1.3E-07               | Kidney                               | 8.7E-07   | NA         | 7.5E-07 | 1.6E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 9.6E-09               | NA         | 8.2E-09 | NA                   | 1.8E-08               | Kidney                               | 1.2E-06   | NA         | 1.1E-06 | 2.3E-06               |
|                             |                       |                      | Chrysene               | 6.4E-11               | NA         | 5.5E-11 | NA                   | 1.2E-10               | Kidney                               | 8.2E-07   | NA         | 7.0E-07 | 1.5E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.0E-08               | NA         | 8.9E-09 | NA                   | 1.9E-08               | Kidney                               | 1.3E-07   | NA         | 1.1E-07 | 2.5E-07               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.1E-09               | NA         | 2.6E-09 | NA                   | 5.7E-09               | Kidney                               | 3.9E-07   | NA         | 3.4E-07 | 7.3E-07               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.7E-04   | NA         | --      | 1.7E-04               |
|                             |                       |                      | Arsenic                | 2.9E-07               | NA         | 5.7E-08 | NA                   | 3.4E-07               | Skin                                 | 1.8E-03   | NA         | 3.5E-04 | 2.1E-03               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.7E-05   | NA         | --      | 5.7E-05               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.7E-04   | NA         | --      | 9.7E-04               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.2E-03   | NA         | --      | 3.2E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.4E-04   | NA         | --      | 1.4E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.3E-04   | NA         | --      | 3.3E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.0E-04   | NA         | --      | 7.0E-04               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            | --      |                       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 3.8E-07    | --      | 1.4E-07              | --                    | 5E-07                                |           | 1.2E-02    | --      | 3.6E-04               |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 5E-07                 |                                      |           |            |         | 1E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 5E-07                |                       |                                      |           |            | 1E-02   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 5E-07                 |                                      |           |            |         | 1E-02                 |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 5E-07                 |                                      |           |            |         | 1E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 5E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/18/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.7E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.7E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 3.3E-04 |
| TOTAL KIDNEY HI =           | 7.6E-04 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.8E-03 |
| TOTAL NOAEL HI =            | 2.5E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 2.1E-03 |
|                             | --      |

**TABLE I-30**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SOIL       | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 3.4E-08               | NA         | 2.9E-08 | NA                   | 6.3E-08               | Kidney                               | 4.3E-06   | NA         | 3.7E-06 | 8.0E-06               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Benzo(a)pyrene         | 4.2E-07               | NA         | 3.6E-07 | NA                   | 7.9E-07               | Kidney                               | 5.4E-06   | NA         | 4.7E-06 | 1.0E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Benzo(b)fluoranthene   | 6.0E-08               | NA         | 5.1E-08 | NA                   | 1.1E-07               | Kidney                               | 7.7E-06   | NA         | 6.6E-06 | 1.4E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Chrysene               | 4.0E-10               | NA         | 3.4E-10 | NA                   | 7.4E-10               | Kidney                               | 5.1E-06   | NA         | 4.4E-06 | 9.5E-06               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Dibenz(a,h)anthracene  | 6.5E-08               | NA         | 5.6E-08 | NA                   | 1.2E-07               | Kidney                               | 8.3E-07   | NA         | 7.1E-07 | 1.5E-06               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 1.9E-08               | NA         | 1.7E-08 | NA                   | 3.6E-08               | Kidney                               | 2.5E-06   | NA         | 2.1E-06 | 4.6E-06               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.1E-03   | NA         | --      | 9.1E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.1E-03   | NA         | --      | 1.1E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Arsenic                | 1.8E-06               | NA         | 3.5E-07 | NA                   | 2.1E-06               | Skin                                 | 1.1E-02   | NA         | 2.2E-03 | 1.3E-02               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.6E-04   | NA         | --      | 3.6E-04               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.1E-03   | NA         | --      | 6.1E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.0E-02   | NA         | --      | 2.0E-02               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 9.0E-04   | NA         | --      | 9.0E-04               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.7E-03   | NA         | --      | 8.7E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.8E-03   | NA         | --      | 8.8E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.4E-03   | NA         | --      | 4.4E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | CHEMICAL TOTAL         | 2.4E-06               | --         | 8.7E-07 | --                   | 3E-06                 |                                      | 7.2E-02   | --         | 2.2E-03 | 7E-02                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      |           |            |         | 7E-02                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |           |            |         | 7E-02                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SOIL       | AIR                   | DUST AT AREA 2       | Benzo(a)anthracene     | NA                    | 8.7E-13    | NA      | NA                   | 8.7E-13               | Nervous System                       | NA        | --         | NA      | 3.1E-04               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 1.1E-11    | NA      | NA                   | 1.1E-11               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 1.5E-12    | NA      | NA                   | 1.5E-12               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Chrysene               | NA                    | 1.0E-13    | NA      | NA                   | 1.0E-13               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 1.8E-12    | NA      | NA                   | 1.8E-12               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 5.0E-13    | NA      | NA                   | 5.0E-13               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 3.1E-04    | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Arsenic                | NA                    | 8.8E-10    | NA      | NA                   | 8.8E-10               | Cardiovascular / Nervous             | NA        |            | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | system                               | NA        | 3.8E-05    | NA      | 3.8E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Chromium               | NA                    | 1.3E-08    | NA      | NA                   | 1.3E-08               | Developmental                        | NA        | 2.5E-05    | NA      | 2.5E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Cobalt                 | NA                    | 3.3E-09    | NA      | NA                   | 3.3E-09               | Respiratory                          | NA        | 3.1E-05    | NA      | 3.1E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       | Respiratory                          | NA        | 1.7E-04    | NA      | 1.7E-04               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.4E-03    | NA      | 1.4E-03               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 3.5E-07    | NA      | 3.5E-07               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 1.8E-08    | --      | --                   | 2E-08                 |                                      | NA        | 3.8E-05    | NA      | 3.8E-05               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      | --        | 2.0E-03    | --      | 2E-03                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |           |            |         | 2E-03                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         | 8E-02                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE I-30  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                      |                       | 3E-06                                |                               |            |        |                       | 8E-02 |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            |        |                      |                       | 3E-06                                | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       | 8E-02 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.1E-03 |
| TOTAL CARDIOVASCULAR HI =   | 3.8E-05 |
| TOTAL DEVELOPMENTAL HI =    | 6.3E-05 |
| TOTAL ENDOCRINE HI =        | 2.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.1E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-03 |
| TOTAL KIDNEY HI =           | 4.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.9E-02 |
| TOTAL NOAEL HI =            | 1.6E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.3E-02 |
| TOTAL RESPIRATORY HI =      | 2.0E-04 |

**TABLE I-31**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 2         | Benzo(a)anthracene     | 1.9E-08               | NA         | 3.2E-08 | NA                   | 5.1E-08               | Kidney                               | 2.4E-06   | NA         | 4.1E-06 | 6.5E-06               |
|                             |                       |                | Benzo(a)pyrene         | 2.4E-07               | NA         | 4.0E-07 | NA                   | 6.4E-07               | Kidney                               | 3.0E-06   | NA         | 5.2E-06 | 8.2E-06               |
|                             |                       |                | Benzo(b)fluoranthene   | 3.3E-08               | NA         | 5.7E-08 | NA                   | 9.0E-08               | Kidney                               | 4.3E-06   | NA         | 7.3E-06 | 1.2E-05               |
|                             |                       |                | Chrysene               | 2.2E-10               | NA         | 3.8E-10 | NA                   | 6.0E-10               | Kidney                               | 2.8E-06   | NA         | 4.9E-06 | 7.7E-06               |
|                             |                       |                | Dibenz(a,h)anthracene  | 3.6E-08               | NA         | 6.2E-08 | NA                   | 9.8E-08               | Kidney                               | 4.6E-07   | NA         | 7.9E-07 | 1.3E-06               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.1E-08               | NA         | 1.8E-08 | NA                   | 2.9E-08               | Kidney                               | 1.4E-06   | NA         | 2.4E-06 | 3.7E-06               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.0E-03   | NA         | --      | 5.0E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 5.9E-04   | NA         | --      | 5.9E-04               |
|                             |                       |                | Arsenic                | 9.9E-07               | NA         | 3.9E-07 | NA                   | 1.4E-06               | Skin                                 | 6.2E-03   | NA         | 2.4E-03 | 8.6E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.4E-03   | NA         | --      | 3.4E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 5.0E-04   | NA         | --      | 5.0E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      | --                    |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.8E-03   | NA         | --      | 4.8E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 4.9E-03   | NA         | --      | 4.9E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.4E-03   | NA         | --      | 2.4E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      |           |            | --      | --                    |
|                             |                       |                | CHEMICAL TOTAL         | 1.3E-06               | --         | 9.7E-07 | --                   | 2E-06                 |                                      | 4.0E-02   | --         | 2.5E-03 | 4E-02                 |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 4E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 4E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.1E-03 |
| TOTAL KIDNEY HI =           | 2.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 9.8E-03 |
| TOTAL NOAEL HI =            | 8.8E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 8.6E-03 |
|                             | --      |

**TABLE I-32**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |  |  |  |  |  |  |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|--|--|--|--|--|--|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |  |  |  |  |  |  |
| SOIL       | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 5.0E-09               | NA         | 1.9E-09 | NA                   | 6.9E-09               | Kidney                               | 1.6E-06   | NA         | 6.2E-07 | 2.2E-06               |  |  |  |  |  |  |
|            |                       |                      | Benzo(a)pyrene         | 6.2E-08               | NA         | 2.4E-08 | NA                   | 8.7E-08               | Kidney                               | 2.0E-06   | NA         | 7.8E-07 | 2.8E-06               |  |  |  |  |  |  |
|            |                       |                      | Benzo(b)fluoranthene   | 8.8E-09               | NA         | 3.4E-09 | NA                   | 1.2E-08               | Kidney                               | 2.8E-06   | NA         | 1.1E-06 | 3.9E-06               |  |  |  |  |  |  |
|            |                       |                      | Chrysene               | 5.9E-11               | NA         | 2.3E-11 | NA                   | 8.1E-11               | Kidney                               | 1.9E-06   | NA         | 7.3E-07 | 2.6E-06               |  |  |  |  |  |  |
|            |                       |                      | Dibenz(a,h)anthracene  | 9.5E-09               | NA         | 3.7E-09 | NA                   | 1.3E-08               | Kidney                               | 3.0E-07   | NA         | 1.2E-07 | 4.2E-07               |  |  |  |  |  |  |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 2.8E-09               | NA         | 1.1E-09 | NA                   | 3.9E-09               | Kidney                               | 9.0E-07   | NA         | 3.5E-07 | 1.3E-06               |  |  |  |  |  |  |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.3E-02   | NA         | --      | 3.3E-02               |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |  |  |  |  |  |  |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.9E-03   | NA         | --      | 3.9E-03               |  |  |  |  |  |  |
|            |                       |                      | Arsenic                | 2.6E-07               | NA         | 2.4E-08 | NA                   | 2.9E-07               | Skin                                 | 4.1E-02   | NA         | 3.7E-03 | 4.4E-02               |  |  |  |  |  |  |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |  |  |  |  |  |  |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.3E-03   | NA         | --      | 3.3E-03               |  |  |  |  |  |  |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.4E-03   | NA         | --      | 7.4E-03               |  |  |  |  |  |  |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.3E-02   | NA         | --      | 1.3E-02               |  |  |  |  |  |  |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |  |  |  |  |  |  |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.1E-02   | NA         | --      | 3.1E-02               |  |  |  |  |  |  |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |  |  |  |  |  |  |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.5E-03   | NA         | --      | 6.5E-03               |  |  |  |  |  |  |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.1E-03   | NA         | --      | 8.1E-03               |  |  |  |  |  |  |
|            |                       |                      | CHEMICAL TOTAL         | 3.5E-07               | --         | 5.8E-08 | --                   | 4E-07                 |                                      | 1.5E-01   | --         | 3.7E-03 | 2E-01                 |  |  |  |  |  |  |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      |           |            |         | 2E-01                 |  |  |  |  |  |  |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |           |            |         | 2E-01                 |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |  |  |  |  |  |
| SOIL       | AIR                   | DUST AT AREA 2       | Benzo(a)anthracene     | NA                    | 1.1E-11    | NA      | NA                   | 1.1E-11               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 1.4E-10    | NA      | NA                   | 1.4E-10               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 2.0E-11    | NA      | NA                   | 2.0E-11               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Chrysene               | NA                    | 1.3E-12    | NA      | NA                   | 1.3E-12               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 2.3E-11    | NA      | NA                   | 2.3E-11               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 6.3E-12    | NA      | NA                   | 6.3E-12               |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 9.8E-02    | NA      | 9.8E-02               |  |  |  |  |  |  |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |  |  |  |  |  |  |
|            |                       |                      | Arsenic                | NA                    | 1.1E-08    | NA      | NA                   | 1.1E-08               | Cardiovascular / Nervous             | NA        | 1.2E-02    | NA      | 1.2E-02               |  |  |  |  |  |  |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | system                               | NA        | 7.8E-04    | NA      | 7.8E-04               |  |  |  |  |  |  |
|            |                       |                      | Chromium               | NA                    | 1.7E-07    | NA      | NA                   | 1.7E-07               | Developmental                        | NA        | 2.0E-01    | NA      | 2.0E-01               |  |  |  |  |  |  |
|            |                       |                      | Cobalt                 | NA                    | 4.2E-08    | NA      | NA                   | 4.2E-08               | Respiratory                          | NA        | 1.6E-02    | NA      | 1.6E-02               |  |  |  |  |  |  |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       | Respiratory                          | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 4.4E-01    | NA      | 4.4E-01               |  |  |  |  |  |  |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.1E-04    | NA      | 1.1E-04               |  |  |  |  |  |  |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |  |  |  |  |  |  |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 1.2E-02    | NA      | 1.2E-02               |  |  |  |  |  |  |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 2.2E-07    | --      | --                   | 2E-07                 |                                      | --        | 7.7E-01    | --      | 8E-01                 |  |  |  |  |  |  |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      |           |            |         | 8E-01                 |  |  |  |  |  |  |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |           |            |         | 8E-01                 |  |  |  |  |  |  |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |  |  |  |  |  |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 6E-07                 |                                      |           |            |         |                       |  |  |  |  |  |  |



TABLE I-32  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                               |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|-------------------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION)          | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       |            | 6E-07  |                               |                       |                                      |           | 9E-01      |        |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            | 6E-07  | TOTAL HAZARD ACROSS ALL MEDIA |                       |                                      |           | 9E-01      |        |                       |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/23/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.9E-03 |
| TOTAL CARDIOVASCULAR HI =   | 1.2E-02 |
| TOTAL DEVELOPMENTAL HI =    | 1.3E-02 |
| TOTAL ENDOCRINE HI =        | 7.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.9E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 6.1E-01 |
| TOTAL NOAEL HI =            | 3.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.4E-02 |
| TOTAL RESPIRATORY HI =      | 2.1E-01 |

**TABLE I-33**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 7.3E-08               | NA         | 2.7E-08 | NA                   | 1.0E-07               | Kidney                               | 9.3E-06   | NA         | 3.4E-06 | 1.3E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 9.2E-07               | NA         | 3.4E-07 | NA                   | 1.3E-06               | Kidney                               | 1.2E-05   | NA         | 4.3E-06 | 1.6E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.3E-07               | NA         | 4.7E-08 | NA                   | 1.8E-07               | Kidney                               | 1.7E-05   | NA         | 6.0E-06 | 2.3E-05               |
|                             |                       |                      | Chrysene               | 8.7E-10               | NA         | 3.2E-10 | NA                   | 1.2E-09               | Kidney                               | 1.1E-05   | NA         | 4.0E-06 | 1.5E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.4E-07               | NA         | 5.1E-08 | NA                   | 1.9E-07               | Kidney                               | 1.8E-06   | NA         | 6.5E-07 | 2.4E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 4.2E-08               | NA         | 1.5E-08 | NA                   | 5.7E-08               | Kidney                               | 5.3E-06   | NA         | 1.9E-06 | 7.3E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.0E-02   | NA         | --      | 2.0E-02               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                      | Arsenic                | 9.2E-07               | NA         | 7.8E-08 | NA                   | 1.0E-06               | Skin                                 | 2.4E-02   | NA         | 2.0E-03 | 2.6E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.7E-04   | NA         | --      | 7.7E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.3E-02   | NA         | --      | 1.3E-02               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.3E-02   | NA         | --      | 4.3E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      | --                    |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.9E-02   | NA         | --      | 1.9E-02               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 4.4E-03   | NA         | --      | 4.4E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.9E-02   | NA         | --      | 1.9E-02               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.4E-03   | NA         | --      | 9.4E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            | --      | --                    |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 2.2E-06    | --      | 5.5E-07              | --                    | 3E-06                                |           | 1.6E-01    | --      | 2.0E-03               |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 3E-06                |                       |                                      |           |            | 2E-01   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 3E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.3E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 4.4E-03 |
| TOTAL KIDNEY HI =           | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.8E-02 |
| TOTAL NOAEL HI =            | 3.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-02 |
|                             | --      |

**TABLE I-34**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 1.4E-08               | NA         | 6.5E-09 | NA                   | 2.1E-08               | Kidney                               | 1.1E-06   | NA         | 5.0E-07 | 1.6E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 1.8E-07               | NA         | 8.2E-08 | NA                   | 2.6E-07               | Kidney                               | 1.4E-06   | NA         | 6.3E-07 | 2.0E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.5E-08               | NA         | 1.2E-08 | NA                   | 3.7E-08               | Kidney                               | 1.9E-06   | NA         | 8.8E-07 | 2.8E-06               |
|                             |                       |                      | Chrysene               | 1.7E-10               | NA         | 7.7E-11 | NA                   | 2.4E-10               | Kidney                               | 1.3E-06   | NA         | 5.9E-07 | 1.9E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 2.7E-08               | NA         | 1.3E-08 | NA                   | 4.0E-08               | Kidney                               | 2.1E-07   | NA         | 9.6E-08 | 3.0E-07               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 8.1E-09               | NA         | 3.7E-09 | NA                   | 1.2E-08               | Kidney                               | 6.1E-07   | NA         | 2.8E-07 | 9.0E-07               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.6E-04   | NA         | --      | 2.6E-04               |
|                             |                       |                      | Arsenic                | 4.3E-07               | NA         | 4.6E-08 | NA                   | 4.7E-07               | Skin                                 | 2.8E-03   | NA         | 3.0E-04 | 3.1E-03               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.9E-05   | NA         | --      | 8.9E-05               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.5E-03   | NA         | --      | 1.5E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.0E-03   | NA         | --      | 5.0E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.2E-04   | NA         | --      | 2.2E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      | --                    |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.2E-03   | NA         | --      | 2.2E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.1E-04   | NA         | --      | 5.1E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.2E-03   | NA         | --      | 2.2E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        | --         |         |                       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 6.8E-07    | --      | 1.6E-07              | --                    | 8E-07                                |           | 1.8E-02    | --      | 3.0E-04               |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 8E-07                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 8E-07                |                       |                                      |           |            | 2E-02   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 8E-07                 |                                      |           |            |         | 2E-02                 |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 8E-07                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 8E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.6E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.0E-03 |
|                             | --      |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.6E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 5.1E-04 |
| TOTAL KIDNEY HI =           | 1.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.4E-03 |
| TOTAL NOAEL HI =            | 3.9E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.1E-03 |
|                             | --      |

**TABLE I-35**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 2               | Benzo(a)anthracene     | 4.9E-07               | NA         | 1.8E-07 | NA                   | 6.7E-07               | Kidney                               | 6.3E-05   | NA         | 2.3E-05 | 8.5E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 6.2E-06               | NA         | 2.3E-06 | NA                   | 8.5E-06               | Kidney                               | 7.9E-05   | NA         | 2.9E-05 | 1.1E-04               |
|                             |                       |                      | Benzo(b)fluoranthene   | 8.8E-07               | NA         | 3.2E-07 | NA                   | 1.2E-06               | Kidney                               | 1.1E-04   | NA         | 4.0E-05 | 1.5E-04               |
|                             |                       |                      | Chrysene               | 5.8E-09               | NA         | 2.1E-09 | NA                   | 8.0E-09               | Kidney                               | 7.4E-05   | NA         | 2.7E-05 | 1.0E-04               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 9.5E-07               | NA         | 3.5E-07 | NA                   | 1.3E-06               | Kidney                               | 1.2E-05   | NA         | 4.4E-06 | 1.6E-05               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.8E-07               | NA         | 1.0E-07 | NA                   | 3.8E-07               | Kidney                               | 3.6E-05   | NA         | 1.3E-05 | 4.9E-05               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-01   | NA         | --      | 1.3E-01               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.5E-02   | NA         | --      | 1.5E-02               |
|                             |                       |                      | Arsenic                | 6.2E-06               | NA         | 5.2E-07 | NA                   | 6.7E-06               | Skin                                 | 1.6E-01   | NA         | 1.4E-02 | 1.7E-01               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.2E-03   | NA         | --      | 5.2E-03               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.8E-02   | NA         | --      | 8.8E-02               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.9E-01   | NA         | --      | 2.9E-01               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.3E-02   | NA         | --      | 1.3E-02               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      | --                    |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-01   | NA         | --      | 1.3E-01               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.9E-02   | NA         | --      | 2.9E-02               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.3E-01   | NA         | --      | 1.3E-01               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.3E-02   | NA         | --      | 6.3E-02               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            | --      | --                    |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 1.5E-05    | --      | 3.7E-06              | --                    | 2E-05                                |           | 1.1E+00    | --      | 1.4E-02               |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 2E-05                |                       |                                      |           |            | 1E+00   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E+00                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.5E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.9E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.5E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 2.9E-02 |
| TOTAL KIDNEY HI =           | 6.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.6E-01 |
| TOTAL NOAEL HI =            | 2.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 1.7E-01 |
|                             | --      |

**TABLE I-36**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 2 - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |  |  |
|-----------------------------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|--|--|
|                             |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |  |  |
| SOIL                        | SUBSURFACE SOIL | AREA 2         | Benzo(a)anthracene     | 9.5E-08               | NA         | 4.4E-08 | NA                   | 1.4E-07               | Kidney                               | 7.2E-06   | NA         | 3.3E-06 | 1.1E-05               |  |  |
|                             |                 |                | Benzo(a)pyrene         | 1.2E-06               | NA         | 5.5E-07 | NA                   | 1.7E-06               | Kidney                               | 9.1E-06   | NA         | 4.2E-06 | 1.3E-05               |  |  |
|                             |                 |                | Benzo(b)fluoranthene   | 1.7E-07               | NA         | 7.8E-08 | NA                   | 2.5E-07               | Kidney                               | 1.3E-05   | NA         | 5.9E-06 | 1.9E-05               |  |  |
|                             |                 |                | Chrysene               | 1.1E-09               | NA         | 5.2E-10 | NA                   | 1.6E-09               | Kidney                               | 8.6E-06   | NA         | 4.0E-06 | 1.3E-05               |  |  |
|                             |                 |                | Dibenz(a,h)anthracene  | 1.8E-07               | NA         | 8.5E-08 | NA                   | 2.7E-07               | Kidney                               | 1.4E-06   | NA         | 6.4E-07 | 2.0E-06               |  |  |
|                             |                 |                | Indeno(1,2,3-cd)pyrene | 5.4E-08               | NA         | 2.5E-08 | NA                   | 7.9E-08               | Kidney                               | 4.1E-06   | NA         | 1.9E-06 | 6.0E-06               |  |  |
|                             |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.5E-02   | NA         | --      | 1.5E-02               |  |  |
|                             |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |  |  |
|                             |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.8E-03   | NA         | --      | 1.8E-03               |  |  |
|                             |                 |                | Arsenic                | 2.9E-06               | NA         | 3.1E-07 | NA                   | 3.2E-06               | Skin                                 | 1.9E-02   | NA         | 2.0E-03 | 2.1E-02               |  |  |
|                             |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.0E-04   | NA         | --      | 6.0E-04               |  |  |
|                             |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-02   | NA         | --      | 1.0E-02               |  |  |
|                             |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.4E-02   | NA         | --      | 3.4E-02               |  |  |
|                             |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.5E-03   | NA         | --      | 1.5E-03               |  |  |
|                             |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |  |  |
|                             |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |  |  |
|                             |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.4E-03   | NA         | --      | 3.4E-03               |  |  |
|                             |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.5E-02   | NA         | --      | 1.5E-02               |  |  |
|                             |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.3E-03   | NA         | --      | 7.3E-03               |  |  |
|                             |                 |                |                        |                       |            |         |                      |                       |                                      |           |            | --      |                       |  |  |
|                             |                 |                | CHEMICAL TOTAL         | 4.6E-06               | --         | 1.1E-06 | --                   | 6E-06                 |                                      | 1.2E-01   | --         | 2.0E-03 | 1E-01                 |  |  |
| EXPOSURE POINT TOTAL        |                 |                |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 1E-01                 |  |  |
| EXPOSURE MEDIUM TOTAL       |                 |                |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 1E-01                 |  |  |
| SOIL TOTAL                  |                 |                |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 1E-01                 |  |  |
| RECEPTOR TOTAL              |                 |                |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 1E-01                 |  |  |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |                        |                       |            |         |                      | 6E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |  |  |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.8E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 3.4E-03 |
| TOTAL KIDNEY HI =           | 8.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.0E-02 |
| TOTAL NOAEL HI =            | 2.6E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.1E-02 |
|                             | --      |

**TABLE I-37**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADOLESCENT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 7.1E-08               | NA         | 3.1E-08 | NA                   | 1.0E-07               | Kidney                               | 7.6E-06   | NA         | 3.3E-06 | 1.1E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 7.6E-07               | NA         | 3.3E-07 | NA                   | 1.1E-06               | Kidney                               | 8.1E-06   | NA         | 3.5E-06 | 1.2E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.2E-07               | NA         | 5.1E-08 | NA                   | 1.7E-07               | Kidney                               | 1.3E-05   | NA         | 5.5E-06 | 1.8E-05               |
|                             |                       |                      | Benzo(k)fluoranthene   | 2.9E-09               | NA         | 1.3E-09 | NA                   | 4.2E-09               | Kidney                               | 3.1E-06   | NA         | 1.3E-06 | 4.5E-06               |
|                             |                       |                      | Carbazole              | 1.5E-10               | NA         | 4.9E-11 | NA                   | 2.0E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 8.7E-10               | NA         | 3.7E-10 | NA                   | 1.2E-09               | Kidney                               | 9.3E-06   | NA         | 4.0E-06 | 1.3E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.5E-07               | NA         | 6.6E-08 | NA                   | 2.2E-07               | Kidney                               | 1.6E-06   | NA         | 7.0E-07 | 2.3E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.6E-08               | NA         | 2.4E-08 | NA                   | 8.0E-08               | Kidney                               | 6.0E-06   | NA         | 2.6E-06 | 8.5E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.1E-03   | NA         | --      | 6.1E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 7.9E-04   | NA         | --      | 7.9E-04               |
|                             |                       |                      | Arsenic                | 3.5E-06               | NA         | 3.4E-07 | NA                   |                       | Skin                                 | 5.4E-02   | NA         | 5.3E-03 | 5.9E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.6E-04   | NA         | 4.8E-05 | 4.1E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.3E-03   | NA         | --      | 5.3E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.2E-02   | NA         | --      | 1.2E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.0E-03   | NA         | --      | 1.0E-03               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.5E-03   | NA         | --      | 3.5E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.7E-03   | NA         | --      | 2.7E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.6E-03   | NA         | --      | 7.6E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.3E-03   | NA         | --      | 4.3E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 4.6E-06               | --         | 8.4E-07 | --                   | 5E-06                 |                                      | 9.8E-02   | --         | 5.4E-03 | 1E-01                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 7.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 7.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.7E-03 |
| TOTAL KIDNEY HI =           | 5.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 9.7E-03 |
| TOTAL NOAEL HI =            | 1.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 5.9E-02 |
|                             | --      |

**TABLE I-38**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 1.0E-08               | NA         | 4.6E-09 | NA                   | 1.5E-08               | Kidney                               | 2.4E-06   | NA         | 1.1E-06 | 3.4E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 1.1E-07               | NA         | 4.9E-08 | NA                   | 1.6E-07               | Kidney                               | 2.5E-06   | NA         | 1.1E-06 | 3.7E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.8E-08               | NA         | 7.7E-09 | NA                   | 2.5E-08               | Kidney                               | 4.0E-06   | NA         | 1.8E-06 | 5.8E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 4.3E-10               | NA         | 1.9E-10 | NA                   | 6.2E-10               | Kidney                               | 9.9E-07   | NA         | 4.4E-07 | 1.4E-06               |
|                             |                       |                      | Carbazole              | 6.5E-11               | NA         | 2.2E-11 | NA                   | 8.7E-11               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 1.3E-10               | NA         | 5.6E-11 | NA                   | 1.8E-10               | Kidney                               | 2.9E-06   | NA         | 1.3E-06 | 4.2E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 2.2E-08               | NA         | 9.9E-09 | NA                   | 3.2E-08               | Kidney                               | 5.1E-07   | NA         | 2.3E-07 | 7.4E-07               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 8.2E-09               | NA         | 3.6E-09 | NA                   | 1.2E-08               | Kidney                               | 1.9E-06   | NA         | 8.3E-07 | 2.7E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.5E-04   | NA         | --      | 2.5E-04               |
|                             |                       |                      | Arsenic                | 1.5E-06               | NA         | 1.6E-07 | NA                   | 1.7E-06               | Skin                                 | 1.7E-02   | NA         | 1.7E-03 | 1.9E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.3E-05   | NA         | --      | 6.3E-05               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-04   | NA         | 1.6E-05 | 1.3E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.7E-03   | NA         | --      | 1.7E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.6E-03   | NA         | --      | 3.6E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.1E-04   | NA         | --      | 3.1E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 8.6E-04   | NA         | --      | 8.6E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.4E-03   | NA         | --      | 2.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                      | CHEMICAL TOTAL         | 1.7E-06               | --         | 2.3E-07 | --                   | 2E-06                 |                                      | 3.1E-02   | --         | 1.7E-03 | 3E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 8.6E-04 |
| TOTAL KIDNEY HI =           | 1.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.0E-03 |
| TOTAL NOAEL HI =            | 4.4E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 1.9E-02 |
|                             | --      |

**TABLE I-39**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 1.7E-08               | NA         | 1.4E-08 | NA                   | 3.1E-08               | Kidney                               | 2.1E-06   | NA         | 1.8E-06 | 4.0E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 1.8E-07               | NA         | 1.5E-07 | NA                   | 3.3E-07               | Kidney                               | 2.3E-06   | NA         | 2.0E-06 | 4.2E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.8E-08               | NA         | 2.4E-08 | NA                   | 5.2E-08               | Kidney                               | 3.6E-06   | NA         | 3.1E-06 | 6.7E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 6.9E-10               | NA         | 6.0E-10 | NA                   | 1.3E-09               | Kidney                               | 8.9E-07   | NA         | 7.6E-07 | 1.6E-06               |
|                             |                       |                      | Carbazole              | 1.0E-10               | NA         | 6.9E-11 | NA                   | 1.7E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 2.1E-10               | NA         | 1.8E-10 | NA                   | 3.8E-10               | Kidney                               | 2.6E-06   | NA         | 2.3E-06 | 4.9E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.6E-08               | NA         | 3.1E-08 | NA                   | 6.7E-08               | Kidney                               | 4.6E-07   | NA         | 4.0E-07 | 8.6E-07               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.3E-08               | NA         | 1.1E-08 | NA                   | 2.5E-08               | Kidney                               | 1.7E-06   | NA         | 1.4E-06 | 3.1E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.7E-03   | NA         | --      | 1.7E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.2E-04   | NA         | --      | 2.2E-04               |
|                             |                       |                      | Arsenic                | 2.5E-06               | NA         | 4.9E-07 | NA                   | 2.9E-06               | Skin                                 | 1.5E-02   | NA         | 3.0E-03 | 1.8E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.7E-05   | NA         | --      | 5.7E-05               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.0E-04   | NA         | 2.7E-05 | 1.3E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.5E-03   | NA         | --      | 1.5E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.3E-03   | NA         | --      | 3.3E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.8E-04   | NA         | --      | 2.8E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.0E-03   | NA         | --      | 1.0E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 7.8E-04   | NA         | --      | 7.8E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.2E-03   | NA         | --      | 2.2E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 2.7E-06               | --         | 7.2E-07 | --                   | 3E-06                 |                                      | 2.8E-02   | --         | 3.1E-03 | 3E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 3E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 3E-06                |                       |                                      |           |            | 3E-02   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 3E-02                 |
|                             |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 3E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 3E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 3E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.2E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.2E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 7.8E-04 |
| TOTAL KIDNEY HI =           | 1.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.7E-03 |
| TOTAL NOAEL HI =            | 3.9E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 1.8E-02 |
|                             | --      |



**TABLE I-40**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 1.0E-07               | NA         | 9.0E-08 | NA                   | 1.9E-07               | Kidney                               | 1.3E-05   | NA         | 1.1E-05 | 2.5E-05               |
|            |                       |                      | Benzo(a)pyrene         | 1.1E-06               | NA         | 9.6E-07 | NA                   | 2.1E-06               | Kidney                               | 1.4E-05   | NA         | 1.2E-05 | 2.7E-05               |
|            |                       |                      | Benzo(b)fluoranthene   | 1.8E-07               | NA         | 1.5E-07 | NA                   | 3.3E-07               | Kidney                               | 2.3E-05   | NA         | 1.9E-05 | 4.2E-05               |
|            |                       |                      | Benzo(k)fluoranthene   | 4.3E-09               | NA         | 3.7E-09 | NA                   | 8.1E-09               | Kidney                               | 5.5E-06   | NA         | 4.8E-06 | 1.0E-05               |
|            |                       |                      | Carbazole              | 6.5E-10               | NA         | 4.3E-10 | NA                   | 1.1E-09               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 1.3E-09               | NA         | 1.1E-09 | NA                   | 2.4E-09               | Kidney                               | 1.6E-05   | NA         | 1.4E-05 | 3.0E-05               |
|            |                       |                      | Dibenz(a,h)anthracene  | 2.3E-07               | NA         | 1.9E-07 | NA                   | 4.2E-07               | Kidney                               | 2.9E-06   | NA         | 2.5E-06 | 5.4E-06               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 8.2E-08               | NA         | 7.1E-08 | NA                   | 1.5E-07               | Kidney                               | 1.1E-05   | NA         | 9.0E-06 | 2.0E-05               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.4E-03   | NA         | --      | 1.4E-03               |
|            |                       |                      | Arsenic                | 1.5E-05               | NA         | 3.0E-06 | NA                   | 1.8E-05               | Skin                                 | 9.5E-02   | NA         | 1.9E-02 | 1.1E-01               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.6E-04   | NA         | --      | 3.6E-04               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.4E-04   | NA         | 1.7E-04 | 8.1E-04               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.4E-03   | NA         | --      | 9.4E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.0E-02   | NA         | --      | 2.0E-02               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.8E-03   | NA         | --      | 1.8E-03               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.3E-03   | NA         | --      | 6.3E-03               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 4.9E-03   | NA         | --      | 4.9E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.3E-02   | NA         | --      | 1.3E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.6E-03   | NA         | --      | 7.6E-03               |
|            |                       |                      | CHEMICAL TOTAL         | 1.7E-05               | --         | 4.5E-06 | --                   | 2E-05                 |                                      | 1.7E-01   | --         | 1.9E-02 | 2E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 3       | Benzo(a)anthracene     | NA                    | 2.7E-12    | NA      | NA                   | 2.7E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 2.9E-11    | NA      | NA                   | 2.9E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 4.6E-12    | NA      | NA                   | 4.6E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 1.1E-12    | NA      | NA                   | 1.1E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 3.3E-13    | NA      | NA                   | 3.3E-13               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 6.4E-12    | NA      | NA                   | 6.4E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 2.1E-12    | NA      | NA                   | 2.1E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 3.7E-04    | NA      | 3.7E-04               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 7.5E-09    | NA      | NA                   | 7.5E-09               | Cardiovascular / Nervous             | NA        | 3.3E-04    | NA      | 3.3E-04               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 2.4E-05    | NA      | 2.4E-05               |
|            |                       |                      | Cadmium                | NA                    | 7.1E-11    | NA      | NA                   | 7.1E-11               | Kidney / Respiratory                 | NA        | 5.5E-06    | NA      | 5.5E-06               |
|            |                       |                      | Chromium               | NA                    | 2.1E-08    | NA      | NA                   | 2.1E-08               | Respiratory                          | NA        | 4.9E-05    | NA      | 4.9E-05               |
|            |                       |                      | Cobalt                 | NA                    | 3.4E-09    | NA      | NA                   | 3.4E-09               | Respiratory                          | NA        | 1.8E-04    | NA      | 1.8E-04               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.0E-03    | NA      | 1.0E-03               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 8.3E-07    | NA      | 8.3E-07               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 6.6E-05    | NA      | 6.6E-05               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 3.2E-08    | --      | --                   | 3E-08                 |                                      | --        | 2.0E-03    | --      | 2E-03                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-08                 |                                      |           |            |         | 2E-03                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-08                 |                                      |           |            |         | 2E-03                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         |                       |

TABLE I-40  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|--------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|        |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |

|                             |  |       |                               |       |
|-----------------------------|--|-------|-------------------------------|-------|
| RECEPTOR TOTAL              |  | 2E-05 |                               | 2E-01 |
| TOTAL RISK ACROSS ALL MEDIA |  | 2E-05 | TOTAL HAZARD ACROSS ALL MEDIA | 2E-01 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.4E-03 |
| TOTAL CARDIOVASCULAR HI =   | 3.3E-04 |
| TOTAL DEVELOPMENTAL HI =    | 3.5E-04 |
| TOTAL ENDOCRINE HI =        | 2.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.4E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 4.9E-03 |
| TOTAL KIDNEY HI =           | 8.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.9E-02 |
| TOTAL NOAEL HI =            | 2.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.1E-01 |
| TOTAL RESPIRATORY HI =      | 2.3E-04 |

**TABLE I-41**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------|----------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                 |                |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL    | AREA 3         | Benzo(a)anthracene     | 5.8E-08               | NA                   | 1.0E-07        | NA                   | 1.6E-07               | Kidney                               | 7.4E-06   | NA         | 1.3E-05 | 2.0E-05               |    |         |       |
|                             |                 |                | Benzo(a)pyrene         | 6.2E-07               | NA                   | 1.1E-06        | NA                   | 1.7E-06               | Kidney                               | 7.9E-06   | NA         | 1.4E-05 | 2.2E-05               |    |         |       |
|                             |                 |                | Benzo(b)fluoranthene   | 9.8E-08               | NA                   | 1.7E-07        | NA                   | 2.7E-07               | Kidney                               | 1.3E-05   | NA         | 2.1E-05 | 3.4E-05               |    |         |       |
|                             |                 |                | Benzo(k)fluoranthene   | 2.4E-09               | NA                   | 4.1E-09        | NA                   | 6.5E-09               | Kidney                               | 3.1E-06   | NA         | 5.3E-06 | 8.4E-06               |    |         |       |
|                             |                 |                | Carbazole              | 3.6E-10               | NA                   | 4.8E-10        | NA                   | 8.4E-10               |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                | Chrysene               | 7.1E-10               | NA                   | 1.2E-09        | NA                   | 1.9E-09               | Kidney                               | 9.1E-06   | NA         | 1.6E-05 | 2.5E-05               |    |         |       |
|                             |                 |                | Dibenz(a,h)anthracene  | 1.3E-07               | NA                   | 2.1E-07        | NA                   | 3.4E-07               | Kidney                               | 1.6E-06   | NA         | 2.7E-06 | 4.3E-06               |    |         |       |
|                             |                 |                | Indeno(1,2,3-cd)pyrene | 4.6E-08               | NA                   | 7.9E-08        | NA                   | 1.2E-07               | Kidney                               | 5.9E-06   | NA         | 1.0E-05 | 1.6E-05               |    |         |       |
|                             |                 |                | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System<br>General Toxicity / | 6.0E-03   | NA         | --      | 6.0E-03               |    |         |       |
|                             |                 |                | Antimony               | NC                    | NA                   | NC             | NA                   |                       | Hematological                        | 7.8E-04   | NA         | --      | 7.8E-04               |    |         |       |
|                             |                 |                | Arsenic                | 8.5E-06               | NA                   | 3.4E-06        | NA                   | 1.2E-05               | Skin                                 | 5.3E-02   | NA         | 2.1E-02 | 7.4E-02               |    |         |       |
|                             |                 |                | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |    |         |       |
|                             |                 |                | Cadmium                | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 3.6E-04   | NA         | 1.9E-04 | 5.5E-04               |    |         |       |
|                             |                 |                | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 5.2E-03   | NA         | --      | 5.2E-03               |    |         |       |
|                             |                 |                | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |    |         |       |
|                             |                 |                | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                         | 9.8E-04   | NA         | --      | 9.8E-04               |    |         |       |
|                             |                 |                | Lead                   | --                    | NA                   | --             | NA                   |                       |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 3.5E-03   | NA         | --      | 3.5E-03               |    |         |       |
|                             |                 |                | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                        | 2.7E-03   | NA         | --      | 2.7E-03               |    |         |       |
|                             |                 |                | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 7.5E-03   | NA         | --      | 7.5E-03               |    |         |       |
|                             |                 |                | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 4.2E-03   | NA         | --      | 4.2E-03               |    |         |       |
|                             |                 |                |                        |                       |                      | CHEMICAL TOTAL | 9.5E-06              | --                    | 5.0E-06                              | --        | 1E-05      |         | 9.6E-02               | -- | 2.1E-02 | 1E-01 |
|                             |                 |                |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                      |           | 1E-05      | 1E-01   |                       |    |         |       |
|                             |                 |                |                        | EXPOSURE MEDIUM TOTAL |                      |                |                      |                       |                                      | 1E-05     | 1E-01      |         |                       |    |         |       |
|                             |                 |                | SOIL TOTAL             |                       |                      |                |                      |                       |                                      |           | 1E-05      | 1E-01   |                       |    |         |       |
|                             | RECEPTOR TOTAL  |                |                        |                       |                      |                |                      |                       | 1E-05                                | 1E-01     |            |         |                       |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |                        |                       |                      |                |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |    |         |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 7.8E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 7.8E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.7E-03 |
| TOTAL KIDNEY HI =           | 5.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 9.5E-03 |
| TOTAL NOAEL HI =            | 1.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 7.4E-02 |
|                             | --      |

**TABLE I-42**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 1.5E-08               | NA         | 6.0E-09 | NA                   | 2.1E-08               | Kidney                               | 4.9E-06   | NA         | 1.9E-06 | 6.8E-06               |
|            |                       |                      | Benzo(a)pyrene         | 1.6E-07               | NA         | 6.4E-08 | NA                   | 2.3E-07               | Kidney                               | 5.2E-06   | NA         | 2.0E-06 | 7.3E-06               |
|            |                       |                      | Benzo(b)fluoranthene   | 2.6E-08               | NA         | 1.0E-08 | NA                   | 3.6E-08               | Kidney                               | 8.3E-06   | NA         | 3.2E-06 | 1.1E-05               |
|            |                       |                      | Benzo(k)fluoranthene   | 6.4E-10               | NA         | 2.5E-10 | NA                   | 8.8E-10               | Kidney                               | 2.0E-06   | NA         | 7.9E-07 | 2.8E-06               |
|            |                       |                      | Carbazole              | 9.6E-11               | NA         | 2.9E-11 | NA                   | 1.2E-10               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 1.9E-10               | NA         | 7.3E-11 | NA                   | 2.6E-10               | Kidney                               | 6.0E-06   | NA         | 2.3E-06 | 8.4E-06               |
|            |                       |                      | Dibenz(a,h)anthracene  | 3.3E-08               | NA         | 1.3E-08 | NA                   | 4.6E-08               | Kidney                               | 1.1E-06   | NA         | 4.1E-07 | 1.5E-06               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 1.2E-08               | NA         | 4.7E-09 | NA                   | 1.7E-08               | Kidney                               | 3.9E-06   | NA         | 1.5E-06 | 5.4E-06               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.0E-02   | NA         | --      | 4.0E-02               |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 5.1E-03   | NA         | --      | 5.1E-03               |
|            |                       |                      | Arsenic                | 2.2E-06               | NA         | 2.0E-07 | NA                   | 2.4E-06               | Skin                                 | 3.5E-01   | NA         | 3.1E-02 | 3.8E-01               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       |                                      | 4.7E-03   | NA         | 5.7E-04 | 5.3E-03               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.2E-03   | NA         | --      | 5.2E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.5E-03   | NA         | --      | 7.5E-03               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.6E-02   | NA         | --      | 2.6E-02               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.3E-02   | NA         | --      | 2.3E-02               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.7E-03   | NA         | --      | 2.7E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.9E-03   | NA         | --      | 9.9E-03               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.4E-02   | NA         | --      | 1.4E-02               |
|            |                       |                      | CHEMICAL TOTAL         | 2.5E-06               | --         | 3.0E-07 | --                   | 3E-06                 |                                      | 4.9E-01   | --         | 3.2E-02 | 5E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 5E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 3       | Benzo(a)anthracene     | NA                    | 3.4E-11    | NA      | NA                   | 3.4E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 3.6E-10    | NA      | NA                   | 3.6E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 5.8E-11    | NA      | NA                   | 5.8E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 1.4E-11    | NA      | NA                   | 1.4E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 4.2E-12    | NA      | NA                   | 4.2E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 8.0E-11    | NA      | NA                   | 8.0E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 2.7E-11    | NA      | NA                   | 2.7E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.2E-01    | NA      | 1.2E-01               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Arsenic                | NA                    | 9.5E-08    | NA      | NA                   | 9.5E-08               | Cardiovascular / Nervous system      | NA        | 1.0E-01    | NA      | 1.0E-01               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 7.7E-04    | NA      | 7.7E-04               |
|            |                       |                      | Cadmium                | NA                    | 9.0E-10    | NA      | NA                   | 9.0E-10               | Kidney / Respiratory                 | NA        | 1.7E-03    | NA      | 1.7E-03               |
|            |                       |                      | Chromium               | NA                    | 2.6E-07    | NA      | NA                   | 2.6E-07               | Respiratory                          | NA        | 3.1E-01    | NA      | 3.1E-01               |
|            |                       |                      | Cobalt                 | NA                    | 4.3E-08    | NA      | NA                   | 4.3E-08               | Respiratory                          | NA        | 1.7E-02    | NA      | 1.7E-02               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 3.2E-01    | NA      | 3.2E-01               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.6E-04    | NA      | 2.6E-04               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 2.1E-02    | NA      | 2.1E-02               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 4.0E-07    | --      | --                   | 4E-07                 |                                      | --        | 8.8E-01    | --      | 9E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 4E-07                 |                                      |           |            |         | 9E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 4E-07                 |                                      |           |            |         | 9E-01                 |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         |                       |

TABLE I-42  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                      |                       | 3E-06                                | 1E+00                         |            |        |                       |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            |        |                      |                       | 3E-06                                | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       | 1E+00 |

**TABLE I-43**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - CURRENT - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |         |
| SOIL                        | SURFACE SOIL    | AREA 3                | Benzo(a)anthracene     | 2.3E-07               | NA         | 8.3E-08        | NA                   | 3.1E-07               | Kidney                               | 2.9E-05   | NA         | 1.1E-05 | 3.9E-05               |       |         |
|                             |                 |                       | Benzo(a)pyrene         | 2.4E-06               | NA         | 8.8E-07        | NA                   | 3.3E-06               | Kidney                               | 3.1E-05   | NA         | 1.1E-05 | 4.2E-05               |       |         |
|                             |                 |                       | Benzo(b)fluoranthene   | 3.8E-07               | NA         | 1.4E-07        | NA                   | 5.2E-07               | Kidney                               | 4.9E-05   | NA         | 1.8E-05 | 6.6E-05               |       |         |
|                             |                 |                       | Benzo(k)fluoranthene   | 9.4E-09               | NA         | 3.4E-09        | NA                   | 1.3E-08               | Kidney                               | 1.2E-05   | NA         | 4.4E-06 | 1.6E-05               |       |         |
|                             |                 |                       | Carbazole              | 3.4E-10               | NA         | 9.5E-11        | NA                   | 4.3E-10               |                                      | --        | NA         | --      |                       |       |         |
|                             |                 |                       | Chrysene               | 2.8E-09               | NA         | 1.0E-09        | NA                   | 3.8E-09               | Kidney                               | 3.5E-05   | NA         | 1.3E-05 | 4.8E-05               |       |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | 4.9E-07               | NA         | 1.8E-07        | NA                   | 6.7E-07               | Kidney                               | 6.2E-06   | NA         | 2.3E-06 | 8.5E-06               |       |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 1.8E-07               | NA         | 6.5E-08        | NA                   | 2.4E-07               | Kidney                               | 2.3E-05   | NA         | 8.3E-06 | 3.1E-05               |       |         |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 2.3E-02   | NA         | --      | 2.3E-02               |       |         |
|                             |                 |                       |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |         |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.0E-03   | NA         | --      | 3.0E-03               |       |         |
|                             |                 |                       | Arsenic                | 7.9E-06               | NA         | 6.7E-07        | NA                   | 8.6E-06               | Skin                                 | 2.1E-01   | NA         | 1.7E-02 | 2.2E-01               |       |         |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.7E-04   | NA         | --      | 7.7E-04               |       |         |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.4E-03   | NA         | 1.6E-04 | 1.5E-03               |       |         |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.0E-02   | NA         | --      | 2.0E-02               |       |         |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 4.4E-02   | NA         | --      | 4.4E-02               |       |         |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 3.8E-03   | NA         | --      | 3.8E-03               |       |         |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |         |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |       |         |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 1.0E-02   | NA         | --      | 1.0E-02               |       |         |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.9E-02   | NA         | --      | 2.9E-02               |       |         |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.6E-02   | NA         | --      | 1.6E-02               |       |         |
|                             |                 |                       |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |         |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 1.2E-05              | --                    | 2.0E-06                              | --        | 1E-05      |         | 3.7E-01               | --    | 1.7E-02 |
|                             |                 |                       | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       |                                      | 1E-05     |            |         |                       |       | 4E-01   |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      |                       | 1E-05                                |           |            |         |                       | 4E-01 |         |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 1E-05                 |                                      |           |            |         | 4E-01                 |       |         |
|                             |                 |                       |                        |                       |            |                |                      | 1E-05                 |                                      |           |            |         | 4E-01                 |       |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 1E-05                 |                                      |           |            |         | 4E-01                 |       |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 4E-01                 |       |         |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.0E-02 |
| TOTAL KIDNEY HI =           | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.7E-02 |
| TOTAL NOAEL HI =            | 5.3E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.2E-01 |
|                             | --      |

**TABLE I-44**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 3               | Benzo(a)anthracene     | 4.4E-08               | NA         | 2.0E-08 | NA                   | 6.4E-08               | Kidney                               | 3.3E-06   | NA         | 1.5E-06 | 4.9E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 4.7E-07               | NA         | 2.2E-07 | NA                   | 6.8E-07               | Kidney                               | 3.6E-06   | NA         | 1.6E-06 | 5.2E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 7.4E-08               | NA         | 3.4E-08 | NA                   | 1.1E-07               | Kidney                               | 5.6E-06   | NA         | 2.6E-06 | 8.2E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 1.8E-09               | NA         | 8.4E-10 | NA                   | 2.7E-09               | Kidney                               | 1.4E-06   | NA         | 6.4E-07 | 2.0E-06               |
|                             |                       |                      | Carbazole              | 1.6E-10               | NA         | 5.6E-11 | NA                   | 2.1E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 5.4E-10               | NA         | 2.5E-10 | NA                   | 7.9E-10               | Kidney                               | 4.1E-06   | NA         | 1.9E-06 | 6.0E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 9.4E-08               | NA         | 4.4E-08 | NA                   | 1.4E-07               | Kidney                               | 7.2E-07   | NA         | 3.3E-07 | 1.0E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.4E-08               | NA         | 1.6E-08 | NA                   | 5.0E-08               | Kidney                               | 2.6E-06   | NA         | 1.2E-06 | 3.8E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.7E-03   | NA         | --      | 2.7E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.5E-04   | NA         | --      | 3.5E-04               |
|                             |                       |                      | Arsenic                | 3.7E-06               | NA         | 3.9E-07 | NA                   | 4.1E-06               | Skin                                 | 2.4E-02   | NA         | 2.5E-03 | 2.6E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.9E-05   | NA         | --      | 8.9E-05               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.6E-04   | NA         | 2.3E-05 | 1.8E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.1E-03   | NA         | --      | 5.1E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 4.4E-04   | NA         | --      | 4.4E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-03   | NA         | --      | 1.6E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.4E-03   | NA         | --      | 3.4E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 4.4E-06               | --         | 7.2E-07 | --                   | 5E-06                 |                                      | 4.3E-02   | --         | 2.6E-03 | 5E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 5E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 5E-06                |                       |                                      |           |            | 5E-02   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 5E-02                 |
|                             |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 5E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 5E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.2E-03 |
| TOTAL KIDNEY HI =           | 2.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.2E-03 |
| TOTAL NOAEL HI =            | 6.1E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-02 |
|                             | --      |

**TABLE I-45**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - CURRENT - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SURFACE SOIL          | AREA 3         | Benzo(a)anthracene     | 1.5E-06               | NA         | 5.6E-07        | NA                   | 2.1E-06               | Kidney                               | 1.9E-04   | NA         | 7.1E-05 | 2.7E-04               |       |
|                             |                       |                | Benzo(a)pyrene         | 1.6E-05               | NA         | 6.0E-06        | NA                   | 2.2E-05               | Kidney                               | 2.1E-04   | NA         | 7.6E-05 | 2.8E-04               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 2.6E-06               | NA         | 9.4E-07        | NA                   | 3.5E-06               | Kidney                               | 3.3E-04   | NA         | 1.2E-04 | 4.5E-04               |       |
|                             |                       |                | Benzo(k)fluoranthene   | 6.4E-08               | NA         | 2.3E-08        | NA                   | 8.7E-08               | Kidney                               | 8.1E-05   | NA         | 2.9E-05 | 1.1E-04               |       |
|                             |                       |                | Carbazole              | 2.3E-09               | NA         | 6.4E-10        | NA                   | 2.9E-09               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Chrysene               | 1.9E-08               | NA         | 6.8E-09        | NA                   | 2.6E-08               | Kidney                               | 2.4E-04   | NA         | 8.7E-05 | 3.2E-04               |       |
|                             |                       |                | Dibenz(a,h)anthracene  | 3.3E-06               | NA         | 1.2E-06        | NA                   | 4.5E-06               | Kidney                               | 4.2E-05   | NA         | 1.5E-05 | 5.7E-05               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.2E-06               | NA         | 4.4E-07        | NA                   | 1.6E-06               | Kidney                               | 1.5E-04   | NA         | 5.6E-05 | 2.1E-04               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.6E-01   | NA         | --      | 1.6E-01               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 2.0E-02   | NA         | --      | 2.0E-02               |       |
|                             |                       |                | Arsenic                | 5.3E-05               | NA         | 4.5E-06        | NA                   | 5.8E-05               | Skin                                 | 1.4E+00   | NA         | 1.2E-01 | 1.5E+00               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 5.2E-03   | NA         | --      | 5.2E-03               |       |
|                             |                       |                | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 9.3E-03   | NA         | 1.0E-03 | 1.0E-02               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.4E-01   | NA         | --      | 1.4E-01               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.0E-01   | NA         | --      | 3.0E-01               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.6E-02   | NA         | --      | 2.6E-02               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 9.1E-02   | NA         | --      | 9.1E-02               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 7.0E-02   | NA         | --      | 7.0E-02               |       |
|                             |                       |                | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.0E-01   | NA         | --      | 2.0E-01               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-01   | NA         | --      | 1.1E-01               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 7.8E-05              | --                    | 1.4E-05                              | --        | 9E-05      |         | 2.5E+00               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 9E-05                                |           |            |         |                       | 3E+00 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 9E-05                |                       |                                      |           |            | 3E+00   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 9E-05                 |                                      |           |            |         | 3E+00                 |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 9E-05                 |                                      |           |            |         | 3E+00                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 9E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E+00                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.0E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.0E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 7.0E-02 |
| TOTAL KIDNEY HI =           | 1.3E-01 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.5E-01 |
| TOTAL NOAEL HI =            | 3.6E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 1.5E+00 |
|                             | --      |



**TABLE I-46**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |
| SOIL                        | SURFACE SOIL    | AREA 3                | Benzo(a)anthracene     | 2.9E-07               | NA         | 1.4E-07        | NA                   | 4.3E-07               | Kidney                               | 2.2E-05   | NA         | 1.0E-05 | 3.3E-05               |    |         |
|                             |                 |                       | Benzo(a)pyrene         | 3.1E-06               | NA         | 1.5E-06        | NA                   | 4.6E-06               | Kidney                               | 2.4E-05   | NA         | 1.1E-05 | 3.5E-05               |    |         |
|                             |                 |                       | Benzo(b)fluoranthene   | 5.0E-07               | NA         | 2.3E-07        | NA                   | 7.3E-07               | Kidney                               | 3.8E-05   | NA         | 1.7E-05 | 5.5E-05               |    |         |
|                             |                 |                       | Benzo(k)fluoranthene   | 1.2E-08               | NA         | 5.7E-09        | NA                   | 1.8E-08               | Kidney                               | 9.3E-06   | NA         | 4.3E-06 | 1.4E-05               |    |         |
|                             |                 |                       | Carbazole              | 1.1E-09               | NA         | 3.7E-10        | NA                   | 1.4E-09               | --                                   | NA        | --         | --      | --                    |    |         |
|                             |                 |                       | Chrysene               | 3.6E-09               | NA         | 1.7E-09        | NA                   | 5.3E-09               | Kidney                               | 2.7E-05   | NA         | 1.3E-05 | 4.0E-05               |    |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | 6.3E-07               | NA         | 2.9E-07        | NA                   | 9.3E-07               | Kidney                               | 4.8E-06   | NA         | 2.2E-06 | 7.1E-06               |    |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 2.3E-07               | NA         | 1.1E-07        | NA                   | 3.4E-07               | Kidney                               | 1.8E-05   | NA         | 8.2E-06 | 2.6E-05               |    |         |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.8E-02   | NA         | --      | 1.8E-02               |    |         |
|                             |                 |                       |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |    |         |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 2.3E-03   | NA         | --      | 2.3E-03               |    |         |
|                             |                 |                       | Arsenic                | 2.5E-05               | NA         | 2.6E-06        | NA                   | 2.7E-05               | Skin                                 | 1.6E-01   | NA         | 1.7E-02 | 1.8E-01               |    |         |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.0E-04   | NA         | --      | 6.0E-04               |    |         |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-03   | NA         | 1.5E-04 | 1.2E-03               |    |         |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.6E-02   | NA         | --      | 1.6E-02               |    |         |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.4E-02   | NA         | --      | 3.4E-02               |    |         |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 3.0E-03   | NA         | --      | 3.0E-03               |    |         |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      | --                    |    |         |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.0E-02   | NA         | --      | 1.0E-02               |    |         |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 8.1E-03   | NA         | --      | 8.1E-03               |    |         |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.3E-02   | NA         | --      | 2.3E-02               |    |         |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.3E-02   | NA         | --      | 1.3E-02               |    |         |
|                             |                 |                       |                        |                       |            |                |                      |                       |                                      |           |            | --      | --                    |    |         |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 2.9E-05              | --                    | 4.9E-06                              | --        | 3E-05      |         | 2.9E-01               | -- | 1.7E-02 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |            |                |                      |                       |                                      | 3E-05     |            |         |                       |    | 3E-01   |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 3E-01                 |    |         |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 3E-01                 |    |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 3E-01                 |    |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 3E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-01                 |    |         |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.3E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 8.1E-03 |
| TOTAL KIDNEY HI =           | 1.5E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.9E-02 |
| TOTAL NOAEL HI =            | 4.1E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.8E-01 |
|                             | --      |

**TABLE I-47**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: OUTDOOR WORKER</b><br><b>RECEPTOR AGE: ADULT</b> |
|----------------------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 3               | Benzo(a)anthracene     | 2.2E-08               | NA         | 1.9E-08        | NA                   | 4.0E-08               | Kidney                               | 2.8E-06   | NA         | 2.4E-06 | 5.2E-06               |       |
|                             |                       |                      | Benzo(a)pyrene         | 2.2E-07               | NA         | 1.9E-07        | NA                   | 4.0E-07               | Kidney                               | 2.8E-06   | NA         | 2.4E-06 | 5.2E-06               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.4E-08               | NA         | 2.9E-08        | NA                   | 6.2E-08               | Kidney                               | 4.3E-06   | NA         | 3.7E-06 | 8.0E-06               |       |
|                             |                       |                      | Carbazole              | 4.0E-11               | NA         | 2.7E-11        | NA                   | 6.7E-11               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 2.1E-10               | NA         | 1.8E-10        | NA                   | 3.8E-10               | Kidney                               | 2.6E-06   | NA         | 2.3E-06 | 4.9E-06               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 5.2E-08               | NA         | 4.5E-08        | NA                   | 9.7E-08               | Kidney                               | 6.7E-07   | NA         | 5.7E-07 | 1.2E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.5E-08               | NA         | 1.3E-08        | NA                   | 2.8E-08               | Kidney                               | 1.9E-06   | NA         | 1.6E-06 | 3.5E-06               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.6E-03   | NA         | --      | 1.6E-03               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 1.5E-04   | NA         | --      | 1.5E-04               |       |
|                             |                       |                      | Arsenic                | 6.4E-07               | NA         | 1.3E-07        | NA                   | 7.6E-07               | Skin                                 | 4.0E-03   | NA         | 7.8E-04 | 4.7E-03               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 4.4E-05   | NA         | --      | 4.4E-05               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 9.7E-04   | NA         | --      | 9.7E-04               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.0E-03   | NA         | --      | 3.0E-03               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.4E-03   | NA         | --      | 2.4E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 9.1E-04   | NA         | --      | 9.1E-04               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 8.3E-04   | NA         | --      | 8.3E-04               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.0E-04   | NA         | --      | 8.0E-04               |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 9.8E-07              | --                    | 4.2E-07                              | --        | 1E-06      |         | 1.7E-02               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 1E-06                                |           |            |         |                       | 2E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 1E-06                 |                                      |           |            |         | 2E-02                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 1E-06                 |                                      |           |            |         | 2E-02                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 1E-06                 |                                      |           |            |         | 2E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/18/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 8.3E-04 |
| TOTAL KIDNEY HI =           | 8.7E-04 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.5E-03 |
| TOTAL NOAEL HI =            | 5.7E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 4.7E-03 |
|                             | --      |

**TABLE I-48**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 3         | Benzo(a)anthracene     | 1.4E-07               | NA         | 1.2E-07 | NA                   | 2.5E-07               | Kidney                               | 1.7E-05   | NA         | 1.5E-05 | 3.2E-05               |
|        |                 |                | Benzo(a)pyrene         | 1.4E-06               | NA         | 1.2E-06 | NA                   | 2.5E-06               | Kidney                               | 1.7E-05   | NA         | 1.5E-05 | 3.2E-05               |
|        |                 |                | Benzo(b)fluoranthene   | 2.1E-07               | NA         | 1.8E-07 | NA                   | 3.9E-07               | Kidney                               | 2.7E-05   | NA         | 2.3E-05 | 5.0E-05               |
|        |                 |                | Carbazole              | 2.5E-10               | NA         | 1.7E-10 | NA                   | 4.2E-10               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 1.3E-09               | NA         | 1.1E-09 | NA                   | 2.4E-09               | Kidney                               | 1.6E-05   | NA         | 1.4E-05 | 3.1E-05               |
|        |                 |                | Dibenz(a,h)anthracene  | 3.3E-07               | NA         | 2.8E-07 | NA                   | 6.1E-07               | Kidney                               | 4.2E-06   | NA         | 3.6E-06 | 7.7E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 9.3E-08               | NA         | 8.0E-08 | NA                   | 1.7E-07               | Kidney                               | 1.2E-05   | NA         | 1.0E-05 | 2.2E-05               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.9E-03   | NA         | --      | 9.9E-03               |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 9.6E-04   | NA         | --      | 9.6E-04               |
|        |                 |                | Arsenic                | 4.0E-06               | NA         | 7.9E-07 | NA                   | 4.8E-06               | Skin                                 | 2.5E-02   | NA         | 4.9E-03 | 3.0E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.7E-04   | NA         | --      | 2.7E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.1E-03   | NA         | --      | 6.1E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.9E-02   | NA         | --      | 1.9E-02               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.5E-02   | NA         | --      | 1.5E-02               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.7E-03   | NA         | --      | 5.7E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.2E-03   | NA         | --      | 5.2E-03               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.0E-03   | NA         | --      | 5.0E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

TABLE I-48  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |       |
|                             |                 |                |          |                       |            |        |                      |                       |                                      |                               |            |        |                       |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                      |                       |                                      |                               |            |        |                       |       |
|                             |                 |                |          |                       | 9E-06      |        |                      |                       |                                      | 1E-01                         |            |        |                       |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       | 9E-06      |        |                      |                       |                                      | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       | 1E-01 |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.6E-04 |
| TOTAL CARDIOVASCULAR HI =   | 8.5E-05 |
| TOTAL DEVELOPMENTAL HI =    | 1.0E-04 |
| TOTAL ENDOCRINE HI =        | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.6E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 5.2E-03 |
| TOTAL KIDNEY HI =           | 5.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.7E-02 |
| TOTAL NOAEL HI =            | 3.6E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.0E-02 |
| TOTAL RESPIRATORY HI =      | 1.9E-04 |

**TABLE I-49**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 3               | Benzo(a)anthracene     | 7.6E-08               | NA         | 1.3E-07 | NA                   | 2.1E-07               | Kidney                               | 9.7E-06   | NA         | 1.7E-05 | 2.6E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 7.6E-07               | NA         | 1.3E-06 | NA                   | 2.1E-06               | Kidney                               | 9.7E-06   | NA         | 1.7E-05 | 2.6E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.2E-07               | NA         | 2.0E-07 | NA                   | 3.2E-07               | Kidney                               | 1.5E-05   | NA         | 2.6E-05 | 4.1E-05               |       |
|                             |                       |                      | Carbazole              | 1.4E-10               | NA         | 1.8E-10 | NA                   | 3.2E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 7.1E-10               | NA         | 1.2E-09 | NA                   | 1.9E-09               | Kidney                               | 9.1E-06   | NA         | 1.6E-05 | 2.5E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.8E-07               | NA         | 3.1E-07 | NA                   | 4.9E-07               | Kidney                               | 2.3E-06   | NA         | 4.0E-06 | 6.3E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.2E-08               | NA         | 8.9E-08 | NA                   | 1.4E-07               | Kidney                               | 6.6E-06   | NA         | 1.1E-05 | 1.8E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.5E-03   | NA         | --      | 5.5E-03               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 5.3E-04   | NA         | --      | 5.3E-04               |       |
|                             |                       |                      | Arsenic                | 2.2E-06               | NA         | 8.7E-07 | NA                   | 3.1E-06               | Skin                                 | 1.4E-02   | NA         | 5.4E-03 | 1.9E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-04   | NA         | --      | 1.5E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.4E-03   | NA         | --      | 3.4E-03               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 8.4E-03   | NA         | --      | 8.4E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.1E-03   | NA         | --      | 3.1E-03               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.9E-03   | NA         | --      | 2.9E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.9E-03   | NA         | --      | 7.9E-03               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.8E-03   | NA         | --      | 2.8E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 3.4E-06    | --      | 2.9E-06              | --                    | 6E-06                                |           | 5.9E-02    | --      | 5.5E-03               | 6E-02 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 6E-06                                |           |            |         |                       | 6E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 6E-02                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 6E-02                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 6E-06                 |                                      |           |            |         | 6E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 6E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 6E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.3E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.3E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.9E-03 |
| TOTAL KIDNEY HI =           | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 8.6E-03 |
| TOTAL NOAEL HI =            | 2.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.9E-02 |
|                             | --      |

**TABLE I-50**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: FUTURE</b><br><b>RECEPTOR POPULATION: CONSTRUCTION WORKER</b><br><b>RECEPTOR AGE: ADULT</b> |
|--------------------------------------------------------------------------------------------------------------------|

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL       | SUBSURFACE SOIL       | AREA 3               | Benzo(a)anthracene     | 2.0E-08               | NA         | 7.8E-09        | NA                   | 2.8E-08               | Kidney                               | 6.4E-06   | NA         | 2.5E-06 | 8.9E-06               |       |
|            |                       |                      | Benzo(a)pyrene         | 2.0E-07               | NA         | 7.8E-08        | NA                   | 2.8E-07               | Kidney                               | 6.4E-06   | NA         | 2.5E-06 | 8.9E-06               |       |
|            |                       |                      | Benzo(b)fluoranthene   | 3.1E-08               | NA         | 1.2E-08        | NA                   | 4.3E-08               | Kidney                               | 9.8E-06   | NA         | 3.8E-06 | 1.4E-05               |       |
|            |                       |                      | Carbazole              | 3.7E-11               | NA         | 1.1E-11        | NA                   | 4.8E-11               |                                      | --        | NA         | --      |                       |       |
|            |                       |                      | Chrysene               | 1.9E-10               | NA         | 7.4E-11        | NA                   | 2.6E-10               | Kidney                               | 6.0E-06   | NA         | 2.4E-06 | 8.4E-06               |       |
|            |                       |                      | Dibenz(a,h)anthracene  | 4.8E-08               | NA         | 1.9E-08        | NA                   | 6.6E-08               | Kidney                               | 1.5E-06   | NA         | 6.0E-07 | 2.1E-06               |       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 1.4E-08               | NA         | 5.3E-09        | NA                   | 1.9E-08               | Kidney                               | 4.4E-06   | NA         | 1.7E-06 | 6.1E-06               |       |
|            |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.6E-02   | NA         | --      | 3.6E-02               |       |
|            |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|            |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.5E-03   | NA         | --      | 3.5E-03               |       |
|            |                       |                      | Arsenic                | 5.8E-07               | NA         | 5.2E-08        | NA                   | 6.4E-07               | Skin                                 | 9.1E-02   | NA         | 8.2E-03 | 9.9E-02               |       |
|            |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.0E-03   | NA         | --      | 1.0E-03               |       |
|            |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.3E-03   | NA         | --      | 3.3E-03               |       |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 6.9E-03   | NA         | --      | 6.9E-03               |       |
|            |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.2E-01   | NA         | --      | 2.2E-01               |       |
|            |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|            |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 2.1E-02   | NA         | --      | 2.1E-02               |       |
|            |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.9E-03   | NA         | --      | 2.9E-03               |       |
|            |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|            |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 9.2E-03   | NA         | --      | 9.2E-03               |       |
|            |                       |                      |                        |                       |            | CHEMICAL TOTAL | 8.9E-07              | --                    | 1.7E-07                              | --        | 1E-06      |         | 4.1E-01               | --    |
|            |                       |                      | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 1E-06                                |           |            |         | 4E-01                 |       |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 1E-06                 |                                      |           |            | 4E-01   |                       |       |
|            |                       |                      |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |
| SOIL       | AIR                   | DUST AT AREA 3       | Benzo(a)anthracene     | NA                    | 4.4E-11    | NA             | NA                   | 4.4E-11               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 4.4E-10    | NA             | NA                   | 4.4E-10               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 6.9E-11    | NA             | NA                   | 6.9E-11               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Chrysene               | NA                    | 4.2E-12    | NA             | NA                   | 4.2E-12               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 1.2E-10    | NA             | NA                   | 1.2E-10               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 3.0E-11    | NA             | NA                   | 3.0E-11               |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 1.1E-01    | NA      | 1.1E-01               |       |
|            |                       |                      | Antimony               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      |                        |                       |            |                |                      |                       | Developmental /                      |           |            |         |                       |       |
|            |                       |                      |                        |                       |            |                |                      |                       | Cardiovascular / Nervous             |           |            |         |                       |       |
|            |                       |                      | Arsenic                | NA                    | 2.5E-08    | NA             | NA                   | 2.5E-08               | system                               | NA        | 2.7E-02    | NA      | 2.7E-02               |       |
|            |                       |                      | Barium                 | NA                    | NC         | NA             | NA                   |                       | Developmental                        | NA        | 5.9E-04    | NA      | 5.9E-04               |       |
|            |                       |                      | Chromium               | NA                    | 1.7E-07    | NA             | NA                   | 1.7E-07               | Respiratory                          | NA        | 2.0E-01    | NA      | 2.0E-01               |       |
|            |                       |                      | Cobalt                 | NA                    | 3.9E-08    | NA             | NA                   | 3.9E-08               | Respiratory                          | NA        | 1.5E-02    | NA      | 1.5E-02               |       |
|            |                       |                      | Copper                 | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Lead                   | NA                    | --         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Manganese              | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 2.9E-01    | NA      | 2.9E-01               |       |
|            |                       |                      | Mercury                | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 2.8E-04    | NA      | 2.8E-04               |       |
|            |                       |                      | Thallium               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | 1.4E-02    | NA      | 1.4E-02               |       |
|            |                       |                      |                        | CHEMICAL TOTAL        | --         | 2.3E-07        | --                   | --                    | 2E-07                                |           | --         | 6.5E-01 | --                    | 6E-01 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      | 2E-07                 |                                      |           |            | 6E-01   |                       |       |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 2E-07                 |                                      |           |            | 6E-01   |                       |       |
| SOIL TOTAL |                       |                      |                        |                       |            |                |                      | 1E-06                 |                                      |           |            | 1E+00   |                       |       |

TABLE I-50  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |                               |        |                       |  |  |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|-------------------------------|--------|-----------------------|--|--|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION                    | DERMAL | EXPOSURE ROUTES TOTAL |  |  |       |
|                             |                 |                |          |                       |            |        |                      |                       |                                      |           |                               |        |                       |  |  |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            | 1E-06  |                      |                       |                                      |           | 1E+00                         |        |                       |  |  |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            | 1E-06  |                      |                       |                                      |           | TOTAL HAZARD ACROSS ALL MEDIA |        |                       |  |  | 1E+00 |

**TABLE I-51**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - CURRENT - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
RECEPTOR POPULATION: RECREATIONAL  
RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 3               | Benzo(a)anthracene     | 3.0E-07               | NA         | 1.1E-07 | NA                   | 4.0E-07               | Kidney                               | 3.8E-05   | NA         | 1.4E-05 | 5.1E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 3.0E-06               | NA         | 1.1E-06 | NA                   | 4.0E-06               | Kidney                               | 3.8E-05   | NA         | 1.4E-05 | 5.1E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 4.6E-07               | NA         | 1.7E-07 | NA                   | 6.2E-07               | Kidney                               | 5.8E-05   | NA         | 2.1E-05 | 7.9E-05               |       |
|                             |                       |                      | Carbazole              | 1.3E-10               | NA         | 3.6E-11 | NA                   | 1.7E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 2.8E-09               | NA         | 1.0E-09 | NA                   | 3.8E-09               | Kidney                               | 3.5E-05   | NA         | 1.3E-05 | 4.8E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 7.1E-07               | NA         | 2.6E-07 | NA                   | 9.7E-07               | Kidney                               | 9.0E-06   | NA         | 3.3E-06 | 1.2E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.0E-07               | NA         | 7.4E-08 | NA                   | 2.8E-07               | Kidney                               | 2.6E-05   | NA         | 9.3E-06 | 3.5E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.1E-02   | NA         | --      | 2.1E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.1E-03   | NA         | --      | 2.1E-03               |       |
|                             |                       |                      | Arsenic                | 2.1E-06               | NA         | 1.7E-07 | NA                   | 2.2E-06               | Skin                                 | 5.3E-02   | NA         | 4.5E-03 | 5.8E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.9E-04   | NA         | --      | 5.9E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.0E-02   | NA         | --      | 4.0E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.3E-02   | NA         | --      | 3.3E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.2E-02   | NA         | --      | 1.2E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.1E-02   | NA         | --      | 3.1E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 6.7E-06    | --      | 1.9E-06              | --                    | 9E-06                                |           | 2.3E-01    | --      | 4.6E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 9E-06                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 9E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |



**TABLE I-52**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL | AREA 3                | Benzo(a)anthracene     | 5.7E-08               | NA         | 2.6E-08        | NA                   | 8.3E-08               | Kidney                               | 4.3E-06   | NA         | 2.0E-06 | 6.3E-06               |       |
|                             |                 |                       | Benzo(a)pyrene         | 5.7E-07               | NA         | 2.6E-07        | NA                   | 8.3E-07               | Kidney                               | 4.3E-06   | NA         | 2.0E-06 | 6.3E-06               |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 8.8E-08               | NA         | 4.1E-08        | NA                   | 1.3E-07               | Kidney                               | 6.7E-06   | NA         | 3.1E-06 | 9.8E-06               |       |
|                             |                 |                       | Carbazole              | 6.0E-11               | NA         | 2.1E-11        | NA                   | 8.2E-11               |                                      | --        | NA         | --      |                       |       |
|                             |                 |                       | Chrysene               | 5.4E-10               | NA         | 2.5E-10        | NA                   | 7.9E-10               | Kidney                               | 4.1E-06   | NA         | 1.9E-06 | 6.0E-06               |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 1.4E-07               | NA         | 6.3E-08        | NA                   | 2.0E-07               | Kidney                               | 1.0E-06   | NA         | 4.8E-07 | 1.5E-06               |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 3.9E-08               | NA         | 1.8E-08        | NA                   | 5.7E-08               | Kidney                               | 3.0E-06   | NA         | 1.4E-06 | 4.3E-06               |       |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 2.5E-03   | NA         | --      | 2.5E-03               |       |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | General Toxicity / Hematological     | 2.4E-04   | NA         | --      | 2.4E-04               |       |
|                             |                 |                       | Arsenic                | 9.5E-07               | NA         | 1.0E-07        | NA                   | 1.1E-06               | Skin                                 | 6.2E-03   | NA         | 6.6E-04 | 6.8E-03               |       |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.8E-05   | NA         | --      | 6.8E-05               |       |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.5E-03   | NA         | --      | 1.5E-03               |       |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 4.7E-03   | NA         | --      | 4.7E-03               |       |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 3.8E-03   | NA         | --      | 3.8E-03               |       |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03               |       |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 1.3E-03   | NA         | --      | 1.3E-03               |       |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.6E-03   | NA         | --      | 3.6E-03               |       |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.2E-03   | NA         | --      | 1.2E-03               |       |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 1.8E-06              | --                    | 5.1E-07                              | --        | 2E-06      |         | 2.6E-02               | --    |
|                             |                 | EXPOSURE POINT TOTAL  |                        |                       |            |                |                      |                       | 2E-06                                |           |            |         |                       | 3E-02 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      |                       | 2E-06                                |           |            |         |                       | 3E-02 |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 2E-06                 |                                      |           |            |         | 3E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.4E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.4E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.3E-03 |
| TOTAL KIDNEY HI =           | 1.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.9E-03 |
| TOTAL NOAEL HI =            | 8.8E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 6.8E-03 |
|                             | --      |

**TABLE I-53**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 3         | Benzo(a)anthracene     | 2.0E-06               | NA         | 7.3E-07 | NA                   | 2.7E-06               | Kidney                               | 2.5E-04   | NA         | 9.2E-05 | 3.4E-04               |
|        |                 |                | Benzo(a)pyrene         | 2.0E-05               | NA         | 7.3E-06 | NA                   | 2.7E-05               | Kidney                               | 2.5E-04   | NA         | 9.2E-05 | 3.4E-04               |
|        |                 |                | Benzo(b)fluoranthene   | 3.1E-06               | NA         | 1.1E-06 | NA                   | 4.2E-06               | Kidney                               | 3.9E-04   | NA         | 1.4E-04 | 5.3E-04               |
|        |                 |                | Carbazole              | 8.8E-10               | NA         | 2.5E-10 | NA                   | 1.1E-09               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 1.9E-08               | NA         | 6.8E-09 | NA                   | 2.6E-08               | Kidney                               | 2.4E-04   | NA         | 8.7E-05 | 3.3E-04               |
|        |                 |                | Dibenz(a,h)anthracene  | 4.8E-06               | NA         | 1.7E-06 | NA                   | 6.5E-06               | Kidney                               | 6.1E-05   | NA         | 2.2E-05 | 8.3E-05               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 1.4E-06               | NA         | 5.0E-07 | NA                   | 1.9E-06               | Kidney                               | 1.7E-04   | NA         | 6.3E-05 | 2.4E-04               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-01   | NA         | --      | 1.4E-01               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.4E-02   | NA         | --      | 1.4E-02               |
|        |                 |                | Arsenic                | 1.4E-05               | NA         | 1.2E-06 | NA                   | 1.5E-05               | Skin                                 | 3.6E-01   | NA         | 3.0E-02 | 3.9E-01               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.0E-03   | NA         | --      | 4.0E-03               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.8E-02   | NA         | --      | 8.8E-02               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.7E-01   | NA         | --      | 2.7E-01               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.2E-01   | NA         | --      | 2.2E-01               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.2E-02   | NA         | --      | 8.2E-02               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 7.6E-02   | NA         | --      | 7.6E-02               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.1E-01   | NA         | --      | 2.1E-01               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.2E-02   | NA         | --      | 7.2E-02               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.7E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.4E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 7.6E-02 |
| TOTAL KIDNEY HI =           | 7.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.3E-01 |
| TOTAL NOAEL HI =            | 5.2E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.9E-01 |
|                             | --      |

**TABLE I-54**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 3 - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RESIDENTIAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 3               | Benzo(a)anthracene     | 3.8E-07               | NA         | 1.8E-07 | NA                   | 5.6E-07               | Kidney                               | 2.9E-05   | NA         | 1.4E-05 | 4.3E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 3.8E-06               | NA         | 1.8E-06 | NA                   | 5.6E-06               | Kidney                               | 2.9E-05   | NA         | 1.4E-05 | 4.3E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 5.9E-07               | NA         | 2.7E-07 | NA                   | 8.7E-07               | Kidney                               | 4.5E-05   | NA         | 2.1E-05 | 6.6E-05               |       |
|                             |                       |                      | Carbazole              | 4.0E-10               | NA         | 1.4E-10 | NA                   | 5.5E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 3.6E-09               | NA         | 1.7E-09 | NA                   | 5.3E-09               | Kidney                               | 2.8E-05   | NA         | 1.3E-05 | 4.0E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 9.2E-07               | NA         | 4.3E-07 | NA                   | 1.3E-06               | Kidney                               | 7.0E-06   | NA         | 3.2E-06 | 1.0E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.6E-07               | NA         | 1.2E-07 | NA                   | 3.8E-07               | Kidney                               | 2.0E-05   | NA         | 9.2E-06 | 2.9E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.6E-03   | NA         | --      | 1.6E-03               |       |
|                             |                       |                      | Arsenic                | 6.4E-06               | NA         | 6.8E-07 | NA                   | 7.1E-06               | Skin                                 | 4.1E-02   | NA         | 4.4E-03 | 4.6E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.6E-04   | NA         | --      | 4.6E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.1E-02   | NA         | --      | 3.1E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 2.5E-02   | NA         | --      | 2.5E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.5E-03   | NA         | --      | 9.5E-03               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 8.7E-03   | NA         | --      | 8.7E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.4E-02   | NA         | --      | 2.4E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.3E-03   | NA         | --      | 8.3E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 1.2E-05    | --      | 3.5E-06              | --                    | 2E-05                                |           | 1.8E-01    | --      | 4.5E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 2E-05                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.6E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 8.7E-03 |
| TOTAL KIDNEY HI =           | 9.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.6E-02 |
| TOTAL NOAEL HI =            | 5.9E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.6E-02 |
|                             | --      |

**TABLE I-55**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR</b><br><b>RECEPTOR AGE: ADOLESCENT</b> |
|---------------------------------------------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 4               | Benzo(a)anthracene     | 3.7E-07               | NA         | 1.6E-07 | NA                   | 5.3E-07               | Kidney                               | 4.0E-05   | NA         | 1.7E-05 | 5.7E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 4.7E-06               | NA         | 2.0E-06 | NA                   | 6.8E-06               | Kidney                               | 5.0E-05   | NA         | 2.2E-05 | 7.2E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 4.2E-07               | NA         | 1.8E-07 | NA                   | 6.1E-07               | Kidney                               | 4.5E-05   | NA         | 1.9E-05 | 6.5E-05               |
|                             |                       |                      | Benzo(k)fluoranthene   | 1.1E-08               | NA         | 4.5E-09 | NA                   | 1.5E-08               | Kidney                               | 1.1E-05   | NA         | 4.8E-06 | 1.6E-05               |
|                             |                       |                      | Carbazole              | 2.2E-07               | NA         | 7.2E-08 | NA                   | 2.9E-07               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 3.8E-09               | NA         | 1.6E-09 | NA                   | 5.4E-09               | Kidney                               | 4.0E-05   | NA         | 1.7E-05 | 5.7E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.3E-06               | NA         | 5.4E-07 | NA                   | 1.8E-06               | Kidney                               | 1.3E-05   | NA         | 5.8E-06 | 1.9E-05               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.5E-07               | NA         | 1.5E-07 | NA                   | 4.9E-07               | Kidney                               | 3.7E-05   | NA         | 1.6E-05 | 5.3E-05               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.7E-03   | NA         | --      | 4.7E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 9.0E-04   | NA         | --      | 9.0E-04               |
|                             |                       |                      | Arsenic                | 7.0E-07               | NA         | 6.9E-08 | NA                   | 7.7E-07               | Skin                                 | 1.1E-02   | NA         | 1.1E-03 | 1.2E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.3E-04   | NA         | --      | 2.3E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.2E-04   | NA         | 2.9E-05 | 2.5E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.3E-03   | NA         | --      | 3.3E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.8E-04   | NA         | --      | 3.8E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.2E-03   | NA         | --      | 4.2E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.8E-04   | NA         | --      | 5.8E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.2E-03   | NA         | --      | 8.2E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.9E-03   | NA         | --      | 2.9E-03               |
|                             |                       |                      | CHEMICAL TOTAL         | 8.1E-06               | --         | 3.2E-06 | --                   | 1E-05                 |                                      | 4.7E-02   | --         | 1.2E-03 | 5E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 5E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 5E-02                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 5E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 5E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 5E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.0E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.0E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 5.8E-04 |
| TOTAL KIDNEY HI =           | 3.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 8.8E-03 |
| TOTAL NOAEL HI =            | 1.2E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.2E-02 |
|                             | --      |

**TABLE I-56**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR</b><br><b>RECEPTOR AGE: ADULT</b> |
|----------------------------------------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 4               | Benzo(a)anthracene     | 5.5E-08               | NA         | 2.4E-08 | NA                   | 7.9E-08               | Kidney                               | 1.3E-05   | NA         | 5.5E-06 | 1.8E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 6.9E-07               | NA         | 3.1E-07 | NA                   | 1.0E-06               | Kidney                               | 1.6E-05   | NA         | 7.0E-06 | 2.3E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 6.2E-08               | NA         | 2.7E-08 | NA                   | 9.0E-08               | Kidney                               | 1.4E-05   | NA         | 6.3E-06 | 2.0E-05               |
|                             |                       |                      | Benzo(k)fluoranthene   | 1.5E-09               | NA         | 6.8E-10 | NA                   | 2.2E-09               | Kidney                               | 3.5E-06   | NA         | 1.6E-06 | 5.1E-06               |
|                             |                       |                      | Carbazole              | 9.6E-08               | NA         | 3.3E-08 | NA                   | 1.3E-07               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 5.5E-10               | NA         | 2.4E-10 | NA                   | 8.0E-10               | Kidney                               | 1.3E-05   | NA         | 5.6E-06 | 1.8E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.8E-07               | NA         | 8.1E-08 | NA                   | 2.7E-07               | Kidney                               | 4.2E-06   | NA         | 1.9E-06 | 6.1E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.1E-08               | NA         | 2.2E-08 | NA                   | 7.3E-08               | Kidney                               | 1.2E-05   | NA         | 5.1E-06 | 1.7E-05               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.5E-03   | NA         | --      | 1.5E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.8E-04   | NA         | --      | 2.8E-04               |
|                             |                       |                      | Arsenic                | 3.1E-07               | NA         | 3.1E-08 | NA                   | 3.4E-07               | Skin                                 | 3.4E-03   | NA         | 3.5E-04 | 3.8E-03               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.1E-05   | NA         | --      | 7.1E-05               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.9E-05   | NA         | 9.3E-06 | 7.8E-05               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-03   | NA         | --      | 1.0E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.3E-03   | NA         | --      | 3.3E-03               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.2E-04   | NA         | --      | 1.2E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.8E-04   | NA         | --      | 1.8E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.6E-03   | NA         | --      | 2.6E-03               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.0E-04   | NA         | --      | 9.0E-04               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 1.5E-06               | --         | 5.3E-07 | --                   | 2E-06                 |                                      | 1.5E-02   | --         | 3.9E-04 | 2E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.8E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.8E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.8E-04 |
| TOTAL KIDNEY HI =           | 1.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.8E-03 |
| TOTAL NOAEL HI =            | 3.7E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.8E-03 |
|                             | --      |

**TABLE I-57**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 4         | Benzo(a)anthracene     | 8.8E-08               | NA         | 7.6E-08 | NA                   | 1.6E-07               | Kidney                               | 1.1E-05   | NA         | 9.7E-06 | 2.1E-05               |
|                             |                       |                | Benzo(a)pyrene         | 1.1E-06               | NA         | 9.6E-07 | NA                   | 2.1E-06               | Kidney                               | 1.4E-05   | NA         | 1.2E-05 | 2.6E-05               |
|                             |                       |                | Benzo(b)fluoranthene   | 1.0E-07               | NA         | 8.6E-08 | NA                   | 1.9E-07               | Kidney                               | 1.3E-05   | NA         | 1.1E-05 | 2.4E-05               |
|                             |                       |                | Benzo(k)fluoranthene   | 2.5E-09               | NA         | 2.1E-09 | NA                   | 4.6E-09               | Kidney                               | 3.2E-06   | NA         | 2.7E-06 | 5.9E-06               |
|                             |                       |                | Carbazole              | 1.5E-07               | NA         | 1.0E-07 | NA                   | 2.6E-07               | --                                   | NA        | --         | --      | --                    |
|                             |                       |                | Chrysene               | 8.9E-10               | NA         | 7.6E-10 | NA                   | 1.7E-09               | Kidney                               | 1.1E-05   | NA         | 9.8E-06 | 2.1E-05               |
|                             |                       |                | Dibenz(a,h)anthracene  | 3.0E-07               | NA         | 2.5E-07 | NA                   | 5.5E-07               | Kidney                               | 3.8E-06   | NA         | 3.2E-06 | 7.0E-06               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 8.1E-08               | NA         | 7.0E-08 | NA                   | 1.5E-07               | Kidney                               | 1.0E-05   | NA         | 8.9E-06 | 1.9E-05               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.5E-04   | NA         | --      | 2.5E-04               |
|                             |                       |                | Arsenic                | 4.9E-07               | NA         | 9.8E-08 | NA                   | 5.9E-07               | Skin                                 | 3.1E-03   | NA         | 6.1E-04 | 3.7E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.4E-05   | NA         | --      | 6.4E-05               |
|                             |                       |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.2E-05   | NA         | 1.6E-05 | 7.8E-05               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.3E-04   | NA         | --      | 9.3E-04               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.0E-03   | NA         | --      | 3.0E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.1E-04   | NA         | --      | 1.1E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       | --                                   | --        | NA         | --      | --                    |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.6E-04   | NA         | --      | 1.6E-04               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.1E-04   | NA         | --      | 8.1E-04               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      | --        | --         | --      |                       |
|                             |                       |                | CHEMICAL TOTAL         | 2.3E-06               | --         | 1.6E-06 | --                   | 4E-06                 |                                      | 1.3E-02   | --         | 6.8E-04 | 1E-02                 |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-02                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 4E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.6E-04 |
| TOTAL KIDNEY HI =           | 1.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.5E-03 |
| TOTAL NOAEL HI =            | 3.3E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.7E-03 |
|                             | --      |

**TABLE I-58**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 4               | Benzo(a)anthracene     | 5.5E-07               | NA         | 4.7E-07 | NA                   | 1.0E-06               | Kidney                               | 7.0E-05   | NA         | 6.0E-05 | 1.3E-04               |
|            |                       |                      | Benzo(a)pyrene         | 7.0E-06               | NA         | 6.0E-06 | NA                   | 1.3E-05               | Kidney                               | 8.9E-05   | NA         | 7.6E-05 | 1.7E-04               |
|            |                       |                      | Benzo(b)fluoranthene   | 6.2E-07               | NA         | 5.4E-07 | NA                   | 1.2E-06               | Kidney                               | 8.0E-05   | NA         | 6.9E-05 | 1.5E-04               |
|            |                       |                      | Benzo(k)fluoranthene   | 1.5E-08               | NA         | 1.3E-08 | NA                   | 2.9E-08               | Kidney                               | 2.0E-05   | NA         | 1.7E-05 | 3.7E-05               |
|            |                       |                      | Carbazole              | 9.6E-07               | NA         | 6.3E-07 | NA                   | 1.6E-06               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 5.6E-09               | NA         | 4.8E-09 | NA                   | 1.0E-08               | Kidney                               | 7.1E-05   | NA         | 6.1E-05 | 1.3E-04               |
|            |                       |                      | Dibenz(a,h)anthracene  | 1.9E-06               | NA         | 1.6E-06 | NA                   | 3.4E-06               | Kidney                               | 2.4E-05   | NA         | 2.0E-05 | 4.4E-05               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 5.1E-07               | NA         | 4.4E-07 | NA                   | 9.4E-07               | Kidney                               | 6.5E-05   | NA         | 5.6E-05 | 1.2E-04               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.2E-03   | NA         | --      | 8.2E-03               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.6E-03   | NA         | --      | 1.6E-03               |
|            |                       |                      | Arsenic                | 3.1E-06               | NA         | 6.1E-07 | NA                   | 3.7E-06               | Skin                                 | 1.9E-02   | NA         | 3.8E-03 | 2.3E-02               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.0E-04   | NA         | --      | 4.0E-04               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.9E-04   | NA         | 1.0E-04 | 4.9E-04               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.8E-03   | NA         | --      | 5.8E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.9E-02   | NA         | --      | 1.9E-02               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 6.8E-04   | NA         | --      | 6.8E-04               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.3E-03   | NA         | --      | 7.3E-03               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.0E-03   | NA         | --      | 1.0E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.1E-03   | NA         | --      | 5.1E-03               |
|            |                       |                      | CHEMICAL TOTAL         | 1.5E-05               | --         | 1.0E-05 | --                   | 2E-05                 |                                      | 8.3E-02   | --         | 4.3E-03 | 9E-02                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 9E-02                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 9E-02                 |
| SOIL       | AIR                   | DUST AT AREA 4       | Benzo(a)anthracene     | NA                    | 1.4E-11    | NA      | NA                   | 1.4E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 1.8E-10    | NA      | NA                   | 1.8E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 1.6E-11    | NA      | NA                   | 1.6E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 4.0E-12    | NA      | NA                   | 4.0E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 1.4E-12    | NA      | NA                   | 1.4E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 5.2E-11    | NA      | NA                   | 5.2E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 1.3E-11    | NA      | NA                   | 1.3E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.8E-04    | NA      | 2.8E-04               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 1.5E-09    | NA      | NA                   | 1.5E-09               | Cardiovascular / Nervous             | NA        | 6.6E-05    | NA      | 6.6E-05               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 2.7E-05    | NA      | 2.7E-05               |
|            |                       |                      | Cadmium                | NA                    | 4.3E-11    | NA      | NA                   | 4.3E-11               | Kidney / Respiratory                 | NA        | 3.3E-06    | NA      | 3.3E-06               |
|            |                       |                      | Chromium               | NA                    | 1.3E-08    | NA      | NA                   | 1.3E-08               | Respiratory                          | NA        | 3.0E-05    | NA      | 3.0E-05               |
|            |                       |                      | Cobalt                 | NA                    | 3.1E-09    | NA      | NA                   | 3.1E-09               | Respiratory                          | NA        | 1.6E-04    | NA      | 1.6E-04               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.2E-03    | NA      | 1.2E-03               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.8E-07    | NA      | 1.8E-07               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 4.4E-05    | NA      | 4.4E-05               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 1.8E-08    | --      | --                   | 2E-08                 |                                      | --        | 1.8E-03    | --      | 2E-03                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-08                 |                                      |           |            |         | 2E-03                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-08                 |                                      |           |            |         | 2E-03                 |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 9E-02                 |

TABLE I-58  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|--------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|        |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |

|                             |  |       |                               |       |
|-----------------------------|--|-------|-------------------------------|-------|
| RECEPTOR TOTAL              |  | 2E-05 |                               | 9E-02 |
| TOTAL RISK ACROSS ALL MEDIA |  | 2E-05 | TOTAL HAZARD ACROSS ALL MEDIA | 9E-02 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.6E-03 |
| TOTAL CARDIOVASCULAR HI =   | 6.6E-05 |
| TOTAL DEVELOPMENTAL HI =    | 9.3E-05 |
| TOTAL ENDOCRINE HI =        | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.6E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.0E-03 |
| TOTAL KIDNEY HI =           | 6.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.7E-02 |
| TOTAL NOAEL HI =            | 2.1E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.3E-02 |
| TOTAL RESPIRATORY HI =      | 1.9E-04 |



**TABLE I-59**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 4         | Benzo(a)anthracene     | 3.1E-07               | NA         | 5.3E-07 | NA                   | 8.3E-07               | Kidney                               | 3.9E-05   | NA         | 6.7E-05 | 1.1E-04               |
|        |                 |                | Benzo(a)pyrene         | 3.9E-06               | NA         | 6.6E-06 | NA                   | 1.1E-05               | Kidney                               | 4.9E-05   | NA         | 8.5E-05 | 1.3E-04               |
|        |                 |                | Benzo(b)fluoranthene   | 3.5E-07               | NA         | 6.0E-07 | NA                   | 9.4E-07               | Kidney                               | 4.4E-05   | NA         | 7.6E-05 | 1.2E-04               |
|        |                 |                | Benzo(k)fluoranthene   | 8.6E-09               | NA         | 1.5E-08 | NA                   | 2.3E-08               | Kidney                               | 1.1E-05   | NA         | 1.9E-05 | 3.0E-05               |
|        |                 |                | Carbazole              | 5.3E-07               | NA         | 7.1E-07 | NA                   | 1.2E-06               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 3.1E-09               | NA         | 5.3E-09 | NA                   | 8.4E-09               | Kidney                               | 3.9E-05   | NA         | 6.8E-05 | 1.1E-04               |
|        |                 |                | Dibenz(a,h)anthracene  | 1.0E-06               | NA         | 1.8E-06 | NA                   | 2.8E-06               | Kidney                               | 1.3E-05   | NA         | 2.3E-05 | 3.6E-05               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.8E-07               | NA         | 4.8E-07 | NA                   | 7.7E-07               | Kidney                               | 3.6E-05   | NA         | 6.2E-05 | 9.8E-05               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.6E-03   | NA         | --      | 4.6E-03               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 8.8E-04   | NA         | --      | 8.8E-04               |
|        |                 |                | Arsenic                | 1.7E-06               | NA         | 6.8E-07 | NA                   | 2.4E-06               | Skin                                 | 1.1E-02   | NA         | 4.2E-03 | 1.5E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.2E-04   | NA         | --      | 2.2E-04               |
|        |                 |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.1E-04   | NA         | 1.1E-04 | 3.3E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.2E-03   | NA         | --      | 3.2E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.8E-04   | NA         | --      | 3.8E-04               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.1E-03   | NA         | --      | 4.1E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 5.7E-04   | NA         | --      | 5.7E-04               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.0E-03   | NA         | --      | 8.0E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.8E-03   | NA         | --      | 2.8E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            | --      |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.8E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.0E-02 |
|                             | --      |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.8E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 5.7E-04 |
| TOTAL KIDNEY HI =           | 4.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 8.7E-03 |
| TOTAL NOAEL HI =            | 1.2E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.5E-02 |
|                             | --      |

**TABLE I-60**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 4               | Benzo(a)anthracene     | 8.1E-08               | NA         | 3.2E-08 | NA                   | 1.1E-07               | Kidney                               | 2.6E-05   | NA         | 1.0E-05 | 3.6E-05               |
|            |                       |                      | Benzo(a)pyrene         | 1.0E-06               | NA         | 4.0E-07 | NA                   | 1.4E-06               | Kidney                               | 3.3E-05   | NA         | 1.3E-05 | 4.5E-05               |
|            |                       |                      | Benzo(b)fluoranthene   | 9.2E-08               | NA         | 3.6E-08 | NA                   | 1.3E-07               | Kidney                               | 2.9E-05   | NA         | 1.1E-05 | 4.1E-05               |
|            |                       |                      | Benzo(k)fluoranthene   | 2.3E-09               | NA         | 8.9E-10 | NA                   | 3.2E-09               | Kidney                               | 7.3E-06   | NA         | 2.8E-06 | 1.0E-05               |
|            |                       |                      | Carbazole              | 1.4E-07               | NA         | 4.2E-08 | NA                   | 1.8E-07               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 8.2E-10               | NA         | 3.2E-10 | NA                   | 1.1E-09               | Kidney                               | 2.6E-05   | NA         | 1.0E-05 | 3.6E-05               |
|            |                       |                      | Dibenz(a,h)anthracene  | 2.7E-07               | NA         | 1.1E-07 | NA                   | 3.8E-07               | Kidney                               | 8.7E-06   | NA         | 3.4E-06 | 1.2E-05               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 7.5E-08               | NA         | 2.9E-08 | NA                   | 1.0E-07               | Kidney                               | 2.4E-05   | NA         | 9.3E-06 | 3.3E-05               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.0E-02   | NA         | --      | 3.0E-02               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 5.8E-03   | NA         | --      | 5.8E-03               |
|            |                       |                      | Arsenic                | 4.5E-07               | NA         | 4.1E-08 | NA                   | 4.9E-07               | Skin                                 | 7.0E-02   | NA         | 6.3E-03 | 7.7E-02               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-03   | NA         | --      | 1.5E-03               |
|            |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       |                                      | 2.8E-03   | NA         | 3.4E-04 | 3.2E-03               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.2E-03   | NA         | --      | 3.2E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 6.8E-03   | NA         | --      | 6.8E-03               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 9.9E-03   | NA         | --      | 9.9E-03               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.7E-02   | NA         | --      | 2.7E-02               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.7E-04   | NA         | --      | 5.7E-04               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.1E-02   | NA         | --      | 1.1E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.4E-03   | NA         | --      | 9.4E-03               |
|            |                       |                      | CHEMICAL TOTAL         | 2.1E-06               | --         | 6.8E-07 | --                   | 3E-06                 |                                      | 1.8E-01   | --         | 6.7E-03 | 2E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |
| SOIL       | AIR                   | DUST AT AREA 4       | Benzo(a)anthracene     | NA                    | 1.8E-10    | NA      | NA                   | 1.8E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 2.3E-09    | NA      | NA                   | 2.3E-09               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 2.0E-10    | NA      | NA                   | 2.0E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(k)fluoranthene   | NA                    | 5.1E-11    | NA      | NA                   | 5.1E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 1.8E-11    | NA      | NA                   | 1.8E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 6.6E-10    | NA      | NA                   | 6.6E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 1.7E-10    | NA      | NA                   | 1.7E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 8.9E-02    | NA      | 8.9E-02               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 1.9E-08    | NA      | NA                   | 1.9E-08               | Cardiovascular / Nervous             | NA        | 2.1E-02    | NA      | 2.1E-02               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 8.6E-04    | NA      | 8.6E-04               |
|            |                       |                      | Cadmium                | NA                    | 5.4E-10    | NA      | NA                   | 5.4E-10               | Kidney / Respiratory                 | NA        | 1.0E-03    | NA      | 1.0E-03               |
|            |                       |                      | Chromium               | NA                    | 1.6E-07    | NA      | NA                   | 1.6E-07               | Respiratory                          | NA        | 1.9E-01    | NA      | 1.9E-01               |
|            |                       |                      | Cobalt                 | NA                    | 3.9E-08    | NA      | NA                   | 3.9E-08               | Respiratory                          | NA        | 1.5E-02    | NA      | 1.5E-02               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 3.7E-01    | NA      | 3.7E-01               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 5.6E-05    | NA      | 5.6E-05               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 1.4E-02    | NA      | 1.4E-02               |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 2.2E-07    | --      | --                   | 2E-07                 |                                      | --        | 7.0E-01    | --      | 7E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-07                 |                                      |           |            |         | 7E-01                 |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-07                 |                                      |           |            |         | 7E-01                 |
| SOIL TOTAL |                       |                      |                        |                       |            |         |                      | 3E-06                 |                                      |           |            |         | 9E-01                 |

TABLE I-60  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|--------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|        |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |

|                       |  |  |  |  |  |  |  |              |  |  |  |  |              |
|-----------------------|--|--|--|--|--|--|--|--------------|--|--|--|--|--------------|
| <b>RECEPTOR TOTAL</b> |  |  |  |  |  |  |  | <b>3E-06</b> |  |  |  |  | <b>9E-01</b> |
|                       |  |  |  |  |  |  |  | <b>3E-06</b> |  |  |  |  | <b>9E-01</b> |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.8E-03 |
| TOTAL CARDIOVASCULAR HI =   | 2.1E-02 |
| TOTAL DEVELOPMENTAL HI =    | 2.2E-02 |
| TOTAL ENDOCRINE HI =        | 6.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.8E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.4E-01 |
| TOTAL NOAEL HI =            | 4.1E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 7.7E-02 |
| TOTAL RESPIRATORY HI =      | 2.0E-01 |

**TABLE I-61**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SURFACE SOIL          | AREA 4         | Benzo(a)anthracene     | 1.2E-06               | NA         | 4.4E-07        | NA                   | 1.6E-06               | Kidney                               | 1.5E-04   | NA         | 5.5E-05 | 2.1E-04               |       |
|                             |                       |                | Benzo(a)pyrene         | 1.5E-05               | NA         | 5.5E-06        | NA                   | 2.1E-05               | Kidney                               | 1.9E-04   | NA         | 7.0E-05 | 2.6E-04               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 1.4E-06               | NA         | 4.9E-07        | NA                   | 1.9E-06               | Kidney                               | 1.7E-04   | NA         | 6.3E-05 | 2.4E-04               |       |
|                             |                       |                | Benzo(k)fluoranthene   | 3.4E-08               | NA         | 1.2E-08        | NA                   | 4.6E-08               | Kidney                               | 4.3E-05   | NA         | 1.6E-05 | 5.8E-05               |       |
|                             |                       |                | Carbazole              | 5.0E-07               | NA         | 1.4E-07        | NA                   | 6.4E-07               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Chrysene               | 1.2E-08               | NA         | 4.4E-09        | NA                   | 1.6E-08               | Kidney                               | 1.5E-04   | NA         | 5.6E-05 | 2.1E-04               |       |
|                             |                       |                | Dibenz(a,h)anthracene  | 4.0E-06               | NA         | 1.5E-06        | NA                   | 5.5E-06               | Kidney                               | 5.1E-05   | NA         | 1.9E-05 | 7.0E-05               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.1E-06               | NA         | 4.0E-07        | NA                   | 1.5E-06               | Kidney                               | 1.4E-04   | NA         | 5.1E-05 | 1.9E-04               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.8E-02   | NA         | --      | 1.8E-02               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.4E-03   | NA         | --      | 3.4E-03               |       |
|                             |                       |                | Arsenic                | 1.6E-06               | NA         | 1.3E-07        | NA                   | 1.7E-06               | Skin                                 | 4.1E-02   | NA         | 3.5E-03 | 4.5E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.6E-04   | NA         | --      | 8.6E-04               |       |
|                             |                       |                | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.3E-04   | NA         | 9.3E-05 | 9.3E-04               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 4.0E-02   | NA         | --      | 4.0E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.5E-03   | NA         | --      | 1.5E-03               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.6E-02   | NA         | --      | 1.6E-02               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.2E-03   | NA         | --      | 2.2E-03               |       |
|                             |                       |                | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.1E-02   | NA         | --      | 3.1E-02               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 2.5E-05              | --                    | 8.6E-06                              | --        | 3E-05      |         | 1.8E-01               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 3E-05                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 3E-05                |                       |                                      |           |            | 2E-01   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 3E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.4E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.2E-03 |
| TOTAL KIDNEY HI =           | 1.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.4E-02 |
| TOTAL NOAEL HI =            | 4.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.5E-02 |
|                             | --      |

**TABLE I-62**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 4         | Benzo(a)anthracene     | 2.3E-07               | NA         | 1.1E-07 | NA                   | 3.4E-07               | Kidney                               | 1.8E-05   | NA         | 8.1E-06 | 2.6E-05               |
|                             |                       |                | Benzo(a)pyrene         | 2.9E-06               | NA         | 1.3E-06 | NA                   | 4.3E-06               | Kidney                               | 2.2E-05   | NA         | 1.0E-05 | 3.2E-05               |
|                             |                       |                | Benzo(b)fluoranthene   | 2.6E-07               | NA         | 1.2E-07 | NA                   | 3.8E-07               | Kidney                               | 2.0E-05   | NA         | 9.2E-06 | 2.9E-05               |
|                             |                       |                | Benzo(k)fluoranthene   | 6.5E-09               | NA         | 3.0E-09 | NA                   | 9.5E-09               | Kidney                               | 4.9E-06   | NA         | 2.3E-06 | 7.2E-06               |
|                             |                       |                | Carbazole              | 2.3E-07               | NA         | 8.2E-08 | NA                   | 3.1E-07               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Chrysene               | 2.3E-09               | NA         | 1.1E-09 | NA                   | 3.4E-09               | Kidney                               | 1.8E-05   | NA         | 8.2E-06 | 2.6E-05               |
|                             |                       |                | Dibenz(a,h)anthracene  | 7.7E-07               | NA         | 3.6E-07 | NA                   | 1.1E-06               | Kidney                               | 5.9E-06   | NA         | 2.7E-06 | 8.6E-06               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 2.1E-07               | NA         | 9.9E-08 | NA                   | 3.1E-07               | Kidney                               | 1.6E-05   | NA         | 7.5E-06 | 2.4E-05               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.1E-03   | NA         | --      | 2.1E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 4.0E-04   | NA         | --      | 4.0E-04               |
|                             |                       |                | Arsenic                | 7.4E-07               | NA         | 7.9E-08 | NA                   | 8.2E-07               | Skin                                 | 4.8E-03   | NA         | 5.1E-04 | 5.3E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.9E-05   | NA         | --      | 9.9E-05               |
|                             |                       |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.6E-05   | NA         | 1.4E-05 | 1.1E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.6E-03   | NA         | --      | 4.6E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.7E-04   | NA         | --      | 1.7E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.8E-03   | NA         | --      | 1.8E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.6E-04   | NA         | --      | 2.6E-04               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.6E-03   | NA         | --      | 3.6E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                | CHEMICAL TOTAL         | 5.4E-06               | --         | 2.2E-06 | --                   | 8E-06                 |                                      | 2.1E-02   | --         | 5.7E-04 | 2E-02                 |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 8E-06                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 8E-06                 |                                      |           |            |         | 2E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 8E-06                 |                                      |           |            |         | 2E-02                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 8E-06                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 8E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.0E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.0E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.6E-04 |
| TOTAL KIDNEY HI =           | 1.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.9E-03 |
| TOTAL NOAEL HI =            | 5.2E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 5.3E-03 |
|                             | --      |

**TABLE I-63**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                 |                       |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL    | AREA 4                | Benzo(a)anthracene     | 8.1E-06               | NA                   | 2.9E-06        | NA                   | 1.1E-05               | Kidney                               | 1.0E-03   | NA         | 3.7E-04 | 1.4E-03               |    |         |       |
|                             |                 |                       | Benzo(a)pyrene         | 1.0E-04               | NA                   | 3.7E-05        | NA                   | 1.4E-04               | Kidney                               | 1.3E-03   | NA         | 4.7E-04 | 1.8E-03               |    |         |       |
|                             |                 |                       | Benzo(b)fluoranthene   | 9.1E-06               | NA                   | 3.3E-06        | NA                   | 1.2E-05               | Kidney                               | 1.2E-03   | NA         | 4.2E-04 | 1.6E-03               |    |         |       |
|                             |                 |                       | Benzo(k)fluoranthene   | 2.3E-07               | NA                   | 8.3E-08        | NA                   | 3.1E-07               | Kidney                               | 2.9E-04   | NA         | 1.0E-04 | 3.9E-04               |    |         |       |
|                             |                 |                       | Carbazole              | 3.4E-06               | NA                   | 9.4E-07        | NA                   | 4.3E-06               |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                       | Chrysene               | 8.1E-08               | NA                   | 3.0E-08        | NA                   | 1.1E-07               | Kidney                               | 1.0E-03   | NA         | 3.8E-04 | 1.4E-03               |    |         |       |
|                             |                 |                       | Dibenz(a,h)anthracene  | 2.7E-05               | NA                   | 9.9E-06        | NA                   | 3.7E-05               | Kidney                               | 3.4E-04   | NA         | 1.3E-04 | 4.7E-04               |    |         |       |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 7.4E-06               | NA                   | 2.7E-06        | NA                   | 1.0E-05               | Kidney                               | 9.4E-04   | NA         | 3.4E-04 | 1.3E-03               |    |         |       |
|                             |                 |                       | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System<br>General Toxicity / | 1.2E-01   | NA         | --      | 1.2E-01               |    |         |       |
|                             |                 |                       | Antimony               | NC                    | NA                   | NC             | NA                   |                       | Hematological                        | 2.3E-02   | NA         | --      | 2.3E-02               |    |         |       |
|                             |                 |                       | Arsenic                | 1.1E-05               | NA                   | 9.0E-07        | NA                   | 1.2E-05               | Skin                                 | 2.8E-01   | NA         | 2.3E-02 | 3.0E-01               |    |         |       |
|                             |                 |                       | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 5.8E-03   | NA         | --      | 5.8E-03               |    |         |       |
|                             |                 |                       | Cadmium                | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 5.6E-03   | NA         | 6.3E-04 | 6.2E-03               |    |         |       |
|                             |                 |                       | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 8.4E-02   | NA         | --      | 8.4E-02               |    |         |       |
|                             |                 |                       | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                            | 2.7E-01   | NA         | --      | 2.7E-01               |    |         |       |
|                             |                 |                       | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                         | 9.8E-03   | NA         | --      | 9.8E-03               |    |         |       |
|                             |                 |                       | Lead                   | --                    | NA                   | --             | NA                   |                       |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                       | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.1E-01   | NA         | --      | 1.1E-01               |    |         |       |
|                             |                 |                       | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                        | 1.5E-02   | NA         | --      | 1.5E-02               |    |         |       |
|                             |                 |                       | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 2.1E-01   | NA         | --      | 2.1E-01               |    |         |       |
|                             |                 |                       | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 7.4E-02   | NA         | --      | 7.4E-02               |    |         |       |
|                             |                 |                       |                        |                       |                      |                |                      |                       |                                      |           |            | --      |                       |    |         |       |
|                             |                 |                       |                        |                       |                      | CHEMICAL TOTAL | 1.7E-04              | --                    | 5.8E-05                              | --        | 2E-04      |         | 1.2E+00               | -- | 2.6E-02 | 1E+00 |
|                             |                 |                       |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                      |           |            | 2E-04   |                       |    |         | 1E+00 |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |                      |                |                      |                       | 2E-04                                |           |            |         | 1E+00                 |    |         |       |
| SOIL TOTAL                  |                 |                       |                        |                       |                      |                |                      | 2E-04                 |                                      |           |            | 1E+00   |                       |    |         |       |
| RECEPTOR TOTAL              |                 |                       |                        |                       |                      |                |                      | 2E-04                 |                                      |           |            | 1E+00   |                       |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |                      |                |                      | 2E-04                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            | 1E+00   |                       |    |         |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.7E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.3E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 1.5E-02 |
| TOTAL KIDNEY HI =           | 9.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.3E-01 |
| TOTAL NOAEL HI =            | 3.0E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.0E-01 |
|                             | --      |

**TABLE I-64**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 4         | Benzo(a)anthracene     | 1.6E-06               | NA         | 7.2E-07 | NA                   | 2.3E-06               | Kidney                               | 1.2E-04   | NA         | 5.5E-05 | 1.7E-04               |
|                             |                       |                | Benzo(a)pyrene         | 2.0E-05               | NA         | 9.1E-06 | NA                   | 2.9E-05               | Kidney                               | 1.5E-04   | NA         | 6.9E-05 | 2.2E-04               |
|                             |                       |                | Benzo(b)fluoranthene   | 1.8E-06               | NA         | 8.1E-07 | NA                   | 2.6E-06               | Kidney                               | 1.3E-04   | NA         | 6.2E-05 | 2.0E-04               |
|                             |                       |                | Benzo(k)fluoranthene   | 4.4E-08               | NA         | 2.0E-08 | NA                   | 6.4E-08               | Kidney                               | 3.3E-05   | NA         | 1.5E-05 | 4.9E-05               |
|                             |                       |                | Carbazole              | 1.5E-06               | NA         | 5.5E-07 | NA                   | 2.1E-06               | --                                   | NA        | --         | --      | --                    |
|                             |                       |                | Chrysene               | 1.6E-08               | NA         | 7.3E-09 | NA                   | 2.3E-08               | Kidney                               | 1.2E-04   | NA         | 5.5E-05 | 1.7E-04               |
|                             |                       |                | Dibenz(a,h)anthracene  | 5.2E-06               | NA         | 2.4E-06 | NA                   | 7.6E-06               | Kidney                               | 4.0E-05   | NA         | 1.8E-05 | 5.8E-05               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.4E-06               | NA         | 6.6E-07 | NA                   | 2.1E-06               | Kidney                               | 1.1E-04   | NA         | 5.0E-05 | 1.6E-04               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-02   | NA         | --      | 1.4E-02               |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Arsenic                | 5.0E-06               | NA         | 5.3E-07 | NA                   | 5.5E-06               | Hematological                        | 2.7E-03   | NA         | --      | 2.7E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 3.2E-02   | NA         | 3.4E-03 | 3.6E-02               |
|                             |                       |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.7E-04   | NA         | --      | 6.7E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.5E-04   | NA         | 9.2E-05 | 7.4E-04               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.7E-03   | NA         | --      | 9.7E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.1E-02   | NA         | --      | 3.1E-02               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       | Undetermined                         | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       |                                      | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.2E-02   | NA         | --      | 1.2E-02               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.7E-03   | NA         | --      | 1.7E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.4E-02   | NA         | --      | 2.4E-02               |
|                             |                       |                |                        |                       |            |         |                      |                       | Kidney                               | 8.5E-03   | NA         | --      | 8.5E-03               |
|                             |                       |                |                        | CHEMICAL TOTAL        | 3.6E-05    | --      | 1.5E-05              | --                    | 5E-05                                |           | 1.4E-01    | --      | 3.9E-03               |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 1E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 1E-01                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 1E-01                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 5E-05                 |                                      |           |            |         | 1E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 5E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.1E-02 |
|                             | --      |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.7E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.7E-03 |
| TOTAL KIDNEY HI =           | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.6E-02 |
| TOTAL NOAEL HI =            | 3.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.6E-02 |
|                             | --      |

TABLE I-65  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: CURRENT  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | AREA 4         | Benzo(a)anthracene     | 3.2E-08               | NA         | 2.8E-08 | NA                   | 6.0E-08               | Kidney                               | 4.1E-06   | NA         | 3.5E-06 | 7.6E-06               |
|                             |                       |                | Benzo(a)pyrene         | 7.3E-07               | NA         | 6.3E-07 | NA                   | 1.4E-06               | Kidney                               | 9.4E-06   | NA         | 8.0E-06 | 1.7E-05               |
|                             |                       |                | Benzo(b)fluoranthene   | 1.1E-07               | NA         | 9.1E-08 | NA                   | 2.0E-07               | Kidney                               | 1.4E-05   | NA         | 1.2E-05 | 2.5E-05               |
|                             |                       |                | Carbazole              | 2.8E-11               | NA         | 1.9E-11 | NA                   | 4.7E-11               | --                                   | NA        | --         | NA      | --                    |
|                             |                       |                | Chrysene               | 6.3E-10               | NA         | 5.4E-10 | NA                   | 1.2E-09               | Kidney                               | 8.1E-06   | NA         | 6.9E-06 | 1.5E-05               |
|                             |                       |                | Dibenz(a,h)anthracene  | 1.4E-07               | NA         | 1.2E-07 | NA                   | 2.6E-07               | Kidney                               | 1.8E-06   | NA         | 1.6E-06 | 3.4E-06               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 5.1E-08               | NA         | 4.4E-08 | NA                   | 9.5E-08               | Kidney                               | 6.5E-06   | NA         | 5.6E-06 | 1.2E-05               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.5E-03   | NA         | --      | 2.5E-03               |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   | 3.0E-04   | NA         | --      | 3.0E-04               |
|                             |                       |                | Arsenic                | 3.3E-07               | NA         | 6.6E-08 | NA                   | 4.0E-07               | Skin                                 | 2.1E-03   | NA         | 4.1E-04 | 2.5E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.1E-05   | NA         | --      | 7.1E-05               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.0E-03   | NA         | --      | 5.0E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.1E-04   | NA         | --      | 1.1E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       | --                                   | --        | NA         | --      | --                    |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.1E-04   | NA         | --      | 2.1E-04               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.3E-03   | NA         | --      | 3.3E-03               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.9E-04   | NA         | --      | 9.9E-04               |
|                             |                       |                |                        | CHEMICAL TOTAL        | 1.4E-06    | --      | 9.8E-07              | --                    | 2E-06                                |           | 1.7E-02    | --      | 4.5E-04               |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/18/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.0E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.0E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.1E-04 |
| TOTAL KIDNEY HI =           | 1.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.9E-03 |
| TOTAL NOAEL HI =            | 4.8E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 2.5E-03 |
|                             | --      |



**TABLE I-66**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 2.0E-07               | NA         | 1.7E-07 | NA                   | 3.7E-07               | Kidney                               | 2.6E-05   | NA         | 2.2E-05 | 4.8E-05               |
|            |                       |                      | Benzo(a)pyrene         | 4.6E-06               | NA         | 3.9E-06 | NA                   | 8.5E-06               | Kidney                               | 5.9E-05   | NA         | 5.0E-05 | 1.1E-04               |
|            |                       |                      | Benzo(b)fluoranthene   | 6.6E-07               | NA         | 5.7E-07 | NA                   | 1.2E-06               | Kidney                               | 8.5E-05   | NA         | 7.3E-05 | 1.6E-04               |
|            |                       |                      | Carbazole              | 1.8E-10               | NA         | 1.2E-10 | NA                   | 2.9E-10               |                                      | --        | NA         | --      |                       |
|            |                       |                      | Chrysene               | 3.9E-09               | NA         | 3.4E-09 | NA                   | 7.3E-09               | Kidney                               | 5.0E-05   | NA         | 4.3E-05 | 9.4E-05               |
|            |                       |                      | Dibenz(a,h)anthracene  | 8.8E-07               | NA         | 7.6E-07 | NA                   | 1.6E-06               | Kidney                               | 1.1E-05   | NA         | 9.7E-06 | 2.1E-05               |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 3.2E-07               | NA         | 2.7E-07 | NA                   | 5.9E-07               | Kidney                               | 4.1E-05   | NA         | 3.5E-05 | 7.6E-05               |
|            |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-02   | NA         | --      | 1.6E-02               |
|            |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|            |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.8E-03   | NA         | --      | 1.8E-03               |
|            |                       |                      | Arsenic                | 2.1E-06               | NA         | 4.1E-07 | NA                   | 2.5E-06               | Skin                                 | 1.3E-02   | NA         | 2.6E-03 | 1.6E-02               |
|            |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.4E-04   | NA         | --      | 4.4E-04               |
|            |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.6E-03   | NA         | --      | 8.6E-03               |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.1E-02   | NA         | --      | 3.1E-02               |
|            |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 6.9E-04   | NA         | --      | 6.9E-04               |
|            |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|            |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.9E-03   | NA         | --      | 8.9E-03               |
|            |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.3E-03   | NA         | --      | 1.3E-03               |
|            |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.1E-02   | NA         | --      | 2.1E-02               |
|            |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.2E-03   | NA         | --      | 6.2E-03               |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           | --         |         |                       |
|            |                       |                      | CHEMICAL TOTAL         | 8.7E-06               | --         | 6.1E-06 | --                   | 1E-05                 |                                      | 1.1E-01   | --         | 2.8E-03 | 1E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         | 1E-05                | 1E-01                 |                                      |           |            |         |                       |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-05                 | 1E-01                                |           |            |         |                       |
|            |                       |                      |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 4       | Benzo(a)anthracene     | NA                    | 5.2E-12    | NA      | NA                   | 5.2E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 1.2E-10    | NA      | NA                   | 1.2E-10               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 1.7E-11    | NA      | NA                   | 1.7E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Carbazole              | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Chrysene               | NA                    | 1.0E-12    | NA      | NA                   | 1.0E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 2.5E-11    | NA      | NA                   | 2.5E-11               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 8.2E-12    | NA      | NA                   | 8.2E-12               |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 5.4E-04    | NA      | 5.4E-04               |
|            |                       |                      | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Developmental /                      |           |            |         |                       |
|            |                       |                      |                        |                       |            |         |                      |                       | Cardiovascular / Nervous             |           |            |         |                       |
|            |                       |                      | Arsenic                | NA                    | 1.0E-09    | NA      | NA                   | 1.0E-09               |                                      | NA        | 4.5E-05    | NA      | 4.5E-05               |
|            |                       |                      | Barium                 | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 3.0E-05    | NA      | 3.0E-05               |
|            |                       |                      | Chromium               | NA                    | 1.9E-08    | NA      | NA                   | 1.9E-08               | Respiratory                          | NA        | 4.4E-05    | NA      | 4.4E-05               |
|            |                       |                      | Cobalt                 | NA                    | 5.1E-09    | NA      | NA                   | 5.1E-09               | Respiratory                          | NA        | 2.7E-04    | NA      | 2.7E-04               |
|            |                       |                      | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead                   | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 1.4E-03    | NA      | 1.4E-03               |
|            |                       |                      | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.2E-07    | NA      | 2.2E-07               |
|            |                       |                      | Thallium               | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       | Vanadium             | NA                     | NC                    | NA         | NA      |                      |                       | NA                                   | 5.4E-05   | NA         | 5.4E-05 |                       |
|            |                       |                      | CHEMICAL TOTAL         | --                    | 2.5E-08    | --      | --                   | 3E-08                 |                                      | --        | 2.4E-03    | --      | 2E-03                 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |         | 3E-08                | 2E-03                 |                                      |           |            |         |                       |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-08                 | 2E-03                                |           |            |         |                       |
| SOIL TOTAL |                       |                      |                        |                       |            |         | 1E-05                | 1E-01                 |                                      |           |            |         |                       |

TABLE I-66  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |       |
|                             |                 |                |          |                       |            |        |                      |                       |                                      |                               |            |        |                       |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                      |                       |                                      |                               |            |        |                       |       |
|                             |                 |                |          |                       | 1E-05      |        |                      |                       |                                      | 1E-01                         |            |        |                       |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       | 1E-05      |        |                      |                       |                                      | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       | 1E-01 |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.8E-03 |
| TOTAL CARDIOVASCULAR HI =   | 4.5E-05 |
| TOTAL DEVELOPMENTAL HI =    | 7.5E-05 |
| TOTAL ENDOCRINE HI =        | 3.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.8E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.3E-03 |
| TOTAL KIDNEY HI =           | 7.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.7E-02 |
| TOTAL NOAEL HI =            | 3.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.6E-02 |
| TOTAL RESPIRATORY HI =      | 3.1E-04 |

**TABLE I-67**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 1.1E-07               | NA         | 1.9E-07 | NA                   | 3.0E-07               | Kidney                               | 1.4E-05   | NA         | 2.4E-05 | 3.9E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 2.5E-06               | NA         | 4.4E-06 | NA                   | 6.9E-06               | Kidney                               | 3.3E-05   | NA         | 5.6E-05 | 8.8E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.7E-07               | NA         | 6.3E-07 | NA                   | 1.0E-06               | Kidney                               | 4.7E-05   | NA         | 8.1E-05 | 1.3E-04               |       |
|                             |                       |                      | Carbazole              | 9.8E-11               | NA         | 1.3E-10 | NA                   | 2.3E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 2.2E-09               | NA         | 3.8E-09 | NA                   | 5.9E-09               | Kidney                               | 2.8E-05   | NA         | 4.8E-05 | 7.6E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 4.9E-07               | NA         | 8.4E-07 | NA                   | 1.3E-06               | Kidney                               | 6.3E-06   | NA         | 1.1E-05 | 1.7E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.8E-07               | NA         | 3.0E-07 | NA                   | 4.8E-07               | Kidney                               | 2.3E-05   | NA         | 3.9E-05 | 6.1E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.7E-03   | NA         | --      | 8.7E-03               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.0E-03   | NA         | --      | 1.0E-03               |       |
|                             |                       |                      | Arsenic                | 1.2E-06               | NA         | 4.6E-07 | NA                   | 1.6E-06               | Skin                                 | 7.2E-03   | NA         | 2.9E-03 | 1.0E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.5E-04   | NA         | --      | 2.5E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 4.8E-03   | NA         | --      | 4.8E-03               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.8E-04   | NA         | --      | 3.8E-04               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.0E-03   | NA         | --      | 5.0E-03               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 7.2E-04   | NA         | --      | 7.2E-04               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-02   | NA         | --      | 1.2E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.4E-03   | NA         | --      | 3.4E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 4.9E-06    | --      | 6.8E-06              | --                    | 1E-05                                |           | 6.0E-02    | --      | 3.1E-03               | 6E-02 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 1E-05                                |           |            |         |                       | 6E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 6E-02                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 6E-02                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 1E-05                 |                                      |           |            |         | 6E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 1E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 6E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 7.2E-04 |
| TOTAL KIDNEY HI =           | 4.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.4E-02 |
| TOTAL NOAEL HI =            | 1.7E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.0E-02 |
|                             | --      |

**TABLE I-68**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |         |
|------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|---------|
|            |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |         |
| SOIL       | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 2.9E-08               | NA         | 1.1E-08        | NA                   | 4.1E-08               | Kidney                               | 9.4E-06   | NA         | 3.7E-06 | 1.3E-05               |         |
|            |                       |                      | Benzo(a)pyrene         | 6.7E-07               | NA         | 2.6E-07        | NA                   | 9.3E-07               | Kidney                               | 2.1E-05   | NA         | 8.4E-06 | 3.0E-05               |         |
|            |                       |                      | Benzo(b)fluoranthene   | 9.7E-08               | NA         | 3.8E-08        | NA                   | 1.4E-07               | Kidney                               | 3.1E-05   | NA         | 1.2E-05 | 4.3E-05               |         |
|            |                       |                      | Carbazole              | 2.6E-11               | NA         | 7.7E-12        | NA                   | 3.4E-11               |                                      | --        | NA         | --      |                       |         |
|            |                       |                      | Chrysene               | 5.8E-10               | NA         | 2.3E-10        | NA                   | 8.0E-10               | Kidney                               | 1.8E-05   | NA         | 7.2E-06 | 2.6E-05               |         |
|            |                       |                      | Dibenz(a,h)anthracene  | 1.3E-07               | NA         | 5.1E-08        | NA                   | 1.8E-07               | Kidney                               | 4.1E-06   | NA         | 1.6E-06 | 5.8E-06               |         |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | 4.7E-08               | NA         | 1.8E-08        | NA                   | 6.5E-08               | Kidney                               | 1.5E-05   | NA         | 5.8E-06 | 2.1E-05               |         |
|            |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 5.7E-02   | NA         | --      | 5.7E-02               |         |
|            |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |         |
|            |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 6.8E-03   | NA         | --      | 6.8E-03               |         |
|            |                       |                      | Arsenic                | 3.1E-07               | NA         | 2.8E-08        | NA                   | 3.3E-07               | Skin                                 | 4.8E-02   | NA         | 4.3E-03 | 5.2E-02               |         |
|            |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.6E-03   | NA         | --      | 1.6E-03               |         |
|            |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 4.7E-03   | NA         | --      | 4.7E-03               |         |
|            |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |         |
|            |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.0E-02   | NA         | --      | 1.0E-02               |         |
|            |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |         |
|            |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 3.3E-02   | NA         | --      | 3.3E-02               |         |
|            |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.1E-04   | NA         | --      | 7.1E-04               |         |
|            |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.5E-02   | NA         | --      | 1.5E-02               |         |
|            |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-02   | NA         | --      | 1.1E-02               |         |
|            |                       |                      |                        |                       |            | CHEMICAL TOTAL | 1.3E-06              | --                    | 4.1E-07                              | --        | 2E-06      |         | 2.0E-01               | --      |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 2E-06                                | 2E-01     |            |         |                       |         |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 2E-06                 | 2E-01                                |           |            |         |                       |         |
|            |                       |                      |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |         |
| SOIL       | AIR                   | DUST AT AREA 4       | Benzo(a)anthracene     | NA                    | 6.5E-11    | NA             | NA                   | 6.5E-11               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Benzo(a)pyrene         | NA                    | 1.5E-09    | NA             | NA                   | 1.5E-09               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Benzo(b)fluoranthene   | NA                    | 2.2E-10    | NA             | NA                   | 2.2E-10               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Carbazole              | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Chrysene               | NA                    | 1.3E-11    | NA             | NA                   | 1.3E-11               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Dibenz(a,h)anthracene  | NA                    | 3.1E-10    | NA             | NA                   | 3.1E-10               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Indeno(1,2,3-cd)pyrene | NA                    | 1.0E-10    | NA             | NA                   | 1.0E-10               |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Aluminum               | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 1.7E-01    | NA      | 1.7E-01               |         |
|            |                       |                      | Antimony               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      |                        |                       |            |                |                      |                       | Developmental /                      |           |            |         |                       |         |
|            |                       |                      | Arsenic                | NA                    | 1.3E-08    | NA             | NA                   | 1.3E-08               | Cardiovascular / Nervous             |           |            |         |                       |         |
|            |                       |                      | Barium                 | NA                    | NC         | NA             | NA                   |                       | system                               | NA        | 1.4E-02    | NA      | 1.4E-02               |         |
|            |                       |                      | Chromium               | NA                    | 2.4E-07    | NA             | NA                   | 2.4E-07               | Developmental                        | NA        | 9.6E-04    | NA      | 9.6E-04               |         |
|            |                       |                      | Cobalt                 | NA                    | 6.5E-08    | NA             | NA                   | 6.5E-08               | Respiratory                          | NA        | 2.8E-01    | NA      | 2.8E-01               |         |
|            |                       |                      | Copper                 | NA                    | NC         | NA             | NA                   |                       | Respiratory                          | NA        | 2.5E-02    | NA      | 2.5E-02               |         |
|            |                       |                      | Lead                   | NA                    | --         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Manganese              | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 4.5E-01    | NA      | 4.5E-01               |         |
|            |                       |                      | Mercury                | NA                    | NC         | NA             | NA                   |                       | Nervous System                       | NA        | 7.0E-05    | NA      | 7.0E-05               |         |
|            |                       |                      | Thallium               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | --         | NA      |                       |         |
|            |                       |                      | Vanadium               | NA                    | NC         | NA             | NA                   |                       |                                      | NA        | 1.7E-02    | NA      | 1.7E-02               |         |
|            |                       |                      |                        |                       |            | CHEMICAL TOTAL | --                   | 3.2E-07               | --                                   | --        | 3E-07      |         | --                    | 9.6E-01 |
|            |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 3E-07                                | 1E+00     |            |         |                       |         |
|            | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 3E-07                 | 1E+00                                |           |            |         |                       |         |
| SOIL TOTAL |                       |                      |                        |                       |            |                |                      | 2E-06                 | 1E+00                                |           |            |         |                       |         |

TABLE I-68  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |                               |        |                       |       |       |  |  |  |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-----------|-------------------------------|--------|-----------------------|-------|-------|--|--|--|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION                    | DERMAL | EXPOSURE ROUTES TOTAL |       |       |  |  |  |       |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                      |                       |                                      |           |                               |        |                       | 2E-06 |       |  |  |  | 1E+00 |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            |        |                      |                       |                                      | 2E-06     | TOTAL HAZARD ACROSS ALL MEDIA |        |                       |       | 1E+00 |  |  |  |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 6.8E-03 |
| TOTAL CARDIOVASCULAR HI =   | 1.4E-02 |
| TOTAL DEVELOPMENTAL HI =    | 1.5E-02 |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 6.8E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 7.2E-01 |
| TOTAL NOAEL HI =            | 4.7E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 5.2E-02 |
| TOTAL RESPIRATORY HI =      | 3.0E-01 |

**TABLE I-69**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 4.4E-07               | NA         | 1.6E-07 | NA                   | 5.9E-07               | Kidney                               | 5.5E-05   | NA         | 2.0E-05 | 7.5E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 9.9E-06               | NA         | 3.6E-06 | NA                   | 1.4E-05               | Kidney                               | 1.3E-04   | NA         | 4.6E-05 | 1.7E-04               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.4E-06               | NA         | 5.3E-07 | NA                   | 2.0E-06               | Kidney                               | 1.8E-04   | NA         | 6.7E-05 | 2.5E-04               |       |
|                             |                       |                      | Carbazole              | 9.1E-11               | NA         | 2.6E-11 | NA                   | 1.2E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 8.6E-09               | NA         | 3.1E-09 | NA                   | 1.2E-08               | Kidney                               | 1.1E-04   | NA         | 4.0E-05 | 1.5E-04               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.9E-06               | NA         | 7.0E-07 | NA                   | 2.6E-06               | Kidney                               | 2.4E-05   | NA         | 8.9E-06 | 3.3E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 6.9E-07               | NA         | 2.5E-07 | NA                   | 9.4E-07               | Kidney                               | 8.8E-05   | NA         | 3.2E-05 | 1.2E-04               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.4E-02   | NA         | --      | 3.4E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 4.0E-03   | NA         | --      | 4.0E-03               |       |
|                             |                       |                      | Arsenic                | 1.1E-06               | NA         | 9.1E-08 | NA                   | 1.2E-06               | Skin                                 | 2.8E-02   | NA         | 2.4E-03 | 3.0E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.6E-04   | NA         | --      | 9.6E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.8E-02   | NA         | --      | 1.8E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 6.7E-02   | NA         | --      | 6.7E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.5E-03   | NA         | --      | 1.5E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.9E-02   | NA         | --      | 1.9E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.8E-03   | NA         | --      | 2.8E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 4.5E-02   | NA         | --      | 4.5E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 1.6E-05    | --      | 5.4E-06              | --                    | 2E-05                                |           | 2.3E-01    | --      | 2.6E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 2E-05                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-05                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 6.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.8E-03 |
| TOTAL KIDNEY HI =           | 1.5E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.3E-02 |
| TOTAL NOAEL HI =            | 6.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.0E-02 |
|                             | --      |

**TABLE I-70**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RECREATIONAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 8.4E-08               | NA         | 3.9E-08 | NA                   | 1.2E-07               | Kidney                               | 6.4E-06   | NA         | 3.0E-06 | 9.3E-06               |       |
|                             |                       |                      | Benzo(a)pyrene         | 1.9E-06               | NA         | 8.9E-07 | NA                   | 2.8E-06               | Kidney                               | 1.5E-05   | NA         | 6.7E-06 | 2.1E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.8E-07               | NA         | 1.3E-07 | NA                   | 4.1E-07               | Kidney                               | 2.1E-05   | NA         | 9.8E-06 | 3.1E-05               |       |
|                             |                       |                      | Carbazole              | 4.2E-11               | NA         | 1.5E-11 | NA                   | 5.7E-11               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 1.6E-09               | NA         | 7.6E-10 | NA                   | 2.4E-09               | Kidney                               | 1.3E-05   | NA         | 5.8E-06 | 1.8E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.7E-07               | NA         | 1.7E-07 | NA                   | 5.4E-07               | Kidney                               | 2.8E-06   | NA         | 1.3E-06 | 4.1E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.3E-07               | NA         | 6.2E-08 | NA                   | 1.9E-07               | Kidney                               | 1.0E-05   | NA         | 4.7E-06 | 1.5E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.9E-03   | NA         | --      | 3.9E-03               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 4.6E-04   | NA         | --      | 4.6E-04               |       |
|                             |                       |                      | Arsenic                | 5.0E-07               | NA         | 5.3E-08 | NA                   | 5.5E-07               | Skin                                 | 3.2E-03   | NA         | 3.5E-04 | 3.6E-03               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-04   | NA         | --      | 1.1E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.1E-03   | NA         | --      | 2.1E-03               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.7E-03   | NA         | --      | 7.7E-03               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.7E-04   | NA         | --      | 1.7E-04               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.2E-03   | NA         | --      | 2.2E-03               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.2E-04   | NA         | --      | 3.2E-04               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.2E-03   | NA         | --      | 5.2E-03               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-03   | NA         | --      | 1.5E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 3.3E-06    | --      | 1.3E-06              | --                    | 5E-06                                |           | 2.7E-02    | --      | 3.8E-04               | 3E-02 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 5E-06                                |           |            |         |                       | 3E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 3E-02                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 3E-02                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 3E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.6E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 7.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.6E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 3.2E-04 |
| TOTAL KIDNEY HI =           | 1.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 6.1E-03 |
| TOTAL NOAEL HI =            | 7.5E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.6E-03 |
|                             | --      |

**TABLE I-71**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4-SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 2.9E-06               | NA         | 1.1E-06 | NA                   | 4.0E-06               | Kidney                               | 3.7E-04   | NA         | 1.4E-04 | 5.1E-04               |       |
|                             |                       |                      | Benzo(a)pyrene         | 6.7E-05               | NA         | 2.4E-05 | NA                   | 9.1E-05               | Kidney                               | 8.5E-04   | NA         | 3.1E-04 | 1.2E-03               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 9.7E-06               | NA         | 3.5E-06 | NA                   | 1.3E-05               | Kidney                               | 1.2E-03   | NA         | 4.5E-04 | 1.7E-03               |       |
|                             |                       |                      | Carbazole              | 6.1E-10               | NA         | 1.7E-10 | NA                   | 7.9E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 5.8E-08               | NA         | 2.1E-08 | NA                   | 7.9E-08               | Kidney                               | 7.3E-04   | NA         | 2.7E-04 | 1.0E-03               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.3E-05               | NA         | 4.7E-06 | NA                   | 1.8E-05               | Kidney                               | 1.6E-04   | NA         | 6.0E-05 | 2.2E-04               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 4.7E-06               | NA         | 1.7E-06 | NA                   | 6.3E-06               | Kidney                               | 5.9E-04   | NA         | 2.1E-04 | 8.1E-04               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.3E-01   | NA         | --      | 2.3E-01               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.7E-02   | NA         | --      | 2.7E-02               |       |
|                             |                       |                      | Arsenic                | 7.3E-06               | NA         | 6.1E-07 | NA                   | 7.9E-06               | Skin                                 | 1.9E-01   | NA         | 1.6E-02 | 2.0E-01               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.5E-03   | NA         | --      | 6.5E-03               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-01   | NA         | --      | 1.2E-01               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.5E-01   | NA         | --      | 4.5E-01               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-01   | NA         | --      | 1.3E-01               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.9E-02   | NA         | --      | 1.9E-02               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.0E-01   | NA         | --      | 3.0E-01               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.0E-02   | NA         | --      | 9.0E-02               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 1.0E-04    | --      | 3.6E-05              | --                    | 1E-04                                |           | 1.6E+00    | --      | 1.7E-02               | 2E+00 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 1E-04                                |           |            |         |                       | 2E+00 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-04                 |                                      |           |            |         | 2E+00                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 1E-04                 |                                      |           |            |         | 2E+00                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 1E-04                 |                                      |           |            |         | 2E+00                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 1E-04                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E+00                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.5E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.7E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 1.9E-02 |
| TOTAL KIDNEY HI =           | 1.0E-01 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.6E-01 |
| TOTAL NOAEL HI =            | 4.4E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 2.0E-01 |
|                             | --      |



**TABLE I-72**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 4 - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 4               | Benzo(a)anthracene     | 5.6E-07               | NA         | 2.6E-07 | NA                   | 8.3E-07               | Kidney                               | 4.3E-05   | NA         | 2.0E-05 | 6.3E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 1.3E-05               | NA         | 6.0E-06 | NA                   | 1.9E-05               | Kidney                               | 9.8E-05   | NA         | 4.5E-05 | 1.4E-04               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.9E-06               | NA         | 8.7E-07 | NA                   | 2.7E-06               | Kidney                               | 1.4E-04   | NA         | 6.6E-05 | 2.1E-04               |       |
|                             |                       |                      | Carbazole              | 2.8E-10               | NA         | 1.0E-10 | NA                   | 3.8E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 1.1E-08               | NA         | 5.1E-09 | NA                   | 1.6E-08               | Kidney                               | 8.4E-05   | NA         | 3.9E-05 | 1.2E-04               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 2.5E-06               | NA         | 1.2E-06 | NA                   | 3.6E-06               | Kidney                               | 1.9E-05   | NA         | 8.8E-06 | 2.8E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 8.9E-07               | NA         | 4.1E-07 | NA                   | 1.3E-06               | Kidney                               | 6.8E-05   | NA         | 3.2E-05 | 1.0E-04               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.6E-02   | NA         | --      | 2.6E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.1E-03   | NA         | --      | 3.1E-03               |       |
|                             |                       |                      | Arsenic                | 3.4E-06               | NA         | 3.6E-07 | NA                   | 3.7E-06               | Skin                                 | 2.2E-02   | NA         | 2.3E-03 | 2.4E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.4E-04   | NA         | --      | 7.4E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.2E-02   | NA         | --      | 5.2E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.2E-03   | NA         | --      | 1.2E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.5E-02   | NA         | --      | 1.5E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.2E-03   | NA         | --      | 2.2E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.5E-02   | NA         | --      | 3.5E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 2.2E-05    | --      | 9.0E-06              | --                    | 3E-05                                |           | 1.8E-01    | --      | 2.5E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 3E-05                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 3E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.1E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.2E-03 |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.1E-02 |
| TOTAL NOAEL HI =            | 5.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 2.4E-02 |
|                             | --      |

**TABLE I-73**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR</b><br><b>RECEPTOR AGE: ADOLESCENT</b> |
|---------------------------------------------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL       | CARCINOGENIC RISK (1) |            |         |                      |                               | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|----------------|-----------------------|------------|---------|----------------------|-------------------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL         | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 5         | Aluminum       | NC                    | NA         | NC      | NA                   | 6.7E-07                       | Nervous System                       | 3.0E-03   | NA         | --      | 3.0E-03               |
|                             |                       |                | Antimony       | NC                    | NA         | NC      | NA                   |                               | General Toxicity / Hematological     | 8.5E-04   | NA         | --      | 8.5E-04               |
|                             |                       |                | Arsenic        | 6.1E-07               | NA         | 6.1E-08 | NA                   |                               | Skin                                 | 9.5E-03   | NA         | 9.4E-04 | 1.0E-02               |
|                             |                       |                | Barium         | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 1.6E-04   | NA         | --      | 1.6E-04               |
|                             |                       |                | Cadmium        | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 4.1E-04   | NA         | 5.4E-05 | 4.7E-04               |
|                             |                       |                | Chromium       | NC                    | NA         | NC      | NA                   |                               | NOAEL                                | 2.8E-03   | NA         | --      | 2.8E-03               |
|                             |                       |                | Cobalt         | NC                    | NA         | NC      | NA                   |                               | Endocrine                            | 2.8E-02   | NA         | --      | 2.8E-02               |
|                             |                       |                | Copper         | NC                    | NA         | NC      | NA                   |                               | Undetermined                         | 1.5E-03   | NA         | --      | 1.5E-03               |
|                             |                       |                | Lead           | --                    | NA         | --      | NA                   |                               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Manganese      | NC                    | NA         | NC      | NA                   |                               | Nervous System                       | 2.3E-03   | NA         | --      | 2.3E-03               |
|                             |                       |                | Mercury        | NC                    | NA         | NC      | NA                   |                               | Immune system                        | 8.0E-03   | NA         | --      | 8.0E-03               |
|                             |                       |                | Thallium       | NC                    | NA         | NC      | NA                   |                               | NOAEL                                | 6.0E-04   | NA         | --      | 6.0E-04               |
|                             |                       |                | Vanadium       | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 2.5E-03   | NA         | --      | 2.5E-03               |
|                             |                       |                | CHEMICAL TOTAL | 6.1E-07               | --         | 6.1E-08 | --                   |                               | 7E-07                                |           | 5.9E-02    | --      | 1.0E-03               |
|                             | EXPOSURE POINT TOTAL  |                |                |                       |            |         |                      | 7E-07                         | 6E-02                                |           |            |         |                       |
|                             | EXPOSURE MEDIUM TOTAL |                |                |                       |            |         |                      | 7E-07                         | 6E-02                                |           |            |         |                       |
| SOIL TOTAL                  |                       |                |                |                       |            |         | 7E-07                | 6E-02                         |                                      |           |            |         |                       |
|                             |                       |                |                |                       |            |         |                      |                               |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                |                |                       |            |         | 7E-07                | 6E-02                         |                                      |           |            |         |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                |                       |            |         | 7E-07                | TOTAL HAZARD ACROSS ALL MEDIA |                                      |           |            |         | 6E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012

Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 8.0E-03 |
| TOTAL KIDNEY HI =           | 3.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.3E-03 |
| TOTAL NOAEL HI =            | 4.9E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 1.0E-02 |
|                             | --      |

**TABLE I-74**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR</b><br><b>RECEPTOR AGE: ADULT</b> |
|----------------------------------------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL       | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|----------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 5               | Aluminum       | NC                    | NA         | NC      | NA                   | 3.0E-07               | Nervous System                       | 9.3E-04   | NA         | --      | 9.3E-04               |
|                             |                       |                      | Antimony       | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 2.7E-04   | NA         | --      | 2.7E-04               |
|                             |                       |                      | Arsenic        | 2.7E-07               | NA         | 2.7E-08 | NA                   |                       | Skin                                 | 3.0E-03   | NA         | 3.0E-04 | 3.3E-03               |
|                             |                       |                      | Barium         | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.9E-05   | NA         | --      | 4.9E-05               |
|                             |                       |                      | Cadmium        | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-04   | NA         | 1.8E-05 | 1.5E-04               |
|                             |                       |                      | Chromium       | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.7E-04   | NA         | --      | 8.7E-04               |
|                             |                       |                      | Cobalt         | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 8.7E-03   | NA         | --      | 8.7E-03               |
|                             |                       |                      | Copper         | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 4.7E-04   | NA         | --      | 4.7E-04               |
|                             |                       |                      | Lead           | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese      | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.3E-04   | NA         | --      | 7.3E-04               |
|                             |                       |                      | Mercury        | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.5E-03   | NA         | --      | 2.5E-03               |
|                             |                       |                      | Thallium       | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.9E-04   | NA         | --      | 1.9E-04               |
|                             |                       |                      | Vanadium       | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.7E-04   | NA         | --      | 7.7E-04               |
|                             |                       |                      | CHEMICAL TOTAL | 2.7E-07               | --         | 2.7E-08 | --                   | 3E-07                 |                                      | 1.9E-02   | --         | 3.2E-04 | 2E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 2E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 2E-02                 |
| SOIL TOTAL                  |                       |                      |                |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 2E-02                 |
| RECEPTOR TOTAL              |                       |                      |                |                       |            |         |                      | 3E-07                 |                                      |           |            |         | 2E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                |                       |            |         |                      | 3E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012

Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.7E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 8.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.7E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.5E-03 |
| TOTAL KIDNEY HI =           | 9.7E-04 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.7E-03 |
| TOTAL NOAEL HI =            | 1.5E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.3E-03 |
|                             | --      |

**TABLE I-75**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL  | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|-----------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |           | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 5         | Aluminum  | NC                    | NA         | NC      | NA                   | 5.2E-07               | Nervous System                       | 8.4E-04   | NA         | --      | 8.4E-04               |
|        |                 |                | Antimony  | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 2.4E-04   | NA         | --      | 2.4E-04               |
|        |                 |                | Arsenic   | 4.3E-07               | NA         | 8.6E-08 | NA                   |                       | Skin                                 | 2.7E-03   | NA         | 5.3E-04 | 3.2E-03               |
|        |                 |                | Barium    | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.4E-05   | NA         | --      | 4.4E-05               |
|        |                 |                | Cadmium   | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.2E-04   | NA         | 3.1E-05 | 1.5E-04               |
|        |                 |                | Chromium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.8E-04   | NA         | --      | 7.8E-04               |
|        |                 |                | Cobalt    | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.8E-03   | NA         | --      | 7.8E-03               |
|        |                 |                | Copper    | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 4.2E-04   | NA         | --      | 4.2E-04               |
|        |                 |                | Lead      | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.6E-04   | NA         | --      | 6.6E-04               |
|        |                 |                | Mercury   | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.3E-03   | NA         | --      | 2.3E-03               |
|        |                 |                | Thallium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.7E-04   | NA         | --      | 1.7E-04               |
|        |                 |                | Vanadium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.0E-04   | NA         | --      | 7.0E-04               |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 | </             |           |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.4E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 7.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.4E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.3E-03 |
| TOTAL KIDNEY HI =           | 8.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.5E-03 |
| TOTAL NOAEL HI =            | 1.4E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 3.2E-03 |
|                             | --      |

**TABLE I-76**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL       | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|------------|-----------------------|----------------------|----------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|            |                       |                      |                | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SURFACE SOIL          | AREA 5               | Aluminum       | NC                    | NA         | NC      | NA                   | 3.2E-06               | Nervous System                       | 5.2E-03   | NA         | --      | 5.2E-03               |
|            |                       |                      | Antimony       | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   | 1.5E-03   | NA         | --      | 1.5E-03               |
|            |                       |                      | Arsenic        | 2.7E-06               | NA         | 5.4E-07 | NA                   |                       | Hematological                        | 1.7E-02   | NA         | 3.3E-03 | 2.0E-02               |
|            |                       |                      | Barium         | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 2.7E-04   | NA         | --      | 2.7E-04               |
|            |                       |                      | Cadmium        | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.3E-04   | NA         | 1.9E-04 | 9.2E-04               |
|            |                       |                      | Chromium       | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.9E-03   | NA         | --      | 4.9E-03               |
|            |                       |                      | Cobalt         | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 4.9E-02   | NA         | --      | 4.9E-02               |
|            |                       |                      | Copper         | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.6E-03   | NA         | --      | 2.6E-03               |
|            |                       |                      | Lead           | --                    | NA         | --      | NA                   |                       | Undetermined                         | --        | NA         | --      | --                    |
|            |                       |                      | Manganese      | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.1E-03   | NA         | --      | 4.1E-03               |
|            |                       |                      | Mercury        | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.4E-02   | NA         | --      | 1.4E-02               |
|            |                       |                      | Thallium       | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.1E-03   | NA         | --      | 1.1E-03               |
|            |                       |                      | Vanadium       | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.4E-03   | NA         | --      | 4.4E-03               |
|            |                       |                      | CHEMICAL TOTAL | 2.7E-06               | --         | 5.4E-07 | --                   | 3E-06                 |                                      | 1.0E-01   | --         | 3.5E-03 | 1E-01                 |
|            |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      |                       | 3E-06                                | 1E-01     |            |         |                       |
|            | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 3E-06                 | 1E-01                                |           |            |         |                       |
|            |                       |                      |                |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL       | AIR                   | DUST AT AREA 5       | Aluminum       | NA                    | NC         | NA      | NA                   | 1.3E-09               | Nervous System                       | NA        | 1.8E-04    | NA      | 1.8E-04               |
|            |                       |                      | Antimony       | NA                    | NC         | NA      | NA                   |                       | NA                                   | --        | NA         |         |                       |
|            |                       |                      | Arsenic        | NA                    | 1.3E-09    | NA      | NA                   |                       | Developmental /                      | NA        | 5.8E-05    | NA      | 5.8E-05               |
|            |                       |                      | Barium         | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 1.9E-05    | NA      | 1.9E-05               |
|            |                       |                      | Cadmium        | NA                    | 8.0E-11    | NA      | NA                   |                       | Kidney / Respiratory                 | NA        | 6.2E-06    | NA      | 6.2E-06               |
|            |                       |                      | Chromium       | NA                    | 1.1E-08    | NA      | NA                   |                       | Respiratory                          | NA        | 2.5E-05    | NA      | 2.5E-05               |
|            |                       |                      | Cobalt         | NA                    | 8.1E-09    | NA      | NA                   |                       | Respiratory                          | NA        | 4.2E-04    | NA      | 4.2E-04               |
|            |                       |                      | Copper         | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Lead           | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Manganese      | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 6.6E-04    | NA      | 6.6E-04               |
|            |                       |                      | Mercury        | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.4E-06    | NA      | 2.4E-06               |
|            |                       |                      | Thallium       | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      |                       |
|            |                       |                      | Vanadium       | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 3.8E-05    | NA      | 3.8E-05               |
|            |                       |                      | CHEMICAL TOTAL | --                    | 2.0E-08    | --      | --                   | 2E-08                 |                                      | --        | 1.4E-03    | --      | 1E-03                 |
|            |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      |                       | 2E-08                                | 1E-03     |            |         |                       |
|            | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 2E-08                 | 1E-03                                |           |            |         |                       |
| SOIL TOTAL |                       |                      |                |                       |            |         | 3E-06                | 1E-01                 |                                      |           |            |         |                       |

TABLE I-76  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                               | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-------------------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL         | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       |            | 3E-06  |                      |                               |                                      |           |            | 1E-01  |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            | 3E-06  |                      | TOTAL HAZARD ACROSS ALL MEDIA |                                      |           |            | 1E-01  |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.5E-03 |
| TOTAL CARDIOVASCULAR HI =   | 5.8E-05 |
| TOTAL DEVELOPMENTAL HI =    | 7.7E-05 |
| TOTAL ENDOCRINE HI =        | 4.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.5E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.4E-02 |
| TOTAL KIDNEY HI =           | 5.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.0E-02 |
| TOTAL NOAEL HI =            | 8.6E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 2.0E-02 |
| TOTAL RESPIRATORY HI =      | 4.5E-04 |

**TABLE I-77**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL  | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|-----------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |           | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 5         | Aluminum  | NC                    | NA         | NC      | NA                   | 2.1E-06               | Nervous System                       | 2.9E-03   | NA         | --      | 2.9E-03               |
|        |                 |                | Antimony  | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   | 8.4E-04   | NA         | --      | 8.4E-04               |
|        |                 |                | Arsenic   | 1.5E-06               | NA         | 5.9E-07 | NA                   |                       | Hematological                        | 9.3E-03   | NA         | 3.7E-03 | 1.3E-02               |
|        |                 |                | Barium    | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 1.5E-04   | NA         | --      | 1.5E-04               |
|        |                 |                | Cadmium   | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.0E-04   | NA         | 2.1E-04 | 6.2E-04               |
|        |                 |                | Chromium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.7E-03   | NA         | --      | 2.7E-03               |
|        |                 |                | Cobalt    | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.7E-02   | NA         | --      | 2.7E-02               |
|        |                 |                | Copper    | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.5E-03   | NA         | --      | 1.5E-03               |
|        |                 |                | Lead      | --                    | NA         | --      | NA                   |                       | Undetermined                         | --        | NA         | --      | --                    |
|        |                 |                | Manganese | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.3E-03   | NA         | --      | 2.3E-03               |
|        |                 |                | Mercury   | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 7.8E-03   | NA         | --      | 7.8E-03               |
|        |                 |                | Thallium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.9E-04   | NA         | --      | 5.9E-04               |
|        |                 |                | Vanadium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.4E-03   | NA         | --      | 2.4E-03               |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 8.4E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 8.4E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 7.8E-03 |
| TOTAL KIDNEY HI =           | 3.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.2E-03 |
| TOTAL NOAEL HI =            | 4.8E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 1.3E-02 |
|                             | --      |

**TABLE I-78**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL       | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------------|----------------------|----------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                       |                      |                | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL          | AREA 5               | Aluminum       | NC                    | NA         | NC      | NA                   | 4.3E-07               | Nervous System                       | 1.9E-02   | NA         | --      | 1.9E-02               |
|        |                       |                      | Antimony       | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   | 5.5E-03   | NA         | --      | 5.5E-03               |
|        |                       |                      | Arsenic        | 4.0E-07               | NA         | 3.6E-08 | NA                   |                       | Hematological                        | 6.2E-02   | NA         | 5.6E-03 | 6.7E-02               |
|        |                       |                      | Barium         | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 1.0E-03   | NA         | --      | 1.0E-03               |
|        |                       |                      | Cadmium        | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.3E-03   | NA         | 6.4E-04 | 6.0E-03               |
|        |                       |                      | Chromium       | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.7E-03   | NA         | --      | 2.7E-03               |
|        |                       |                      | Cobalt         | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.8E-02   | NA         | --      | 1.8E-02               |
|        |                       |                      | Copper         | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.9E-02   | NA         | --      | 3.9E-02               |
|        |                       |                      | Lead           | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      | --                    |
|        |                       |                      | Manganese      | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.5E-02   | NA         | --      | 1.5E-02               |
|        |                       |                      | Mercury        | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.7E-03   | NA         | --      | 7.7E-03               |
|        |                       |                      | Thallium       | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.7E-04   | NA         | --      | 7.7E-04               |
|        |                       |                      | Vanadium       | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.0E-03   | NA         | --      | 8.0E-03               |
|        |                       |                      | CHEMICAL TOTAL |                       | 4.0E-07    | --      | 3.6E-08              | --                    | 4E-07                                |           | 1.8E-01    | --      | 6.2E-03               |
|        |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      |                       | 4E-07                                |           |            |         | 2E-01                 |
|        | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 4E-07                 |                                      |           |            | 2E-01   |                       |
|        |                       |                      |                |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                       |                      |                |                       |            |         |                      |                       |                                      |           |            |         |                       |
| SOIL   | AIR                   | DUST AT AREA 5       | Aluminum       | NA                    | NC         | NA      | NA                   | 1.7E-08               | Nervous System                       | NA        | 5.7E-02    | NA      | 5.7E-02               |
|        |                       |                      | Antimony       | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      | --                    |
|        |                       |                      | Arsenic        | NA                    | 1.7E-08    | NA      | NA                   |                       | Developmental /                      | NA        | 1.8E-02    | NA      | 1.8E-02               |
|        |                       |                      | Barium         | NA                    | NC         | NA      | NA                   |                       | Developmental                        | NA        | 5.9E-04    | NA      | 5.9E-04               |
|        |                       |                      | Cadmium        | NA                    | 1.0E-09    | NA      | NA                   |                       | Kidney / Respiratory                 | NA        | 2.0E-03    | NA      | 2.0E-03               |
|        |                       |                      | Chromium       | NA                    | 1.4E-07    | NA      | NA                   |                       | Respiratory                          | NA        | 1.6E-01    | NA      | 1.6E-01               |
|        |                       |                      | Cobalt         | NA                    | 1.0E-07    | NA      | NA                   |                       | Respiratory                          | NA        | 4.0E-02    | NA      | 4.0E-02               |
|        |                       |                      | Copper         | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      | --                    |
|        |                       |                      | Lead           | NA                    | --         | NA      | NA                   |                       |                                      | NA        | --         | NA      | --                    |
|        |                       |                      | Manganese      | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 2.1E-01    | NA      | 2.1E-01               |
|        |                       |                      | Mercury        | NA                    | NC         | NA      | NA                   |                       | Nervous System                       | NA        | 7.6E-04    | NA      | 7.6E-04               |
|        |                       |                      | Thallium       | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | --         | NA      | --                    |
|        |                       |                      | Vanadium       | NA                    | NC         | NA      | NA                   |                       |                                      | NA        | 1.2E-02    | NA      | 1.2E-02               |
|        |                       |                      | CHEMICAL TOTAL |                       | --         | 2.6E-07 | --                   | --                    | 3E-07                                |           | --         | 5.0E-01 | --                    |
|        |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      |                       | 3E-07                                |           |            |         | 5E-01                 |
|        | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 3E-07                 |                                      |           |            | 5E-01   |                       |
|        | SOIL TOTAL            |                      |                |                       |            |         |                      | 7E-07                 |                                      |           |            | 7E-01   |                       |



TABLE I-78  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                               |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|-------------------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION)          | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       |            |        |                               |                       |                                      |           |            |        |                       |
|                             |                 |                |          |                       | 7E-07      |        |                               |                       |                                      |           |            | 7E-01  |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       | 7E-07      |        | TOTAL HAZARD ACROSS ALL MEDIA |                       |                                      |           |            | 7E-01  |                       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 5.5E-03 |
| TOTAL CARDIOVASCULAR HI =   | 1.8E-02 |
| TOTAL DEVELOPMENTAL HI =    | 1.9E-02 |
| TOTAL ENDOCRINE HI =        | 1.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 5.5E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.2E-01 |
| TOTAL NOAEL HI =            | 6.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 6.7E-02 |
| TOTAL RESPIRATORY HI =      | 2.0E-01 |

**TABLE I-79**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL  | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|-----------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |           | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 5         | Aluminum  | NC                    | NA         | NC      | NA                   | 1.5E-06               | Nervous System                       | 1.1E-02   | NA         | --      | 1.1E-02               |
|        |                 |                | Antimony  | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Arsenic   | 1.4E-06               | NA         | 1.2E-07 | NA                   |                       | Hematological                        | 3.3E-03   | NA         | --      | 3.3E-03               |
|        |                 |                | Barium    | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 3.6E-02   | NA         | 3.0E-03 | 3.9E-02               |
|        |                 |                | Cadmium   | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.9E-04   | NA         | --      | 5.9E-04               |
|        |                 |                | Chromium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.6E-03   | NA         | 1.8E-04 | 1.7E-03               |
|        |                 |                | Cobalt    | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.1E-02   | NA         | --      | 1.1E-02               |
|        |                 |                | Copper    | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.1E-01   | NA         | --      | 1.1E-01               |
|        |                 |                | Lead      | --                    | NA         | --      | NA                   |                       | Undetermined                         | 5.7E-03   | NA         | --      | 5.7E-03               |
|        |                 |                | Manganese | NC                    | NA         | NC      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Mercury   | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 8.9E-03   | NA         | --      | 8.9E-03               |
|        |                 |                | Thallium  | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.0E-02   | NA         | --      | 3.0E-02               |
|        |                 |                | Vanadium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.3E-03   | NA         | --      | 2.3E-03               |
|        |                 |                |           |                       |            |         |                      |                       | Kidney                               | 9.4E-03   | NA         | --      | 9.4E-03               |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.3E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 3.0E-02 |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.0E-02 |
| TOTAL NOAEL HI =            | 1.9E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.9E-02 |
|                             | --      |

**TABLE I-80**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RECREATIONAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL       | CARCINOGENIC RISK (1) |            |         |                      |                               | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|----------------|-----------------------|------------|---------|----------------------|-------------------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL         | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | AREA 5               | Aluminum       | NC                    | NA         | NC      | NA                   | 7.2E-07                       | Nervous System                       | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                      | Antimony       | NC                    | NA         | NC      | NA                   |                               | General Toxicity /                   | 3.8E-04   | NA         | --      | 3.8E-04               |
|                             |                       |                      | Arsenic        | 6.5E-07               | NA         | 6.9E-08 | NA                   |                               | Hematological                        | 4.2E-03   | NA         | 4.5E-04 | 4.6E-03               |
|                             |                       |                      | Barium         | NC                    | NA         | NC      | NA                   |                               | Skin                                 | 6.8E-05   | NA         | --      | 6.8E-05               |
|                             |                       |                      | Cadmium        | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 1.8E-04   | NA         | 2.6E-05 | 2.1E-04               |
|                             |                       |                      | Chromium       | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                      | Cobalt         | NC                    | NA         | NC      | NA                   |                               | NOAEL                                | 1.2E-02   | NA         | --      | 1.2E-02               |
|                             |                       |                      | Copper         | NC                    | NA         | NC      | NA                   |                               | Endocrine                            | 6.6E-04   | NA         | --      | 6.6E-04               |
|                             |                       |                      | Lead           | --                    | NA         | --      | NA                   |                               | Undetermined                         | --        | NA         | --      | --                    |
|                             |                       |                      | Manganese      | NC                    | NA         | NC      | NA                   |                               | Nervous System                       | 1.0E-03   | NA         | --      | 1.0E-03               |
|                             |                       |                      | Mercury        | NC                    | NA         | NC      | NA                   |                               | Immune system                        | 3.5E-03   | NA         | --      | 3.5E-03               |
|                             |                       |                      | Thallium       | NC                    | NA         | NC      | NA                   |                               | NOAEL                                | 2.6E-04   | NA         | --      | 2.6E-04               |
|                             |                       |                      | Vanadium       | NC                    | NA         | NC      | NA                   |                               | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |
|                             |                       |                      | CHEMICAL TOTAL | 6.5E-07               | --         | 6.9E-08 | --                   | 7E-07                         |                                      | 2.6E-02   | --         | 4.7E-04 | 3E-02                 |
|                             |                       | EXPOSURE POINT TOTAL |                |                       |            |         |                      |                               | 7E-07                                |           |            |         | 3E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                |                       |            |         |                      | 7E-07                         |                                      |           |            | 3E-02   |                       |
| SOIL TOTAL                  |                       |                      |                |                       |            |         | 7E-07                |                               |                                      |           | 3E-02      |         |                       |
| RECEPTOR TOTAL              |                       |                      |                |                       |            |         | 7E-07                |                               |                                      |           | 3E-02      |         |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                |                       |            |         | 7E-07                | TOTAL HAZARD ACROSS ALL MEDIA |                                      |           | 3E-02      |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.8E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.8E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 3.5E-03 |
| TOTAL KIDNEY HI =           | 1.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.3E-03 |
| TOTAL NOAEL HI =            | 2.1E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 4.6E-03 |
|                             | --      |

**TABLE I-81**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL  | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|-----------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |           | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 5         | Aluminum  | NC                    | NA         | NC      | NA                   | 1.0E-05               | Nervous System                       | 7.6E-02   | NA         | --      | 7.6E-02               |
|        |                 |                | Antimony  | NC                    | NA         | NC      | NA                   |                       | General Toxicity / Hematological     | 2.2E-02   | NA         | --      | 2.2E-02               |
|        |                 |                | Arsenic   | 9.4E-06               | NA         | 7.9E-07 | NA                   |                       | Skin                                 | 2.4E-01   | NA         | 2.1E-02 | 2.6E-01               |
|        |                 |                | Barium    | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.0E-03   | NA         | --      | 4.0E-03               |
|        |                 |                | Cadmium   | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-02   | NA         | 1.2E-03 | 1.2E-02               |
|        |                 |                | Chromium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.1E-02   | NA         | --      | 7.1E-02               |
|        |                 |                | Cobalt    | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 7.1E-01   | NA         | --      | 7.1E-01               |
|        |                 |                | Copper    | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.8E-02   | NA         | --      | 3.8E-02               |
|        |                 |                | Lead      | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.0E-02   | NA         | --      | 6.0E-02               |
|        |                 |                | Mercury   | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.0E-01   | NA         | --      | 2.0E-01               |
|        |                 |                | Thallium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.5E-02   | NA         | --      | 1.5E-02               |
|        |                 |                | Vanadium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.3E-02   | NA         | --      | 6.3E-02               |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 | </             |           |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 7.1E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.2E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-01 |
| TOTAL KIDNEY HI =           | 7.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.4E-01 |
| TOTAL NOAEL HI =            | 1.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-01 |
|                             | --      |

**TABLE I-82**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RESIDENTIAL  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL  | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|-----------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |           | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | AREA 5         | Aluminum  | NC                    | NA         | NC      | NA                   | 4.8E-06               | Nervous System                       | 8.8E-03   | NA         | --      | 8.8E-03               |
|        |                 |                | Antimony  | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   | 2.5E-03   | NA         | --      | 2.5E-03               |
|        |                 |                | Arsenic   | 4.3E-06               | NA         | 4.6E-07 | NA                   |                       | Hematological                        | 2.8E-02   | NA         | 3.0E-03 | 3.1E-02               |
|        |                 |                | Barium    | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 4.6E-04   | NA         | --      | 4.6E-04               |
|        |                 |                | Cadmium   | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.2E-03   | NA         | 1.7E-04 | 1.4E-03               |
|        |                 |                | Chromium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.2E-03   | NA         | --      | 8.2E-03               |
|        |                 |                | Cobalt    | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 8.2E-02   | NA         | --      | 8.2E-02               |
|        |                 |                | Copper    | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.4E-03   | NA         | --      | 4.4E-03               |
|        |                 |                | Lead      | --                    | NA         | --      | NA                   |                       | Undetermined                         | --        | NA         | --      | --                    |
|        |                 |                | Manganese | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 6.9E-03   | NA         | --      | 6.9E-03               |
|        |                 |                | Mercury   | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.4E-02   | NA         | --      | 2.4E-02               |
|        |                 |                | Thallium  | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.8E-03   | NA         | --      | 1.8E-03               |
|        |                 |                | Vanadium  | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.3E-03   | NA         | --      | 7.3E-03               |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |           |                       |            |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 8.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.5E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.4E-02 |
| TOTAL KIDNEY HI =           | 9.1E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.6E-02 |
| TOTAL NOAEL HI =            | 1.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.1E-02 |
|                             | --      |

**TABLE I-83**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 5         | Benzo(a)anthracene     | 9.9E-09               | NA         | 8.5E-09        | NA                   | 1.8E-08               | Kidney                               | 1.3E-06   | NA         | 1.1E-06 | 2.4E-06               |       |
|                             |                       |                | Benzo(a)pyrene         | 8.4E-08               | NA         | 7.2E-08        | NA                   | 1.6E-07               | Kidney                               | 1.1E-06   | NA         | 9.3E-07 | 2.0E-06               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 1.4E-08               | NA         | 1.2E-08        | NA                   | 2.5E-08               | Kidney                               | 1.7E-06   | NA         | 1.5E-06 | 3.2E-06               |       |
|                             |                       |                | Chrysene               | 1.1E-10               | NA         | 9.1E-11        | NA                   | 2.0E-10               | Kidney                               | 1.4E-06   | NA         | 1.2E-06 | 2.5E-06               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 2.4E-09               | NA         | 2.1E-09        | NA                   | 4.5E-09               | Kidney                               | 3.1E-07   | NA         | 2.7E-07 | 5.8E-07               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.2E-03   | NA         | --      | 1.2E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 1.9E-04   | NA         | --      | 1.9E-04               |       |
|                             |                       |                | Arsenic                | 2.1E-07               | NA         | 4.1E-08        | NA                   | 2.5E-07               | Skin                                 | 1.3E-03   | NA         | 2.6E-04 | 1.6E-03               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 4.4E-05   | NA         | --      | 4.4E-05               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.0E-03   | NA         | --      | 1.0E-03               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.8E-03   | NA         | --      | 3.8E-03               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 9.1E-05   | NA         | --      | 9.1E-05               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 9.0E-04   | NA         | --      | 9.0E-04               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.5E-03   | NA         | --      | 2.5E-03               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.0E-04   | NA         | --      | 7.0E-04               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 3.2E-07              | --                    | 1.4E-07                              | --        | 5E-07      |         | 1.2E-02               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 5E-07                                |           |            |         |                       | 1E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 5E-07                |                       |                                      |           |            | 1E-02   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 5E-07                 |                                      |           |            |         | 1E-02                 |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 5E-07                 |                                      |           |            |         | 1E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 5E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-02                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/18/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.5E-03 |
| TOTAL KIDNEY HI =           | 7.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.1E-03 |
| TOTAL NOAEL HI =            | 1.1E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 1.6E-03 |
|                             | --      |

**TABLE I-84**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM     | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1)            |           |            |         |                       |
|------------|-----------------|-----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|-------------------------------------------------|-----------|------------|---------|-----------------------|
|            |                 |                       |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                            | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL       | SUBSURFACE SOIL | AREA 5                | Benzo(a)anthracene     | 6.2E-08               | NA         | 5.3E-08 | NA                   | 1.2E-07               | Kidney                                          | 7.9E-06   | NA         | 6.8E-06 | 1.5E-05               |
|            |                 |                       | Benzo(a)pyrene         | 5.3E-07               | NA         | 4.5E-07 | NA                   | 9.8E-07               | Kidney                                          | 6.8E-06   | NA         | 5.8E-06 | 1.3E-05               |
|            |                 |                       | Benzo(b)fluoranthene   | 8.5E-08               | NA         | 7.3E-08 | NA                   | 1.6E-07               | Kidney                                          | 1.1E-05   | NA         | 9.3E-06 | 2.0E-05               |
|            |                 |                       | Chrysene               | 6.7E-10               | NA         | 5.7E-10 | NA                   | 1.2E-09               | Kidney                                          | 8.5E-06   | NA         | 7.3E-06 | 1.6E-05               |
|            |                 |                       | Indeno(1,2,3-cd)pyrene | 1.5E-08               | NA         | 1.3E-08 | NA                   | 2.8E-08               | Kidney                                          | 1.9E-06   | NA         | 1.7E-06 | 3.6E-06               |
|            |                 |                       | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                                  | 7.8E-03   | NA         | --      | 7.8E-03               |
|            |                 |                       |                        |                       |            |         |                      |                       | General Toxicity / Hematological                | 1.2E-03   | NA         | --      | 1.2E-03               |
|            |                 |                       | Antimony               | NC                    | NA         | NC      | NA                   |                       | Skin                                            | 8.1E-03   | NA         | 1.6E-03 | 9.7E-03               |
|            |                 |                       | Arsenic                | 1.3E-06               | NA         | 2.6E-07 | NA                   | 1.6E-06               | Kidney                                          | 2.8E-04   | NA         | --      | 2.8E-04               |
|            |                 |                       | Barium                 | NC                    | NA         | NC      | NA                   |                       | NOAEL                                           | 6.4E-03   | NA         | --      | 6.4E-03               |
|            |                 |                       | Chromium               | NC                    | NA         | NC      | NA                   |                       | Endocrine                                       | 2.4E-02   | NA         | --      | 2.4E-02               |
|            |                 |                       | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                                    | 5.7E-04   | NA         | --      | 5.7E-04               |
|            |                 |                       | Copper                 | NC                    | NA         | NC      | NA                   |                       |                                                 | --        | NA         | --      |                       |
|            |                 |                       | Lead                   | --                    | NA         | --      | NA                   |                       | Nervous System                                  | 5.6E-03   | NA         | --      | 5.6E-03               |
|            |                 |                       | Manganese              | NC                    | NA         | NC      | NA                   |                       | Immune system                                   | 1.6E-02   | NA         | --      | 1.6E-02               |
|            |                 |                       | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                                          | 4.4E-03   | NA         | --      | 4.4E-03               |
|            |                 |                       | Vanadium               | NC                    | NA         | NC      | NA                   |                       |                                                 | --        |            | --      |                       |
|            |                 |                       | CHEMICAL TOTAL         | 2.0E-06               | --         | 8.5E-07 | --                   | 3E-06                 |                                                 | 7.4E-02   | --         | 1.6E-03 | 8E-02                 |
|            |                 | EXPOSURE POINT TOTAL  |                        |                       |            |         |                      | 3E-06                 |                                                 |           |            |         | 8E-02                 |
|            |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |         |                      | 3E-06                 |                                                 |           |            |         | 8E-02                 |
|            |                 |                       |                        |                       |            |         |                      |                       |                                                 |           |            |         |                       |
| SOIL       | AIR             | DUST AT AREA 5        | Benzo(a)anthracene     | NA                    | 1.6E-12    | NA      | NA                   | 1.6E-12               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Benzo(a)pyrene         | NA                    | 1.4E-11    | NA      | NA                   | 1.4E-11               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Benzo(b)fluoranthene   | NA                    | 2.2E-12    | NA      | NA                   | 2.2E-12               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Chrysene               | NA                    | 1.7E-13    | NA      | NA                   | 1.7E-13               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Indeno(1,2,3-cd)pyrene | NA                    | 3.9E-13    | NA      | NA                   | 3.9E-13               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Aluminum               | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 2.7E-04    | NA      | 2.7E-04               |
|            |                 |                       | Antimony               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|            |                 |                       |                        |                       |            |         |                      |                       | Developmental / Cardiovascular / Nervous system | NA        | 2.8E-05    | NA      | 2.8E-05               |
|            |                 |                       | Arsenic                | NA                    | 6.4E-10    | NA      | NA                   | 6.4E-10               | Developmental                                   | NA        | 1.9E-05    | NA      | 1.9E-05               |
|            |                 |                       | Barium                 | NA                    | NC         | NA      | NA                   |                       | Respiratory                                     | NA        | 3.3E-05    | NA      | 3.3E-05               |
|            |                 |                       | Chromium               | NA                    | 1.4E-08    | NA      | NA                   | 1.4E-08               | Respiratory                                     | NA        | 2.0E-04    | NA      | 2.0E-04               |
|            |                 |                       | Cobalt                 | NA                    | 3.9E-09    | NA      | NA                   | 3.9E-09               |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Copper                 | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Lead                   | NA                    | --         | NA      | NA                   |                       |                                                 | NA        | --         | NA      |                       |
|            |                 |                       | Manganese              | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 9.0E-04    | NA      | 9.0E-04               |
|            |                 |                       | Mercury                | NA                    | NC         | NA      | NA                   |                       | Nervous System                                  | NA        | 2.7E-06    | NA      | 2.7E-06               |
|            |                 |                       | Vanadium               | NA                    | NC         | NA      | NA                   |                       |                                                 | NA        | 3.8E-05    | NA      | 3.8E-05               |
|            |                 |                       | CHEMICAL TOTAL         | --                    | 1.9E-08    | --      | --                   | 2E-08                 |                                                 | --        | 1.5E-03    | --      | 1E-03                 |
|            |                 | EXPOSURE POINT TOTAL  |                        |                       |            |         |                      | 2E-08                 |                                                 |           |            |         | 1E-03                 |
|            |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |         |                      | 2E-08                 |                                                 |           |            |         | 1E-03                 |
| SOIL TOTAL |                 |                       |                        |                       |            |         |                      | 3E-06                 |                                                 |           |            |         | 8E-02                 |

TABLE I-84  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM         | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |                             |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |  |
|----------------|-----------------|----------------|----------|-----------------------|-----------------------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|--|
|                |                 |                |          | INGESTION             | INHALATION                  | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |  |
|                |                 |                |          |                       |                             |        |                      |                       |                                      |                               |            |        |                       |  |
| RECEPTOR TOTAL |                 |                |          |                       |                             |        |                      |                       |                                      |                               |            |        |                       |  |
|                |                 |                |          |                       | TOTAL RISK ACROSS ALL MEDIA |        |                      |                       |                                      | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       |  |
|                |                 |                |          |                       | 3E-06                       |        |                      |                       |                                      | 8E-02                         |            |        |                       |  |
|                |                 |                |          |                       | 3E-06                       |        |                      |                       |                                      | 8E-02                         |            |        |                       |  |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.2E-03 |
| TOTAL CARDIOVASCULAR HI =   | 2.8E-05 |
| TOTAL DEVELOPMENTAL HI =    | 4.7E-05 |
| TOTAL ENDOCRINE HI =        | 2.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.2E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.6E-02 |
| TOTAL KIDNEY HI =           | 4.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.5E-02 |
| TOTAL NOAEL HI =            | 7.0E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 9.7E-03 |
| TOTAL RESPIRATORY HI =      | 2.4E-04 |



**TABLE I-85**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: INDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 5         | Benzo(a)anthracene     | 3.4E-08               | NA         | 5.9E-08 | NA                   | 9.4E-08               | Kidney                               | 4.4E-06   | NA         | 7.6E-06 | 1.2E-05               |
|        |                 |                | Benzo(a)pyrene         | 2.9E-07               | NA         | 5.0E-07 | NA                   | 8.0E-07               | Kidney                               | 3.8E-06   | NA         | 6.4E-06 | 1.0E-05               |
|        |                 |                | Benzo(b)fluoranthene   | 4.7E-08               | NA         | 8.1E-08 | NA                   | 1.3E-07               | Kidney                               | 6.0E-06   | NA         | 1.0E-05 | 1.6E-05               |
|        |                 |                | Chrysene               | 3.7E-10               | NA         | 6.3E-10 | NA                   | 1.0E-09               | Kidney                               | 4.7E-06   | NA         | 8.1E-06 | 1.3E-05               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 8.4E-09               | NA         | 1.4E-08 | NA                   | 2.3E-08               | Kidney                               | 1.1E-06   | NA         | 1.8E-06 | 2.9E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.3E-03   | NA         | --      | 4.3E-03               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 6.6E-04   | NA         | --      | 6.6E-04               |
|        |                 |                | Arsenic                | 7.2E-07               | NA         | 2.9E-07 | NA                   | 1.0E-06               | Skin                                 | 4.5E-03   | NA         | 1.8E-03 | 6.3E-03               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-04   | NA         | --      | 1.5E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.6E-03   | NA         | --      | 3.6E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.3E-02   | NA         | --      | 1.3E-02               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 3.2E-04   | NA         | --      | 3.2E-04               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.1E-03   | NA         | --      | 3.1E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 8.6E-03   | NA         | --      | 8.6E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.4E-03   | NA         | --      | 2.4E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       | </         |         |                      |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 6.6E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 6.6E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 8.6E-03 |
| TOTAL KIDNEY HI =           | 2.6E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 7.5E-03 |
| TOTAL NOAEL HI =            | 3.9E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 6.3E-03 |
|                             | --      |

**TABLE I-86**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 5         | Benzo(a)anthracene     | 9.1E-09               | NA         | 3.5E-09 | NA                   | 1.3E-08               | Kidney                               | 2.9E-06   | NA         | 1.1E-06 | 4.0E-06               |
|        |                 |                | Benzo(a)pyrene         | 7.7E-08               | NA         | 3.0E-08 | NA                   | 1.1E-07               | Kidney                               | 2.5E-06   | NA         | 9.7E-07 | 3.4E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 1.2E-08               | NA         | 4.9E-09 | NA                   | 1.7E-08               | Kidney                               | 4.0E-06   | NA         | 1.6E-06 | 5.5E-06               |
|        |                 |                | Chrysene               | 9.8E-11               | NA         | 3.8E-11 | NA                   | 1.4E-10               | Kidney                               | 3.1E-06   | NA         | 1.2E-06 | 4.3E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.2E-09               | NA         | 8.7E-10 | NA                   | 3.1E-09               | Kidney                               | 7.1E-07   | NA         | 2.8E-07 | 9.9E-07               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.9E-02   | NA         | --      | 2.9E-02               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 4.3E-03   | NA         | --      | 4.3E-03               |
|        |                 |                | Arsenic                | 1.9E-07               | NA         | 1.7E-08 | NA                   | 2.1E-07               | Skin                                 | 3.0E-02   | NA         | 2.7E-03 | 3.2E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.0E-03   | NA         | --      | 1.0E-03               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.5E-03   | NA         | --      | 3.5E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 8.7E-03   | NA         | --      | 8.7E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 8.4E-03   | NA         | --      | 8.4E-03               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.0E-02   | NA         | --      | 2.0E-02               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.5E-03   | NA         | --      | 8.5E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.1E-03   | NA         | --      | 8.1E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

TABLE I-86  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                               |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|-------------------------------|-----------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION)          | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       | 6E-07      |        |                               |                       |                                      |           | 7E-01      |        |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       | 6E-07      |        | TOTAL HAZARD ACROSS ALL MEDIA |                       |                                      |           | 7E-01      |        |                       |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.3E-03 |
| TOTAL CARDIOVASCULAR HI =   | 8.8E-03 |
| TOTAL DEVELOPMENTAL HI =    | 9.4E-03 |
| TOTAL ENDOCRINE HI =        | 8.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.3E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.3E-01 |
| TOTAL NOAEL HI =            | 2.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.2E-02 |
| TOTAL RESPIRATORY HI =      | 2.3E-01 |

**TABLE I-87**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE<br>RECEPTOR POPULATION: RECREATIONAL<br>RECEPTOR AGE: CHILD (AGES 1-7) |
|---------------------------------------------------------------------------------------------------|

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 5         | Benzo(a)anthracene     | 1.3E-07               | NA         | 5.5E-08        | NA                   | 1.9E-07               | Kidney                               | 1.7E-05   | NA         | 6.2E-06 | 2.3E-05               |       |
|                             |                       |                | Benzo(a)pyrene         | 1.1E-06               | NA         | 4.6E-07        | NA                   | 1.6E-06               | Kidney                               | 1.5E-05   | NA         | 5.3E-06 | 2.0E-05               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 1.8E-07               | NA         | 7.5E-08        | NA                   | 2.6E-07               | Kidney                               | 2.3E-05   | NA         | 8.5E-06 | 3.2E-05               |       |
|                             |                       |                | Chrysene               | 1.4E-09               | NA         | 5.9E-10        | NA                   | 2.0E-09               | Kidney                               | 1.8E-05   | NA         | 6.7E-06 | 2.5E-05               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 3.3E-08               | NA         | 1.3E-08        | NA                   | 4.6E-08               | Kidney                               | 4.2E-06   | NA         | 1.5E-06 | 5.7E-06               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                |                        |                       |            |                |                      | General Toxicity /    |                                      |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 2.5E-03   | NA         | --      | 2.5E-03               |       |
|                             |                       |                | Arsenic                | 6.8E-07               | NA         | 5.7E-08        | NA                   | 7.3E-07               | Skin                                 | 1.8E-02   | NA         | 1.5E-03 | 1.9E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 5.9E-04   | NA         | --      | 5.9E-04               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 5.1E-02   | NA         | --      | 5.1E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.2E-03   | NA         | --      | 1.2E-03               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.2E-02   | NA         | --      | 1.2E-02               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 3.3E-02   | NA         | --      | 3.3E-02               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 9.4E-03   | NA         | --      | 9.4E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 2.2E-06              | --                    | 6.6E-07                              | --        | 3E-06      |         | 1.6E-01               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 3E-06                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 3E-06                |                       |                                      |           |            | 2E-01   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |       |
|                             |                       |                |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         |                       |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 3E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.5E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 3.3E-02 |
| TOTAL KIDNEY HI =           | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.9E-02 |
| TOTAL NOAEL HI =            | 1.5E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.9E-02 |
|                             | --      |

**TABLE I-88**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: FUTURE</b><br><b>RECEPTOR POPULATION: RECREATIONAL</b><br><b>RECEPTOR AGE: ADULT</b> |
|-------------------------------------------------------------------------------------------------------------|

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | AREA 5         | Benzo(a)anthracene     | 2.6E-08               | NA         | 1.2E-08 | NA                   | 3.8E-08               | Kidney                               | 2.0E-06   | NA         | 9.1E-07 | 2.9E-06               |
|        |                 |                | Benzo(a)pyrene         | 2.2E-07               | NA         | 1.0E-07 | NA                   | 3.2E-07               | Kidney                               | 1.7E-06   | NA         | 7.8E-07 | 2.5E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 3.6E-08               | NA         | 1.6E-08 | NA                   | 5.2E-08               | Kidney                               | 2.7E-06   | NA         | 1.3E-06 | 4.0E-06               |
|        |                 |                | Chrysene               | 2.8E-10               | NA         | 1.3E-10 | NA                   | 4.1E-10               | Kidney                               | 2.1E-06   | NA         | 9.8E-07 | 3.1E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 6.3E-09               | NA         | 2.9E-09 | NA                   | 9.3E-09               | Kidney                               | 4.8E-07   | NA         | 2.2E-07 | 7.1E-07               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.9E-03   | NA         | --      | 1.9E-03               |
|        |                 |                |                        |                       |            |         |                      | General Toxicity /    |                                      |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.9E-04   | NA         | --      | 2.9E-04               |
|        |                 |                | Arsenic                | 3.1E-07               | NA         | 3.3E-08 | NA                   | 3.4E-07               | Skin                                 | 2.0E-03   | NA         | 2.2E-04 | 2.2E-03               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.8E-05   | NA         | --      | 6.8E-05               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.6E-03   | NA         | --      | 1.6E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.9E-03   | NA         | --      | 5.9E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.4E-04   | NA         | --      | 1.4E-04               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-03   | NA         | --      | 1.4E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 3.9E-03   | NA         | --      | 3.9E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           | --         |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         | </                   |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.9E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.9E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 3.9E-03 |
| TOTAL KIDNEY HI =           | 1.2E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.3E-03 |
| TOTAL NOAEL HI =            | 1.7E-03 |
|                             | --      |
| TOTAL SKIN HI =             | 2.2E-03 |
|                             | --      |

**TABLE I-89**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 5               | Benzo(a)anthracene     | 9.1E-07               | NA         | 3.7E-07        | NA                   | 1.3E-06               | Kidney                               | 1.2E-04   | NA         | 4.2E-05 | 1.6E-04               |       |
|                             |                       |                      | Benzo(a)pyrene         | 7.7E-06               | NA         | 3.1E-06        | NA                   | 1.1E-05               | Kidney                               | 9.8E-05   | NA         | 3.6E-05 | 1.3E-04               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.2E-06               | NA         | 5.0E-07        | NA                   | 1.7E-06               | Kidney                               | 1.6E-04   | NA         | 5.7E-05 | 2.2E-04               |       |
|                             |                       |                      | Chrysene               | 9.7E-09               | NA         | 3.9E-09        | NA                   | 1.4E-08               | Kidney                               | 1.2E-04   | NA         | 4.5E-05 | 1.7E-04               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.2E-07               | NA         | 9.0E-08        | NA                   | 3.1E-07               | Kidney                               | 2.8E-05   | NA         | 1.0E-05 | 3.8E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.1E-01   | NA         | --      | 1.1E-01               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                      | Arsenic                | 4.5E-06               | NA         | 3.8E-07        | NA                   | 4.9E-06               | Skin                                 | 1.2E-01   | NA         | 9.9E-03 | 1.3E-01               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 4.0E-03   | NA         | --      | 4.0E-03               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 9.4E-02   | NA         | --      | 9.4E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.4E-01   | NA         | --      | 3.4E-01               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 8.3E-03   | NA         | --      | 8.3E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 8.2E-02   | NA         | --      | 8.2E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.3E-01   | NA         | --      | 2.3E-01               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.3E-02   | NA         | --      | 6.3E-02               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 1.5E-05              | --                    | 4.5E-06                              | --        | 2E-05      |         | 1.1E+00               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 2E-05                                |           |            |         |                       | 1E+00 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |       |
|                             |                       |                      |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 2E-05                 |                                      |           |            |         | 1E+00                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 2E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E+00                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.7E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 2.3E-01 |
| TOTAL KIDNEY HI =           | 6.8E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.9E-01 |
| TOTAL NOAEL HI =            | 1.0E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 1.3E-01 |
|                             | --      |

**TABLE I-90**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - AREA 5 - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | AREA 5         | Benzo(a)anthracene     | 1.7E-07               | NA         | 8.1E-08        | NA                   | 2.6E-07               | Kidney                               | 1.3E-05   | NA         | 6.2E-06 | 1.9E-05               |       |
|                             |                       |                | Benzo(a)pyrene         | 1.5E-06               | NA         | 6.9E-07        | NA                   | 2.2E-06               | Kidney                               | 1.1E-05   | NA         | 5.2E-06 | 1.7E-05               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 2.4E-07               | NA         | 1.1E-07        | NA                   | 3.5E-07               | Kidney                               | 1.8E-05   | NA         | 8.4E-06 | 2.7E-05               |       |
|                             |                       |                | Chrysene               | 1.9E-09               | NA         | 8.7E-10        | NA                   | 2.7E-09               | Kidney                               | 1.4E-05   | NA         | 6.6E-06 | 2.1E-05               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 4.3E-08               | NA         | 2.0E-08        | NA                   | 6.2E-08               | Kidney                               | 3.2E-06   | NA         | 1.5E-06 | 4.7E-06               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                |                        |                       |            |                |                      | General Toxicity /    |                                      |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 2.0E-03   | NA         | --      | 2.0E-03               |       |
|                             |                       |                | Arsenic                | 2.1E-06               | NA         | 2.2E-07        | NA                   | 2.3E-06               | Skin                                 | 1.4E-02   | NA         | 1.5E-03 | 1.5E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 4.6E-04   | NA         | --      | 4.6E-04               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 4.0E-02   | NA         | --      | 4.0E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 9.6E-04   | NA         | --      | 9.6E-04               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 9.4E-03   | NA         | --      | 9.4E-03               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.6E-02   | NA         | --      | 2.6E-02               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.3E-03   | NA         | --      | 7.3E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 4.0E-06              | --                    | 1.1E-06                              | --        | 5E-06      |         | 1.2E-01               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 5E-06                                |           |            |         |                       | 1E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 5E-06                |                       |                                      |           |            | 1E-01   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 5E-06                 |                                      |           |            |         | 1E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/24/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.6E-02 |
| TOTAL KIDNEY HI =           | 7.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.2E-02 |
| TOTAL NOAEL HI =            | 1.2E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.5E-02 |
|                             | --      |

**TABLE I-91**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - CURRENT - TRESPASSER/RECREATIONAL RECEPTOR - ADOLESCENT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESPASSER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADOLESCENT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | BACKGROUND           | Benzo(a)anthracene     | 3.7E-08               | NA         | 1.6E-08 | NA                   | 5.3E-08               | Kidney                               | 3.9E-06   | NA         | 1.7E-06 | 5.6E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 3.1E-07               | NA         | 1.3E-07 | NA                   | 4.4E-07               | Kidney                               | 3.3E-06   | NA         | 1.4E-06 | 4.7E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 5.2E-08               | NA         | 2.2E-08 | NA                   | 7.4E-08               | Kidney                               | 5.5E-06   | NA         | 2.4E-06 | 7.9E-06               |
|                             |                       |                      | Benzo(k)fluoranthene   | 1.1E-09               | NA         | 4.9E-10 | NA                   | 1.6E-09               | Kidney                               | 1.2E-06   | NA         | 5.2E-07 | 1.7E-06               |
|                             |                       |                      | Carbazole              | 4.6E-11               | NA         | 1.5E-11 | NA                   | 6.1E-11               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 2.9E-10               | NA         | 1.3E-10 | NA                   | 4.2E-10               | Kidney                               | 3.1E-06   | NA         | 1.3E-06 | 4.5E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.6E-08               | NA         | 1.5E-08 | NA                   | 5.1E-08               | Kidney                               | 3.8E-07   | NA         | 1.6E-07 | 5.4E-07               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.3E-08               | NA         | 5.8E-09 | NA                   | 1.9E-08               | Kidney                               | 1.4E-06   | NA         | 6.2E-07 | 2.1E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 5.5E-03   | NA         | --      | 5.5E-03               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.0E-03   | NA         | --      | 1.0E-03               |
|                             |                       |                      | Arsenic                | 7.9E-07               | NA         | 7.8E-08 | NA                   |                       | Skin                                 | 1.2E-02   | NA         | 1.2E-03 | 1.3E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.4E-04   | NA         | 5.8E-05 | 5.0E-04               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.9E-03   | NA         | --      | 3.9E-03               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 6.3E-04   | NA         | --      | 6.3E-04               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 4.2E-03   | NA         | --      | 4.2E-03               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 9.6E-04   | NA         | --      | 9.6E-04               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.0E-02   | NA         | --      | 7.0E-02               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.6E-03   | NA         | --      | 3.6E-03               |
|                             |                       |                      | CHEMICAL TOTAL         | 1.2E-06               | --         | 2.7E-07 | --                   | 2E-06                 |                                      | 1.1E-01   | --         | 1.3E-03 | 1E-01                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 1E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 1E-01                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 1E-01                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-06                 |                                      |           |            |         | 1E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 9.6E-04 |
| TOTAL KIDNEY HI =           | 4.3E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 9.6E-03 |
| TOTAL NOAEL HI =            | 7.4E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.3E-02 |
|                             | --      |



**TABLE I-92**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - CURRENT - TRESSPASER/RECREATIONAL RECEPTOR - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
 RECEPTOR POPULATION: TRESSPASER/RECREATIONAL RECEPTOR  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |         |
| SOIL                        | SURFACE SOIL    | BACKGROUND            | Benzo(a)anthracene     | 5.4E-09               | NA         | 2.4E-09        | NA                   | 7.8E-09               | Kidney                               | 1.2E-06   | NA         | 5.4E-07 | 1.8E-06               |       |         |
|                             |                 |                       | Benzo(a)pyrene         | 4.5E-08               | NA         | 2.0E-08        | NA                   | 6.5E-08               | Kidney                               | 1.0E-06   | NA         | 4.5E-07 | 1.5E-06               |       |         |
|                             |                 |                       | Benzo(b)fluoranthene   | 7.6E-09               | NA         | 3.4E-09        | NA                   | 1.1E-08               | Kidney                               | 1.7E-06   | NA         | 7.7E-07 | 2.5E-06               |       |         |
|                             |                 |                       | Benzo(k)fluoranthene   | 1.7E-10               | NA         | 7.4E-11        | NA                   | 2.4E-10               | Kidney                               | 3.8E-07   | NA         | 1.7E-07 | 5.5E-07               |       |         |
|                             |                 |                       | Carbazole              | 2.0E-11               | NA         | 6.9E-12        | NA                   | 2.7E-11               |                                      | --        | NA         | --      |                       |       |         |
|                             |                 |                       | Chrysene               | 4.3E-11               | NA         | 1.9E-11        | NA                   | 6.2E-11               | Kidney                               | 9.9E-07   | NA         | 4.4E-07 | 1.4E-06               |       |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | 5.2E-09               | NA         | 2.3E-09        | NA                   | 7.5E-09               | Kidney                               | 1.2E-07   | NA         | 5.3E-08 | 1.7E-07               |       |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | 2.0E-09               | NA         | 8.7E-10        | NA                   | 2.9E-09               | Kidney                               | 4.5E-07   | NA         | 2.0E-07 | 6.5E-07               |       |         |
|                             |                 |                       | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.7E-03   | NA         | --      | 1.7E-03               |       |         |
|                             |                 |                       |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |         |
|                             |                 |                       | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.2E-04   | NA         | --      | 3.2E-04               |       |         |
|                             |                 |                       | Arsenic                | 3.5E-07               | NA         | 3.5E-08        | NA                   | 3.8E-07               | Skin                                 | 3.8E-03   | NA         | 3.9E-04 | 4.2E-03               |       |         |
|                             |                 |                       | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.2E-05   | NA         | --      | 6.2E-05               |       |         |
|                             |                 |                       | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.4E-04   | NA         | 1.9E-05 | 1.6E-04               |       |         |
|                             |                 |                       | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.2E-03   | NA         | --      | 1.2E-03               |       |         |
|                             |                 |                       | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.4E-03   | NA         | --      | 3.4E-03               |       |         |
|                             |                 |                       | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.0E-04   | NA         | --      | 2.0E-04               |       |         |
|                             |                 |                       | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |         |
|                             |                 |                       | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.3E-03   | NA         | --      | 1.3E-03               |       |         |
|                             |                 |                       | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 3.0E-04   | NA         | --      | 3.0E-04               |       |         |
|                             |                 |                       | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.2E-02   | NA         | --      | 2.2E-02               |       |         |
|                             |                 |                       | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-03   | NA         | --      | 1.1E-03               |       |         |
|                             |                 |                       |                        |                       |            |                |                      |                       |                                      |           |            |         |                       |       |         |
|                             |                 |                       |                        |                       |            | CHEMICAL TOTAL | 4.1E-07              | --                    | 6.4E-08                              | --        | 5E-07      |         | 3.6E-02               | --    | 4.1E-04 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |            |                |                      |                       |                                      | 5E-07     |            |         |                       |       | 4E-02   |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |            |                |                      |                       | 5E-07                                |           |            |         |                       | 4E-02 |         |
| SOIL TOTAL                  |                 |                       |                        |                       |            |                |                      | 5E-07                 |                                      |           |            |         | 4E-02                 |       |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |            |                |                      | 5E-07                 |                                      |           |            |         | 4E-02                 |       |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |            |                |                      | 5E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 4E-02                 |       |         |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/2012  
 Checked by: KJC 2/15/2012

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.2E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.2E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 3.0E-04 |
| TOTAL KIDNEY HI =           | 1.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.0E-03 |
| TOTAL NOAEL HI =            | 2.3E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 4.2E-03 |
|                             | --      |

**TABLE I-93**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: CURRENT</b><br><b>RECEPTOR POPULATION: OUTDOOR WORKER</b><br><b>RECEPTOR AGE: ADULT</b> |
|----------------------------------------------------------------------------------------------------------------|

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |  |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|--|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |  |
| SOIL   | SURFACE SOIL    | BACKGROUND     | Benzo(a)anthracene     | 5.4E-08               | NA         | 4.6E-08 | NA                   | 1.0E-07               | Kidney                               | 6.9E-06   | NA         | 5.9E-06 | 1.3E-05               |  |
|        |                 |                | Benzo(a)pyrene         | 4.5E-07               | NA         | 3.9E-07 | NA                   | 8.4E-07               | Kidney                               | 5.8E-06   | NA         | 5.0E-06 | 1.1E-05               |  |
|        |                 |                | Benzo(b)fluoranthene   | 7.6E-08               | NA         | 6.6E-08 | NA                   | 1.4E-07               | Kidney                               | 9.8E-06   | NA         | 8.4E-06 | 1.8E-05               |  |
|        |                 |                | Benzo(k)fluoranthene   | 1.7E-09               | NA         | 1.4E-09 | NA                   | 3.1E-09               | Kidney                               | 2.1E-06   | NA         | 1.8E-06 | 4.0E-06               |  |
|        |                 |                | Carbazole              | 2.0E-10               | NA         | 1.3E-10 | NA                   | 3.4E-10               |                                      | --        | NA         | --      |                       |  |
|        |                 |                | Chrysene               | 4.3E-10               | NA         | 3.7E-10 | NA                   | 8.1E-10               | Kidney                               | 5.5E-06   | NA         | 4.8E-06 | 1.0E-05               |  |
|        |                 |                | Dibenz(a,h)anthracene  | 5.3E-08               | NA         | 4.5E-08 | NA                   | 9.8E-08               | Kidney                               | 6.7E-07   | NA         | 5.8E-07 | 1.2E-06               |  |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.0E-08               | NA         | 1.7E-08 | NA                   | 3.7E-08               | Kidney                               | 2.5E-06   | NA         | 2.2E-06 | 4.7E-06               |  |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System<br>General Toxicity / | 9.6E-03   | NA         | --      | 9.6E-03               |  |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.8E-03   | NA         | --      | 1.8E-03               |  |
|        |                 |                | Arsenic                | 3.5E-06               | NA         | 6.9E-07 | NA                   | 4.2E-06               | Skin                                 | 2.2E-02   | NA         | 4.3E-03 | 2.6E-02               |  |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.5E-04   | NA         | --      | 3.5E-04               |  |
|        |                 |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.8E-04   | NA         | 2.1E-04 | 9.8E-04               |  |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.9E-03   | NA         | --      | 6.9E-03               |  |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.9E-02   | NA         | --      | 1.9E-02               |  |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.1E-03   | NA         | --      | 1.1E-03               |  |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |  |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.4E-03   | NA         | --      | 7.4E-03               |  |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.7E-03   | NA         | --      | 1.7E-03               |  |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-01   | NA         | --      | 1.2E-01               |  |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.4E-03   | NA         | --      | 6.4E-03               |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |  |
|        |                 |                |                        | </                    |            |         |                      |                       |                                      |           |            |         |                       |  |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by:

40841

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.8E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.7E-03 |
| TOTAL KIDNEY HI =           | 7.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.7E-02 |
| TOTAL NOAEL HI =            | 1.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-02 |
|                             | --      |

**TABLE I-94**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

|                                                                                                               |
|---------------------------------------------------------------------------------------------------------------|
| <b>SCENARIO TIMEFRAME: FUTURE</b><br><b>RECEPTOR POPULATION: OUTDOOR WORKER</b><br><b>RECEPTOR AGE: ADULT</b> |
|---------------------------------------------------------------------------------------------------------------|

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | BACKGROUND     | Benzo(a)anthracene     | 5.4E-08               | NA         | 4.6E-08 | NA                   | 1.0E-07               | Kidney                               | 6.9E-06   | NA         | 5.9E-06 | 1.3E-05               |
|        |                 |                | Benzo(a)pyrene         | 4.5E-07               | NA         | 3.9E-07 | NA                   | 8.4E-07               | Kidney                               | 5.8E-06   | NA         | 5.0E-06 | 1.1E-05               |
|        |                 |                | Benzo(b)fluoranthene   | 7.6E-08               | NA         | 6.6E-08 | NA                   | 1.4E-07               | Kidney                               | 9.8E-06   | NA         | 8.4E-06 | 1.8E-05               |
|        |                 |                | Benzo(k)fluoranthene   | 1.7E-09               | NA         | 1.4E-09 | NA                   | 3.1E-09               | Kidney                               | 2.1E-06   | NA         | 1.8E-06 | 4.0E-06               |
|        |                 |                | Carbazole              | 2.0E-10               | NA         | 1.3E-10 | NA                   | 3.4E-10               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 4.3E-10               | NA         | 3.7E-10 | NA                   | 8.1E-10               | Kidney                               | 5.5E-06   | NA         | 4.8E-06 | 1.0E-05               |
|        |                 |                | Dibenz(a,h)anthracene  | 5.3E-08               | NA         | 4.5E-08 | NA                   | 9.8E-08               | Kidney                               | 6.7E-07   | NA         | 5.8E-07 | 1.2E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.0E-08               | NA         | 1.7E-08 | NA                   | 3.7E-08               | Kidney                               | 2.5E-06   | NA         | 2.2E-06 | 4.7E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 9.6E-03   | NA         | --      | 9.6E-03               |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Arsenic                | 3.5E-06               | NA         | 6.9E-07 | NA                   | 4.2E-06               | Hematological                        | 1.8E-03   | NA         | --      | 1.8E-03               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 2.2E-02   | NA         | 4.3E-03 | 2.6E-02               |
|        |                 |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 3.5E-04   | NA         | --      | 3.5E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 7.8E-04   | NA         | 2.1E-04 | 9.8E-04               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.9E-03   | NA         | --      | 6.9E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 1.9E-02   | NA         | --      | 1.9E-02               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       | Undetermined                         | 1.1E-03   | NA         | --      | 1.1E-03               |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.4E-03   | NA         | --      | 7.4E-03               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.7E-03   | NA         | --      | 1.7E-03               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-01   | NA         | --      | 1.2E-01               |
|        |                 |                |                        |                       |            |         |                      |                       | Kidney                               | 6.4E-03   | NA         | --      | 6.4E-03               |
|        |                 |                | CHEMICAL TOTAL         | 4.1E-06               | --         | 1.3E-06 | --                   | 5E-06                 |                                      |           |            |         |                       |
|        |                 |                | EXPOSURE POINT TOTAL   |                       |            |         |                      | 5E-06                 |                                      | 2.0E-01   | --         | 4.5E-03 | 2E-01                 |
|        |                 |                | EXPOSURE MEDIUM TOTAL  |                       |            |         |                      | 5E-06                 |                                      |           |            |         | 2E-01                 |

**TABLE I-94**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: OUTDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                                                 |            |         |                       |       |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|----------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------------------------|------------|---------|-----------------------|-------|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION     | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                                       | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |         |
|                             |                 |                       |                        |                       |                |        |                      |                       |                                      |                                                 |            |         |                       |       |         |
| SOIL                        | AIR             | DUST AT BACKGROUND    | Benzo(a)anthracene     | NA                    | 1.4E-12        | NA     | NA                   | 1.4E-12               | Nervous System                       | NA                                              | --         | NA      | 3.3E-04               |       |         |
|                             |                 |                       | Benzo(a)pyrene         | NA                    | 1.2E-11        | NA     | NA                   | 1.2E-11               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Benzo(b)fluoranthene   | NA                    | 2.0E-12        | NA     | NA                   | 2.0E-12               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Benzo(k)fluoranthene   | NA                    | 4.3E-13        | NA     | NA                   | 4.3E-13               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Carbazole              | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Chrysene               | NA                    | 1.1E-13        | NA     | NA                   | 1.1E-13               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | NA                    | 1.5E-12        | NA     | NA                   | 1.5E-12               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | NA                    | 5.1E-13        | NA     | NA                   | 5.1E-13               |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       | Aluminum               | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | 3.3E-04    | NA      |                       |       |         |
|                             |                 |                       | Antimony               | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | --         | NA      |                       |       |         |
|                             |                 |                       |                        |                       |                |        |                      |                       |                                      | Developmental / Cardiovascular / Nervous system | NA         | 7.4E-05 |                       | NA    | 7.4E-05 |
|                             |                 |                       | Arsenic                | NA                    | 1.7E-09        | NA     | NA                   | 1.7E-09               |                                      | Developmental                                   | NA         | 2.4E-05 |                       | NA    | 2.4E-05 |
|                             |                 |                       | Barium                 | NA                    | NC             | NA     | NA                   |                       |                                      | Kidney / Respiratory                            | NA         | 6.7E-06 |                       | NA    | 6.7E-06 |
|                             |                 |                       | Cadmium                | NA                    | 8.6E-11        | NA     | NA                   | 8.6E-11               |                                      | Respiratory                                     | NA         | 3.6E-05 |                       | NA    | 3.6E-05 |
|                             |                 |                       | Chromium               | NA                    | 1.5E-08        | NA     | NA                   | 1.5E-08               |                                      | Respiratory                                     | NA         | 1.6E-04 |                       | NA    | 1.6E-04 |
|                             |                 |                       | Cobalt                 | NA                    | 3.1E-09        | NA     | NA                   | 3.1E-09               |                                      |                                                 | NA         | --      |                       | NA    |         |
|                             |                 |                       | Copper                 | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA    |         |
|                             |                 |                       | Lead                   | NA                    | --             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA    |         |
|                             |                 |                       | Manganese              | NA                    | NC             | NA     | NA                   |                       |                                      | Nervous System                                  | NA         | 1.2E-03 |                       | NA    | 1.2E-03 |
|                             |                 |                       | Mercury                | NA                    | NC             | NA     | NA                   |                       |                                      | Nervous System                                  | NA         | 2.9E-07 |                       | NA    | 2.9E-07 |
|                             |                 |                       | Thallium               | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA    |         |
|                             |                 |                       | Vanadium               | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | 5.5E-05 |                       | NA    | 5.5E-05 |
|                             |                 |                       |                        |                       | CHEMICAL TOTAL | --     | 2.0E-08              | --                    |                                      | --                                              | 2E-08      |         |                       | --    | 1.9E-03 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |                |        |                      |                       |                                      | 2E-08                                           |            |         |                       | 2E-03 |         |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |                |        |                      |                       | 2E-08                                |                                                 |            |         | 2E-03                 |       |         |
| SOIL TOTAL                  |                 |                       |                        |                       |                |        |                      | 5E-06                 |                                      |                                                 |            | 2E-01   |                       |       |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |                |        |                      | 5E-06                 |                                      |                                                 |            | 2E-01   |                       |       |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |                |        |                      | 5E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |                                                 |            | 2E-01   |                       |       |         |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.8E-03 |
| TOTAL CARDIOVASCULAR HI =   | 7.4E-05 |
| TOTAL DEVELOPMENTAL HI =    | 9.8E-05 |
| TOTAL ENDOCRINE HI =        | 1.9E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.8E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 1.7E-03 |
| TOTAL KIDNEY HI =           | 7.8E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.9E-02 |
| TOTAL NOAEL HI =            | 1.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-02 |
| TOTAL RESPIRATORY HI =      | 2.0E-04 |

**TABLE I-95**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SURFACE SOIL          | BACKGROUND     | Benzo(a)anthracene     | 3.0E-08               | NA         | 5.2E-08        | NA                   | 8.2E-08               | Kidney                               | 3.8E-06   | NA         | 6.6E-06 | 1.0E-05               |       |
|                             |                       |                | Benzo(a)pyrene         | 2.5E-07               | NA         | 4.3E-07        | NA                   | 6.8E-07               | Kidney                               | 3.2E-06   | NA         | 5.5E-06 | 8.7E-06               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 4.2E-08               | NA         | 7.3E-08        | NA                   | 1.2E-07               | Kidney                               | 5.4E-06   | NA         | 9.3E-06 | 1.5E-05               |       |
|                             |                       |                | Benzo(k)fluoranthene   | 9.3E-10               | NA         | 1.6E-09        | NA                   | 2.5E-09               | Kidney                               | 1.2E-06   | NA         | 2.0E-06 | 3.2E-06               |       |
|                             |                       |                | Carbazole              | 1.1E-10               | NA         | 1.5E-10        | NA                   | 2.6E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Chrysene               | 2.4E-10               | NA         | 4.1E-10        | NA                   | 6.5E-10               | Kidney                               | 3.1E-06   | NA         | 5.3E-06 | 8.4E-06               |       |
|                             |                       |                | Dibenz(a,h)anthracene  | 2.9E-08               | NA         | 5.0E-08        | NA                   | 7.9E-08               | Kidney                               | 3.7E-07   | NA         | 6.4E-07 | 1.0E-06               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.1E-08               | NA         | 1.9E-08        | NA                   | 3.0E-08               | Kidney                               | 1.4E-06   | NA         | 2.4E-06 | 3.8E-06               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 5.4E-03   | NA         | --      | 5.4E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 1.0E-03   | NA         | --      | 1.0E-03               |       |
|                             |                       |                | Arsenic                | 1.9E-06               | NA         | 7.7E-07        | NA                   | 2.7E-06               | Skin                                 | 1.2E-02   | NA         | 4.8E-03 | 1.7E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.0E-04   | NA         | --      | 2.0E-04               |       |
|                             |                       |                | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 4.3E-04   | NA         | 2.3E-04 | 6.6E-04               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.9E-03   | NA         | --      | 3.9E-03               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 1.0E-02   | NA         | --      | 1.0E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 6.2E-04   | NA         | --      | 6.2E-04               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 4.1E-03   | NA         | --      | 4.1E-03               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 9.4E-04   | NA         | --      | 9.4E-04               |       |
|                             |                       |                | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 6.8E-02   | NA         | --      | 6.8E-02               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 3.6E-03   | NA         | --      | 3.6E-03               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 2.3E-06              | --                    | 1.4E-06                              | --        | 4E-06      |         | 1.1E-01               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       |                                      | 4E-06     |            |         |                       | 1E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                |                      | 4E-06                 |                                      |           |            | 1E-01   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 4E-06                 |                                      |           |            | 1E-01   |                       |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 4E-06                 |                                      |           |            | 1E-01   |                       |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 4E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            | 1E-01   |                       |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 1.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 9.4E-04 |
| TOTAL KIDNEY HI =           | 4.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 9.5E-03 |
| TOTAL NOAEL HI =            | 7.3E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.7E-02 |
|                             | --      |

TABLE I-96  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SURFACE SOIL    | BACKGROUND     | Benzo(a)anthracene     | 7.9E-09               | NA         | 3.1E-09 | NA                   | 1.1E-08               | Kidney                               | 2.5E-06   | NA         | 9.9E-07 | 3.5E-06               |
|        |                 |                | Benzo(a)pyrene         | 6.6E-08               | NA         | 2.6E-08 | NA                   | 9.2E-08               | Kidney                               | 2.1E-06   | NA         | 8.3E-07 | 2.9E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 1.1E-08               | NA         | 4.4E-09 | NA                   | 1.6E-08               | Kidney                               | 3.6E-06   | NA         | 1.4E-06 | 5.0E-06               |
|        |                 |                | Benzo(k)fluoranthene   | 2.5E-10               | NA         | 9.6E-11 | NA                   | 3.4E-10               | Kidney                               | 7.9E-07   | NA         | 3.1E-07 | 1.1E-06               |
|        |                 |                | Carbazole              | 3.0E-11               | NA         | 9.0E-12 | NA                   | 3.9E-11               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 6.4E-11               | NA         | 2.5E-11 | NA                   | 8.8E-11               | Kidney                               | 2.0E-06   | NA         | 7.9E-07 | 2.8E-06               |
|        |                 |                | Dibenz(a,h)anthracene  | 7.7E-09               | NA         | 3.0E-09 | NA                   | 1.1E-08               | Kidney                               | 2.5E-07   | NA         | 9.6E-08 | 3.4E-07               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.9E-09               | NA         | 1.1E-09 | NA                   | 4.1E-09               | Kidney                               | 9.3E-07   | NA         | 3.6E-07 | 1.3E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.5E-02   | NA         | --      | 3.5E-02               |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Arsenic                | 5.1E-07               | NA         | 4.6E-08 | NA                   | 5.6E-07               | Hematological                        | 6.6E-03   | NA         | --      | 6.6E-03               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Skin                                 | 7.9E-02   | NA         | 7.1E-03 | 8.7E-02               |
|        |                 |                | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       |                                      | 5.7E-03   | NA         | 6.8E-04 | 6.4E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.8E-03   | NA         | --      | 3.8E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 6.9E-03   | NA         | --      | 6.9E-03               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       | Undetermined                         | 1.6E-02   | NA         | --      | 1.6E-02               |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.7E-02   | NA         | --      | 2.7E-02               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.3E-04   | NA         | --      | 9.3E-04               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 9.0E-02   | NA         | --      | 9.0E-02               |
|        |                 |                |                        |                       |            |         |                      |                       | Kidney                               | 1.2E-02   | NA         | --      | 1.2E-02               |
|        |                 |                | CHEMICAL TOTAL         | 6.1E-07               | --         | 8.4E-08 | --                   | 7E-07                 |                                      |           |            |         |                       |
|        |                 |                | EXPOSURE POINT TOTAL   |                       |            |         |                      | 7E-07                 |                                      | 2.9E-01   | --         | 7.8E-03 | 3E-01                 |
|        |                 |                | EXPOSURE MEDIUM TOTAL  |                       |            |         |                      | 7E-07                 |                                      |           |            |         | 3E-01                 |

TABLE I-96  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT        | CHEMICAL               | CARCINOGENIC RISK (1) |                |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                                                 |            |         |                       |    |         |
|-----------------------------|-----------------|-----------------------|------------------------|-----------------------|----------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------------------------|------------|---------|-----------------------|----|---------|
|                             |                 |                       |                        | INGESTION             | INHALATION     | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                                       | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |
|                             |                 |                       |                        |                       |                |        |                      |                       |                                      |                                                 |            |         |                       |    |         |
| SOIL                        | AIR             | DUST AT BACKGROUND    | Benzo(a)anthracene     | NA                    | 1.8E-11        | NA     | NA                   | 1.8E-11               | Nervous System                       | NA                                              | --         | NA      | 1.0E-01               |    |         |
|                             |                 |                       | Benzo(a)pyrene         | NA                    | 1.5E-10        | NA     | NA                   | 1.5E-10               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Benzo(b)fluoranthene   | NA                    | 2.5E-11        | NA     | NA                   | 2.5E-11               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Benzo(k)fluoranthene   | NA                    | 5.5E-12        | NA     | NA                   | 5.5E-12               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Carbazole              | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Chrysene               | NA                    | 1.4E-12        | NA     | NA                   | 1.4E-12               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Dibenz(a,h)anthracene  | NA                    | 1.9E-11        | NA     | NA                   | 1.9E-11               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Indeno(1,2,3-cd)pyrene | NA                    | 6.5E-12        | NA     | NA                   | 6.5E-12               |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       | Aluminum               | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | 1.0E-01    | NA      |                       |    |         |
|                             |                 |                       | Antimony               | NA                    | NC             | NA     | NA                   |                       |                                      | NA                                              | --         | NA      |                       |    |         |
|                             |                 |                       |                        |                       |                |        |                      |                       |                                      | Developmental / Cardiovascular / Nervous system | NA         | 2.3E-02 |                       | NA | 2.3E-02 |
|                             |                 |                       | Arsenic                | NA                    | 2.2E-08        | NA     | NA                   | 2.2E-08               |                                      | Developmental                                   | NA         | 7.6E-04 |                       | NA | 7.6E-04 |
|                             |                 |                       | Barium                 | NA                    | NC             | NA     | NA                   |                       |                                      | Kidney / Respiratory                            | NA         | 2.1E-03 |                       | NA | 2.1E-03 |
|                             |                 |                       | Cadmium                | NA                    | 1.1E-09        | NA     | NA                   | 1.1E-09               |                                      | Respiratory                                     | NA         | 2.3E-01 |                       | NA | 2.3E-01 |
|                             |                 |                       | Chromium               | NA                    | 1.9E-07        | NA     | NA                   | 1.9E-07               |                                      | Respiratory                                     | NA         | 1.5E-02 |                       | NA | 1.5E-02 |
|                             |                 |                       | Cobalt                 | NA                    | 3.9E-08        | NA     | NA                   | 3.9E-08               |                                      |                                                 | NA         | --      |                       | NA |         |
|                             |                 |                       | Copper                 | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA |         |
|                             |                 |                       | Lead                   | NA                    | --             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA |         |
|                             |                 |                       | Manganese              | NA                    | NC             | NA     | NA                   |                       |                                      | Nervous System                                  | NA         | 3.7E-01 |                       | NA | 3.7E-01 |
|                             |                 |                       | Mercury                | NA                    | NC             | NA     | NA                   |                       |                                      | Nervous System                                  | NA         | 9.2E-05 |                       | NA | 9.2E-05 |
|                             |                 |                       | Thallium               | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | --      |                       | NA |         |
|                             |                 |                       | Vanadium               | NA                    | NC             | NA     | NA                   |                       |                                      |                                                 | NA         | 1.7E-02 |                       | NA | 1.7E-02 |
|                             |                 |                       |                        |                       | CHEMICAL TOTAL | --     | 2.6E-07              | --                    |                                      | --                                              | 3E-07      |         |                       | -- | 7.6E-01 |
|                             |                 |                       |                        | EXPOSURE POINT TOTAL  |                |        |                      |                       |                                      | 3E-07                                           | 8E-01      |         |                       |    |         |
|                             |                 | EXPOSURE MEDIUM TOTAL |                        |                       |                |        |                      | 3E-07                 | 8E-01                                |                                                 |            |         |                       |    |         |
| SOIL TOTAL                  |                 |                       |                        |                       |                |        |                      | 9E-07                 | 1E+00                                |                                                 |            |         |                       |    |         |
| RECEPTOR TOTAL              |                 |                       |                        |                       |                |        |                      | 9E-07                 | 1E+00                                |                                                 |            |         |                       |    |         |
| TOTAL RISK ACROSS ALL MEDIA |                 |                       |                        |                       |                |        |                      | 9E-07                 | TOTAL HAZARD ACROSS ALL MEDIA        |                                                 |            |         | 1E+00                 |    |         |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 6.6E-03 |
| TOTAL CARDIOVASCULAR HI =   | 2.3E-02 |
| TOTAL DEVELOPMENTAL HI =    | 2.4E-02 |
| TOTAL ENDOCRINE HI =        | 6.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 6.6E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.6E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.6E-01 |
| TOTAL NOAEL HI =            | 1.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 8.7E-02 |
| TOTAL RESPIRATORY HI =      | 2.4E-01 |

**TABLE I-97**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SURFACE SOIL          | BACKGROUND     | Benzo(a)anthracene     | 1.2E-07               | NA         | 4.8E-08        | NA                   | 1.7E-07               | Kidney                               | 1.5E-05   | NA         | 5.4E-06 | 2.0E-05               |       |
|                             |                       |                | Benzo(a)pyrene         | 9.8E-07               | NA         | 4.0E-07        | NA                   | 1.4E-06               | Kidney                               | 1.2E-05   | NA         | 4.5E-06 | 1.7E-05               |       |
|                             |                       |                | Benzo(b)fluoranthene   | 1.7E-07               | NA         | 6.7E-08        | NA                   | 2.3E-07               | Kidney                               | 2.1E-05   | NA         | 7.7E-06 | 2.9E-05               |       |
|                             |                       |                | Benzo(k)fluoranthene   | 3.6E-09               | NA         | 1.5E-09        | NA                   | 5.1E-09               | Kidney                               | 4.6E-06   | NA         | 1.7E-06 | 6.3E-06               |       |
|                             |                       |                | Carbazole              | 1.1E-10               | NA         | 3.0E-11        | NA                   | 1.4E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Chrysene               | 9.4E-10               | NA         | 3.8E-10        | NA                   | 1.3E-09               | Kidney                               | 1.2E-05   | NA         | 4.4E-06 | 1.6E-05               |       |
|                             |                       |                | Dibenz(a,h)anthracene  | 1.1E-07               | NA         | 4.6E-08        | NA                   | 1.6E-07               | Kidney                               | 1.4E-06   | NA         | 5.3E-07 | 2.0E-06               |       |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 4.3E-08               | NA         | 1.7E-08        | NA                   | 6.1E-08               | Kidney                               | 5.5E-06   | NA         | 2.0E-06 | 7.5E-06               |       |
|                             |                       |                | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 2.1E-02   | NA         | --      | 2.1E-02               |       |
|                             |                       |                |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 3.9E-03   | NA         | --      | 3.9E-03               |       |
|                             |                       |                | Arsenic                | 1.8E-06               | NA         | 1.5E-07        | NA                   | 2.0E-06               | Skin                                 | 4.7E-02   | NA         | 3.9E-03 | 5.1E-02               |       |
|                             |                       |                | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.6E-04   | NA         | --      | 7.6E-04               |       |
|                             |                       |                | Cadmium                | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.7E-03   | NA         | 1.9E-04 | 1.9E-03               |       |
|                             |                       |                | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.5E-02   | NA         | --      | 1.5E-02               |       |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 4.1E-02   | NA         | --      | 4.1E-02               |       |
|                             |                       |                | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 2.4E-03   | NA         | --      | 2.4E-03               |       |
|                             |                       |                | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.6E-02   | NA         | --      | 1.6E-02               |       |
|                             |                       |                | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 3.7E-03   | NA         | --      | 3.7E-03               |       |
|                             |                       |                | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 2.7E-01   | NA         | --      | 2.7E-01               |       |
|                             |                       |                | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.4E-02   | NA         | --      | 1.4E-02               |       |
|                             |                       |                |                        |                       |            |                |                      |                       |                                      |           |            | --      |                       |       |
|                             |                       |                |                        |                       |            | CHEMICAL TOTAL | 3.2E-06              | --                    | 7.3E-07                              | --        | 4E-06      |         | 4.3E-01               | --    |
|                             |                       |                | EXPOSURE POINT TOTAL   |                       |            |                |                      |                       | 4E-06                                |           |            |         |                       | 4E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |                | 4E-06                |                       |                                      |           |            | 4E-01   |                       |       |
| SOIL TOTAL                  |                       |                |                        |                       |            |                |                      | 4E-06                 |                                      |           |            |         | 4E-01                 |       |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |                |                      | 4E-06                 |                                      |           |            |         | 4E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |                |                      | 4E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 4E-01                 |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.1E-02 |
|                             | --      |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.9E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 3.7E-03 |
| TOTAL KIDNEY HI =           | 1.7E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.7E-02 |
| TOTAL NOAEL HI =            | 2.8E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 5.1E-02 |
|                             | --      |



**TABLE I-98**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |                      |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |    |         |       |
|-----------------------------|-----------------|----------------|------------------------|-----------------------|----------------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|----|---------|-------|
|                             |                 |                |                        | INGESTION             | INHALATION           | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |    |         |       |
| SOIL                        | SURFACE SOIL    | BACKGROUND     | Benzo(a)anthracene     | 2.3E-08               | NA                   | 1.0E-08        | NA                   | 3.3E-08               | Kidney                               | 1.7E-06   | NA         | 8.0E-07 | 2.5E-06               |    |         |       |
|                             |                 |                | Benzo(a)pyrene         | 1.9E-07               | NA                   | 8.8E-08        | NA                   | 2.8E-07               | Kidney                               | 1.4E-06   | NA         | 6.7E-07 | 2.1E-06               |    |         |       |
|                             |                 |                | Benzo(b)fluoranthene   | 3.2E-08               | NA                   | 1.5E-08        | NA                   | 4.7E-08               | Kidney                               | 2.4E-06   | NA         | 1.1E-06 | 3.6E-06               |    |         |       |
|                             |                 |                | Benzo(k)fluoranthene   | 7.0E-10               | NA                   | 3.2E-10        | NA                   | 1.0E-09               | Kidney                               | 5.3E-07   | NA         | 2.5E-07 | 7.8E-07               |    |         |       |
|                             |                 |                | Carbazole              | 4.9E-11               | NA                   | 1.7E-11        | NA                   | 6.6E-11               |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                | Chrysene               | 1.8E-10               | NA                   | 8.4E-11        | NA                   | 2.7E-10               | Kidney                               | 1.4E-06   | NA         | 6.4E-07 | 2.0E-06               |    |         |       |
|                             |                 |                | Dibenz(a,h)anthracene  | 2.2E-08               | NA                   | 1.0E-08        | NA                   | 3.2E-08               | Kidney                               | 1.7E-07   | NA         | 7.8E-08 | 2.4E-07               |    |         |       |
|                             |                 |                | Indeno(1,2,3-cd)pyrene | 8.3E-09               | NA                   | 3.9E-09        | NA                   | 1.2E-08               | Kidney                               | 6.3E-07   | NA         | 2.9E-07 | 9.3E-07               |    |         |       |
|                             |                 |                | Aluminum               | NC                    | NA                   | NC             | NA                   |                       | Nervous System<br>General Toxicity / | 2.4E-03   | NA         | --      | 2.4E-03               |    |         |       |
|                             |                 |                | Antimony               | NC                    | NA                   | NC             | NA                   |                       | Hematological                        | 4.5E-04   | NA         | --      | 4.5E-04               |    |         |       |
|                             |                 |                | Arsenic                | 8.3E-07               | NA                   | 8.9E-08        | NA                   | 9.2E-07               | Skin                                 | 5.4E-03   | NA         | 5.8E-04 | 6.0E-03               |    |         |       |
|                             |                 |                | Barium                 | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 8.7E-05   | NA         | --      | 8.7E-05               |    |         |       |
|                             |                 |                | Cadmium                | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 1.9E-04   | NA         | 2.8E-05 | 2.2E-04               |    |         |       |
|                             |                 |                | Chromium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 1.7E-03   | NA         | --      | 1.7E-03               |    |         |       |
|                             |                 |                | Cobalt                 | NC                    | NA                   | NC             | NA                   |                       | Endocrine                            | 4.7E-03   | NA         | --      | 4.7E-03               |    |         |       |
|                             |                 |                | Copper                 | NC                    | NA                   | NC             | NA                   |                       | Undetermined                         | 2.8E-04   | NA         | --      | 2.8E-04               |    |         |       |
|                             |                 |                | Lead                   | --                    | NA                   | --             | NA                   |                       |                                      | --        | NA         | --      |                       |    |         |       |
|                             |                 |                | Manganese              | NC                    | NA                   | NC             | NA                   |                       | Nervous System                       | 1.8E-03   | NA         | --      | 1.8E-03               |    |         |       |
|                             |                 |                | Mercury                | NC                    | NA                   | NC             | NA                   |                       | Immune system                        | 4.2E-04   | NA         | --      | 4.2E-04               |    |         |       |
|                             |                 |                | Thallium               | NC                    | NA                   | NC             | NA                   |                       | NOAEL                                | 3.1E-02   | NA         | --      | 3.1E-02               |    |         |       |
|                             |                 |                | Vanadium               | NC                    | NA                   | NC             | NA                   |                       | Kidney                               | 1.6E-03   | NA         | --      | 1.6E-03               |    |         |       |
|                             |                 |                |                        |                       |                      | CHEMICAL TOTAL | 1.1E-06              | --                    | 2.2E-07                              | --        | 1E-06      |         | 5.0E-02               | -- | 6.1E-04 | 5E-02 |
|                             |                 |                |                        |                       | EXPOSURE POINT TOTAL |                |                      |                       |                                      |           |            | 1E-06   | 5E-02                 |    |         |       |
|                             |                 |                |                        | EXPOSURE MEDIUM TOTAL |                      |                |                      |                       |                                      |           | 1E-06      | 5E-02   |                       |    |         |       |
|                             | SOIL TOTAL      |                |                        |                       |                      |                |                      |                       | 1E-06                                | 5E-02     |            |         |                       |    |         |       |
| RECEPTOR TOTAL              |                 |                |                        |                       |                      |                |                      | 1E-06                 | 5E-02                                |           |            |         |                       |    |         |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |                        |                       |                      |                |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 5E-02                 |    |         |       |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 4.5E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 4.5E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 4.2E-04 |
| TOTAL KIDNEY HI =           | 1.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.2E-03 |
| TOTAL NOAEL HI =            | 3.3E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 6.0E-03 |
|                             | --      |

**TABLE I-99**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | BACKGROUND           | Benzo(a)anthracene     | 7.9E-07               | NA         | 3.2E-07 | NA                   | 1.1E-06               | Kidney                               | 1.0E-04   | NA         | 3.7E-05 | 1.4E-04               |
|                             |                       |                      | Benzo(a)pyrene         | 6.6E-06               | NA         | 2.7E-06 | NA                   | 9.3E-06               | Kidney                               | 8.4E-05   | NA         | 3.1E-05 | 1.1E-04               |
|                             |                       |                      | Benzo(b)fluoranthene   | 1.1E-06               | NA         | 4.5E-07 | NA                   | 1.6E-06               | Kidney                               | 1.4E-04   | NA         | 5.2E-05 | 1.9E-04               |
|                             |                       |                      | Benzo(k)fluoranthene   | 2.5E-08               | NA         | 9.9E-09 | NA                   | 3.4E-08               | Kidney                               | 3.1E-05   | NA         | 1.1E-05 | 4.2E-05               |
|                             |                       |                      | Carbazole              | 7.1E-10               | NA         | 2.0E-10 | NA                   | 9.1E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 6.4E-09               | NA         | 2.6E-09 | NA                   | 8.9E-09               | Kidney                               | 8.1E-05   | NA         | 2.9E-05 | 1.1E-04               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 7.7E-07               | NA         | 3.1E-07 | NA                   | 1.1E-06               | Kidney                               | 9.8E-06   | NA         | 3.6E-06 | 1.3E-05               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 2.9E-07               | NA         | 1.2E-07 | NA                   | 4.1E-07               | Kidney                               | 3.7E-05   | NA         | 1.3E-05 | 5.0E-05               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.4E-01   | NA         | --      | 1.4E-01               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.6E-02   | NA         | --      | 2.6E-02               |
|                             |                       |                      | Arsenic                | 1.2E-05               | NA         | 1.0E-06 | NA                   | 1.3E-05               | Skin                                 | 3.1E-01   | NA         | 2.6E-02 | 3.4E-01               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.1E-03   | NA         | --      | 5.1E-03               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-02   | NA         | 1.3E-03 | 1.3E-02               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.0E-01   | NA         | --      | 1.0E-01               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.7E-01   | NA         | --      | 2.7E-01               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.6E-02   | NA         | --      | 1.6E-02               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.1E-01   | NA         | --      | 1.1E-01               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.5E-02   | NA         | --      | 2.5E-02               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.8E+00   | NA         | --      | 1.8E+00               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.3E-02   | NA         | --      | 9.3E-02               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                      | CHEMICAL TOTAL         | 2.2E-05               | --         | 4.9E-06 | --                   | 3E-05                 |                                      | 2.9E+00   | --         | 2.8E-02 | 3E+00                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 3E+00                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         | 3E-05                |                       |                                      |           |            | 3E+00   |                       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 3E+00                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 3E-05                 |                                      |           |            |         | 3E+00                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 3E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E+00                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.6E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.7E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.6E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 2.5E-02 |
| TOTAL KIDNEY HI =           | 1.1E-01 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.5E-01 |
| TOTAL NOAEL HI =            | 1.9E+00 |
|                             | --      |
| TOTAL SKIN HI =             | 3.4E-01 |
|                             | --      |

**TABLE I-100**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SURFACE SOIL          | BACKGROUND           | Benzo(a)anthracene     | 1.5E-07               | NA         | 7.1E-08 | NA                   | 2.2E-07               | Kidney                               | 1.2E-05   | NA         | 5.4E-06 | 1.7E-05               |
|                             |                       |                      | Benzo(a)pyrene         | 1.3E-06               | NA         | 5.9E-07 | NA                   | 1.9E-06               | Kidney                               | 9.7E-06   | NA         | 4.5E-06 | 1.4E-05               |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.2E-07               | NA         | 1.0E-07 | NA                   | 3.1E-07               | Kidney                               | 1.6E-05   | NA         | 7.6E-06 | 2.4E-05               |
|                             |                       |                      | Benzo(k)fluoranthene   | 4.7E-09               | NA         | 2.2E-09 | NA                   | 6.9E-09               | Kidney                               | 3.6E-06   | NA         | 1.7E-06 | 5.3E-06               |
|                             |                       |                      | Carbazole              | 3.3E-10               | NA         | 1.2E-10 | NA                   | 4.4E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Chrysene               | 1.2E-09               | NA         | 5.7E-10 | NA                   | 1.8E-09               | Kidney                               | 9.3E-06   | NA         | 4.3E-06 | 1.4E-05               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.5E-07               | NA         | 6.9E-08 | NA                   | 2.2E-07               | Kidney                               | 1.1E-06   | NA         | 5.2E-07 | 1.6E-06               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.6E-08               | NA         | 2.6E-08 | NA                   | 8.2E-08               | Kidney                               | 4.3E-06   | NA         | 2.0E-06 | 6.2E-06               |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.6E-02   | NA         | --      | 1.6E-02               |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.0E-03   | NA         | --      | 3.0E-03               |
|                             |                       |                      | Arsenic                | 5.6E-06               | NA         | 6.0E-07 | NA                   | 6.2E-06               | Skin                                 | 3.6E-02   | NA         | 3.9E-03 | 4.0E-02               |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.9E-04   | NA         | --      | 5.9E-04               |
|                             |                       |                      | Cadmium                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | 1.9E-04 | 1.5E-03               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-02   | NA         | --      | 1.2E-02               |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 3.2E-02   | NA         | --      | 3.2E-02               |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.2E-02   | NA         | --      | 1.2E-02               |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.8E-03   | NA         | --      | 2.8E-03               |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 2.1E-01   | NA         | --      | 2.1E-01               |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.1E-02   | NA         | --      | 1.1E-02               |
|                             |                       |                      |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       | CHEMICAL TOTAL       |                        | 7.4E-06               | --         | 1.5E-06 | --                   | 9E-06                 |                                      | 3.3E-01   | --         | 4.1E-03 | 3E-01                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 3E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 3E-01                 |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 3E-01                 |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 9E-06                 |                                      |           |            |         | 3E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 9E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-01                 |

NOTES:  
 NC - Not carcinogenic by this exposure route.  
 NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
 -- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
 Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.8E-03 |
| TOTAL KIDNEY HI =           | 1.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.9E-02 |
| TOTAL NOAEL HI =            | 2.2E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 4.0E-02 |
|                             | --      |

**TABLE I-101**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - CURRENT - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: CURRENT  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND     | Benzo(a)anthracene     | 1.4E-07               | NA         | 1.2E-07 | NA                   | 2.5E-07               | Kidney                               | 1.7E-05   | NA         | 1.5E-05 | 3.2E-05               |
|                             |                       |                | Benzo(a)pyrene         | 4.4E-07               | NA         | 3.7E-07 | NA                   | 8.1E-07               | Kidney                               | 5.6E-06   | NA         | 4.8E-06 | 1.0E-05               |
|                             |                       |                | Benzo(b)fluoranthene   | 1.6E-07               | NA         | 1.4E-07 | NA                   | 3.0E-07               | Kidney                               | 2.1E-05   | NA         | 1.8E-05 | 3.9E-05               |
|                             |                       |                | Carbazole              | 2.2E-10               | NA         | 1.5E-10 | NA                   | 3.7E-10               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Chrysene               | 5.6E-10               | NA         | 4.8E-10 | NA                   | 1.0E-09               | Kidney                               | 7.1E-06   | NA         | 6.1E-06 | 1.3E-05               |
|                             |                       |                | Dibenz(a,h)anthracene  | 4.7E-08               | NA         | 4.0E-08 | NA                   | 8.7E-08               | Kidney                               | 6.0E-07   | NA         | 5.2E-07 | 1.1E-06               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 2.4E-08               | NA         | 2.1E-08 | NA                   | 4.5E-08               | Kidney                               | 3.1E-06   | NA         | 2.7E-06 | 5.8E-06               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.0E-02   | NA         | --      | 1.0E-02               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 9.1E-04   | NA         | --      | 9.1E-04               |
|                             |                       |                | Arsenic                | 2.3E-06               | NA         | 4.5E-07 | NA                   | 2.7E-06               | Skin                                 | 1.4E-02   | NA         | 2.8E-03 | 1.7E-02               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.1E-04   | NA         | --      | 4.1E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.7E-03   | NA         | --      | 6.7E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.4E-02   | NA         | --      | 2.4E-02               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 7.4E-04   | NA         | --      | 7.4E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.6E-03   | NA         | --      | 7.6E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.2E-03   | NA         | --      | 1.2E-03               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.1E-02   | NA         | --      | 7.1E-02               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.2E-03   | NA         | --      | 5.2E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|                             |                       |                |                        | CHEMICAL TOTAL        | 3.1E-06    | --      | 1.1E-06              | --                    | 4E-06                                |           | 1.4E-01    | --      | 2.8E-03               |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-01                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-01                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 4E-06                 |                                      |           |            |         | 1E-01                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 4E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 1E-01                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.1E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 2.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.1E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.2E-03 |
| TOTAL KIDNEY HI =           | 5.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 1.8E-02 |
| TOTAL NOAEL HI =            | 7.8E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.7E-02 |
|                             | --      |

**TABLE I-102**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: OUTDOOR WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | BACKGROUND     | Benzo(a)anthracene     | 1.4E-07               | NA         | 1.2E-07 | NA                   | 2.5E-07               | Kidney                               | 1.7E-05   | NA         | 1.5E-05 | 3.2E-05               |
|        |                 |                | Benzo(a)pyrene         | 4.4E-07               | NA         | 3.7E-07 | NA                   | 8.1E-07               | Kidney                               | 5.6E-06   | NA         | 4.8E-06 | 1.0E-05               |
|        |                 |                | Benzo(b)fluoranthene   | 1.6E-07               | NA         | 1.4E-07 | NA                   | 3.0E-07               | Kidney                               | 2.1E-05   | NA         | 1.8E-05 | 3.9E-05               |
|        |                 |                | Carbazole              | 2.2E-10               | NA         | 1.5E-10 | NA                   | 3.7E-10               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 5.6E-10               | NA         | 4.8E-10 | NA                   | 1.0E-09               | Kidney                               | 7.1E-06   | NA         | 6.1E-06 | 1.3E-05               |
|        |                 |                | Dibenz(a,h)anthracene  | 4.7E-08               | NA         | 4.0E-08 | NA                   | 8.7E-08               | Kidney                               | 6.0E-07   | NA         | 5.2E-07 | 1.1E-06               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 2.4E-08               | NA         | 2.1E-08 | NA                   | 4.5E-08               | Kidney                               | 3.1E-06   | NA         | 2.7E-06 | 5.8E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.0E-02   | NA         | --      | 1.0E-02               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 9.1E-04   | NA         | --      | 9.1E-04               |
|        |                 |                | Arsenic                | 2.3E-06               | NA         | 4.5E-07 | NA                   | 2.7E-06               | Skin                                 | 1.4E-02   | NA         | 2.8E-03 | 1.7E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 4.1E-04   | NA         | --      | 4.1E-04               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 6.7E-03   | NA         | --      | 6.7E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 2.4E-02   | NA         | --      | 2.4E-02               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 7.4E-04   | NA         | --      | 7.4E-04               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 7.6E-03   | NA         | --      | 7.6E-03               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 1.2E-03   | NA         | --      | 1.2E-03               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 7.1E-02   | NA         | --      | 7.1E-02               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 5.2E-03   | NA         | --      | 5.2E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |

TABLE I-102  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - OUTDOOR WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                     |
|-------------------------------------|
| SCENARIO TIMEFRAME: FUTURE          |
| RECEPTOR POPULATION: OUTDOOR WORKER |
| RECEPTOR AGE: ADULT                 |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                               | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |        |                       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-------------------------------|--------------------------------------|-----------|------------|--------|-----------------------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL         | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |
| RECEPTOR TOTAL              |                 |                |          |                       |            | 4E-06  |                      |                               |                                      |           |            | 1E-01  |                       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       |            | 4E-06  |                      | TOTAL HAZARD ACROSS ALL MEDIA |                                      |           |            | 1E-01  |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 9.1E-04 |
| TOTAL CARDIOVASCULAR HI =   | 4.8E-05 |
| TOTAL DEVELOPMENTAL HI =    | 7.7E-05 |
| TOTAL ENDOCRINE HI =        | 2.4E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 9.1E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 1.2E-03 |
| TOTAL KIDNEY HI =           | 5.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.0E-02 |
| TOTAL NOAEL HI =            | 7.8E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 1.7E-02 |
| TOTAL RESPIRATORY HI =      | 2.4E-04 |

**TABLE I-103**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - INDOOR WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: INDOOR WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND           | Benzo(a)anthracene     | 7.5E-08               | NA         | 1.3E-07        | NA                   | 2.0E-07               | Kidney                               | 9.6E-06   | NA         | 1.6E-05 | 2.6E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 2.4E-07               | NA         | 4.2E-07        | NA                   | 6.6E-07               | Kidney                               | 3.1E-06   | NA         | 5.3E-06 | 8.4E-06               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 9.1E-08               | NA         | 1.6E-07        | NA                   | 2.5E-07               | Kidney                               | 1.2E-05   | NA         | 2.0E-05 | 3.1E-05               |       |
|                             |                       |                      | Carbazole              | 1.2E-10               | NA         | 1.6E-10        | NA                   | 2.9E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 3.1E-10               | NA         | 5.3E-10        | NA                   | 8.4E-10               | Kidney                               | 4.0E-06   | NA         | 6.8E-06 | 1.1E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 2.6E-08               | NA         | 4.5E-08        | NA                   | 7.1E-08               | Kidney                               | 3.3E-07   | NA         | 5.7E-07 | 9.1E-07               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 1.4E-08               | NA         | 2.3E-08        | NA                   | 3.7E-08               | Kidney                               | 1.7E-06   | NA         | 3.0E-06 | 4.7E-06               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 5.8E-03   | NA         | --      | 5.8E-03               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 5.1E-04   | NA         | --      | 5.1E-04               |       |
|                             |                       |                      | Arsenic                | 1.3E-06               | NA         | 5.0E-07        | NA                   | 1.8E-06               | Skin                                 | 7.8E-03   | NA         | 3.1E-03 | 1.1E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.3E-04   | NA         | --      | 2.3E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.7E-03   | NA         | --      | 3.7E-03               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 4.1E-04   | NA         | --      | 4.1E-04               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 4.2E-03   | NA         | --      | 4.2E-03               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 6.5E-04   | NA         | --      | 6.5E-04               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 3.9E-02   | NA         | --      | 3.9E-02               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 2.9E-03   | NA         | --      | 2.9E-03               |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 1.7E-06              | --                    | 1.3E-06                              | --        | 3E-06      |         | 7.9E-02               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 3E-06                                |           |            |         |                       | 8E-02 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         | 8E-02                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         | 8E-02                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 3E-06                 |                                      |           |            |         | 8E-02                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 3E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 8E-02                 |       |

**TABLE I-104**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: CONSTRUCTION WORKER  
RECEPTOR AGE: ADULT

| MEDIUM | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|--------|-----------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|        |                 |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL   | SUBSURFACE SOIL | BACKGROUND     | Benzo(a)anthracene     | 2.0E-08               | NA         | 7.7E-09 | NA                   | 2.8E-08               | Kidney                               | 6.3E-06   | NA         | 2.5E-06 | 8.8E-06               |
|        |                 |                | Benzo(a)pyrene         | 6.4E-08               | NA         | 2.5E-08 | NA                   | 8.9E-08               | Kidney                               | 2.0E-06   | NA         | 8.0E-07 | 2.8E-06               |
|        |                 |                | Benzo(b)fluoranthene   | 2.4E-08               | NA         | 9.3E-09 | NA                   | 3.3E-08               | Kidney                               | 7.6E-06   | NA         | 3.0E-06 | 1.1E-05               |
|        |                 |                | Carbazole              | 3.3E-11               | NA         | 9.9E-12 | NA                   | 4.3E-11               |                                      | --        | NA         | --      |                       |
|        |                 |                | Chrysene               | 8.2E-11               | NA         | 3.2E-11 | NA                   | 1.1E-10               | Kidney                               | 2.6E-06   | NA         | 1.0E-06 | 3.6E-06               |
|        |                 |                | Dibenz(a,h)anthracene  | 6.9E-09               | NA         | 2.7E-09 | NA                   | 9.6E-09               | Kidney                               | 2.2E-07   | NA         | 8.6E-08 | 3.1E-07               |
|        |                 |                | Indeno(1,2,3-cd)pyrene | 3.6E-09               | NA         | 1.4E-09 | NA                   | 5.0E-09               | Kidney                               | 1.1E-06   | NA         | 4.4E-07 | 1.6E-06               |
|        |                 |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 3.8E-02   | NA         | --      | 3.8E-02               |
|        |                 |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|        |                 |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 3.3E-03   | NA         | --      | 3.3E-03               |
|        |                 |                | Arsenic                | 3.3E-07               | NA         | 3.0E-08 | NA                   | 3.6E-07               | Skin                                 | 5.2E-02   | NA         | 4.7E-03 | 5.6E-02               |
|        |                 |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.5E-03   | NA         | --      | 1.5E-03               |
|        |                 |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 3.7E-03   | NA         | --      | 3.7E-03               |
|        |                 |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 8.7E-03   | NA         | --      | 8.7E-03               |
|        |                 |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.1E-02   | NA         | --      | 1.1E-02               |
|        |                 |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|        |                 |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.8E-02   | NA         | --      | 2.8E-02               |
|        |                 |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.5E-04   | NA         | --      | 6.5E-04               |
|        |                 |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.2E-02   | NA         | --      | 5.2E-02               |
|        |                 |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 9.6E-03   | NA         | --      | 9.6E-03               |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |
|        |                 |                |                        |                       |            |         |                      |                       |                                      |           |            |         |                       |



TABLE I-104  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - CONSTRUCTION WORKER - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

|                                          |
|------------------------------------------|
| SCENARIO TIMEFRAME: FUTURE               |
| RECEPTOR POPULATION: CONSTRUCTION WORKER |
| RECEPTOR AGE: ADULT                      |

| MEDIUM                      | EXPOSURE MEDIUM | EXPOSURE POINT | CHEMICAL | CARCINOGENIC RISK (1) |            |        |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |        |                       |  |       |
|-----------------------------|-----------------|----------------|----------|-----------------------|------------|--------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|--------|-----------------------|--|-------|
|                             |                 |                |          | INGESTION             | INHALATION | DERMAL | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL | EXPOSURE ROUTES TOTAL |  |       |
|                             |                 |                |          |                       |            |        |                      |                       |                                      |                               |            |        |                       |  |       |
| RECEPTOR TOTAL              |                 |                |          |                       | 8E-07      |        |                      |                       |                                      | 1E+00                         |            |        |                       |  |       |
| TOTAL RISK ACROSS ALL MEDIA |                 |                |          |                       | 8E-07      |        |                      |                       |                                      | TOTAL HAZARD ACROSS ALL MEDIA |            |        |                       |  | 1E+00 |

NOTES:  
NC - Not carcinogenic by this exposure route.  
NA - Not applicable; exposure route not applicable for this chemical/exposure medium.  
-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011  
Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 3.3E-03 |
| TOTAL CARDIOVASCULAR HI =   | 1.5E-02 |
| TOTAL DEVELOPMENTAL HI =    | 1.6E-02 |
| TOTAL ENDOCRINE HI =        | 8.7E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 3.3E-03 |
|                             | --      |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 5.8E-01 |
| TOTAL NOAEL HI =            | 8.0E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 5.6E-02 |
| TOTAL RESPIRATORY HI =      | 2.4E-01 |

**TABLE I-105**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - RECREATIONAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RECREATIONAL  
RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND           | Benzo(a)anthracene     | 2.9E-07               | NA         | 1.2E-07        | NA                   | 4.1E-07               | Kidney                               | 3.7E-05   | NA         | 1.4E-05 | 5.1E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 9.5E-07               | NA         | 3.8E-07        | NA                   | 1.3E-06               | Kidney                               | 1.2E-05   | NA         | 4.4E-06 | 1.6E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.5E-07               | NA         | 1.4E-07        | NA                   | 5.0E-07               | Kidney                               | 4.5E-05   | NA         | 1.6E-05 | 6.1E-05               |       |
|                             |                       |                      | Carbazole              | 1.2E-10               | NA         | 3.3E-11        | NA                   | 1.5E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 1.2E-09               | NA         | 4.9E-10        | NA                   | 1.7E-09               | Kidney                               | 1.5E-05   | NA         | 5.6E-06 | 2.1E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.0E-07               | NA         | 4.1E-08        | NA                   | 1.4E-07               | Kidney                               | 1.3E-06   | NA         | 4.7E-07 | 1.8E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 5.3E-08               | NA         | 2.1E-08        | NA                   | 7.4E-08               | Kidney                               | 6.7E-06   | NA         | 2.4E-06 | 9.2E-06               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 2.2E-02   | NA         | --      | 2.2E-02               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 2.0E-03   | NA         | --      | 2.0E-03               |       |
|                             |                       |                      | Arsenic                | 1.2E-06               | NA         | 9.9E-08        | NA                   | 1.3E-06               | Skin                                 | 3.0E-02   | NA         | 2.6E-03 | 3.3E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 8.9E-04   | NA         | --      | 8.9E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.4E-02   | NA         | --      | 1.4E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 5.1E-02   | NA         | --      | 5.1E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.6E-03   | NA         | --      | 1.6E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.6E-02   | NA         | --      | 1.6E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 2.5E-03   | NA         | --      | 2.5E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.5E-01   | NA         | --      | 1.5E-01               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 2.9E-06              | --                    | 8.1E-07                              | --        | 4E-06      |         | 3.1E-01               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 4E-06                                |           |            |         |                       | 3E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 4E-06                 |                                      |           |            |         | 3E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 4E-06                 |                                      |           |            |         | 3E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 4E-06                 |                                      |           |            |         | 3E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 4E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 3E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.0E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.1E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.0E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.5E-03 |
| TOTAL KIDNEY HI =           | 1.2E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.9E-02 |
| TOTAL NOAEL HI =            | 1.7E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 3.3E-02 |
|                             | --      |

**TABLE I-106**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - RECREATIONAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RECREATIONAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND     | Benzo(a)anthracene     | 5.7E-08               | NA         | 2.6E-08 | NA                   | 8.3E-08               | Kidney                               | 4.3E-06   | NA         | 2.0E-06 | 6.3E-06               |
|                             |                       |                | Benzo(a)pyrene         | 1.8E-07               | NA         | 8.5E-08 | NA                   | 2.7E-07               | Kidney                               | 1.4E-06   | NA         | 6.4E-07 | 2.0E-06               |
|                             |                       |                | Benzo(b)fluoranthene   | 6.8E-08               | NA         | 3.2E-08 | NA                   | 1.0E-07               | Kidney                               | 5.2E-06   | NA         | 2.4E-06 | 7.6E-06               |
|                             |                       |                | Carbazole              | 5.4E-11               | NA         | 1.9E-11 | NA                   | 7.3E-11               |                                      | --        | NA         | --      |                       |
|                             |                       |                | Chrysene               | 2.3E-10               | NA         | 1.1E-10 | NA                   | 3.4E-10               | Kidney                               | 1.8E-06   | NA         | 8.2E-07 | 2.6E-06               |
|                             |                       |                | Dibenz(a,h)anthracene  | 2.0E-08               | NA         | 9.1E-09 | NA                   | 2.9E-08               | Kidney                               | 1.5E-07   | NA         | 6.9E-08 | 2.2E-07               |
|                             |                       |                | Indeno(1,2,3-cd)pyrene | 1.0E-08               | NA         | 4.7E-09 | NA                   | 1.5E-08               | Kidney                               | 7.7E-07   | NA         | 3.6E-07 | 1.1E-06               |
|                             |                       |                | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 2.6E-03   | NA         | --      | 2.6E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |
|                             |                       |                | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 2.3E-04   | NA         | --      | 2.3E-04               |
|                             |                       |                | Arsenic                | 5.4E-07               | NA         | 5.8E-08 | NA                   | 6.0E-07               | Skin                                 | 3.5E-03   | NA         | 3.8E-04 | 3.9E-03               |
|                             |                       |                | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.0E-04   | NA         | --      | 1.0E-04               |
|                             |                       |                | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.7E-03   | NA         | --      | 1.7E-03               |
|                             |                       |                | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 5.9E-03   | NA         | --      | 5.9E-03               |
|                             |                       |                | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.8E-04   | NA         | --      | 1.8E-04               |
|                             |                       |                | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |
|                             |                       |                | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.9E-03   | NA         | --      | 1.9E-03               |
|                             |                       |                | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.9E-04   | NA         | --      | 2.9E-04               |
|                             |                       |                | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.8E-02   | NA         | --      | 1.8E-02               |
|                             |                       |                | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 1.3E-03   | NA         | --      | 1.3E-03               |
|                             |                       |                |                        |                       |            |         |                      |                       |                                      | --        |            |         |                       |
|                             |                       |                | CHEMICAL TOTAL         | 8.8E-07               | --         | 2.1E-07 | --                   | 1E-06                 |                                      | 3.5E-02   | --         | 3.8E-04 | 4E-02                 |
|                             | EXPOSURE POINT TOTAL  |                |                        |                       |            |         |                      | 1E-06                 |                                      |           |            |         | 4E-02                 |
|                             | EXPOSURE MEDIUM TOTAL |                |                        |                       |            |         |                      | 1E-06                 |                                      |           |            |         | 4E-02                 |
| SOIL TOTAL                  |                       |                |                        |                       |            |         |                      | 1E-06                 |                                      |           |            |         | 4E-02                 |
| RECEPTOR TOTAL              |                       |                |                        |                       |            |         |                      | 1E-06                 |                                      |           |            |         | 4E-02                 |
| TOTAL RISK ACROSS ALL MEDIA |                       |                |                        |                       |            |         |                      | 1E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 4E-02                 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 2.3E-04 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 5.9E-03 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 2.3E-04 |
| TOTAL IMMUNE SYSTEM HI =    | 2.9E-04 |
| TOTAL KIDNEY HI =           | 1.4E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 4.5E-03 |
| TOTAL NOAEL HI =            | 1.9E-02 |
|                             | --      |
| TOTAL SKIN HI =             | 3.9E-03 |
|                             | --      |

**TABLE I-107**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |                |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|----------------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL         | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND           | Benzo(a)anthracene     | 2.0E-06               | NA         | 8.0E-07        | NA                   | 2.8E-06               | Kidney                               | 2.5E-04   | NA         | 9.1E-05 | 3.4E-04               |       |
|                             |                       |                      | Benzo(a)pyrene         | 6.4E-06               | NA         | 2.6E-06        | NA                   | 9.0E-06               | Kidney                               | 8.1E-05   | NA         | 2.9E-05 | 1.1E-04               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 2.4E-06               | NA         | 9.6E-07        | NA                   | 3.4E-06               | Kidney                               | 3.0E-04   | NA         | 1.1E-04 | 4.1E-04               |       |
|                             |                       |                      | Carbazole              | 7.8E-10               | NA         | 2.2E-10        | NA                   | 1.0E-09               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 8.2E-09               | NA         | 3.3E-09        | NA                   | 1.1E-08               | Kidney                               | 1.0E-04   | NA         | 3.8E-05 | 1.4E-04               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 6.9E-07               | NA         | 2.8E-07        | NA                   | 9.7E-07               | Kidney                               | 8.7E-06   | NA         | 3.2E-06 | 1.2E-05               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.6E-07               | NA         | 1.4E-07        | NA                   | 5.0E-07               | Kidney                               | 4.5E-05   | NA         | 1.6E-05 | 6.2E-05               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.5E-01   | NA         | --      | 1.5E-01               |       |
|                             |                       |                      |                        |                       |            |                |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC             | NA                   |                       | Hematological                        | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      | Arsenic                | 7.9E-06               | NA         | 6.6E-07        | NA                   | 8.6E-06               | Skin                                 | 2.0E-01   | NA         | 1.7E-02 | 2.2E-01               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 6.0E-03   | NA         | --      | 6.0E-03               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 9.7E-02   | NA         | --      | 9.7E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC             | NA                   |                       | Endocrine                            | 3.4E-01   | NA         | --      | 3.4E-01               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC             | NA                   |                       | Undetermined                         | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --             | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC             | NA                   |                       | Nervous System                       | 1.1E-01   | NA         | --      | 1.1E-01               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC             | NA                   |                       | Immune system                        | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC             | NA                   |                       | NOAEL                                | 1.0E+00   | NA         | --      | 1.0E+00               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC             | NA                   |                       | Kidney                               | 7.6E-02   | NA         | --      | 7.6E-02               |       |
|                             |                       |                      |                        |                       |            | CHEMICAL TOTAL | 2.0E-05              | --                    | 5.4E-06                              | --        | 3E-05      |         | 2.1E+00               | --    |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |                |                      |                       | 3E-05                                |           |            |         |                       | 2E+00 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 2E+00                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 2E+00                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |                |                      | 3E-05                 |                                      |           |            |         | 2E+00                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |                |                      | 3E-05                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E+00                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 3.4E-01 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.3E-02 |
| TOTAL IMMUNE SYSTEM HI =    | 1.7E-02 |
| TOTAL KIDNEY HI =           | 8.3E-02 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 2.6E-01 |
| TOTAL NOAEL HI =            | 1.1E+00 |
|                             | --      |
| TOTAL SKIN HI =             | 2.2E-01 |
|                             | --      |

**TABLE I-108**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - BACKGROUND - SUBSURFACE - FUTURE - RESIDENTIAL - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| SOIL                        | SUBSURFACE SOIL       | BACKGROUND           | Benzo(a)anthracene     | 3.8E-07               | NA         | 1.8E-07 | NA                   | 5.6E-07               | Kidney                               | 2.9E-05   | NA         | 1.3E-05 | 4.2E-05               |       |
|                             |                       |                      | Benzo(a)pyrene         | 1.2E-06               | NA         | 5.7E-07 | NA                   | 1.8E-06               | Kidney                               | 9.3E-06   | NA         | 4.3E-06 | 1.4E-05               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 4.6E-07               | NA         | 2.1E-07 | NA                   | 6.7E-07               | Kidney                               | 3.5E-05   | NA         | 1.6E-05 | 5.1E-05               |       |
|                             |                       |                      | Carbazole              | 3.6E-10               | NA         | 1.3E-10 | NA                   | 4.9E-10               |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Chrysene               | 1.6E-09               | NA         | 7.3E-10 | NA                   | 2.3E-09               | Kidney                               | 1.2E-05   | NA         | 5.5E-06 | 1.7E-05               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 1.3E-07               | NA         | 6.1E-08 | NA                   | 1.9E-07               | Kidney                               | 1.0E-06   | NA         | 4.7E-07 | 1.5E-06               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 6.8E-08               | NA         | 3.2E-08 | NA                   | 1.0E-07               | Kidney                               | 5.2E-06   | NA         | 2.4E-06 | 7.6E-06               |       |
|                             |                       |                      | Aluminum               | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.7E-02   | NA         | --      | 1.7E-02               |       |
|                             |                       |                      |                        |                       |            |         |                      |                       | General Toxicity /                   |           |            |         |                       |       |
|                             |                       |                      | Antimony               | NC                    | NA         | NC      | NA                   |                       | Hematological                        | 1.5E-03   | NA         | --      | 1.5E-03               |       |
|                             |                       |                      | Arsenic                | 3.6E-06               | NA         | 3.9E-07 | NA                   | 4.0E-06               | Skin                                 | 2.4E-02   | NA         | 2.5E-03 | 2.6E-02               |       |
|                             |                       |                      | Barium                 | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 6.9E-04   | NA         | --      | 6.9E-04               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.1E-02   | NA         | --      | 1.1E-02               |       |
|                             |                       |                      | Cobalt                 | NC                    | NA         | NC      | NA                   |                       | Endocrine                            | 4.0E-02   | NA         | --      | 4.0E-02               |       |
|                             |                       |                      | Copper                 | NC                    | NA         | NC      | NA                   |                       | Undetermined                         | 1.2E-03   | NA         | --      | 1.2E-03               |       |
|                             |                       |                      | Lead                   | --                    | NA         | --      | NA                   |                       |                                      | --        | NA         | --      |                       |       |
|                             |                       |                      | Manganese              | NC                    | NA         | NC      | NA                   |                       | Nervous System                       | 1.3E-02   | NA         | --      | 1.3E-02               |       |
|                             |                       |                      | Mercury                | NC                    | NA         | NC      | NA                   |                       | Immune system                        | 2.0E-03   | NA         | --      | 2.0E-03               |       |
|                             |                       |                      | Thallium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.2E-01   | NA         | --      | 1.2E-01               |       |
|                             |                       |                      | Vanadium               | NC                    | NA         | NC      | NA                   |                       | Kidney                               | 8.7E-03   | NA         | --      | 8.7E-03               |       |
|                             |                       |                      |                        | CHEMICAL TOTAL        | 5.9E-06    | --      | 1.4E-06              | --                    | 7E-06                                |           | 2.4E-01    | --      | 2.6E-03               | 2E-01 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 7E-06                                |           |            |         |                       | 2E-01 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |       |
| SOIL TOTAL                  |                       |                      |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 7E-06                 |                                      |           |            |         | 2E-01                 |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 7E-06                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            |         | 2E-01                 |       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/25/2011

|                             |         |
|-----------------------------|---------|
| TOTAL GENERAL TOXICITY HI = | 1.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL ENDOCRINE HI =        | 4.0E-02 |
|                             | --      |
|                             | --      |
| TOTAL HEMATOLOGICAL HI =    | 1.5E-03 |
| TOTAL IMMUNE SYSTEM HI =    | 2.0E-03 |
| TOTAL KIDNEY HI =           | 9.5E-03 |
|                             | --      |
|                             | --      |
| TOTAL NERVOUS SYSTEM HI =   | 3.0E-02 |
| TOTAL NOAEL HI =            | 1.3E-01 |
|                             | --      |
| TOTAL SKIN HI =             | 2.6E-02 |
|                             | --      |

**TABLE I-109**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - GROUNDWATER - FUTURE - CONSTRUCTION WORKER - ADULT**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: CONSTRUCTION WORKER  
 RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| GROUND WATER                | GROUNDWATER           | GROUNDWATER          | Chloroform             | 0.0E+00               | NA         | 2.2E-10 | NA                   | 2.2E-10               | Liver                                | 0.0E+00   | NA         | 5.0E-06 | 5.0E-06               |
|                             |                       |                      | Benzo(a)anthracene     | 0.0E+00               | NA         | 1.2E-08 | NA                   | 1.2E-08               | Kidney                               | 0.0E+00   | NA         | 3.7E-06 | 3.7E-06               |
|                             |                       |                      | Benzo(a)pyrene         | 0.0E+00               | NA         | 1.6E-07 | NA                   | 1.6E-07               | Kidney                               | 0.0E+00   | NA         | 5.2E-06 | 5.2E-06               |
|                             |                       |                      | Benzo(b)fluoranthene   | 0.0E+00               | NA         | 2.2E-08 | NA                   | 2.2E-08               | Kidney                               | 0.0E+00   | NA         | 7.0E-06 | 7.0E-06               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 0.0E+00               | NA         | 3.6E-07 | NA                   | 3.6E-07               | Kidney                               | 0.0E+00   | NA         | 1.2E-05 | 1.2E-05               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 0.0E+00               | NA         | 2.6E-08 | NA                   | 2.6E-08               | Kidney                               | 0.0E+00   | NA         | 8.2E-06 | 8.2E-06               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   | NOAEL                 | 0.0E+00                              | NA        | 6.4E-05    | 6.4E-05 |                       |
|                             |                       |                      | CHEMICAL TOTAL         | --                    | --         | 5.8E-07 | --                   | 6E-07                 | --                                   | --        | 1.0E-04    | 1E-04   |                       |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       | 1E-04                                |           |            |         |                       |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      | 1E-04                 |                                      |           |            |         |                       |
| GROUNDWATER TOTAL           |                       |                      |                        |                       |            |         | 1E-04                |                       |                                      |           |            |         |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         | 1E-04                |                       |                                      |           |            |         |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         | 1E-04                |                       |                                      |           |            |         |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: EYM 10/17/2011

Checked by: BJR 10/23/2011

|                   |         |
|-------------------|---------|
|                   | --      |
|                   | --      |
|                   | --      |
|                   | --      |
|                   | --      |
|                   | --      |
|                   | --      |
|                   | --      |
| TOTAL KIDNEY HI = | 3.6E-05 |
| TOTAL LIVER HI =  | 5.0E-06 |
|                   | --      |
|                   | --      |
| TOTAL NOAEL HI =  | 6.4E-05 |
|                   | --      |
|                   | --      |
|                   | --      |

**TABLE I-110**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - FUTURE - RESIDENTIAL - CHILD (AGES 1-7)**  
**SUPPLEMENTAL REMEDIAL INVESTIGATION**  
**FT. TOTTEN COAST GUARD STATION**  
**QUEENS, NEW YORK**

SCENARIO TIMEFRAME: FUTURE  
 RECEPTOR POPULATION: RESIDENTIAL  
 RECEPTOR AGE: CHILD (AGES 1-7)

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |                               |            |         |                       |       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-------------------------------|------------|---------|-----------------------|-------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION                     | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |       |
| GROUND WATER                | GROUND WATER          | SITE                 | Chloroform             | 2.4E-06               | NA         | 2.1E-07 | NA                   | 2.6E-06               | Liver                                | 8.9E-02                       | NA         | 7.9E-03 | 9.7E-02               |       |
|                             |                       |                      | Benzo(a)anthracene     | 3.7E-06               | NA         | 4.6E-05 | NA                   | 4.9E-05               | Kidney                               | 4.7E-04                       | NA         | 5.8E-03 | 6.2E-03               |       |
|                             |                       |                      | Benzo(a)pyrene         | 3.0E-05               | NA         | 6.3E-04 | NA                   | 6.6E-04               | Kidney                               | 3.8E-04                       | NA         | 8.1E-03 | 8.4E-03               |       |
|                             |                       |                      | Benzo(b)fluoranthene   | 4.0E-06               | NA         | 8.6E-05 | NA                   | 9.0E-05               | Kidney                               | 5.1E-04                       | NA         | 1.1E-02 | 1.1E-02               |       |
|                             |                       |                      | Dibenz(a,h)anthracene  | 4.4E-05               | NA         | 1.4E-03 | NA                   | 1.5E-03               | Kidney                               | 5.5E-04                       | NA         | 1.8E-02 | 1.9E-02               |       |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 4.5E-06               | NA         | 1.0E-04 | NA                   | 1.0E-04               | Kidney                               | 5.8E-04                       | NA         | 1.3E-02 | 1.3E-02               |       |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 1.3E-01                       | NA         | 6.6E-02 | 1.9E-01               |       |
|                             |                       |                      | CHEMICAL TOTAL         | 8.9E-05               | --         | 2.3E-03 | --                   | 2E-03                 |                                      | 2.2E-01                       | --         | 1.3E-01 | 3E-01                 |       |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      |                               |            | 3E-01   |                       |       |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |                               | 3E-01      |         |                       |       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-03                 |                                      | 3E-01                         |            |         |                       |       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-03                 |                                      | TOTAL HAZARD ACROSS ALL MEDIA |            |         |                       | 3E-01 |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/12

Checked by: INITIALS DATE

TOTAL KIDNEY HI =

TOTAL LIVER HI =

TOTAL NOAEL HI =

TABLE I-111  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - REASONABLE MAXIMUM EXPOSURE - FUTURE - RESIDENTIAL - ADULT  
SUPPLEMENTAL REMEDIAL INVESTIGATION  
FT. TOTTEN COAST GUARD STATION  
QUEENS, NEW YORK

SCENARIO TIMEFRAME: FUTURE  
RECEPTOR POPULATION: RESIDENTIAL  
RECEPTOR AGE: ADULT

| MEDIUM                      | EXPOSURE MEDIUM       | EXPOSURE POINT       | CHEMICAL               | CARCINOGENIC RISK (1) |            |         |                      |                       | NON-CARCINOGENIC HAZARD QUOTIENT (1) |           |            |         |                       |
|-----------------------------|-----------------------|----------------------|------------------------|-----------------------|------------|---------|----------------------|-----------------------|--------------------------------------|-----------|------------|---------|-----------------------|
|                             |                       |                      |                        | INGESTION             | INHALATION | DERMAL  | EXTERNAL (RADIATION) | EXPOSURE ROUTES TOTAL | PRIMARY TARGET ORGAN                 | INGESTION | INHALATION | DERMAL  | EXPOSURE ROUTES TOTAL |
| GROUND WATER                | GROUND WATER          | SITE                 | Chloroform             | 4.4E-06               | NA         | 4.0E-07 | NA                   | 4.8E-06               | Liver                                | 4.1E-02   | NA         | 3.8E-03 | 4.5E-02               |
|                             |                       |                      | Benzo(a)anthracene     | 2.8E-06               | NA         | 3.6E-05 | NA                   | 3.9E-05               | Kidney                               | 2.2E-04   | NA         | 2.8E-03 | 3.0E-03               |
|                             |                       |                      | Benzo(a)pyrene         | 2.3E-05               | NA         | 5.1E-04 | NA                   | 5.3E-04               | Kidney                               | 1.8E-04   | NA         | 3.9E-03 | 4.0E-03               |
|                             |                       |                      | Benzo(b)fluoranthene   | 3.1E-06               | NA         | 6.9E-05 | NA                   | 7.2E-05               | Kidney                               | 2.4E-04   | NA         | 5.2E-03 | 5.5E-03               |
|                             |                       |                      | Dibenz(a,h)anthracene  | 3.4E-05               | NA         | 1.1E-03 | NA                   | 1.2E-03               | Kidney                               | 2.6E-04   | NA         | 8.6E-03 | 8.9E-03               |
|                             |                       |                      | Indeno(1,2,3-cd)pyrene | 3.5E-06               | NA         | 8.0E-05 | NA                   | 8.4E-05               | Kidney                               | 2.7E-04   | NA         | 6.1E-03 | 6.4E-03               |
|                             |                       |                      | Chromium               | NC                    | NA         | NC      | NA                   |                       | NOAEL                                | 5.8E-02   | NA         | 2.4E-02 | 8.2E-02               |
|                             |                       |                      | CHEMICAL TOTAL         | 7.1E-05               | --         | 1.8E-03 | --                   | 2E-03                 |                                      | 1.0E-01   | --         | 5.5E-02 | 2E-01                 |
|                             |                       | EXPOSURE POINT TOTAL |                        |                       |            |         |                      |                       |                                      |           |            |         | 2E-01                 |
|                             | EXPOSURE MEDIUM TOTAL |                      |                        |                       |            |         |                      |                       |                                      |           |            | 2E-01   |                       |
| RECEPTOR TOTAL              |                       |                      |                        |                       |            |         |                      | 2E-03                 |                                      |           |            | 2E-01   |                       |
| TOTAL RISK ACROSS ALL MEDIA |                       |                      |                        |                       |            |         |                      | 2E-03                 | TOTAL HAZARD ACROSS ALL MEDIA        |           |            | 2E-01   |                       |

NOTES:

NC - Not carcinogenic by this exposure route.

NA - Not applicable; exposure route not applicable for this chemical/exposure medium.

-- - Not calculated; dose-response data and/or dermal absorption values are not available.

Prepared by: BJR 2/14/12

Checked by: INITIALS DATE

TOTAL KIDNEY HI =

TOTAL LIVER HI =

TOTAL NOAEL HI =