

Note: Averages are based on three composites of up to five fish of each species from each location. At least one of the three composite samples had to have a significant result for an average concentration to be reported. Refer to Data Table 5-16 for the radio analytical results.

**Data Table 6-30(a) Average Concentration in Composites used in the Dose Calculations**  
Average Concentration in Composites for the Dose Calculations: Units are pCi/g

| Location                    | Species | H-3      | Sr-89,90 | Cs-137   | I-129    | Tc-99    |
|-----------------------------|---------|----------|----------|----------|----------|----------|
| Augusta<br>Lock + Dam       | Bass    |          |          |          |          |          |
|                             | Catfish |          | 2.69E-03 |          |          |          |
|                             | Panfish |          | 5.96E-03 |          |          |          |
| U3R Mouth                   | Bass    | 5.95E-02 | 2.63E-03 | 2.94E-02 |          |          |
|                             | Catfish | 1.07E-01 |          |          |          | 5.50E-02 |
|                             | Panfish | 7.35E-02 | 4.86E-03 |          |          | 4.71E-02 |
| Fourmile<br>Branch<br>Mouth | Bass    | 3.24E-01 |          | 8.23E-02 |          |          |
|                             | Catfish | 3.95E-02 |          | 4.72E-02 |          |          |
|                             | Panfish | 1.22E-01 | 3.12E-03 |          |          |          |
| Steel Creek<br>Mouth        | Bass    | 6.65E-02 | 1.35E-03 | 9.08E-02 |          |          |
|                             | Catfish | 4.57E-02 |          | 4.27E-02 | 1.04E-02 |          |
|                             | Panfish | 7.53E-02 |          | 1.25E-01 |          | 5.56E-02 |
| L3R Mouth                   | Bass    |          | 3.52E-03 | 3.26E-02 |          |          |
|                             | Catfish | 6.37E-02 |          | 7.82E-02 |          | 5.62E-02 |
|                             | Panfish |          | 2.72E-03 | 3.55E-02 | 2.10E-02 |          |
| Hwy-301<br>Bridge Area      | Bass    |          | 1.71E-03 | 2.19E-02 |          |          |
|                             | Catfish |          | 2.70E-03 | 1.60E-02 |          |          |
|                             | Panfish |          | 4.51E-03 |          |          |          |

**Data Table 6-30(b) Total Dose from Consumption of 24 kg/y from Savannah River Fish**  
**2014 Total Dose from Consumption of 24 kg/y from Savannah river Fish: Units are mrem**

| Location                    | Species | H-3     | Sr-90   | Cs-137  | I-129   | Tc-99   | Total          |
|-----------------------------|---------|---------|---------|---------|---------|---------|----------------|
| Augusta<br>Lock + Dam       | Bass    |         |         |         |         |         | 0.0E+00        |
|                             | Catfish |         | 8.6E-03 |         |         |         | 8.6E-03        |
|                             | Panfish |         | 1.9E-02 |         |         |         | 1.9E-02        |
| U3R Mouth                   | Bass    | 1.1E-04 | 8.4E-03 | 3.5E-02 |         |         | 4.3E-02        |
|                             | Catfish | 2.0E-04 |         |         |         | 4.4E-03 | 4.6E-03        |
|                             | Panfish | 1.4E-04 | 1.6E-02 |         |         | 3.8E-03 | 1.9E-02        |
| Fourmile<br>Branch<br>Mouth | Bass    | 6.0E-04 |         | 9.7E-02 |         |         | 9.8E-02        |
|                             | Catfish | 7.4E-05 |         | 5.6E-02 |         |         | 5.6E-02        |
|                             | Panfish | 2.3E-04 | 1.0E-02 |         |         |         | 1.0E-02        |
| Steel Creek<br>Mouth        | Bass    | 1.2E-04 | 4.3E-03 | 1.1E-01 |         |         | 1.1E-01        |
|                             | Catfish | 8.5E-05 |         | 5.0E-02 | 1.1E-01 |         | 1.6E-01        |
|                             | Panfish | 1.4E-04 |         | 1.5E-01 |         | 4.4E-03 | 1.5E-01        |
| L3R Mouth                   | Bass    |         | 1.1E-02 | 3.9E-02 |         |         | 5.0E-02        |
|                             | Catfish | 1.2E-04 |         | 9.2E-02 |         | 4.5E-03 | 9.7E-02        |
|                             | Panfish |         | 8.7E-03 | 4.2E-02 | 2.3E-01 |         | <b>2.8E-01</b> |
| Hwy-301<br>Bridge Area      | Bass    |         | 5.5E-03 | 2.6E-02 |         |         | 3.1E-02        |
|                             | Catfish |         | 8.6E-03 | 1.9E-02 |         |         | 2.8E-02        |
|                             | Panfish |         | 1.4E-02 |         |         |         | 1.4E-02        |

**Data Table 6-30(c) Total Risk from Consumption of 24 kg/y from Savannah River Fish**  
**2014 Total Risk from Consumption of 24 kg/y from Savannah River Fish: Units are risk/year**

| Location                    | Species | H-3     | Sr-90   | Cs-137  | I-129   | Tc-99   | Total          |
|-----------------------------|---------|---------|---------|---------|---------|---------|----------------|
| Augusta<br>Lock + Dam       | Bass    |         |         |         |         |         | 0.0E+00        |
|                             | Catfish |         | 6.2E-09 |         |         |         | 6.2E-09        |
|                             | Panfish |         | 1.4E-08 |         |         |         | 1.4E-08        |
| U3R Mouth                   | Bass    | 9.3E-11 | 6.0E-09 | 2.6E-08 |         |         | 3.2E-08        |
|                             | Catfish | 1.7E-10 |         |         |         | 5.3E-09 | 5.4E-09        |
|                             | Panfish | 1.1E-10 | 1.1E-08 |         |         | 4.5E-09 | 1.6E-08        |
| Fourmile<br>Branch<br>Mouth | Bass    | 5.1E-10 |         | 7.4E-08 |         |         | 7.4E-08        |
|                             | Catfish | 6.2E-11 |         | 4.2E-08 |         |         | 4.2E-08        |
|                             | Panfish | 1.9E-10 | 7.1E-09 |         |         |         | 7.3E-09        |
| Steel Creek<br>Mouth        | Bass    | 1.0E-10 | 3.1E-09 | 8.2E-08 |         |         | 8.5E-08        |
|                             | Catfish | 7.1E-11 |         | 3.8E-08 | 4.8E-08 |         | 8.7E-08        |
|                             | Panfish | 1.2E-10 |         | 1.1E-07 |         | 5.3E-09 | 1.2E-07        |
| L3R Mouth                   | Bass    |         | 8.1E-09 | 2.9E-08 |         |         | 3.7E-08        |
|                             | Catfish | 1.0E-10 |         | 7.0E-08 |         | 5.4E-09 | 7.6E-08        |
|                             | Panfish |         | 6.2E-09 | 3.2E-08 | 9.7E-08 |         | <b>1.4E-07</b> |
| Hwy-301<br>Bridge Area      | Bass    |         | 3.9E-09 | 2.0E-08 |         |         | 2.4E-08        |
|                             | Catfish |         | 6.2E-09 | 1.4E-08 |         |         | 2.1E-08        |
|                             | Panfish |         | 1.0E-08 |         |         |         | 1.0E-08        |

| <i><b>Tritium (H-3) Summary (Edible)</b></i> | <b>Bass</b>             | <b>Catfish</b>          | <b>Panfish</b>          |
|----------------------------------------------|-------------------------|-------------------------|-------------------------|
| <b>Location</b>                              | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> |
| Augusta L&D                                  | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Upper Three Runs Creek River Mouth           | 5.95E-02                | 1.07E-01                | 7.35E-02                |
| Four Mile Creek River Mouth                  | 3.24E-01                | 3.95E-02                | 1.22E-01                |
| Steel Creek River Mouth                      | 6.65E-02                | 4.57E-02                | 7.53E-02                |
| Lower Three Runs Creek River Mouth           | 0.00E+00                | 6.37E-02                | 0.00E+00                |
| Hwy 301 Bridge Area                          | 0.00E+00                | 0.00E+00                | 0.00E+00                |

***Co-60 Summary (Edible)***

| <b>Location</b>                    | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Augusta L&D                        | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Upper Three Runs Creek River Mouth | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Four Mile Creek River Mouth        | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Steel Creek River Mouth            | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Lower Three Runs Creek River Mouth | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Hwy 301 Bridge Area                | 0.00E+00                | 0.00E+00                | 0.00E+00                |

***Cs-137 Summary (Edible)***

| <b>Location</b>                    | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Augusta L&D                        | 0.00E+00                | 0.00E+00                | 0.00E+00                |
| Upper Three Runs Creek River Mouth | 2.94E-02                | 0.00E+00                | 0.00E+00                |
| Four Mile Creek River Mouth        | 8.23E-02                | 4.72E-02                | 0.00E+00                |
| Steel Creek River Mouth            | 9.08E-02                | 4.27E-02                | 1.25E-01                |
| Lower Three Runs Creek River Mouth | 3.26E-02                | 7.82E-02                | 3.55E-02                |
| Hwy 301 Bridge Area                | 2.19E-02                | 1.60E-02                | 0.00E+00                |

***Sr-89/90 Summary (Edible)***

| <b>Location</b>                    | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Augusta L&D                        | 0.00E+00                | 2.69E-03                | 5.96E-03                |
| Upper Three Runs Creek River Mouth | 2.63E-03                | 0.00E+00                | 4.86E-03                |
| Four Mile Creek River Mouth        | 0.00E+00                | 0.00E+00                | 3.12E-03                |
| Steel Creek River Mouth            | 1.35E-03                | 0.00E+00                | 0.00E+00                |
| Lower Three Runs Creek River Mouth | 3.52E-03                | 0.00E+00                | 2.72E-03                |
| Hwy 301 Bridge Area                | 1.71E-03                | 2.70E-03                | 4.51E-03                |

***Sr-89/90 Summary (Non-Edible)***

| <b>Location</b>                    | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> | <b>Mean<br/>(pCi/g)</b> |
|------------------------------------|-------------------------|-------------------------|-------------------------|
| Augusta L&D                        | 7.90E-01                | 8.59E-01                | 8.59E-01                |
| Upper Three Runs Creek River Mouth | 8.89E-01                | 9.05E-01                | 9.51E-01                |
| Four Mile Creek River Mouth        | 1.84E+00                | 1.11E+00                | 1.07E+00                |
| Steel Creek River Mouth            | 7.03E-01                | 9.44E-01                | 7.56E-01                |
| Lower Three Runs Creek River Mouth | 8.24E-01                | 8.23E-01                | 7.38E-01                |

| Augusta L&D | Upper Three Runs Creek River Mouth | Four Mile Creek River Mouth | Steel Creek River Mouth | Lower Three Runs Creek River Mouth | Hwy 301 Bridge Area |
|-------------|------------------------------------|-----------------------------|-------------------------|------------------------------------|---------------------|
| 0.00E+00    | 5.95E-02                           | 3.24E-01                    | 6.65E-02                | 0.00E+00                           | 0.00E+00            |
| 0.00E+00    | 1.07E-01                           | 3.95E-02                    | 4.57E-02                | 6.37E-02                           | 0.00E+00            |
| 0.00E+00    | 7.35E-02                           | 1.22E-01                    | 7.53E-02                | 0.00E+00                           | 0.00E+00            |

| Augusta L&D | Upper Three Runs Creek River Mouth | Four Mile Creek River Mouth | Steel Creek River Mouth | Lower Three Runs Creek River Mouth | Hwy 301 Bridge Area |
|-------------|------------------------------------|-----------------------------|-------------------------|------------------------------------|---------------------|
| 0.00E+00    | 2.94E-02                           | 8.23E-02                    | 9.08E-02                | 3.26E-02                           | 2.19E-02            |
| 0.00E+00    | 0.00E+00                           | 4.72E-02                    | 4.27E-02                | 7.82E-02                           | 1.60E-02            |
| 0.00E+00    | 0.00E+00                           | 0.00E+00                    | 1.25E-01                | 3.55E-02                           | 0.00E+00            |

| Augusta L&D | Upper Three Runs Creek River Mouth | Four Mile Creek River Mouth | Steel Creek River Mouth | Lower Three Runs Creek River Mouth | Hwy 301 Bridge Area |
|-------------|------------------------------------|-----------------------------|-------------------------|------------------------------------|---------------------|
| 0.00E+00    | 2.63E-03                           | 0.00E+00                    | 1.35E-03                | 3.52E-03                           | 1.71E-03            |
| 2.69E-03    | 0.00E+00                           | 0.00E+00                    | 0.00E+00                | 0.00E+00                           | 2.70E-03            |
| 5.96E-03    | 4.86E-03                           | 3.12E-03                    | 0.00E+00                | 2.72E-03                           | 4.51E-03            |

|                                                    |          |          |          |
|----------------------------------------------------|----------|----------|----------|
| Special Study - Lower Three Runs Creek River Mouth | 6.74E-02 |          | 1.28E-01 |
| Hwy 301 Bridge Area                                | 5.17E-01 | 9.82E-01 | 9.48E-01 |

***I-129 Summary (Edible)***

| Location                           | Mean<br>(pCi/g) | Mean<br>(pCi/g) | Mean<br>(pCi/g) |
|------------------------------------|-----------------|-----------------|-----------------|
| Augusta L&D                        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Upper Three Runs Creek River Mouth | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Four Mile Creek River Mouth        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Steel Creek River Mouth            | 0.00E+00        | 1.04E-02        | 0.00E+00        |
| Lower Three Runs Creek River Mouth | 0.00E+00        | 0.00E+00        | 2.10E-02        |
| Hwy 301 Bridge Area                | 0.00E+00        | 0.00E+00        | 0.00E+00        |

***Tc-99 Summary (Edible)***

| Location                           | Mean<br>(pCi/g) | Mean<br>(pCi/g) | Mean<br>(pCi/g) |
|------------------------------------|-----------------|-----------------|-----------------|
| Augusta L&D                        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Upper Three Runs Creek River Mouth | 0.00E+00        | 5.50E-02        | 4.71E-02        |
| Four Mile Creek River Mouth        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Steel Creek River Mouth            | 0.00E+00        | 0.00E+00        | 5.56E-02        |
| Lower Three Runs Creek River Mouth | 0.00E+00        | 5.62E-02        | 0.00E+00        |
| Hwy 301 Bridge Area                | 0.00E+00        | 0.00E+00        | 0.00E+00        |

***Gross Beta Summary (Edible)***

| Location                           | Mean<br>(pCi/g) | Mean<br>(pCi/g) | Mean<br>(pCi/g) |
|------------------------------------|-----------------|-----------------|-----------------|
| Augusta L&D                        | 2.64E+00        | 3.14E+00        | 2.07E+00        |
| Upper Three Runs Creek River Mouth | 2.95E+00        | 3.25E+00        | 2.88E+00        |
| Four Mile Creek River Mouth        | 2.82E+00        | 3.02E+00        | 2.15E+00        |
| Steel Creek River Mouth            | 2.62E+00        | 2.78E+00        | 2.32E+00        |
| Lower Three Runs Creek River Mouth | 2.76E+00        | 3.13E+00        | 2.77E+00        |
| Hwy 301 Bridge Area                | 2.73E+00        | 3.17E+00        | 2.58E+00        |

***Gross Alpha Summary (Edible)***

| Location                           | Mean<br>(pCi/g) | Mean<br>(pCi/g) | Mean<br>(pCi/g) |
|------------------------------------|-----------------|-----------------|-----------------|
| Augusta L&D                        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Upper Three Runs Creek River Mouth | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Four Mile Creek River Mouth        | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Steel Creek River Mouth            | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Lower Three Runs Creek River Mouth | 0.00E+00        | 0.00E+00        | 0.00E+00        |
| Hwy 301 Bridge Area                | 0.00E+00        | 0.00E+00        | 0.00E+00        |