## Henderson, Ginny

**From:** Michael Burns [mburns@ESINC.CC]
**Sent:** Tuesday, August 16, 2011 11:35 AM
**To:** Henderson, Ginny
**Subject:** RE: APAC Castle Hayne
**Attachments:** Soil Table.BG.pdf; Soil Tables.Prev Results.pdf; Soil Table.Prev TCLP.pdf

Ginny,

Attached are three tables.

- BG results
- Previous soil boring lab results. I changed the PSRGs to reflect the August 2011 PRG and Residential HBSRG
- Previous TCLP data

Let me know what you come up with.

ENVIRONMENTAL SERVICES, INC.
**Mike Burns**
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919-212-1760 ext. 123 Phone | 919-212-1707 Fax | 919-801-4687 Cell

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**From:** Henderson, Ginny [mailto:ginny.henderson@ncdenr.gov]
**Sent:** Tuesday, August 16, 2011 11:18 AM
**To:** Michael Burns
**Subject:** RE: APAC Castle Hayne

Mike,
It can be acceptable to average over those depths ranges, but there are a number of things to consider when averaging. I have done averaging for this site already, which previously went into determining what additional assessment was needed. So if you prefer you can just send the data in and I would incorporate the new data into my existing calculations. As a reminder, averaging can't be used for comparison against the protection of groundwater RGs.

Ginny Henderson
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TABLE 2

**SUMMARY OF SOIL BACKGROUND ANALYTICAL DATA**

FORMER APAC CASTLE HAYNE ASPHALT PLANT

CASTLE HAYNE, NEW HANOVER COUNTY, NORTH CAROLINA

NCDENR FACILITY NO. NONCD0002779

ESI PROJECT NO. ER08-136.10

| Boring No. | Depth (feet) | Date | Antimony (7440-36-0) | Arsenic (7440-38-2) | Beryllium (7440-41-7) | Cadimum (7440-43-9) | Chromium (7440-47-3) | Copper (7440-50-8) | Iron (7439-89-6) | Lead (7439-92-1) | Manganese (7439-96-5) | Mercury (7439-97-6) | Nickel (7440-02-0) | Selenium (7782-49-2) | Silver (7440-22-4) | Thallium (7440-28-0) | Zinc (7440-66-6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BG-1A | 0.5 | 6/3/2009 | NE | 1.78 | 0.082 | NE | 7.93 | NE | 2670 | NE | 67.7 | <0.006 | NE | NE | <0.06 | NE | NE |
| BG-1B | 5 | 6/3/2009 | NE | 1.81 | 0.104 | NE | 14.4 | NE | 2850 | NE | 7.49 | <0.006 | NE | NE | 0.08 | NE | NE |
| BG-1C | 8 | 6/3/2009 | NE | 1.18 | 0.105 | NE | 7.70 | NE | 1410 | NE | 2.83 | 0.007 | NE | NE | <0.06 | NE | NE |
| BG-2A | 1 | 6/2/2009 | NE | 2.03 | 0.089 | NE | 6.46 | NE | 2880 | NE | 49.9 | <0.006 | NE | NE | <0.06 | NE | NE |
| BG-2B | 3 | 6/2/2009 | NE | 0.78 | 0.094 | NE | 1.59 | NE | 366 | NE | 3.33 | <0.006 | NE | NE | <0.06 | NE | NE |
| BG-2C | 5 | 6/2/2009 | NE | 1.77 | 0.083 | NE | 13.0 | NE | 2360 | NE | 6.98 | 0.02 | NE | NE | <0.06 | NE | NE |
| BG-3 | 0.5 | 9/9/2010 | NE | NE | NE | 0.125 | 7.49 | NE | NE | NE | NE | NE | NE | NE | NE | <0.103 | NE |
| BG-3A | 1 | 6/3/2009 | NE | 2.57 | 0.097 | NE | 7.33 | NE | 3140 | NE | 59.8 | 0.007 | NE | NE | <0.06 | NE | NE |
| BG-3B | 2.5 | 6/3/2009 | NE | 0.89 | 0.032 | NE | 2.88 | NE | 1760 | NE | 2.62 | 0.01 | NE | NE | 0.08 | NE | NE |
| BG-3C | 4 | 6/3/2009 | NE | 0.50 | 0.054 | NE | 2.32 | NE | 628 | NE | 4.44 | 0.01 | NE | NE | <0.07 | NE | NE |
| BG-3 | 4 | 9/9/2010 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0.72 | NE |
| BG-3 | 5 | 9/9/2010 | NE | NE | NE | <0.0116 | 0.812 | NE | NE | NE | NE | NE | NE | NE | NE | 0.237 | NE |
| BG-4 | 0.5 | 9/9/2010 | NE | NE | NE | 0.011 | 2.55 | NE | NE | NE | NE | NE | NE | NE | NE | 0.591 | NE |
| BG-4 | 4 | 9/9/2010 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0.978 | NE |
| BG-4 | 5 | 9/9/2010 | NE | NE | NE | <0.0110 | 5.58 | NE | NE | NE | NE | NE | NE | NE | NE | 0.343 | NE |
| BG-5 | 0.5 | 9/9/2010 | NE | NE | NE | <0.0110 | 1.3 | NE | NE | NE | NE | NE | NE | NE | NE | 0.201 | NE |
| BG-5 | 4 | 9/9/2010 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0.786 | NE |
| BG-5 | 5 | 9/9/2010 | NE | NE | NE | <0.0105 | 15.2 | NE | NE | NE | NE | NE | NE | NE | NE | 0.394 | NE |
| BG-6 | 0.5 | 9/9/2010 | NE | NE | NE | 0.0495 | 5.19 | NE | NE | NE | NE | NE | NE | NE | NE | 0.79 | NE |
| BG-6 | 4 | 9/9/2010 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0.199 | NE |
| BG-6 | 5 | 9/9/2010 | NE | NE | NE | 0.0384 | 4.08 | NE | NE | NE | NE | NE | NE | NE | NE | 0.781 | NE |
| BG-7 | 0.5 | 9/9/2010 | NE | NE | NE | 0.34 | 13.1 | NE | NE | NE | NE | NE | NE | NE | NE | <0.123 | NE |
| BG-7 | 4 | 9/9/2010 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | <0.126 | NE |
| BG-7 | 5 | 9/9/2010 | NE | NE | NE | 0.0416 | 1,89 | NE | NE | NE | NE | NE | NE | NE | NE | 0.127 | NE |
| BG-8 | 2 | 7/27/2011 | NE | 1.64 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-8 | 3 | 7/27/2011 | NE | 11.6 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-8 | 4 | 7/27/2011 | NE | 3.69 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-8 | 6 | 7/27/2011 | NE | 2.34 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-9 | 2 | 7/27/2011 | NE | 0.955 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-9 | 3 | 7/27/2011 | NE | 3.71 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-9 | 4 | 7/27/2011 | NE | 7.15 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-9 | 6 | 7/27/2011 | NE | 12.7 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-10 | 2 | 7/27/2011 | NE | 5.63 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-10 | 3 | 7/27/2011 | NE | 1.29 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-10 | 4 | 7/27/2011 | NE | 0.883 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-10 | 6 | 7/27/2011 | NE | 11.3 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-11 | 2 | 7/27/2011 | NE | 2.79 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-11 | 3 | 7/27/2011 | NE | 1.43 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-11 | 4 | 7/27/2011 | NE | 1.98 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-11 | 6 | 7/27/2011 | NE | 0.993 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-12 | 2 | 7/27/2011 | NE | 0.928 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-12 | 3 | 7/27/2011 | NE | 0.754 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-12 | 4 | 7/27/2011 | NE | 2.21 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-12 | 6 | 7/27/2011 | NE | 4.73 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-13 | 2 | 7/27/2011 | NE | <0.366 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-13 | 3 | 7/27/2011 | NE | <0.404 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-13 | 4 | 7/27/2011 | NE | <0.394 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-13 | 5 | 7/27/2011 | NE | <0.344 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-14 | 2 | 7/27/2011 | NE | <0.339 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-14 | 3 | 7/27/2011 | NE | <0.440 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-14 | 4 | 7/27/2011 | NE | <0.339 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-15 | 2 | 7/2/2011 | NE | 1.02 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-15 | 3 | 7/28/2011 | NE | <0.333 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-15 | 4 | 7/28/2011 | NE | 3.77 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| BG-15 | 6 | 7/28/2011 | NE | 4.52 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE |
| Range | ---- | ---- | ---- | <0.333 - 12.7 | 0.032 - 0.105 | <0.110-0.34 | 0.812-15.2 | ---- | 366 - 3140 | ---- | 2.62 - 67.7 | <0.006 - 0.02 | ---- | ---- | <0.06 - 0.08 | <0.103-0.978 | ---- |

Notes:
1) All concentrations are expressed in milligrams per kilogram (mg/Kg).
2) (XXXX-XX-X) = Chemical Abstract Service number.
3) Shaded concentrations are not considered to be representative of background conditions by IHSB.
4) NE = not evaluated.

TABLE 3
**SUMMARY OF SOIL METALS ANALYTICAL DATA**
FORMER APAC CASTLE HAYNE ASPHALT PLANT
CASTLE HAYNE, NEW HANOVER COUNTY, NORTH CAROLINA
NCDENR FACILITY NO. NONCD0002779
ESI PROJECT NO. ER08-136.10

| Boring No. | Depth (feet) | Date | Antimony (7440-36-0) | Arsenic (7440-38-2) | Beryllium (7440-41-7) | Cadimum (7440-43-9) | Chromium (7440-47-3) | Copper (7440-50-8) | Iron (7439-89-6) | Lead (7439-92-1) | Manganese (7439-96-5) | Mercury (7439-97-6) | Nickel (7440-02-0) | Selenium (7782-49-2) | Silver (7440-22-4) | Thallium (7440-28-0) | Zinc (7440-66-6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DP-1 | 5 | 4/20/2009 | <0.33 | 1.84 | 0.060 | <0.008 | 12.7 | 1.35 | 2520 | 6.78 | 3.40 | 0.006 | 0.76 | <0.36 | <0.07 | 0.22 | 2.97 |
| DP-2 | 0.5 | 4/23/2009 | <0.28 | 2.89 | 0.116 | 0.087 | 8.85B | 1.68B | ***3530*** | 2.11B | 52.2B | <0.005 | 3.22 | <0.30 | 1.32 | 0.30 | 8.13 |
| DP-2A | 5 | 4/23/2009 | 0.47 | 1.08 | 0.098 | <0.008 | **19.6B** | 1.78B | ***5890*** | 6.12B | 7.25B | 0.008 | 1.02 | 1.77 | <0.07 | 0.28 | 4.99 |
| DP-2B | 9 | 4/23/2009 | <0.49 | 4.77 | 4.24 | 0.517 | **23.0B** | 4.67B | ***64200*** | 14.7 | ***69.1B*** | 0.11 | 35.7 | 0.59 | <0.10 | <0.30 | 81.5 |
| DP-3 | 7.5 | 4/21/2009 | <0.31 | 1.89 | 0.073 | <0.008 | 13.1 | 1.99 | 2570 | 6.94 | 4.79 | <0.006 | 1.16 | 0.48 | <0.07 | <0.19 | 3.16 |
| DP-3A | 5 | 4/21/2009 | 0.48 | 3.57 | 0.108 | 0.079 | 9.6B | <0.064 | 3090 | <0.07 | 60.9B | <0.005 | 4.45 | <0.30 | 1.71 | <0.17 | 7.03 |
| DP-4 | 4 | 6/2/2009 | <0.28 | 0.62 | 0.048 | 0.024 | 2.52 | 0.626 | 1720 | 1.98 | 7.65 | 0.007 | 1.03 | 0.3 | <0.06 | 0.67 | 2.48 |
| DP-4A | 5 | 6/2/2009 | <0.29 | 2.21 | 0.272 | 0.159 | 9.85 | 1.52 | ***6290*** | 4.31 | 61.7 | 0.006 | 10.3 | <0.32 | 0.06 | <0.18 | 14.0 |
| DP-4B | 7 | 6/2/2009 | 0.37 | 0.59 | 0.131 | 0.014 | 2.79 | 1.46 | 1150 | 6.41 | 13.5 | <0.007 | 1.62 | <0.36 | <0.07 | <0.20 | 4.6 |
| DP-5 | 0.5 | 4/22/2009 | <0.28 | 3.02 | 0.163 | 0.099 | 7.33 | 1.2 | ***4280*** | 3.14 | 65.1 | 0.005 | 5.39 | 1.19 | 0.89 | <0.18 | 10.1 |
| DP-6 | 0.5 | 4/23/2009 | <0.28 | 1.7 | 0.247 | 0.094 | 9.01B | 1.55B | ***6990*** | 4.52B | ***101B*** | 0.01 | 5.31 | 1.33 | 0.42 | <0.17 | 10.3 |
| DP-7 | 0.5 | 4/22/2009 | <0.28 | 8.97 | 0.065 | 0.062 | 4.83 | 1.89 | 1400 | 19.0 | 11.2 | 0.02 | 1.32 | 0.39 | 0.07 | <0.17 | 9.97 |
| DP-8 | 2 | 4/20/2009 | <0.28 | 1.76 | 0.087 | 0.079 | 5.13 | 1.22 | 2600 | 4.32 | 36.3 | 0.03 | 4.24 | 1.39 | 0.70 | <0.17 | 13.0 |
| DP-9 | 3.5 | 4/21/2009 | <0.30 | 1.68 | 0.089 | <0.008 | **15.7** | 1.56 | ***3420*** | 5.71 | 7.24 | 0.01 | 0.97 | 0.99 | <0.06 | <0.18 | 4.20 |
| DP-9A | 5 | 4/21/2009 | 0.59 | ***14.3*** | 1.11 | 0.051 | **16.2B** | 0.752B | ***15000*** | 25B | ***114B*** | 0.03B | 3.92 | 3.27 | <0.07 | <0.20 | 16.5 |
| DP-10 | 3 | 4/21/2009 | <0.31 | 2.15 | 0.136 | 0.022 | 14.5 | 0.974 | ***4400*** | 5.11 | 22.5 | 0.03 | 2.38 | 1.35 | 0.29 | <0.19 | 9.04 |
| DP-11 | 7 | 4/21/2009 | <0.31 | 5.22 | 0.119 | <0.008 | 11.6 | 1.6 | ***4840*** | 7.89 | 11 | 0.01 | 1.55 | 1.18 | <0.07 | <0.19 | 5.78 |
| DP-11A | 4 | 4/21/2009 | <0.30 | 1.91 | 0.099 | 0.009 | 12.3B | 0.888B | ***3840*** | 4.52B | 13.0B | 0.006 | 0.96 | 0.97 | <0.06 | <0.19 | 3.56 |
| DP-12 | 0.5 | 4/22/2009 | <0.27 | 2.75 | 0.095 | 0.120 | 6.24 | 1.72 | 3060 | 3.45 | ***71.0*** | 0.006 | 6.43 | <0.30 | 1.11 | <0.17 | 16.4 |
| DP-13 | 0.5 | 4/22/2009 | <0.27 | 3.49 | 0.105 | 0.073 | 8.00 | 0.519 | 2890 | 0.90 | 50.5 | <0.005 | 2.87 | <0.30 | 1.31 | <0.17 | 9.77 |
| DP-14 | 0.5 | 4/22/2009 | <0.28 | 1.73 | 0.191 | 0.092 | 6.14 | 1.13 | ***3810*** | 3.10 | 66.8 | <0.005 | 5.27 | 0.71 | 0.38 | <0.17 | 10.5 |
| DP-15 | 0.5 | 4/23/2009 | <0.29 | 1.68 | 0.352 | 0.098 | 6.13B | 1.29B | 1880 | 5.22B | 23.4B | 0.01 | 2.89 | 0.35 | 0.32 | <0.18 | 11.3 |
| DP-16 | 1 | 8/10/2010 | Not Evaluated | 0.824 | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated | Not Evaluated |
| DP-16 | 5 | 8/10/2010 | | 1.47 | | | | | | | | | | | | | |
| DP-16 | 7 | 8/8/2010 | | 0.886 | | | | | | | | | | | | | |
| DP-17 | 0.5 | 8/10/2010 | | 0.98 | | | | | | | | | | | | | |
| DP-17 | 5 | 8/10/2010 | | 0.514 | | | | | | | | | | | | | |
| DP-17 | 7 | 8/10/2010 | | 1.74 | | | | | | | | | | | | | |
| DP-18 | 0.5 | 8/10/2010 | | 0.717 | | | | | | | | | | | | | |
| DP-18 | 5 | 8/10/2010 | | 1.3 | | | | | | | | | | | | | |
| DP-18 | 7 | 8/10/2010 | | 0.867 | | | | | | | | | | | | | |
| DP-19 | 0.5 | 8/10/2010 | | 0.608 | | | | | | | | | | | | | |
| DP-19 | 5 | 8/10/2010 | | 1.31 | | | | | | | | | | | | | |
| DP-19 | 7 | 8/10/2010 | | 0.556 | | | | | | | | | | | | | |
| DP-20 | 0.5 | 8/10/2010 | | 1.28 | | | | | | | | | | | | | |
| DP-20 | 5 | 8/10/2010 | | 4.16 | | | | | | | | | | | | | |
| DP-20 | 7 | 8/10/2010 | | 1.26 | | | | | | | | | | | | | |
| DP-21 | 6 | 8/10/2010 | | 1.79 | | | | | | | | | | | | | |
| DP-22 | 0.5 | 8/10/2010 | | 4.12 | | | | | | | | | | | | | |
| DP-22 | 5 | 8/10/2010 | | 1.89 | | | | | | | | | | | | | |
| DP-22 | 6 | 8/10/2010 | | 1.38 | | | | | | | | | | | | | |
| DP-23 | 0.5 | 8/10/2010 | | 2.78 | | | | | | | | | | | | | |
| DP-23 | 5 | 8/10/2010 | | 1.84 | | | | | | | | | | | | | |
| DP-23 | 6 | 8/10/2010 | | 0.911 | | | | | | | | | | | | | |
| DP-24 | 0.5 | 8/11/2010 | | 1.6 | | | | | | | | | | | | | |
| DP-24 | 5 | 8/11/2010 | | 3.23 | | | | | | | | | | | | | |
| DP-24 | 6 | 8/11/2010 | | 5.43 | | | | | | | | | | | | | |
| DP-28 | 5 | 9/9/2010 | | 4.12 | | | | | | | | | | | | | |
| DP-28 | 6 | 9/9/2010 | | 3.19 | | | | | | | | | | | | | |
| DP-29 | 2 | 9/9/2010 | | 10.8B | | | | | | | | | | | | | |
| DP-29 | 3 | 9/9/2010 | | 0.394B | | | | | | | | | | | | | |
| DP-29 | 4 | 9/9/2010 | | 4.74 | | | | | | | | | | | | | |
| DP-29 | 5 | 9/9/2010 | | ***41.2*** | | | | | | | | | | | | | |
| DP-29 | 6 | 9/9/2010 | | 1.83 | | | | | | | | | | | | | |
| DP-29R | 1 | 10/15/2010 | | 1.3 | | | | | | | | | | | | | |
| DP-29R | 2 | 10/15/2010 | | 2.03 | | | | | | | | | | | | | |
| DP-29R | 3 | 10/15/2010 | | 3.98 | | | | | | | | | | | | | |
| DP-30 | 3 | 10/15/2010 | | 1.69 | | | | | | | | | | | | | |
| DP-30 | 4 | 10/15/2010 | | 5.06 | | | | | | | | | | | | | |
| DP-30 | 5 | 10/15/2010 | | ***57.5*** | | | | | | | | | | | | | |
| DP-30 | 6 | 10/15/2010 | | 1.39 | | | | | | | | | | | | | |
| DP-31 | 3 | 10/15/2010 | | 2.98 | | | | | | | | | | | | | |
| DP-31 | 4 | 10/15/2010 | | **20** | | | | | | | | | | | | | |
| DP-31 | 5 | 10/15/2010 | | 2.27 | | | | | | | | | | | | | |
| DP-31 | 6 | 10/15/2010 | | 8.37 | | | | | | | | | | | | | |
| DP-32 | 3 | 10/15/2010 | | 0.298 | | | | | | | | | | | | | |
| DP-32 | 4 | 10/15/2010 | | 1.22 | | | | | | | | | | | | | |
| DP-32 | 5 | 10/15/2010 | | 1.47 | | | | | | | | | | | | | |
| DP-32 | 6 | 10/15/2010 | | 1.85 | | | | | | | | | | | | | |
| DP-33 | 3 | 10/15/2010 | | 0.351 | | | | | | | | | | | | | |
| DP-33 | 4 | 10/15/2010 | | 2.34 | | | | | | | | | | | | | |
| DP-33 | 5 | 10/15/2010 | | 0.916 | | | | | | | | | | | | | |
| DP-33 | 6 | 10/15/2010 | | 1.81 | | | | | | | | | | | | | |
| DP-34 | 3 | 10/15/2010 | | 1.02 | | | | | | | | | | | | | |
| DP-34 | 4 | 10/15/2010 | | 8.05 | | | | | | | | | | | | | |
| DP-34 | 5 | 10/15/2010 | | ***30*** | | | | | | | | | | | | | |
| DP-34 | 6 | 10/15/2010 | | 0.193 | | | | | | | | | | | | | |
| Residential Health-Based | ---- | ---- | 6.2 | 0.39 | 32 | 14 | 14 | 620 | 11000 | 400 | 360 | 2 | 300 | 78 | 78 | 0.16 | 4600 |
| Protection of GW | ---- | ---- | 0.9 | 5.8 | 63 | 3 | 3 | 700 | 150 | 270 | 65 | 1 | 130 | 2.1 | 3.4 | 0.28 | 1200 |
| Background | ---- | ---- | ---- | <0.333 - 12.7 | 0.032 - 0.097 | <0.011-0.34 | 0.812-15.2 | ---- | 366 - 3140 | ---- | 2.62 - 67.7 | <0.006 - 0.2 | ---- | ---- | <0.06 - 0.08 | <0.103-0.978 | ---- |

Notes:
1) All concentrations are expressed in milligrams per kilogram (mg/Kg).
2) (XXXX-XX-X) = Chemical Abstract Service number.
3) Residntial Health-Based = Inactive Hazardous Sites Branch - Residential Health-Based Soil Remediation Goals (August 2011).
4) Protection of GW = Inactive Hazardous Sites Branch Protection of Groundwater Soil Remediation Goals (August 2011).
5) B-flag = The analyte was detected in the associated method blank.
6) NS = No standard.
7) Shaded concentrations exceed either the Residential Health-Based or Protection of GW standard.
8) Bold concentrations exceed measured background levels.
9) underlined concentrations exceed both the Health-Based and Protection of GW standards.
10) Background = Range of concentrations recorded for area of uncontaminated soils.

TABLE 5
**SUMMARY OF SOIL TCLP ANALYTICAL DATA**
FORMER APAC CASTLE HAYNE ASPHALT PLANT
CASTLE HAYNE, NEW HANOVER COUNTY, NORTH CAROLINA
NCDENR FACILITY NO. NONCD0002779
ESI PROJECT NO. ER08-136.07

| Boring No. | Depth (feet) | Date | Arsenic (7440-38-2) | Beryllium (7440-41-7) | Iron (7439-89-6) | Manganese (7439-96-5) | Mercury (7439-97-6) | Silver (7440-22-4) | Selenium (7782-49-2) | Thallium (7740-28-0) |
|---|---|---|---|---|---|---|---|---|---|---|
| DP-1 | 5 | 7/28/2009 | NE | NE | <0.310 | NE | NE | NE | NE | NE |
| DP-2 | 0.5 | 7/28/2009 | NE | NE | 4.19 | NE | NE | <0.00960 | NE | NE |
| DP-2A | 5 | 7/28/2009 | NE | NE | 1.66 | NE | NE | NE | NE | NE |
| DP-2B | 9 | 7/28/2009 | <0.0280 | <0.00075 | 3.58 | 0.611 | <0.00011 | NE | NE | NE |
| DP-3 | 7.5 | 7/28/2009 | NE | NE | 1.73 | NE | NE | NE | NE | NE |
| DP-3A | 5 | 7/28/2009 | NE | NE | <0.310 | NE | NE | <0.0096 | NE | NE |
| DP-4A | 5 | 7/28/2009 | NE | NE | <0.310 | NE | NE | NE | NE | NE |
| DP-5 | 0.5 | 7/28/2009 | NE | NE | <0.310 | NE | NE | <0.0096 | NE | NE |
| DP-6 | 0.5 | 7/28/2009 | NE | NE | <0.310 | 1.58 | NE | <0.0096 | NE | NE |
| DP-7 | 0.5 | 7/28/2009 | <0.0280 | NE | <0.310 | NE | <0.00011 | NE | NE | NE |
| DP-8 | 2 | 7/28/2009 | NE | NE | 1.05 | NE | <0.00011 | <0.0096 | NE | NE |
| DP-9 | 3.5 | 7/28/2009 | NE | NE | 0.485 | NE | NE | NE | NE | NE |
| DP-9A | 5 | 7/28/2009 | <0.0280 | NE | <0.310 | 0.0301 | <0.00011 | NE | NE | NE |
| DP-10 | 3 | 7/28/2009 | NE | NE | <0.310 | NE | <0.00011 | <0.0096 | NE | NE |
| DP-11 | 7 | 7/28/2009 | <0.0280 | NE | <0.310 | NE | NE | NE | NE | NE |
| DP-11A | 4 | 7/28/2009 | NE | NE | <0.310 | NE | NE | NE | NE | NE |
| DP-12 | 0.5 | 7/28/2009 | NE | NE | 3.90 | 0.560 | NE | 0.0149 | NE | NE |
| DP-13 | 0.5 | 7/28/2009 | NE | NE | 0.955 | NE | NE | 0.0157 | NE | NE |
| DP-14 | 0.5 | 7/28/2009 | NE | NE | <0.310 | 2.61 | NE | <0.0096 | NE | NE |
| DP-15 | 0.5 | 7/28/2009 | NE | NE | 0.41 | NE | NE | 0.0171 | NE | NE |
| DP-21 | 5 | 8/10/2010 | NE | NE | NE | NE | NE | NE | <0.0270 | NE |
| DP-25 | 5 | 8/11/2010 | NE | NE | NE | NE | NE | NE | NE | 0.0612 |
| DP-26 | 0.5 | 8/11/2010 | NE | NE | NE | NE | NE | NE | NE | <0.0480 |
| DP-26 | 5 | 8/11/2010 | NE | NE | NE | NE | NE | NE | NE | 0.0782 |
| DP-27 | 4 | 8/11/2010 | NE | NE | NE | NE | NE | NE | NE | 0.0532 |
| NC 2L | ---- | ---- | 0.05 | 4 | 0.3 | 0.05 | 0.00105 | 0.0175 | 0.02 | 0.002* |

Notes:
1) All concentrations are expressed in millgrams per liter (mg/L).
2) (XXXX-XX-X) = Chemical Abstract Service number.
3) NC 2L = 15A NCAC 02L .0202 Groundwater Quality Standards.
4) Shaded concentrations exceed the NC 2L for leachibility.
5) NE = Not evaluated.
6) Interim 2L standard for Thallium is 0.2 ug/L (October 1, 2010).