Appendix A

Current Conceptual Site Model
**HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM**

**Site:** FHR North Pole Refinery - On-Site Only

**Completed By:** R. Andresen  
**Date Completed:** updated May 21, 2012

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**Media**  
Check the media that could be directly affected by the release.  
For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.

**Transport Mechanisms**

- **Surface Soil** (0-2 ft bgs)
- **Subsurface Soil** (2-15 ft bgs)
- **Groundwater**
- **Surface Water**
- **Sediment**

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**Exposure Media**  
Check all exposure media identified in (2).

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**Exposure Pathway/Route**

- **Incidental Soil Ingestion**  
- **Dermal Absorption of Contaminants from Soil**  
- **Dermal Absorption of Contaminants in Groundwater**  
- **Inhalation of Fugitive Dust**  
- **Ingestion of Groundwater**  
- **Inhalation of Groundwater**  
- **Inhalation of Volatile Compounds in Tap Water**  
- **Inhalation of Outdoor Air**  
- **Inhalation of Indoor Air**  
- **Inhalation of Fugitive Dust**  
- **Ingestion of Surface Water**  
- **Dermal Absorption of Contaminants in Surface Water**  
- **Ingestion of Wild or Farmed Foods**  

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**Instructions:** Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

- Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

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**Current & Future Receptors**

- Residents (adults or children)  
- Harvesters  
- Construction workers  
- Residents (0-2 ft bgs)  
- Residents (2-15 ft bgs)  
- Recreational users  
- Incidental Soil Ingestion  
- Dermal Absorption of Contaminants in Surface Water  
- Ingestion of Wild or Farmed Foods  
- Inhalation of Outdoor Air  
- Resuspension, runoff, or erosion  
- Uptake by plants or animals  
- Other (list): _____________________________________
Appendix B

Historical Residual LNAPL
Appendix C

Hydrographs
MW-186 Well Nest Hydrograph
North Pole Refinery
Flint Hills Resources Alaska, LLC

<table>
<thead>
<tr>
<th>Well</th>
<th>Screen Info</th>
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</thead>
<tbody>
<tr>
<td>MW-186A</td>
<td>MW-186A screened interval (477.9-487.6 ft. MSL)</td>
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<tr>
<td>MW-186B</td>
<td>MW-186B screened interval (432.3-442.0 ft. MSL)</td>
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<tr>
<td>MW-186C</td>
<td>MW-186C screened interval (392.3-401.9 ft. MSL)</td>
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<tr>
<td>MW-186E</td>
<td>MW-186E screened interval (417.3-422.0 ft. MSL)</td>
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O-12 Well Hydrograph
North Pole Refinery
Flint Hills Resources Alaska, LLC

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<td>O-12</td>
<td>O-12 screened interval (476.3-486.1 ft. MSL)</td>
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S-43 Well Hydrograph
North Pole Refinery
Flint Hills Resources Alaska, LLC

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<tbody>
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<td>S-43</td>
<td>S-43 screened interval (481.5-490.8 ft. MSL)</td>
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