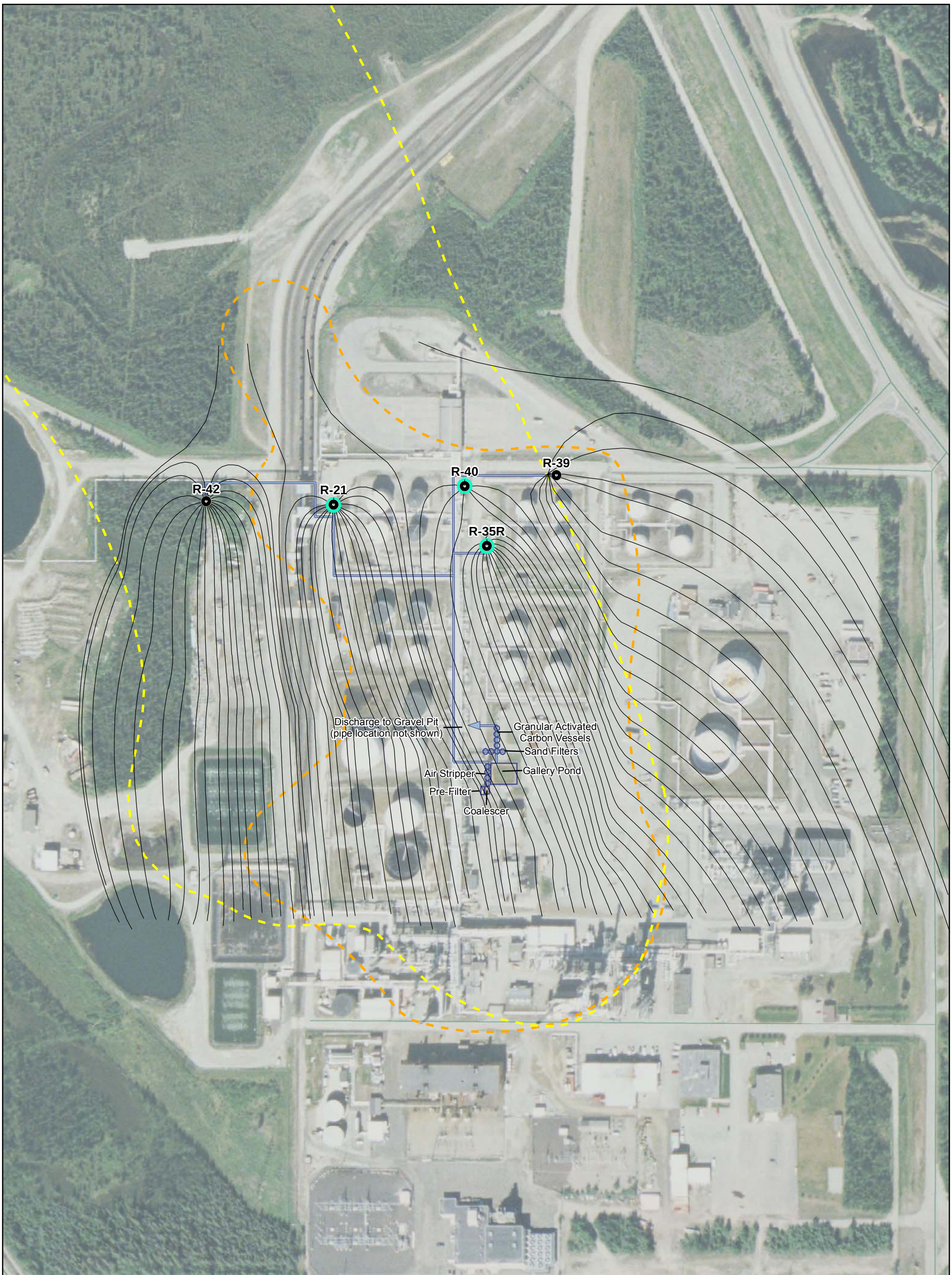


Recovery Well

Installed Product Recovery System

Low-stage Capture Lines

Approximate Sulfolane Plume (10 □g/L Isopleth)

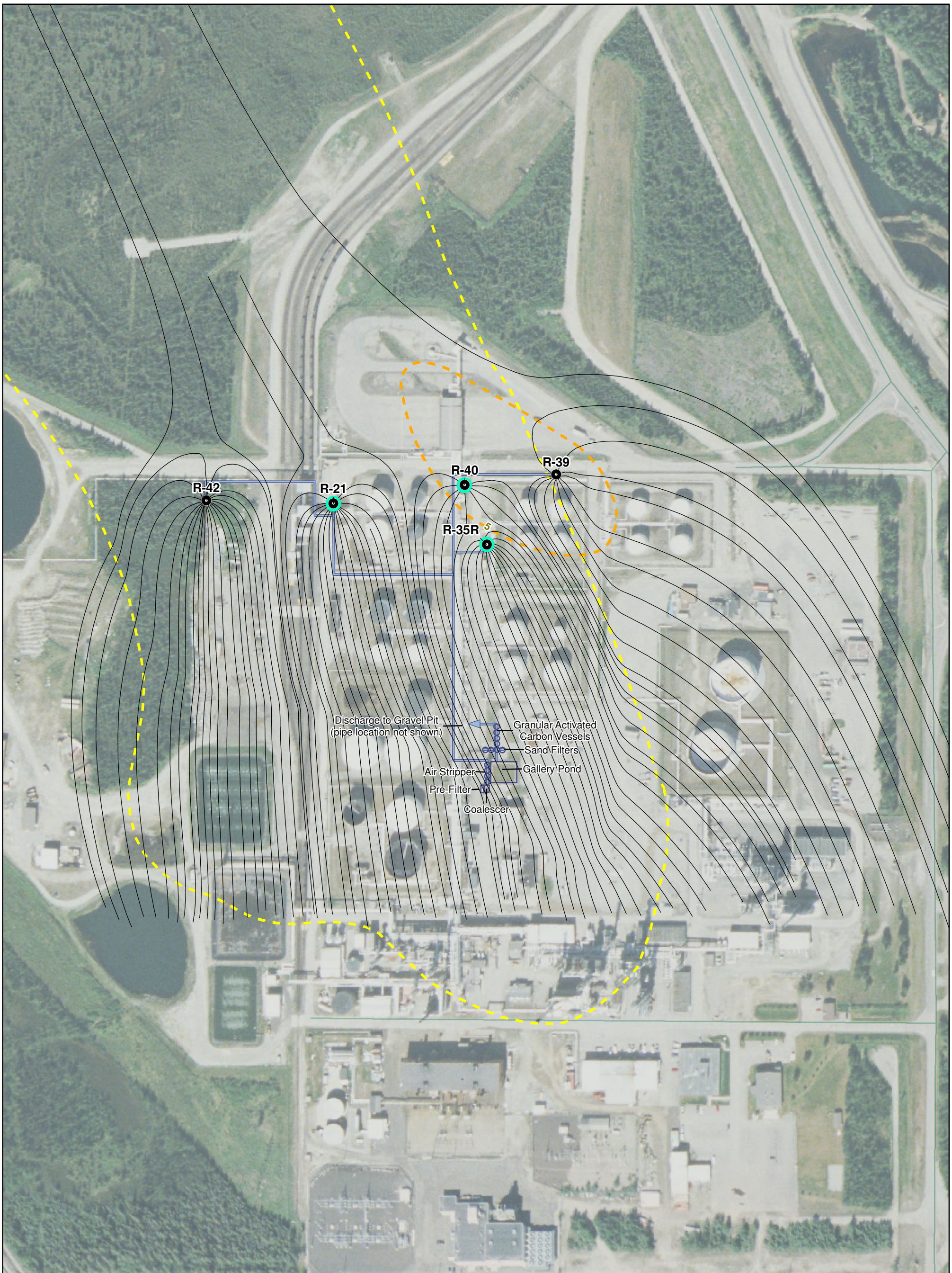
Approximate Benzene Plume (5 □g/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 132
LOW-STAGE CAPTURE EVALUATION
WATER TABLE
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

Low-stage Capture Lines

Approximate Sulfolane Plume (10 µg/L Isopleth)

Approximate Benzene Plume (5 µg/L Isopleth)

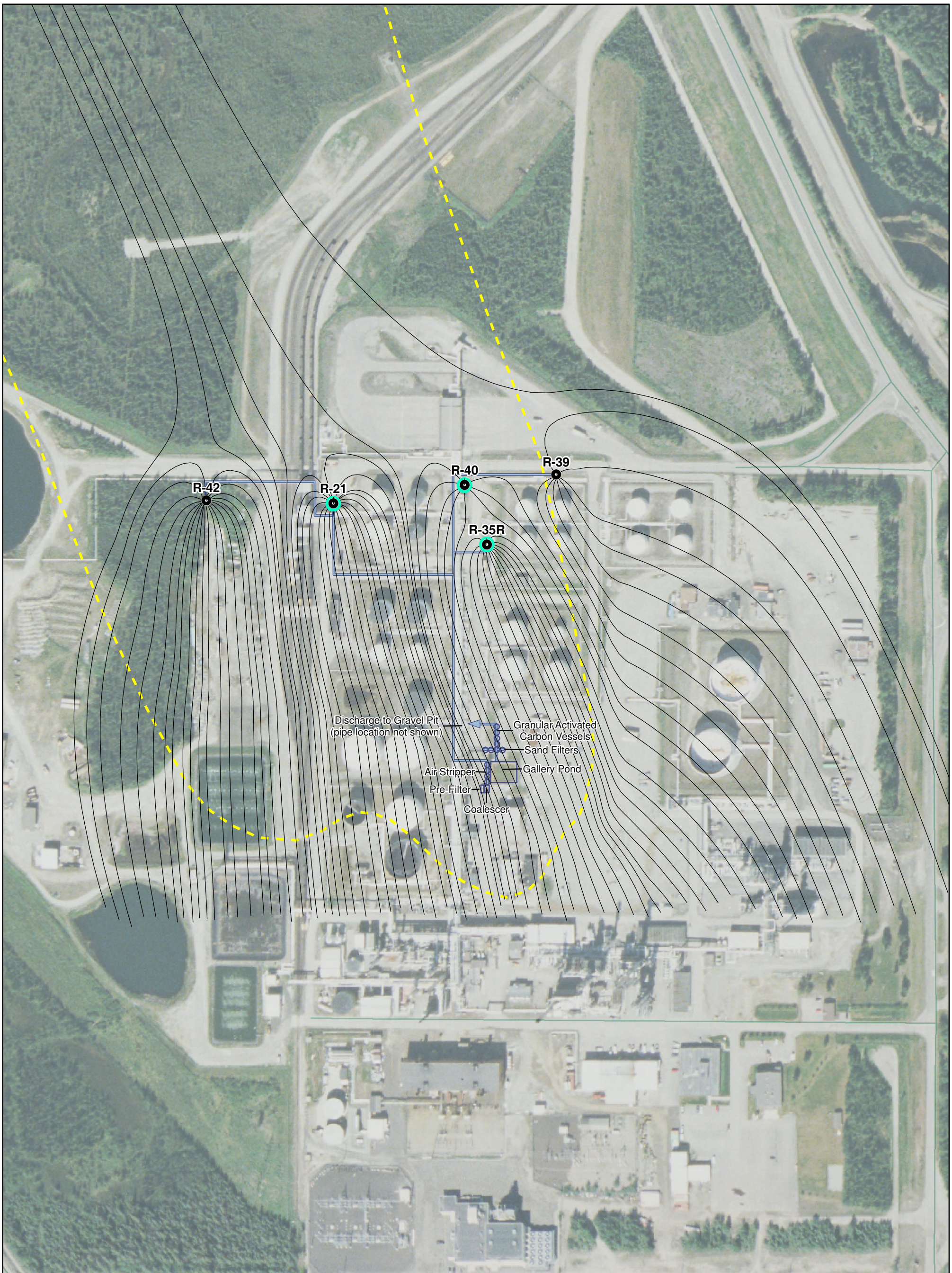
Remediation System Piping

N

0 125 250 500

Feet

Figure 133
LOW-STAGE CAPTURE EVALUATION
20 FEET BGS (10-15 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

Low-stage Capture Lines

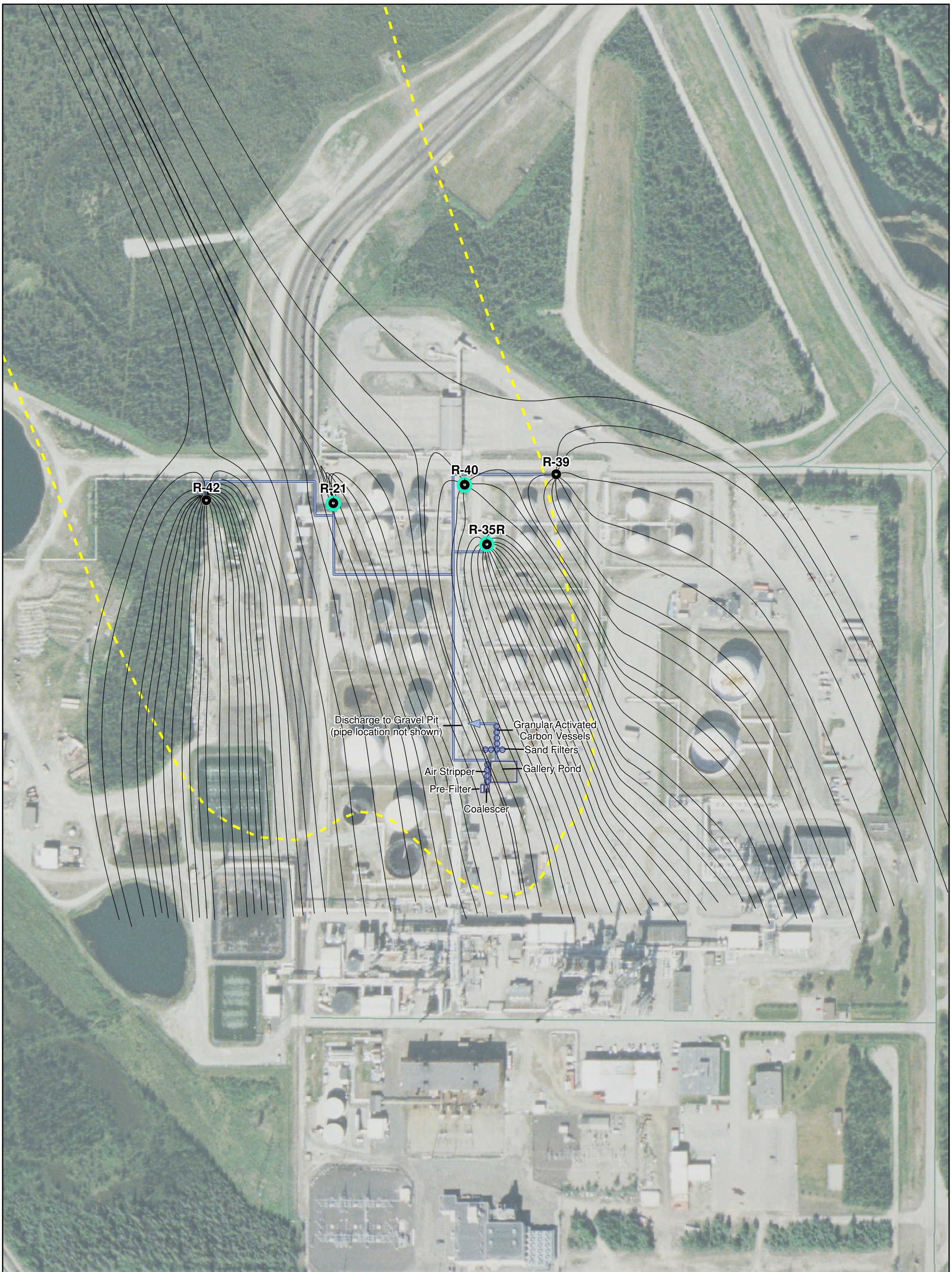
Approximate Sulfolane Plume (10 µg/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 134
LOW-STAGE CAPTURE EVALUATION
40 FEET BGS (30-35 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

Low-stage Capture Lines

Approximate Sulfolane Plume (10 µg/L Isopleth)

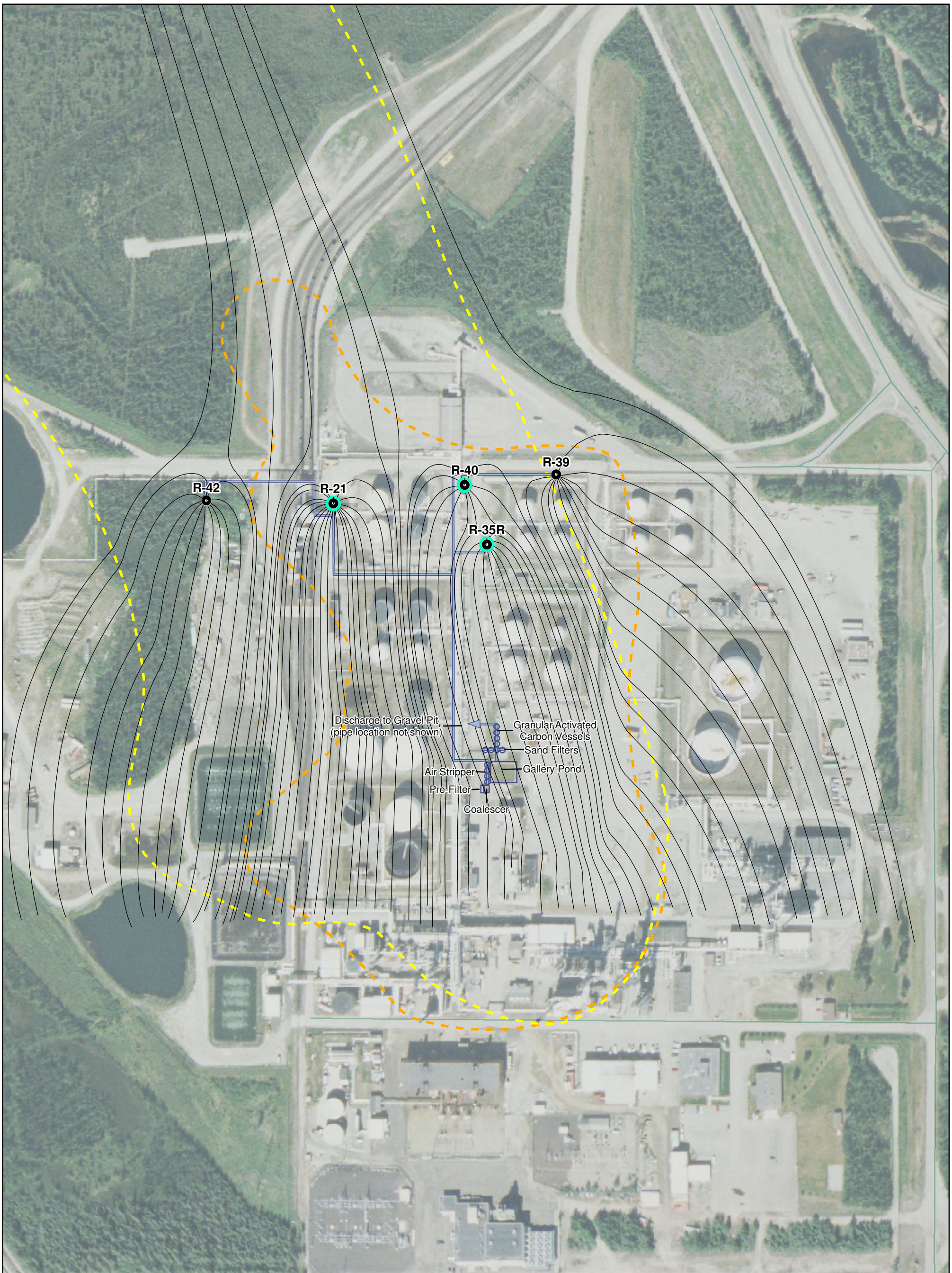
Remediation System Piping

Note: No benzene data available from this depth.

0 125 250 500

Feet

Figure 135
LOW-STAGE CAPTURE EVALUATION
60 FEET BGS (50-55 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

High-stage Capture Lines

Approximate Sulfolane Plume (10 µg/L Isopleth)

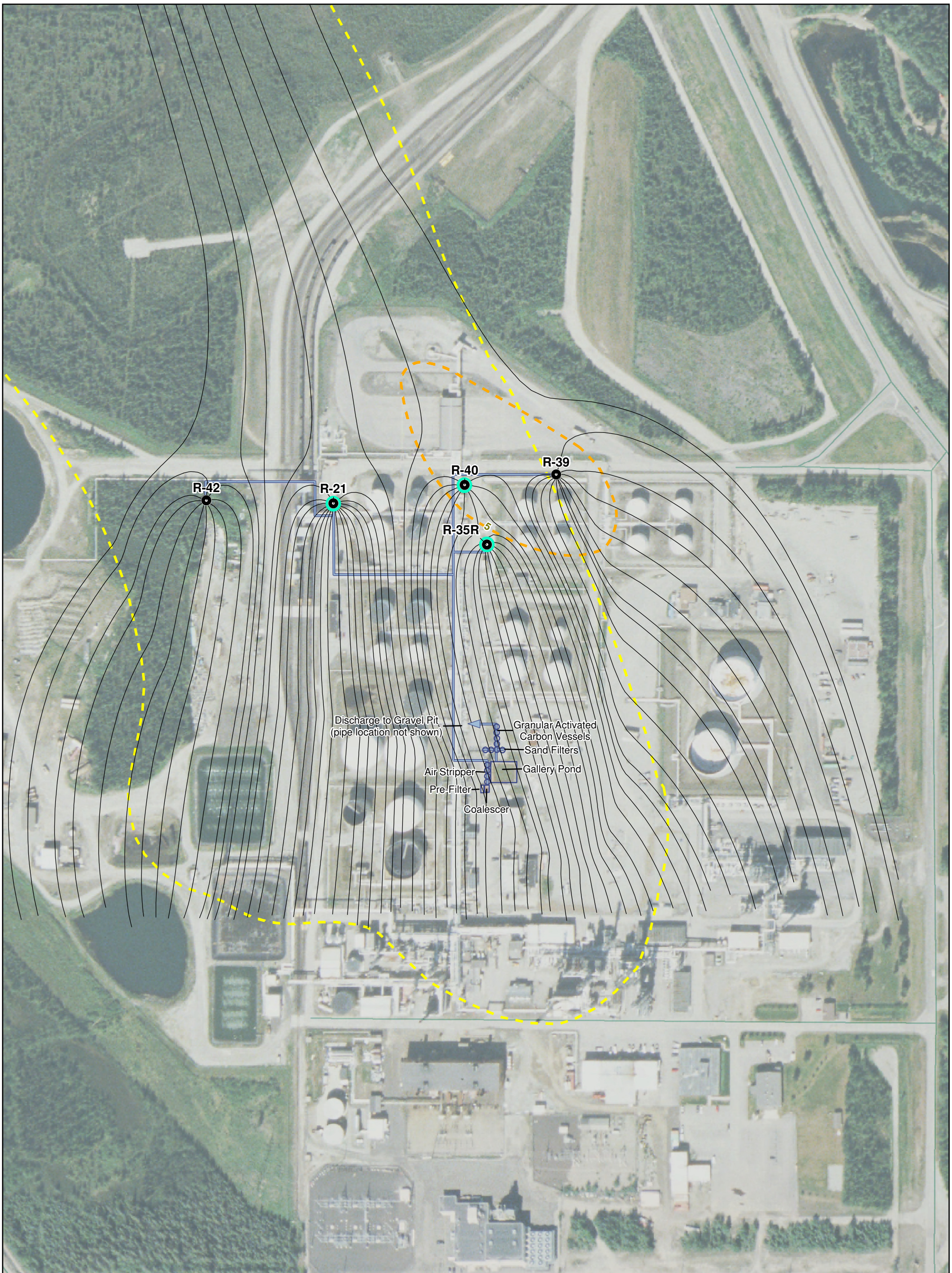
Approximate Benzene Plume (5 µg/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 136
HIGH-STAGE CAPTURE EVALUATION
WATER TABLE
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

High-stage Capture Lines

Approximate Sulfolane Plume (10 µg/L Isopleth)

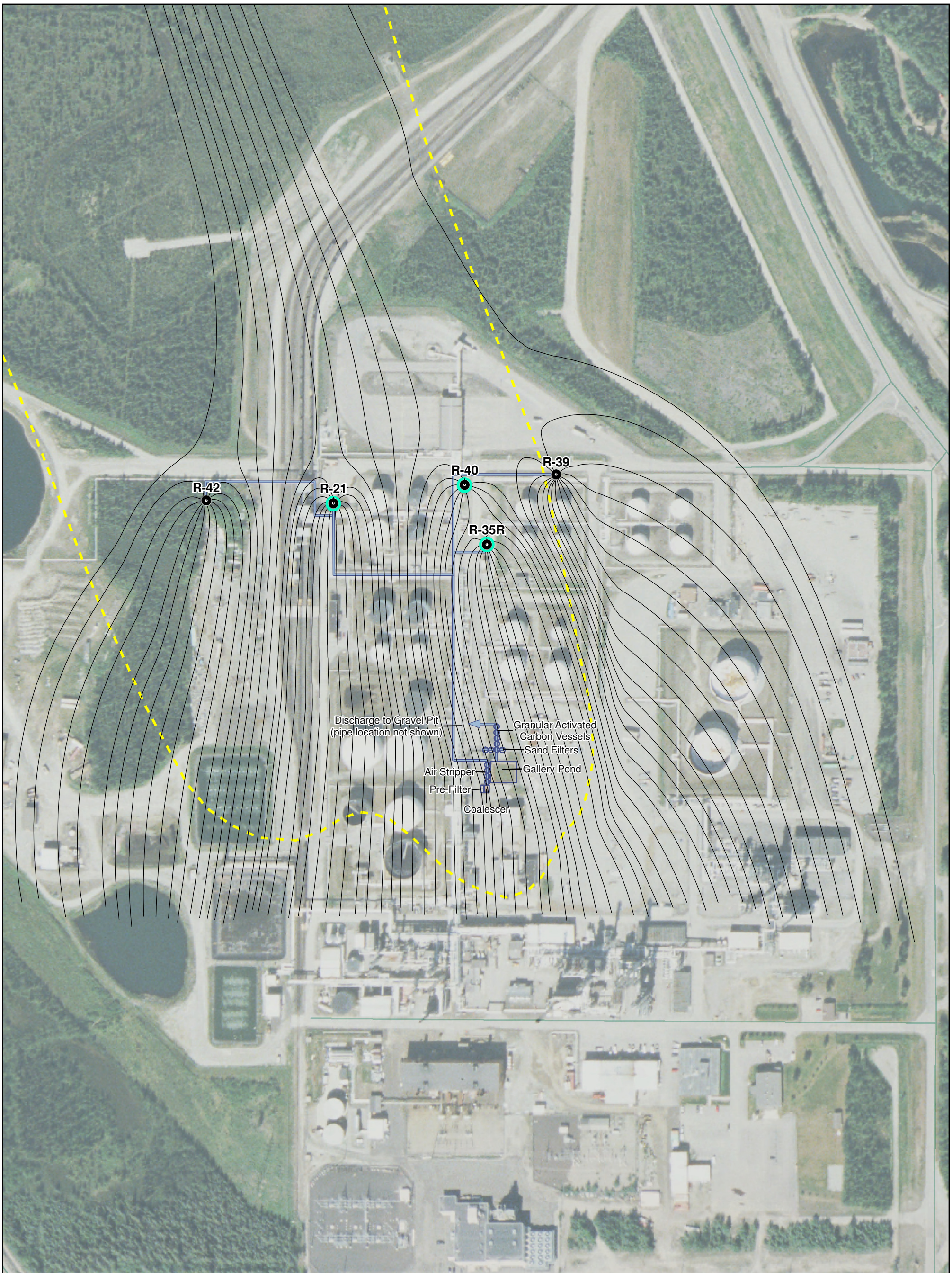
Approximate Benzene Plume (5 µg/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 137
HIGH-STAGE CAPTURE EVALUATION
20 FEET BGS (10-15 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

High-stage Capture Lines

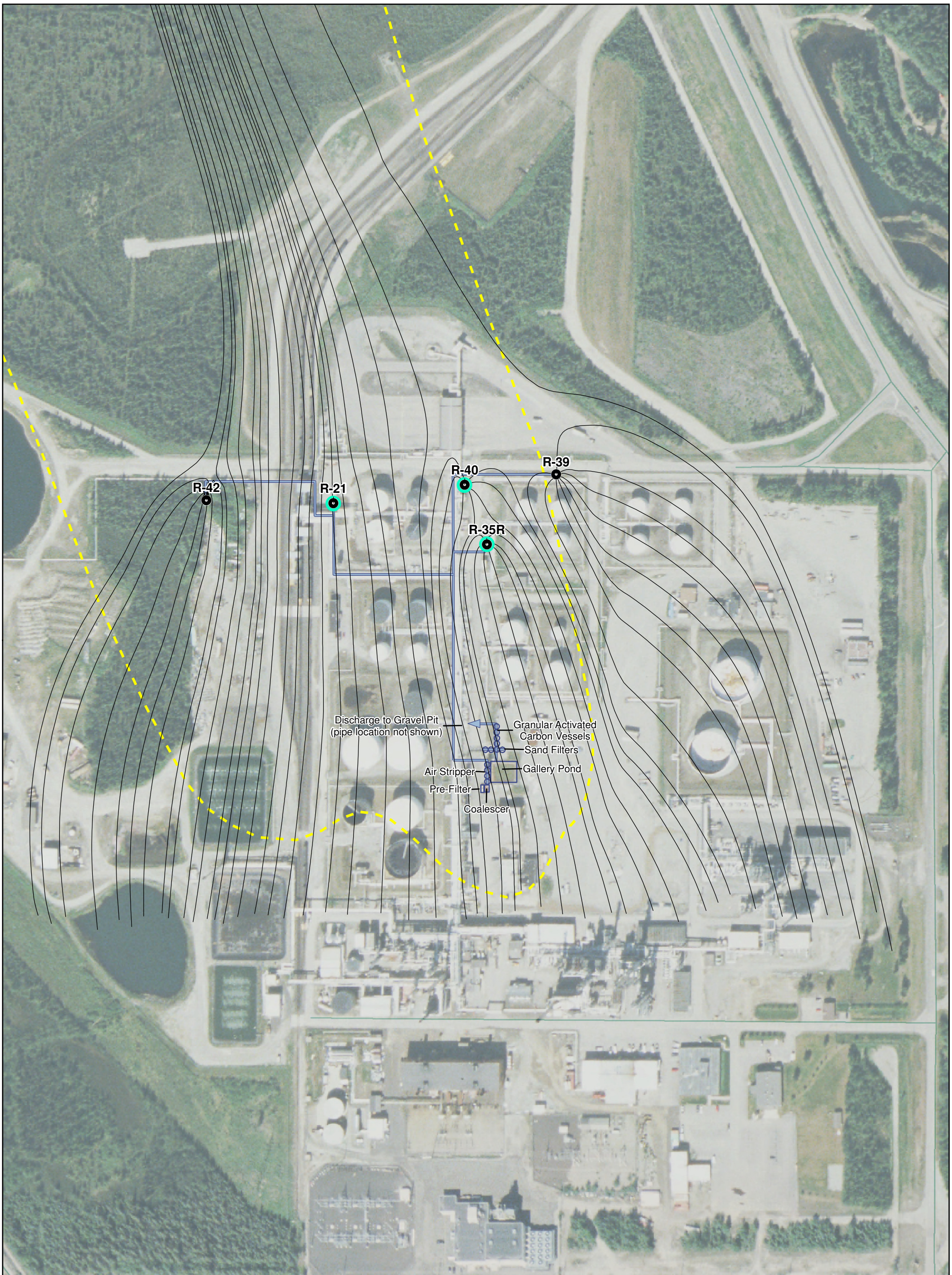
Approximate Sulfolane Plume (10 µg/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 138
HIGH-STAGE CAPTURE EVALUATION
40 FEET BGS (30-35 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC



Recovery Well

Installed Product Recovery System

High-stage Capture Lines

Approximate Sulfolane Plume (10 µg/L Isopleth)

Remediation System Piping

0 125 250 500

Feet

Figure 139
HIGH-STAGE CAPTURE EVALUATION
60 FEET BGS (50-55 FEET BWT)
North Pole Refinery
Flint Hills Resources Alaska, LLC

Figure 140
MONITORING WELL ANALYTICAL DATA-MW-127
North Pole Refinery
Flint Hills Resources Alaska, LLC

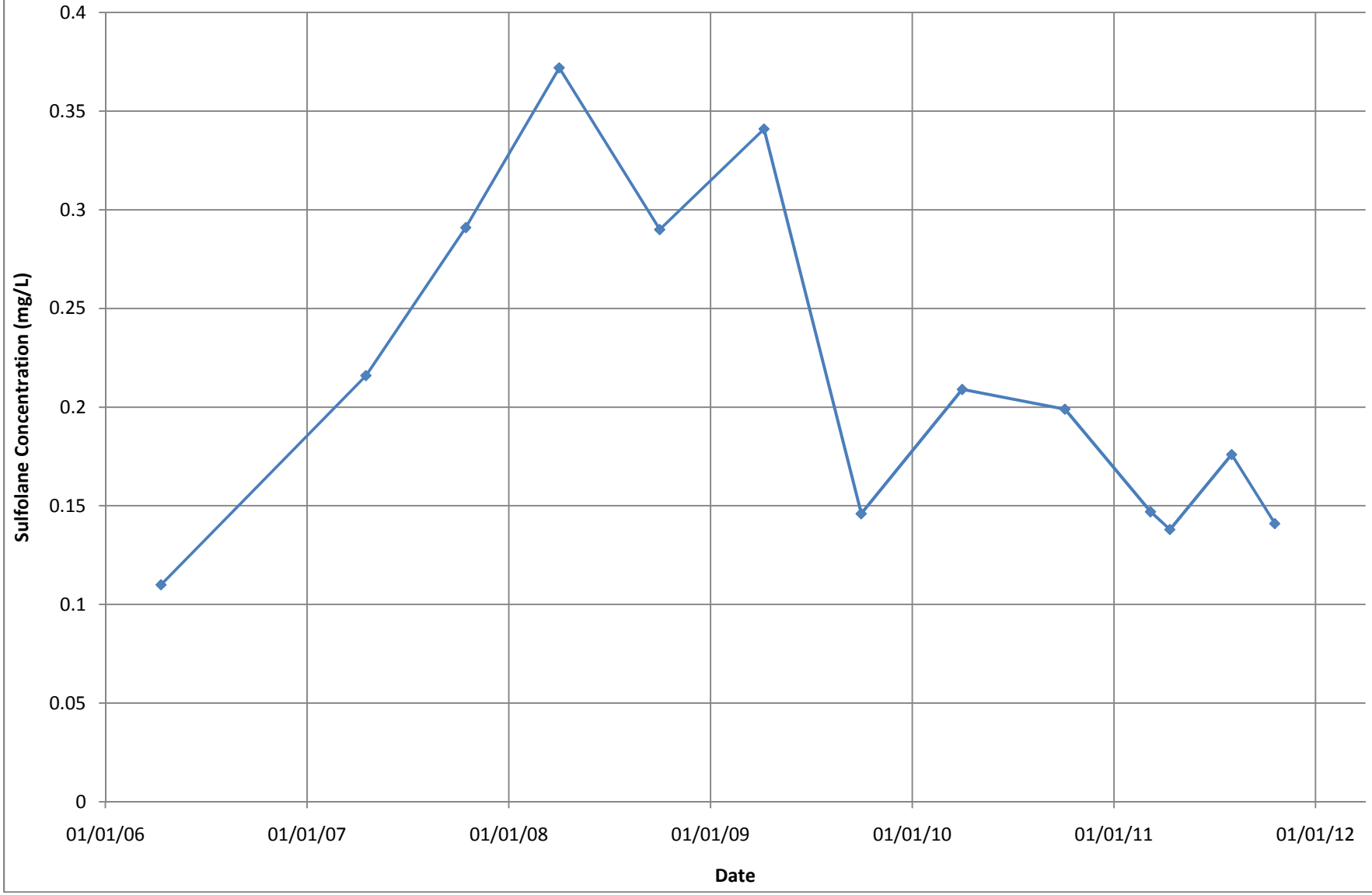


Figure 141
MONITORING WELL ANALYTICAL DATA-MW-131
North Pole Refinery
Flint Hills Resources Alaska, LLC

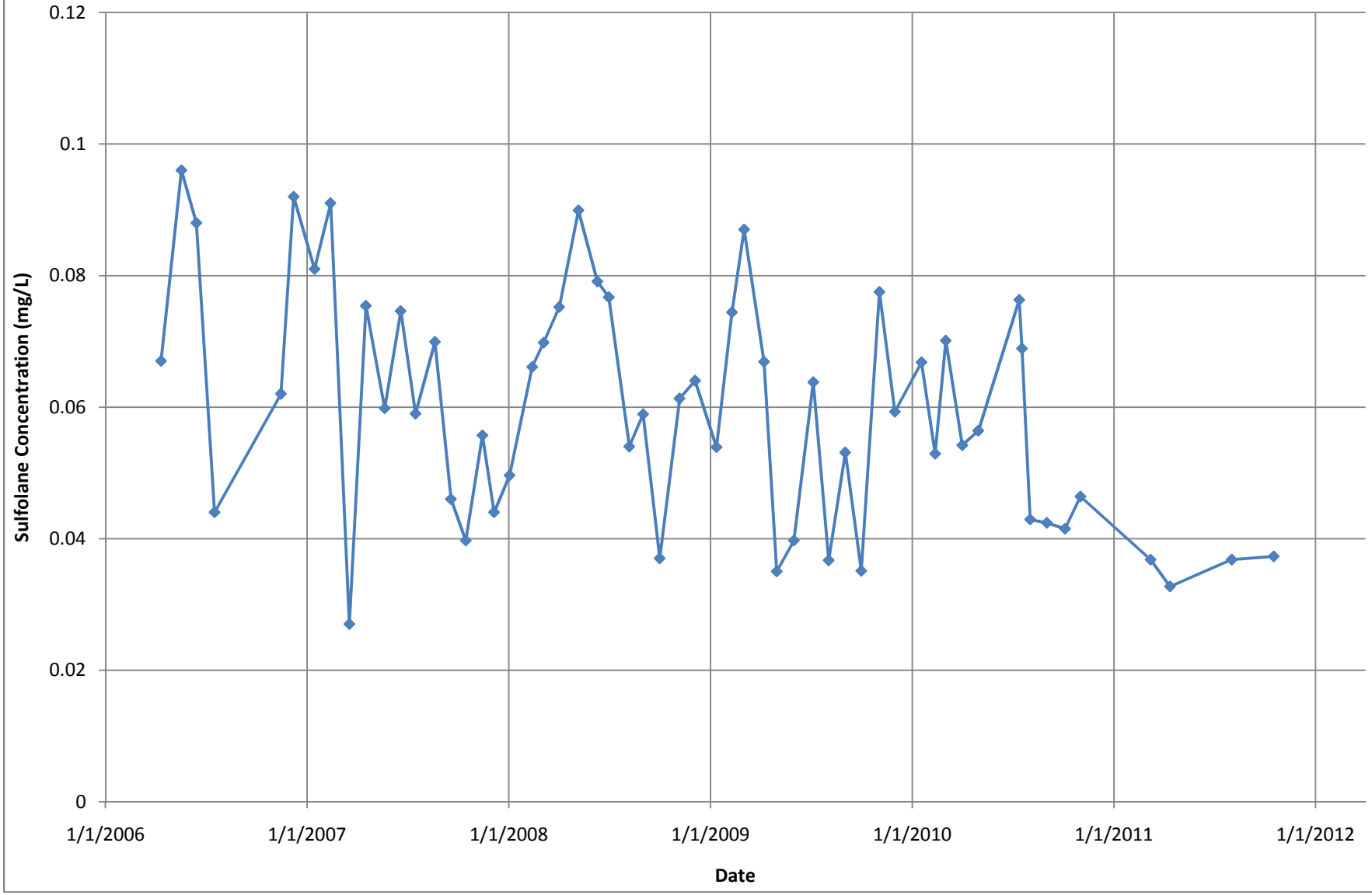


Figure 142
MONITORING WELL ANALYTICAL DATA-MW-139
North Pole Refinery
Flint Hills Resources Alaska, LLC

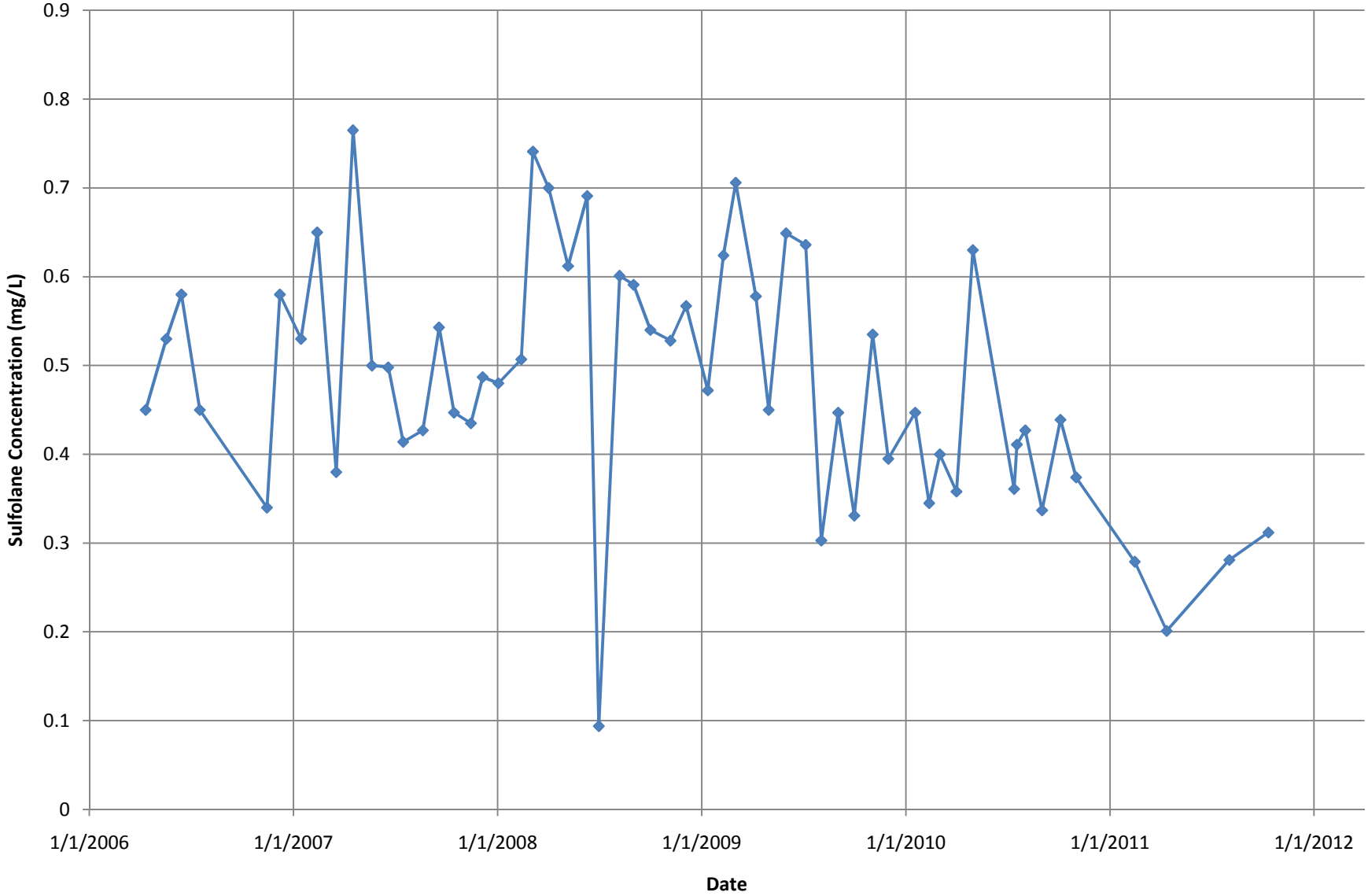


Figure 143
MONITORING WELL ANALYTICAL DATA-MW-142
North Pole Refinery
Flint Hills Resources Alaska, LLC

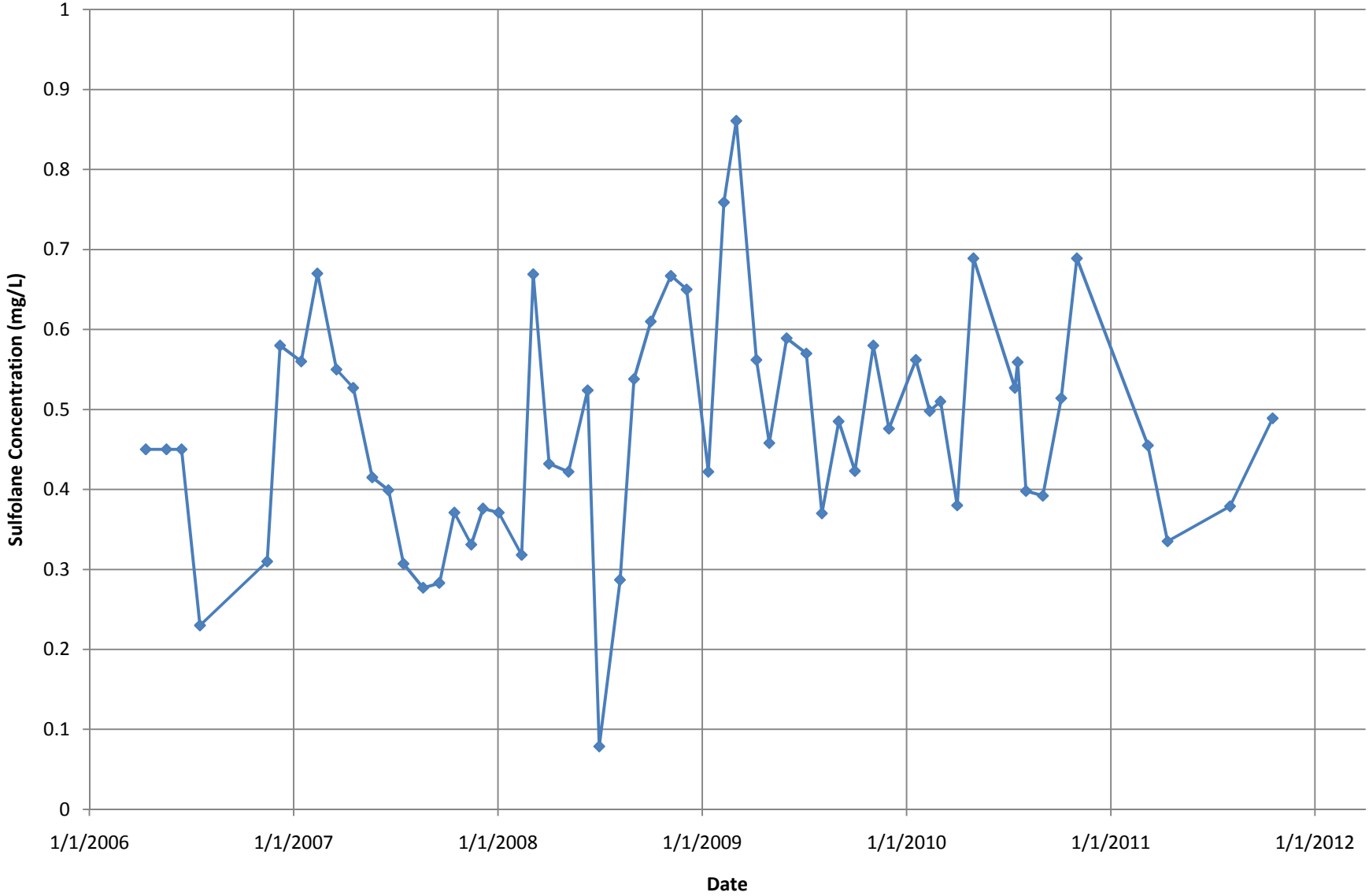
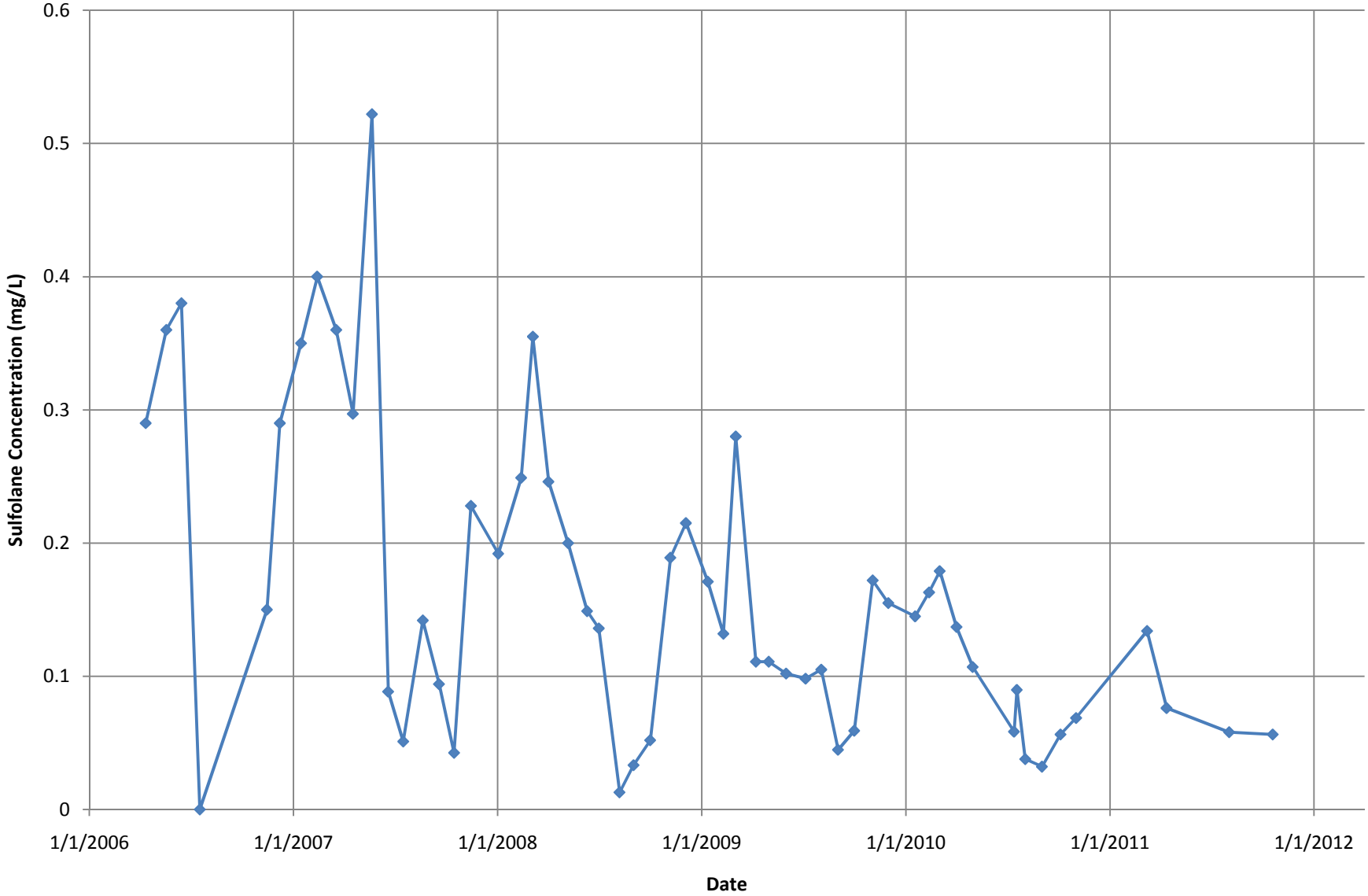


Figure 144
MONITORING WELL ANALYTICAL DATA-MW-143
North Pole Refinery
Flint Hills Resources Alaska, LLC



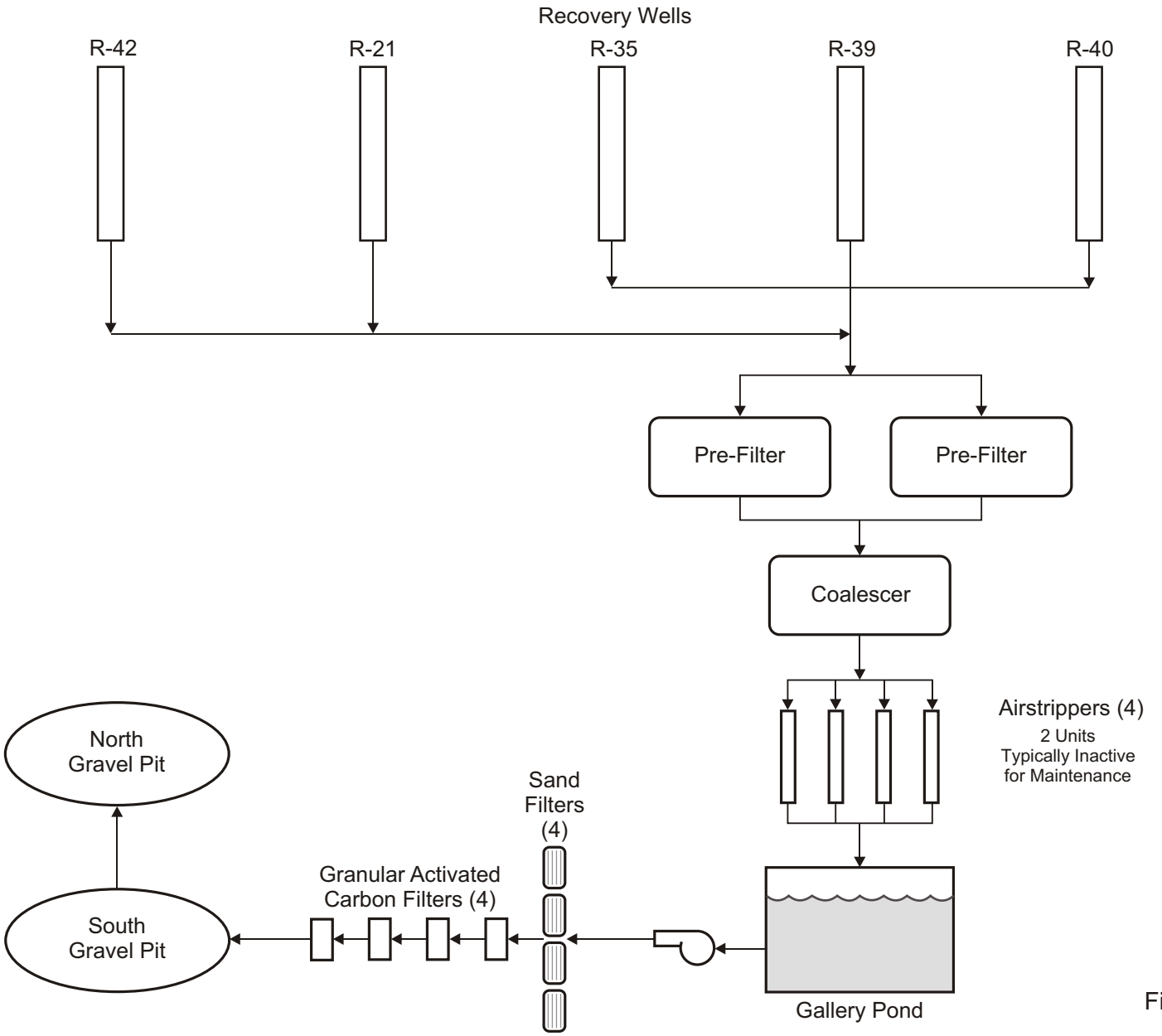


Figure 145

PROCESS FLOW DIAGRAM
GROUNDWATER CAPTURE
AND TREATMENT SYSTEM
North Pole Refinery
Flint Hills Resources Alaska, LLC