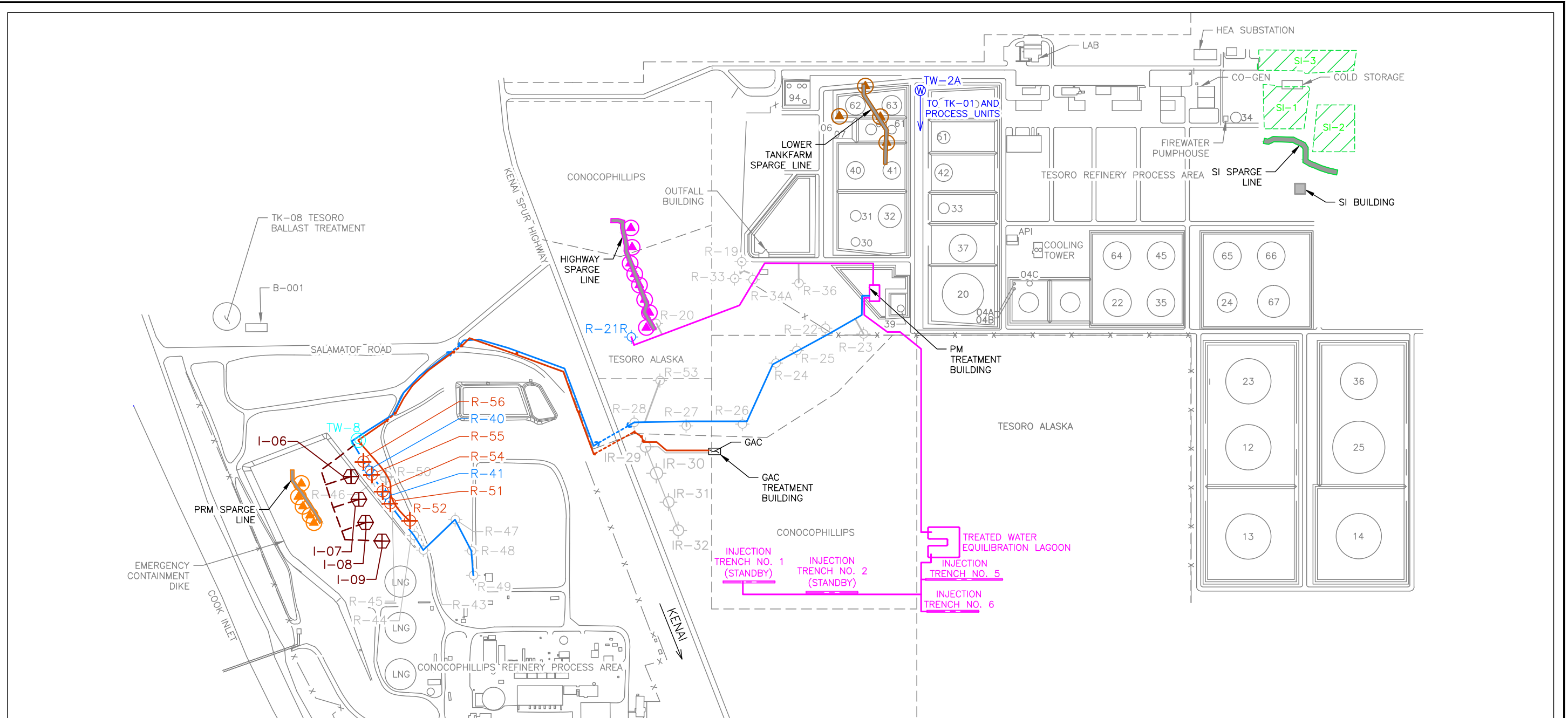


M:\STOV\TESORO\CADD\KENAREFINERY\RESOURCECONSERVATION\RECOVERYACT_PERMIT\RENEWAL2015\APPENDIX_D\FIGUREDITS\DO2-KENAI_CORRECTIVEMEASURESYS



Source Drawing From: Kent & Sullivan Inc., Circa 2007

EXPLANATION

	PRM VAPOR EXTRACTION WELL		PRM AIR SPARGE LINE		SI CLOSED SURFACE IMPOUNDMENT
	HIGHWAY VAPOR EXTRACTION WELL		HIGHWAY AIR SPARGE LINE	AS	AIR SPARGE
	LOWER TANKFARM VAPOR EXTRACTION WELL		LOWER TANKFARM AIR SPARGE LINE	GAC	GRANULAR ACTIVATED CARBON
	PRODUCTION WELL AND DESIGNATION FOR PRM AND B-AQUIFER INJECTION SYSTEM		SI AIR SPARGE LINE	HEA	HOMER ELECTRIC ASSOCIATION
	PRM RECOVERY WELL AND DESIGNATION		PRM RECOVERY WELL PIPELINE (DASHED WHERE SEGMENTS ARE UNDERGROUND)	LNG	LIQUID NATURAL GAS
	B-AQUIFER RECOVERY WELL AND DESIGNATION		PM RECOVERY WELL PIPELINE	NO.	NUMBER
	B-AQUIFER INJECTION WELL AND DESIGNATION		B-AQUIFER RECOVERY WELL PIPELINE (DASHED WHERE SEGMENTS ARE UNDERGROUND)	PRM	PHILLIPS REMEDIAL MEASURE
	OFFLINE RECOVERY WELL AND DESIGNATION		B-AQUIFER INJECTION WELL PIPELINE	PM	PHILLIPS MARATHON
	OFFLINE B-AQUIFER RECOVERY WELL AND DESIGNATION		PM INJECTION TRENCH	SI	SURFACE IMPOUNDMENT
				VE	VAPOR EXTRACTION



FIGURE 1

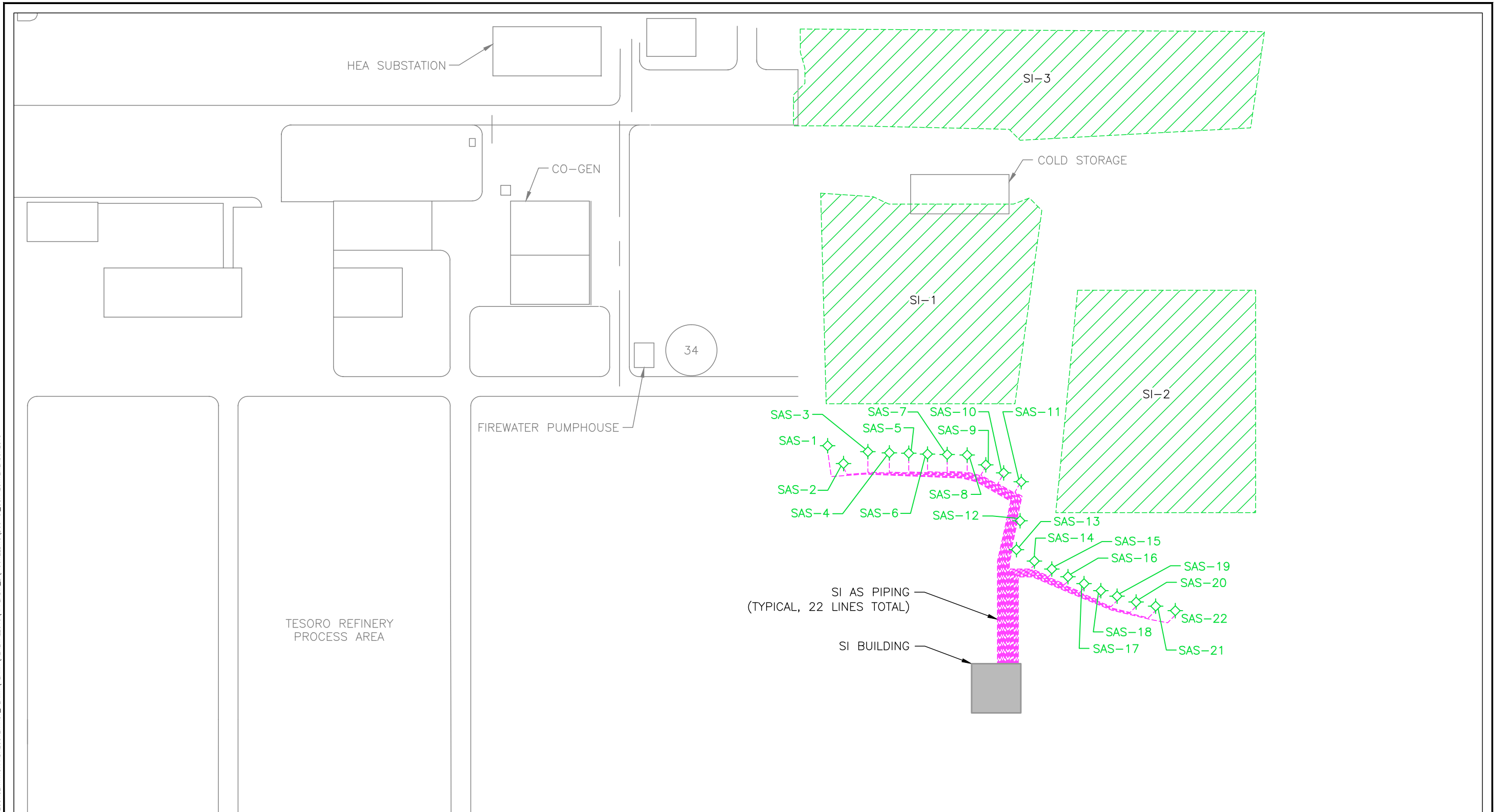
CORRECTIVE MEASURE SYSTEMS

**KENAI TESORO REFINERY
NIKISKI, ALASKA**



Drawn By: RJ Checked By: SP Scale: 1" = 500' Date: 9/7/2016 File: D02-KENAI_CORRECTIVEMEASURESYS

M:\STOV\TESORO\CADD\KENAREFINERY\RESOURCECONSERVATION\ADRECOVERY\ACT_PERMIT\PERMIT\RENEWAL2015\APPENDIX_D\FIGUREDITS\DO3-SI_CORRECTIVEMEASURESYS



EXPLANATION

	SI AIR SPARGE WELL AND DESIGNATION	AS	AIR SPARGE
	SI AIR SPARGE LINE	HEA	HOMER ELECTRIC ASSOCIATION
	SI CLOSED SURFACE IMPOUNDMENT	SI	SURFACE IMPOUNDMENT

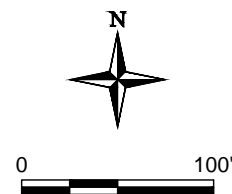


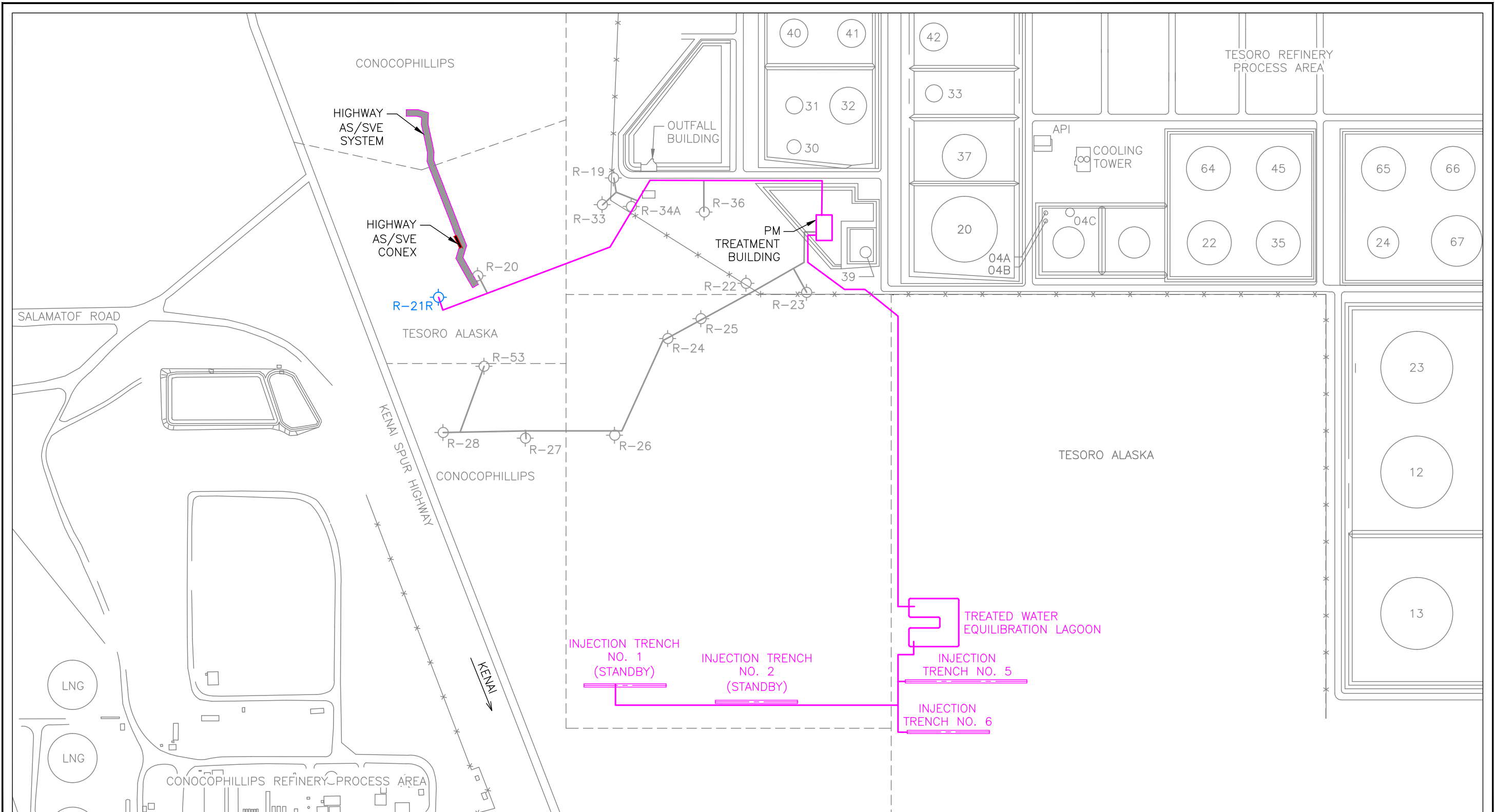
FIGURE 2

SI CORRECTIVE MEASURE
SITE PLAN

KENAI TESORO REFINERY
NIKISKI, ALASKA

Drawn By: RJ	Checked By: SP	Scale: 1" = 100'	Date: 6/23/2016	File: D03-SI_CORRECTIVEMEASURESYS
--------------	----------------	------------------	-----------------	-----------------------------------

M:\STOV\TESORO\CADD\KENAI\REFINERY\RESOURCECONSERVATION\RECOVERYACT_PERMIT\PERMIT\RENEWAL2015\APPENDIX_D\FIGUREDITS\DO5-PM_CORRECTIVEMEASURESYS



EXPLANATION

	RECOVERY WELL AND DESIGNATION	AS	AIR SPARGE
	OFFLINE RECOVERY WELL AND DESIGNATION	NO.	NUMBER
	PM RECOVERY WELL PIPELINE	PM	PHILLIPS MARATHON
	PM INJECTION TRENCH	SVE	SOIL VAPOR EXTRACTION
	PM AIR SPARGE AND SVE LINE (HIGHWAY SYSTEM)		

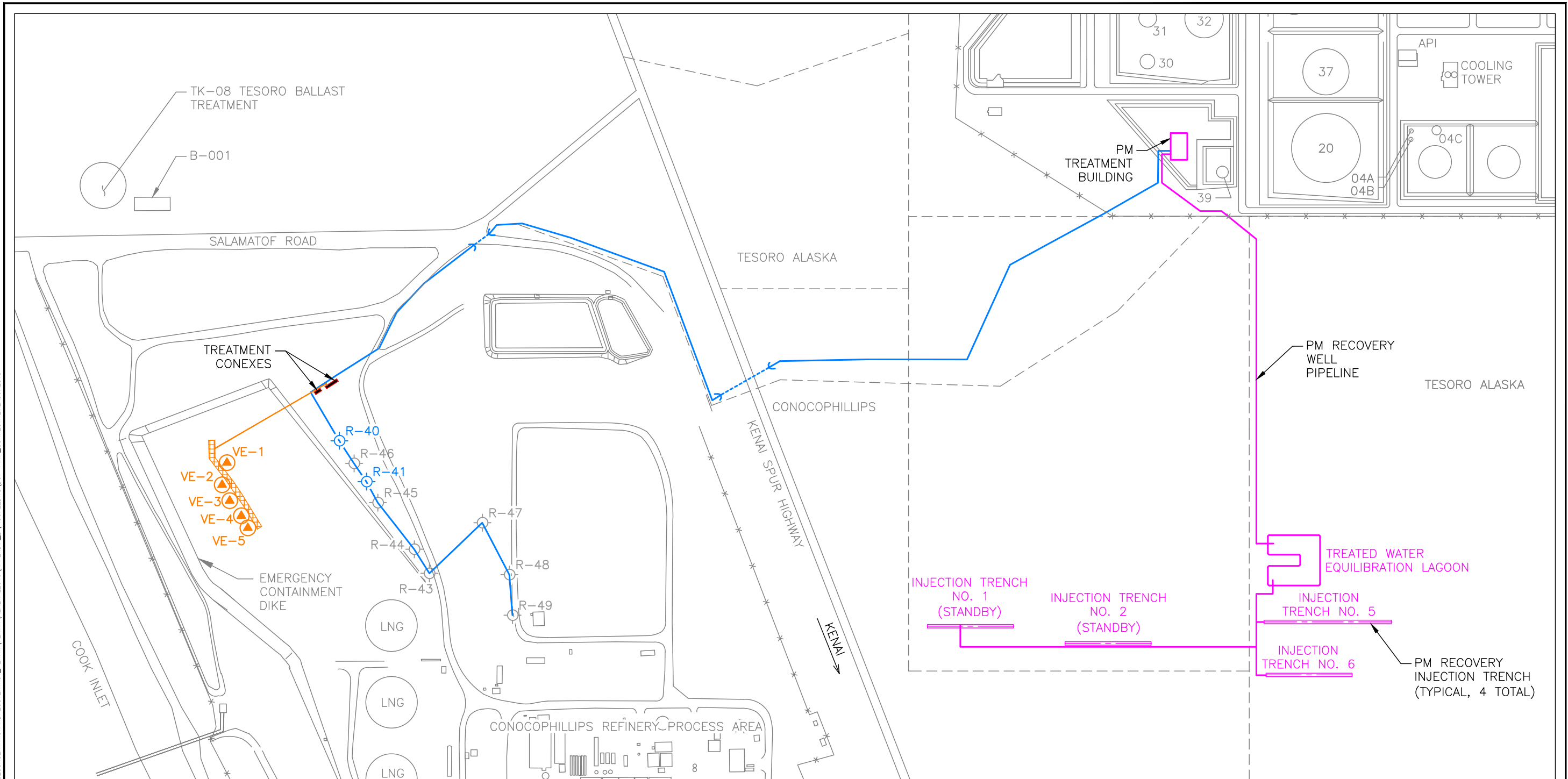


FIGURE 3

**PM CORRECTIVE MEASURE
SITE PLAN**

**KENAI TESORO REFINERY
NIKISKI, ALASKA**

\\TRIHYDRO.COM\CLIENTS\STOV\TESORO\CADD\KENAI\REFINERY\RESOURCECONSERVATIONANDRECOVERYACT_PERMIT\PERMIT_RENEWAL2015\APPENDIX_D\FIGUREDITS.D07-PRM_CORRECTIVEMEASURESYS



EXPLANATION

- VE-5
PRM VAPOR EXTRACTION WELL AND DESIGNATION
- R-41
PRM RECOVERY WELL AND DESIGNATION
- R-43
OFFLINE RECOVERY WELL AND DESIGNATION
- AS / VE PIPELINES
- PRM RECOVERY WELL PIPELINE (DASHED WHERE SEGMENTS ARE UNDERGROUND)
- PRM AIR SPARGE LINE

- AS AIR SPARGE
- LNG LIQUID NATURAL GAS
- NO. NUMBER
- PRM PHILLIPS REMEDIAL MEASURE
- PM PHILLIPS MARATHON
- VE VAPOR EXTRACTION



0 300'

Trihydro
CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

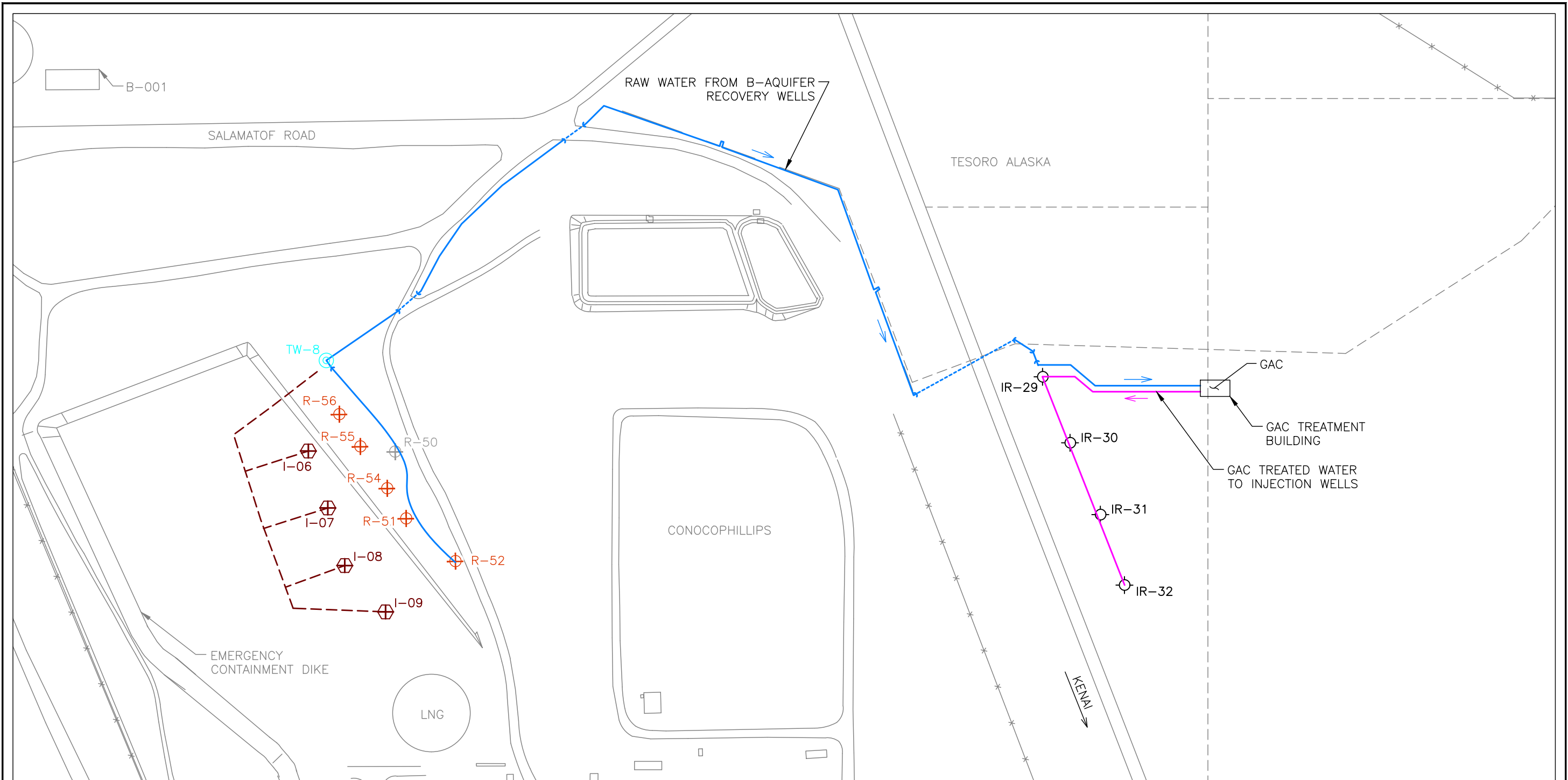
FIGURE 4

**PRM CORRECTIVE MEASURE SYSTEM
SITE MAP**

**KENAI TESORO REFINERY
NIKISKI, ALASKA**

Drawn By: RJ | Checked By: SP | Scale: 1" = 300' | Date: 9/7/2016 | File: D07-PRM_CORRECTIVEMEASURESYS

M:\STOV\TESORO\CAOD\KENAREFINERY\RESOURCECONSERVATION\RECOVERYACT_PERMIT\PERMIT\AS-SUBMITTED_201707\TESORO_KENAI_PERMIT\39B-KR_B-AQUIFER_CORRECTIVEMEASURESYS_20170628



EXPLANATION

- | | | | |
|-------|--|--|--|
| TW-8 | PRODUCTION WELL AND DESIGNATION FOR PRM AND B-AQUIFER INJECTION SYSTEM | | B-AQUIFER RECOVERY WELL RAW WATER PIPELINE (DASHED WHERE SEGMENTS ARE UNDERGROUND) |
| R-52 | B-AQUIFER RECOVERY WELL AND DESIGNATION | | TREATED WATER PIPELINE |
| I-09 | B-AQUIFER INJECTION WELL AND DESIGNATION | | B-AQUIFER INJECTION WELL PIPELINE |
| R-50 | OFFLINE B-AQUIFER RECOVERY WELL AND DESIGNATION | | GRANULAR ACTIVATED CARBON |
| IR-32 | INJECTION WELL AND DESIGNATION | | LIQUID NATURAL GAS |
| | | | PHILLIPS REMEDIAL MEASURE |



0 200'

 1252 Commerce Drive Laramie, Wyoming 82070 www.trihydro.com (P) 307/745.7474 (F) 307/745.7729	FIGURE 5				
	B-AQUIFER CORRECTIVE MEASURE SYSTEM SITE MAP				
	KENAI TESORO REFINERY NIKISKI, ALASKA				
Drawn By: RJ	Checked By: SP	Scale: 1" = 200'	Date: 5/9/2017	File: 39B-KR_B-AQUIFER_CORRECTIVEMEASURESYS_20170628	

EXPLANATION

- ⊙ E-157 UPPER CONFINED AQUIFER MONITORING WELL LOCATION
- ⊙ TW-5 PRODUCTION WELL LOCATION
- CORRECTIVE ACTION SAMPLING WELL
- CORRECTIVE ACTION AND COMPLIANCE MONITORING WELL
- GROUNDWATER CONTOUR BASED ON FEBRUARY 2005 DATA IN FEET MLLW
- APPROXIMATE EXTENT OF BENZENE CONCENTRATION GREATER THAN 5 μG/L BASED ON FEBRUARY 2005 DATA
- GAC GRANULAR ACTIVATED CARBON
- HEA HOMER ELECTRIC ASSOCIATION
- LNG LIQUID NATURAL GAS
- MLLW MEAN LOWER LOW WATER
- PM PHILLIPS MARATHON
- μG/L MICROGRAMS PER LITER

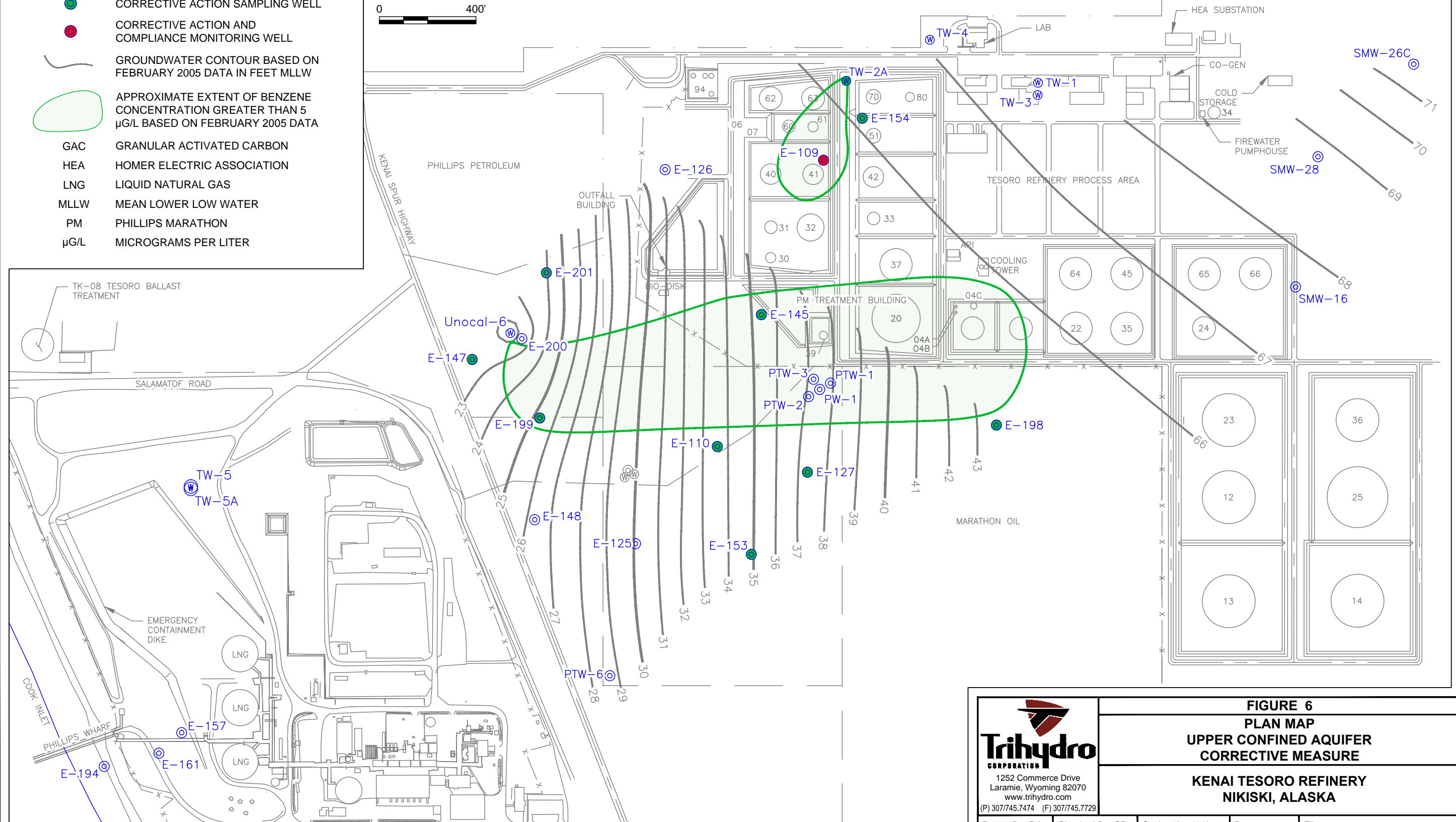
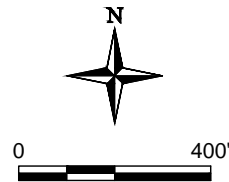


FIGURE 6
PLAN MAP
UPPER CONFINED AQUIFER
CORRECTIVE MEASURE
KENAI TESORO REFINERY
NIKISKI, ALASKA

Drawn By: RJ Checked By: SP Scale: 1" = 400' Date: 6/23/2016 File: 36C-KENAI_CORRECTIVEMEASUREUCA

M:\STOV\TESORO\CAO\KENAREFINERY\RESOURCECONSERVATION\MADECOVERYACT\PERMIT\PERMIT\RENEWAL2015\APPENDIX_D_36C-KENAI_CORRECTIVEMEASUREUCA

Source Drawing From: Kent & Sullivan Inc., Circa 2007