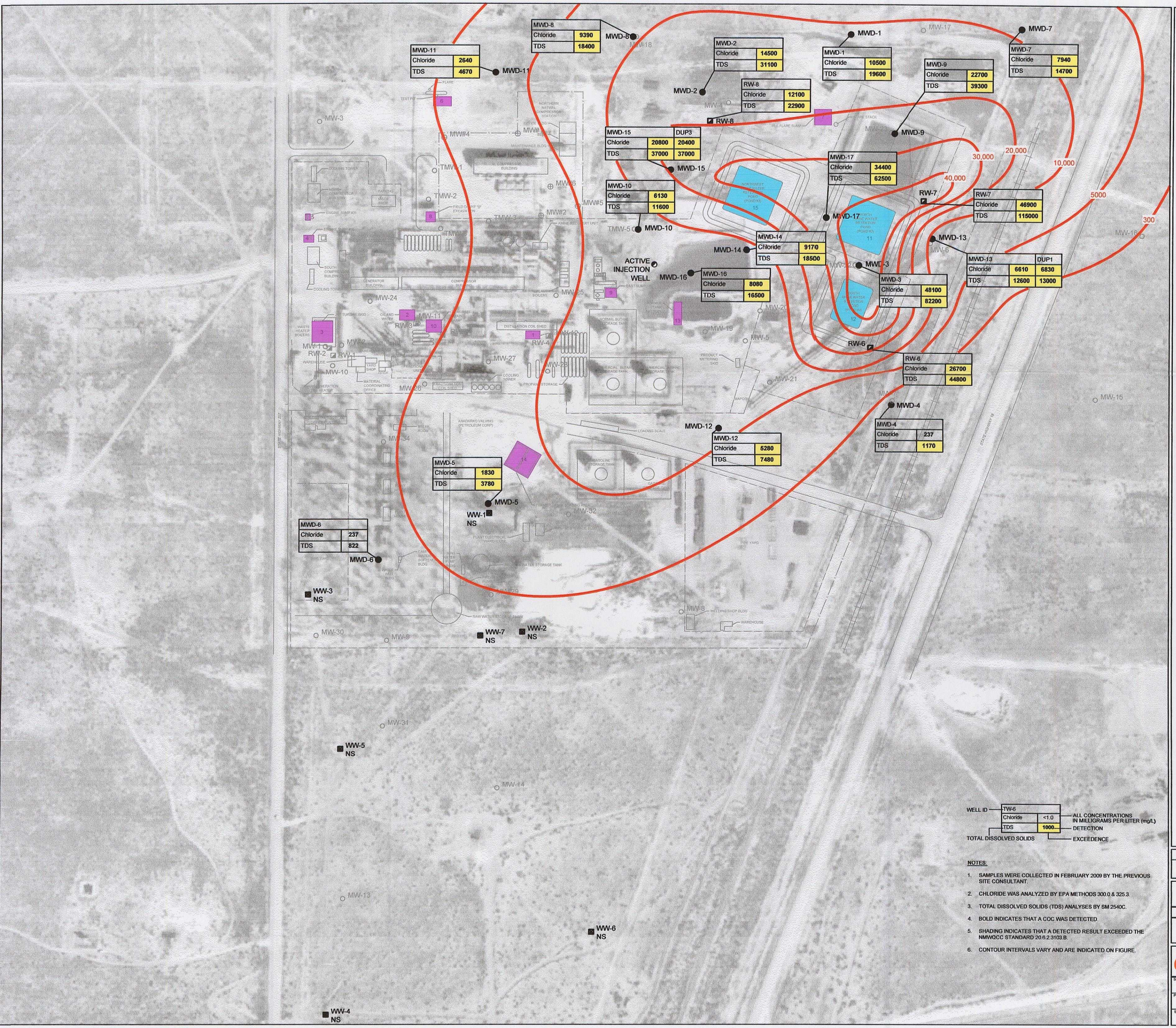

LEGEND

- TARGA'S ACTIVE INJECTION WELL
- MONITOR WELL LOCATION (SHALLOW)
- MONITOR WELL LOCATION (DEEP)
- RECOVERY WELL LOCATION
- WATER WELL LOCATION (INACTIVE)
- OFFSITE PROPERTY WELLS "NOT SAMPLED"
- HYDROCARBON INVESTIGATION AREA
- CHLORIDE INVESTIGATION AREA
- -300- CHLORIDE CONTOUR (µg/L)

NOTES

1. A SUBSURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF THE **SLOP OIL SUMP** IN JULY 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING DUE SOUTH OF THE SUMP TO A TD OF 57 FEET BGS. ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS AT DEPTH AND LIGHT NON-AQUEOUS HYDROCARBONS (LNAPL) WAS ENCOUNTERED ON THE GROUNDWATER. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996. REMEDIAL ACTIVITIES FOR THE **SLOP OIL SUMP**, INCLUDED REMOVAL OF THE SUMP IN SEPTEMBER 2000. THE EXCAVATION AREA MEASURED 20' X 20' X 15'. CONFIRMATION SAMPLES FROM THE EXCAVATION AT DEPTH (15') INDICATED HYDROCARBON IMPACTS IN THE SOILS. REMEDIAL ACTIVITIES ARE DETAILED IN THE *2000 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. IN 2001.
2. A SUBSURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF THE **OIL & WATER SUMP** IN AUGUST 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING DUE SOUTH OF THE SUMP TO A TD OF 57 FEET BGS. ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS IN THE INTERMEDIATE SOILS AT 17 FEET BGS AND LNAPL WAS ENCOUNTERED ON THE GROUNDWATER. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996. REMEDIAL ACTIVITIES FOR THE **SLOP OIL SUMP**, INCLUDED REMOVAL OF THE SUMP IN SEPTEMBER 2000. THE EXCAVATION AREA MEASURED 20' X 20' X 10'. CONFIRMATION SAMPLES FROM THE EXCAVATION AT DEPTH (10') INDICATED HYDROCARBON IMPACTS IN THE SOILS. REMEDIAL ACTIVITIES ARE DETAILED IN THE *2000 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. IN 2001.
3. A SUBSURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF THE **JET TURBINE SKID** IN AUGUST 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF 3 BORINGS RANGING IN TDS FROM 52 AND 57 FEET BGS. ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS TO BOTH THE SOILS AND GROUNDWATER IN ALL 3 BORINGS. TWO OF THE THREE BORINGS WERE CONVERTED TO MONITOR WELLS (MW 1 & MW 2). INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996.
4. TWO SEPARATE SHALLOW SUBSURFACE INVESTIGATIONS WERE CONDUCTED IN THE VICINITY OF **ENGINE SUMP #30** IN AUGUST 1996 AND JUNE 1997. THE AUGUST 1996 INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SHALLOW SOIL BORING DIRECTLY NORTH OF THE **ENGINE SUMP #30** TO A TD OF 16 FEET BGS. RESULTS AT TD INDICATED HYDROCARBON IMPACTS AT DEPTH. THE JUNE 1997 INVESTIGATION INCLUDED THE INSTALLATION OF THREE ADDITIONAL SHALLOW BORINGS (EAST, WEST & SOUTH OF THE SUMP) TO A MAXIMUM DEPTH OF 4 FEET BGS. NO HYDROCARBONS WERE DETECTED IN ANY OF THE THREE BORINGS AT DEPTH (4 FEET). INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *FINAL INVESTIGATION REPORT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED JULY 1997.
5. A SHALLOW SUBSURFACE INVESTIGATION WAS PERFORMED IN THE VICINITY OF **ENGINE SUMP #31** IN AUGUST 1996. THIS INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE BORING DUE SOUTH OF THE SUMP TO A TD OF 6 FEET BGS. NO HYDROCARBONS IMPACTS WERE DETECTED AT DEPTH. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996.
6. A SHALLOW SUBSURFACE INVESTIGATION WAS CONDUCTED ON THE SOUTHWEST CORNER OF THE **EMERGENCY FLARE SUMP** IN AUGUST 1996. THE INVESTIGATION INCLUDED A SHALLOW TRENCH (TEST PIT) THAT WAS EXCAVATED TO 5 FEET BGS. CONFIRMATION SAMPLES AT DEPTH (5 FEET BGS) WERE BELOW LABORATORY DETECTION LIMITS. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996.
7. AN INTERMEDIATE SUBSURFACE INVESTIGATION WAS PERFORMED IN THE VICINITY OF THE **H2S FLARE SUMP** IN AUGUST 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING TO A TD OF 27 FEET BGS. HYDROCARBON IMPACTS WERE DETECTED IN THE SHALLOW (1.5-2 FEET) SOILS NEAR THE **H2S FLARE SUMP**. ANALYTICAL RESULTS AT THE 27 FEET BGS INTERVAL WERE BELOW LABORATORY DETECTION LIMITS. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *SUBSURFACE ENVIRONMENTAL ASSESSMENT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED SEPTEMBER 1996.
8. A SUBSURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF **FIELD OIL PIT "D"** IN NOVEMBER 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING TO A TOTAL DEPTH (TD) OF FORTY-EIGHT (48) FEET BELOW GROUND SURFACE (BGS). ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS EXTENDED TO 40 FEET BGS. GROUNDWATER WAS NOT ENCOUNTERED DURING THE INSTALLATION OF THE BORING. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *FINAL INVESTIGATION REPORT* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. DATED JULY 1997. REMEDIAL ACTIVITIES FOR THE **FIELD OIL PIT "D"** INCLUDED OVER-EXCAVATION ACTIVITIES THAT WERE PERFORMED IN FEBRUARY 2000. A TOTAL OF 312 CUBIC YARDS OF SOIL WERE REMOVED. REMEDIAL ACTIVITIES ARE DETAILED IN THE *2000 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. IN 2001.
9. THE **EAST SUMP** WAS CONSTRUCTED OF CONCRETED AND MEASURED 5' X 5' X3'. THE EAST SUMP WAS REMOVED IN SEPTEMBER 2000 AND THE AREA WAS OVER-EXCAVATED TO APPROXIMATELY 9' X 13' X 10'. CONFIRMATION SAMPLES FROM THE EXCAVATION AT DEPTH (5') INDICATED HYDROCARBON IMPACTS IN THE SOILS. REMEDIAL ACTIVITIES ARE DETAILED IN THE *2000 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. IN 2001.
10. A SUBSURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF THE **CONCRETE DRAIN SUMP** IN SEPTEMBER 2000. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING TO A TD OF 51 FEET BGS. ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS AT DEPTH. REMEDIAL ACTIVITIES FOR THE **CONCRETE DRAIN SUMP** INCLUDED REMOVAL OF THE SUMP IN SEPTEMBER 2000. THE EXCAVATION AREA MEASURED 9' X 13' X 9'. CONFIRMATION SAMPLES FROM THE EXCAVATION AT DEPTH (9') INDICATED HYDROCARBON IMPACTS IN THE SOILS. BOTH INVESTIGATION AND REMEDIATION ACTIVITIES ARE SUMMARIZED IN THE *2000 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION* GENERATED BY HIGHLANDER ENVIRONMENTAL CORP. IN 2001.
11. THE **NORTH BRINE WATER RETENTION POND (POND #2)** MEASURED APPROXIMATELY 240' X 240' X 19' AND HAD A DESIGNED CAPACITY OF 75,000 BARRELS (BBLS). USAGE OF THIS POND WAS DISCONTINUED IN EARLY 1998. THIS **NORTH BRINE WATER RETENTION POND** WAS CAPPED AND CROWNED WITH A CLAY CAP IN LATE 2000.
12. THE **SOUTH BRINE WATER RETENTION POND (POND #4)** MEASURED APPROXIMATELY 190' X 240' X 16' AND HAD A DESIGNED CAPACITY OF 52,000 BARRELS (BBLS). USAGE OF THIS POND WAS DISCONTINUED IN MID 1998. THIS **SOUTH BRINE WATER RETENTION POND** WAS CAPPED AND CROWNED WITH A CLAY CAP IN LATE 2000.
13. THE **FORMER TANK BATTERY** LOCATION WAS STRUCK BY LIGHTNING IN MAY 2005. THIS **FORMER TANK BATTERY** LOCATION WAS USED FOR FLUID (LNAPL AND PRODUCED WATER) STORAGE BY THE GROUNDWATER REMEDIATION SYSTEMS LOCATED ON THE EAST SIDE OF THE PLANT. APPROXIMATELY 350 BBLS OF FLUIDS WERE RELEASED AND 330 BBLS WERE RECOVERED. DEMOLITION OF THE **FORMER TANK BATTERY** IS SUMMARIZED IN A TRANSMITTAL LETTER OF A *SEMI-ANNUAL GROUNDWATER MONITORING REPORT FOR THE EUNICE SOUTH GAS PLANT* GENERATED BY SECOR INTERNATIONAL INC. DATED MARCH 3, 2006.
14. A SUBSURFACE INVESTIGATION WAS CONDUCTED IN THE VICINITY OF THE **FORMER TRUCK LOADING AREA** LOCATED SOUTH OF THE PLANT IN NOVEMBER 2005. THE INVESTIGATION INCLUDED THE INSTALLATION OF 3 BORINGS TO GROUNDWATER. HYDROCARBON IMPACTS WERE DETECTED IN THE SHALLOW (5-6 FEET BGS) AND IN THE INTERMEDIATE (25-26 BGS) IN AT LEAST ONE BORING. TWO OF THE THREE WELLS WERE CONVERTED INTO MONITOR WELLS (MW 32 & MW 34). INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE *2006 ANNUAL SUMMARY OF INVESTIGATION AND REMEDIATION FOR THE SOUTH EUNICE GAS PLANT* GENERATED BY SECOR INTERNATIONAL INC IN JULY 2006.
15. THE **NORTHWEST BRINE WATER RETENTION POND (POND #3)** WAS CAPPED IN JULY 2007. DEMOLITION ACTIVITIES OF THE **SOUTHWEST BRINE WATER RETENTION POND (POND #3)** ARE SUMMARIZED IN THE *2007 ANNUAL SUMMARY OF INVESTIGATION AND REMEDIATION FOR THE SOUTH EUNICE GAS PLANT* GENERATED BY SECOR INTERNATIONAL IN MARCH 7, 2007.

WELL ID — TW-6
Chloride <1.0 — ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L)
TDS 1000 — DETECTION
TOTAL DISSOLVED SOLIDS — EXCEEDENCE

NOTES:

1. SAMPLES WERE COLLECTED IN FEBRUARY 2009 BY THE PREVIOUS SITE CONSULTANT.
2. CHLORIDE WAS ANALYZED BY EPA METHODS 300.0 & 325.3.
3. TOTAL DISSOLVED SOLIDS (TDS) ANALYSES BY SM 2540C.
4. BOLD INDICATES THAT A COC WAS DETECTED.
5. SHADING INDICATES THAT A DETECTED RESULT EXCEEDED THE NMWQCC STANDARD 20.6.2.3103.B.
6. CONTOUR INTERVALS VARY AND ARE INDICATED ON FIGURE.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Chevron Environmental Management Company

EUNICE SOUTH

CHLORIDE & TDS CONCENTRATION MAP DEEP WELLS - FEBRUARY 2009

CONESTOGA-ROVERS & ASSOCIATES

Source Reference: USGS 1968 AERIAL

Project Manager:	Reviewed By:	Date:	
J. ORNELAS	T LARSON	FEBRUARY 2009	
Scale: 1:100	Project N#: 055271-09	Report N#: 002	Drawing N#: 014

055271-09(002)GN-MD014 SEP 22/2010