



**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
- APPROXIMATE EXTENT OF LNAPL PLUME
- BENZENE CONTOUR (µg/L)

**BASEMAP NOTES**

1. A SURFACE 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 PHASE LIQUID (LNAPL) WAS ENCOUNTERED ON THE GROUNDWATER INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE SURFACE INVESTIGATION REPORT DATED SEPTEMBER 1996. REMEDIAL ACTIVITIES FOR THE SLOP OIL SUMP INCLUDED REMOVAL OF THE SUMP IN SEPTEMBER 2000. THE EXCAVATION AREA MEASURED 20' X 25' (10' COMBINATION 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.

2. A SURFACE 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 SURFACE INVESTIGATION REPORT DATED SEPTEMBER 1996. REMEDIAL ACTIVITIES FOR THE SLOP OIL SUMP INCLUDED REMOVAL OF THE SUMP IN SEPTEMBER 2000. THE EXCAVATION AREA MEASURED 20' X 25' (10' COMBINATION 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 SURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF THE JET TURBINE SUMP 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 TWO OF THE THREE BORINGS. TWO OF THE THREE BORINGS WERE CONVERTED TO MONITOR WELLS (MW-1 & MW-2). INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE SURFACE INVESTIGATION REPORT DATED SEPTEMBER 1996.

4. TWO SEPARATE SHALLOW SUBSURFACE INVESTIGATIONS WERE CONDUCTED IN THE VICINITY OF ENGINE SUMP #2 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 #2 TO A TD OF 10 FEET BGS. RESULTS AT 10 FEET BGS 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 DATED SEPTEMBER 1996.

5. A SHALLOW SUBSURFACE INVESTIGATION WAS PERFORMED IN THE VICINITY OF ENGINE SUMP #3 IN AUGUST 1996. THIS INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SHALLOW SOIL BORING DUE SOUTH OF THE SUMP TO A TD OF 4 FEET BGS. NO HYDROCARBONS IMPACTS WERE DETECTED AT DEPTH. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE SURFACE INVESTIGATION REPORT 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. COMBINATION SAMPLES AT DEPTH (5 FEET BGS) WERE BELOW LABORATORY DETECTION LIMITS. INVESTIGATION ACTIVITIES ARE SUMMARIZED IN THE SURFACE INVESTIGATION REPORT 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 (1.52 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 SURFACE INVESTIGATION REPORT DATED SEPTEMBER 1996.

8. A SURFACE INVESTIGATION WAS PERFORMED IN THE DIRECT VICINITY OF FIELD OIL PIT #2 IN NOVEMBER 1996. THE INVESTIGATION INCLUDED THE INSTALLATION OF A SINGLE SOIL BORING TO A TOTAL DEPTH (TD) OF FORTY-FOUR (44) FEET BELOW GROUND SURFACE. ANALYTICAL RESULTS INDICATED HYDROCARBON IMPACTS EXTENDED TO 40 FEET BGS. GROUNDWATER WAS NOT ENCOUNTERED DURING THE INVESTIGATION. REMEDIAL ACTIVITIES FOR THE FIELD OIL PIT #2 INCLUDED OVER-EXCAVATION ACTIVITIES THAT WERE PERFORMED IN FEBRUARY 2000. A TOTAL OF 342 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 CONCRETE AND MEASURED 8' X 30'. THE EAST SUMP WAS REMOVED IN SEPTEMBER 2000 AND THE AREA WAS OVER-EXCAVATED TO APPROXIMATELY 7' X 12' X 10'. COMBINATION 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 8' X 13' X 9'. COMBINATION SAMPLES FROM THE EXCAVATION AT DEPTH (5') 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 #3) MEASURED APPROXIMATELY 240' X 240' X 10' AND HAD A DESIGNED CAPACITY OF 75,000 BARRELS (BBL). USAGE OF THIS POND WAS DISCONTINUED IN EARLY 1996. THE NORTH BRINE WATER RETENTION POND WAS CAPPED AND GROWNED WITH A CLAY CAP IN LATE 2000.

12. THE SOUTH BRINE WATER RETENTION POND (POND #4) MEASURED APPROXIMATELY 100' X 240' X 10' AND HAD A DESIGNED CAPACITY OF 52,000 BARRELS (BBL). USAGE OF THIS POND WAS DISCONTINUED IN MID 1996. THE SOUTH BRINE WATER RETENTION POND WAS CAPPED AND GROWNED WITH A CLAY CAP IN LATE 2000.

13. THE FORMER TANK BATTERY LOCATION WAS STRUCK BY LIGHTNING IN MAY 2000. THIS FORMER TANK BATTERY LOCATION WAS USED FOR FLUID (LNAPL) AND PRODUCED WATER STORAGE BY THE GROUNDWATER REMEDIATION SYSTEM. LOCATED ON THE EAST SIDE OF THE PLANT, APPROXIMATELY 300 BBL'S OF FLUIDS WERE RELEASED AND 300 BBL'S WERE RECOVERED. REMEDIATION OF THE FORMER TANK BATTERY IS SUMMARIZED IN A TRANSMITTAL LETTER OF A SEER-ANNUAL GROUNDWATER MONITORING REPORT FOR THE ELKINS 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 (20-26 FEET BGS) 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 & REMEDIATION FOR THE SOUTH ELKINS GAS PLANT GENERATED BY SECOR INTERNATIONAL INC. DATED MARCH 3, 2006.

15. THE NORTHWEST BRINE WATER RETENTION POND (POND #5) WAS CAPPED IN JULY 2007. DEMOLITION ACTIVITIES OF THE SOUTHWEST BRINE WATER RETENTION POND (POND #6) ARE SUMMARIZED IN THE 2007 ANNUAL SUMMARY OF INVESTIGATION & REMEDIATION FOR THE SOUTH ELKINS GAS PLANT GENERATED BY SECOR INTERNATIONAL INC. DATED MARCH 3, 2007.

**SCALE VERIFICATION**

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

**Chevron Environmental Management Company**

**ENUNICE SOUTH**

**BTEX CONCENTRATION MAP**

**SHALLOW WELLS - AUGUST 2009**

**COMESTOGA-ROVERS & ASSOCIATES**

Source Reference: USGS 1998 AERIAL

Project Manager:	Reviewed By:	Date:
J. ORNELAS	T. LARSON	AUGUST 2009
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