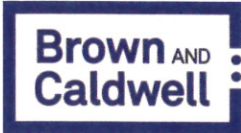


501 Great Circle Road, Ste. 150  
Nashville, TN 37228

T: 615-255-2288  
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2100.38.028.16  
ADEC File No.

Hazard ID No.



May 4, 2013

Mr. Todd Blessing  
Alaska Department of Environmental Conservation  
555 Cordova Street  
Anchorage, AK 99501

DEPT. OF ENVIRONMENTAL  
CONSERVATION

MAY 08 2013

RECEIVED

143263.003

Subject: Completion Report for Well Plugging and Abandonment  
**ADEC Contaminated Sites File ID # 2100.38.028.16**  
FedEx ANC Facilities:  
ANCA Warehouse Facility 3444 West International Airport Road  
ANCR Facility 6050 Rockwell Avenue, Ted Stevens Anchorage Airport

Dear Mr. Blessing,

Brown and Caldwell (BC) is pleased to submit the Well Plugging and Abandonment Completion Report on behalf of Federal Express (FedEx) for the two FedEx facilities identified above. The attached Figure 1 provides a Site Location Map depicting both FedEx locations. Based on the Alaska Department of Environmental Conservation (ADEC) letter dated September 14, 2012, which requested abandonment of groundwater wells at both sites, FedEx contracted with BC to conduct the well abandonment activities. BC has prepared this Completion Report to provide written notification to ADEC of the well abandonment procedures and activities. ADEC has made a determination that No Further Action is required at these Sites per their correspondence dated September 14, 2012.<sup>1</sup> This Completion Report represents the final remaining Site activity that is required to complete remediation actions at these facilities. The field activities documented in this report took place April 1-2, 2013 and were conducted in accordance with ADEC well abandonment guidance documents.

### **Field Activities**

Prior to well abandonment activities, BC requested a utility locate from all public utility providers to these locations using Dig Alert. Other pre-field activities included update of the project health and safety plan, and working out access issues to locations within the airport operations area prior to mobilizing to the sites. On April 1, 2013, BC mobilized to the Site to oversee the well abandonment activities performed by Discovery Drilling, Inc (Discovery). Two methods of well abandonment were used during these field activities. Due to frozen ground conditions, the casings on some wells were unable to be removed. Descriptions of the wells and well abandonment methods used will be described below.

#### **ANCR Hub Facility:**

The casings on wells MW-4, MW-5, and MW-6 were able to be removed. Prior to casing removal, the casing bottoms were punctured and filled with a bentonite slurry mixture. As the casing was being removed additional bentonite slurry mix was added to prevent

<sup>1</sup> AKDEC 2012. Anchorage International Airport Federal Express Groundwater Monitoring Reports dated August 31, 2012.

possible well hole sloughing. After well casings were removed, the top foot of the boreholes were filled with appropriate materials to match (asphalt or concrete) the ground surface of the surrounding area.

The casings on wells MW-1, MW-2, and MW-3 were not able to be removed due to frozen ground conditions. In these wells, a bentonite slurry mixture was placed inside the existing casing up to five feet below ground surface. The top five feet of the well was over-drilled using hollow stem augers and then backfilled with a bentonite slurry to completely seal the well. The top one foot was filled with material to match the surrounding area.

Table 1 below describes surface materials used for each well. In areas where concrete was used as the finish material, 5000 psi concrete was used due to being located within high traffic areas or within the aircraft parking tarmac.

**ANCA Warehouse Facility:**

The casings on wells FE-2 and FE-4 were able to be removed. Prior to casing removal, the casing bottoms were punctured and filled with a bentonite slurry mixture. As the casing was being removed additional bentonite slurry mix was added to prevent possible well hole sloughing. After well casings were removed, the top foot of the boreholes were filled with appropriate materials to match (asphalt or concrete) the ground surface of the surrounding area. Table 2 below describes surface materials used for each well. In areas where concrete was used as the finish material, 5000 psi concrete was used due to being located within high traffic areas or within the aircraft parking tarmac.

The casings on wells FE-1 and FE-3 were not able to be removed due to frozen ground conditions. In these wells, a bentonite slurry mixture was placed inside the existing casing up to five feet below ground surface. The top five feet of the well was over-drilled using hollow stem augers and then backfilled with a bentonite slurry to completely seal the well. The top one foot was filled with material to match the surrounding area.

Table 1. FedEx - ANCR - 6050 Rockwell Avenue						
Location	Monitoring Well ID	Total Depth (feet)	Casing Material	Casing Diameter (inches)	Surface Cover	Method Used
FedEx/Airport Property	MW-1	23.00	PVC	2	5000 psi concrete	Casing Grouted In Place
FedEx/Airport Property	MW-2	22.30	PVC	2	5000 psi concrete	Casing Grouted In Place
FedEx/Airport Property	MW-3	22.41	PVC	2	5000 psi concrete	Casing Grouted In Place
FedEx/Airport Property	MW-4	24.00	PVC	2	5000 psi concrete	Casing Removed
FedEx/Airport Property	MW-5	23.75	PVC	2	5000 psi concrete	Casing Removed
FedEx/Airport Property	MW-6	25.81	PVC	2	5000 psi concrete	Casing Removed

Table 2. FedEx - ANCR - 3444 International Airport Blvd						
Location	Monitoring Well ID	Total Depth (feet)	Casing Material	Casing Diameter (inches)	Surface Cover	Method Used
Airport Property	FE-4	17.45	PVC	2	Cold Patch Asphalt	Casing Grouted In Place
Off Airport Property	FE-1	15.60	PVC	2	Pea Gravel	Casing Removed
Off Airport Property	FE-2	16.34	PVC	2	Pea Gravel	Casing Grouted In Place
Off Airport Property	FE-3	19.50	PVC	2	Pea Gravel	Casing Removed

Well abandonment locations are depicted on Figures 2A and 2B (attached).

All materials removed from the boreholes were collected and removed from the site by Discovery. Wells on both sites were abandoned in accordance with correspondence received from ADEC as well as ADEC guidance documents. After review and approval of this Closure Report, BC requests a final closure letter from ADEC stating that No Further Action is required for these sites.

If you have any question or concern regarding this Closure Report or the project in general, please contact Mr. Joshua Entremont at office telephone number of (615) 250-1247, or Mr. Andrew Hellenthal at (615) 250-1228.

Very truly yours,

**Brown and Caldwell**



Joshua L. Entremont  
Project Manager



Andrew J. Hellenthal  
Managing Geologist

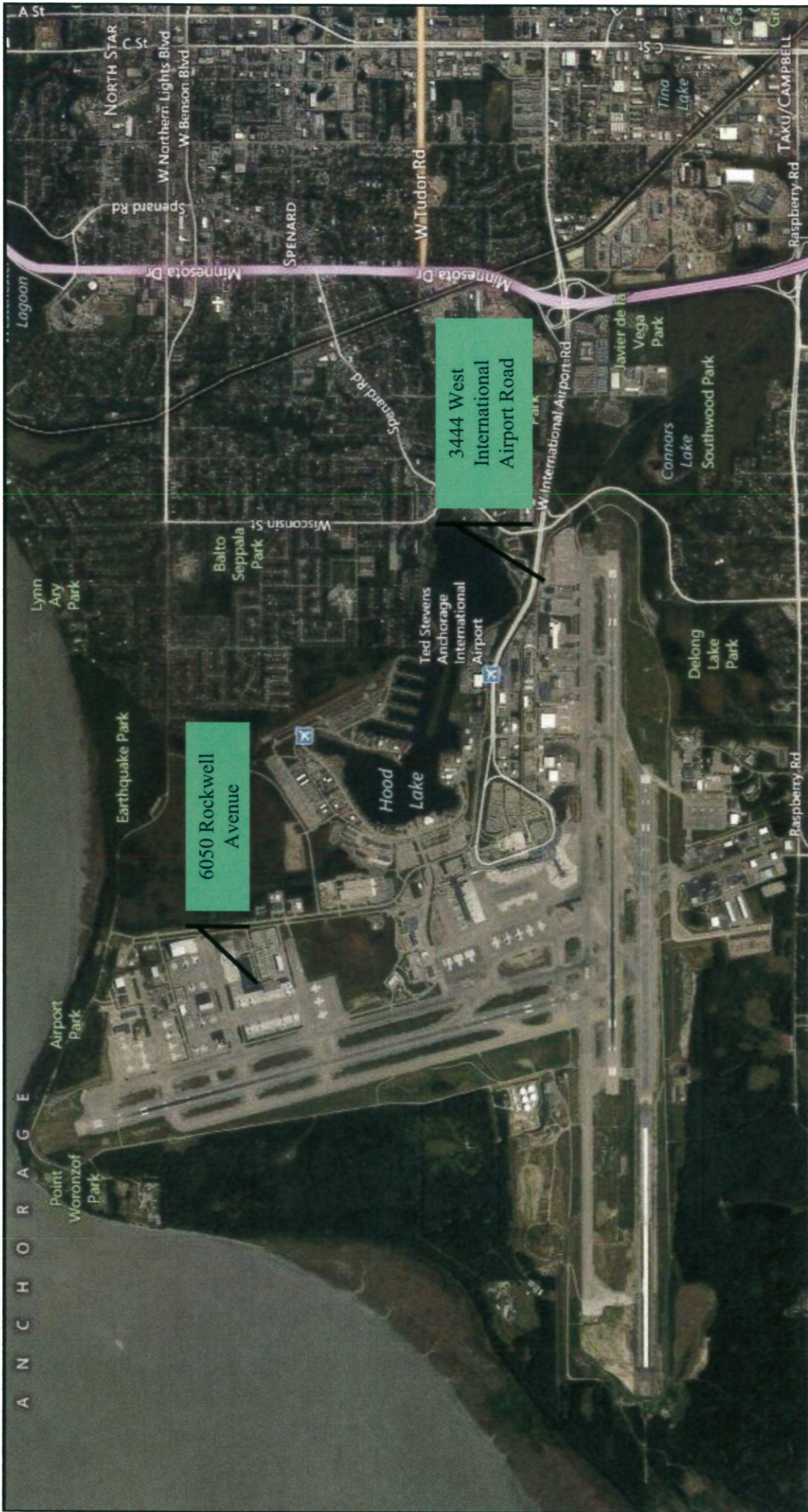
Attachments:

Attachment A -

- Figure 1 - Location Map
- Figure 2A - 6050 Rockwell Avenue Site Map
- Figure 2B - 3444 West International Airport Road Site Map

cc: Mr. Jamal Mansour, FedEx with attachments

**Attachment A - Figures**

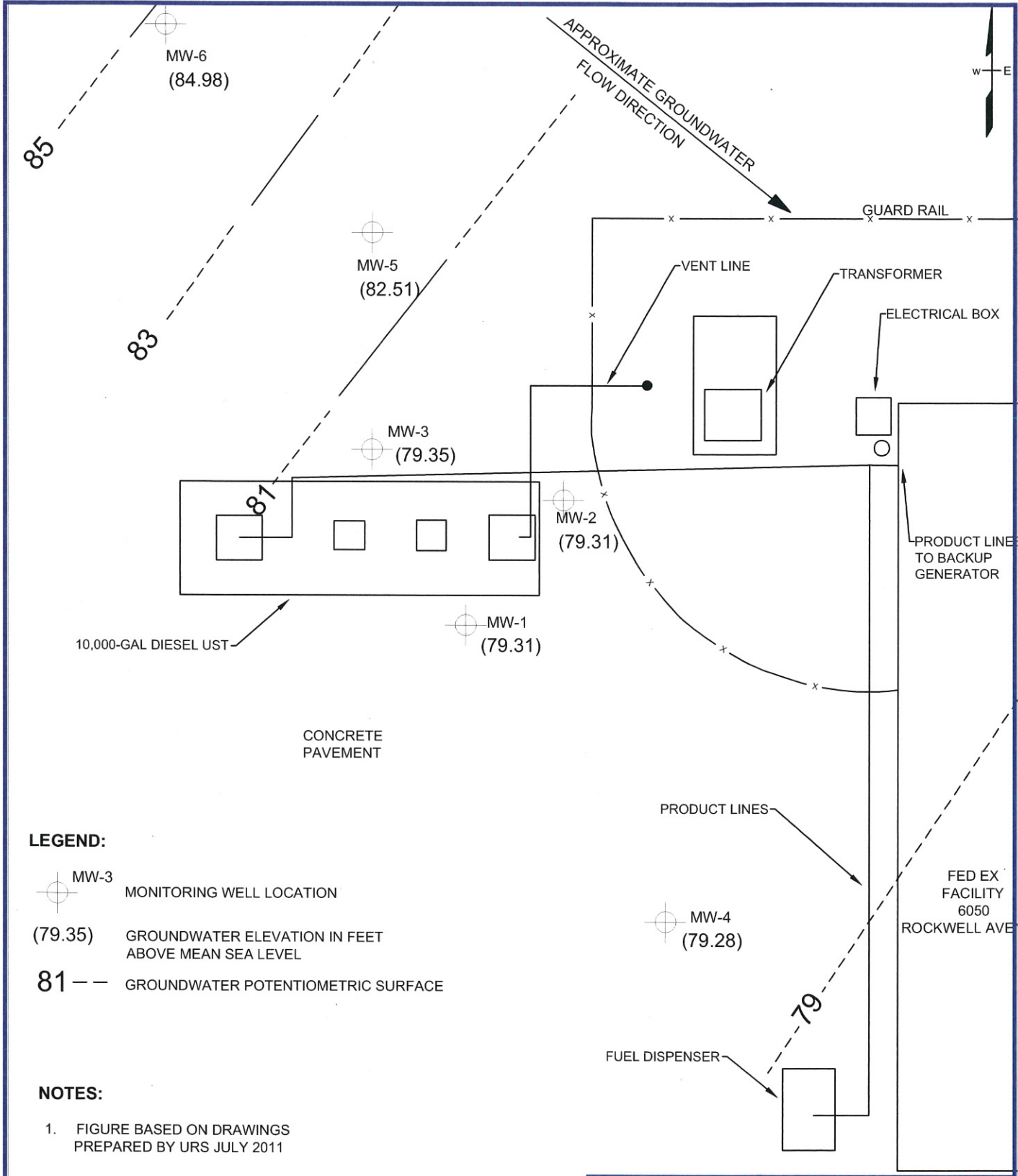


# Brown AND Caldwell :


FIGURE 1  
SITE LOCATION MAP

FedEx  
Well Abandonment Locations  
Anchorage, Alaska





**LEGEND:**

-  MW-3 MONITORING WELL LOCATION
- (79.35) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 81 — GROUNDWATER POTENTIOMETRIC SURFACE

**NOTES:**

1. FIGURE BASED ON DRAWINGS PREPARED BY URS JULY 2011



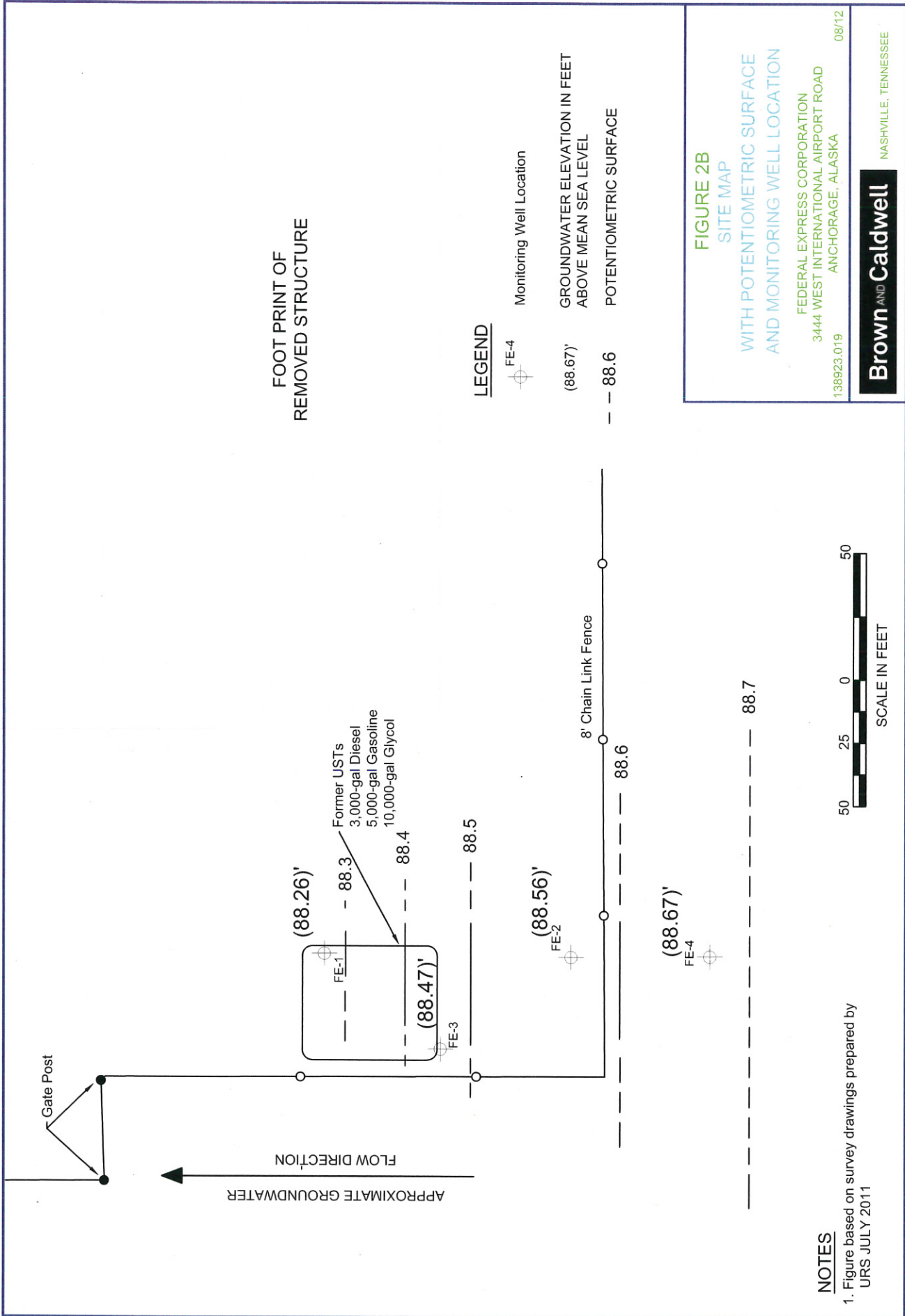
**FIGURE 2A**  
**SITE MAP**  
**WITH POTENTIOMETRIC SURFACE**  
**AND MONITORING WELL LOCATIONS**

FEDERAL EXPRESS CORPORATION  
 6050 ROCKWELL AVENUE  
 ANCHORAGE, ALASKA

138923.018

08/12

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**FIGURE 2B**  
 SITE MAP  
 WITH POTENTIOMETRIC SURFACE  
 AND MONITORING WELL LOCATION

FEDERAL EXPRESS CORPORATION  
 3444 WEST INTERNATIONAL AIRPORT ROAD  
 ANCHORAGE, ALASKA  
 138923.019

08/12

**Brown AND Caldwell**  
 NASHVILLE, TENNESSEE