

Updates on Recent Field Work at Jet Fuel Pipeline, Bldg. 81, and the Small Landfill



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Engineering Field Activity Northeast
Restoration Advisory Board
September 8, 2005

Jet Fuel Pipeline Activities



- Navy performing an in-situ chemical oxidation treatment as part of the Massachusetts Contingency Plan (MCP) Phase V activities.
- This is the third round of treatment at the site.
- GeoCleanse International injected Fenton's Reagent into the vadose zone and ground water.
 - Injected 4, 338 gallons of 50% hydrogen peroxide
 - Injected 14,968 gallons of catalyst
- GeoCleanse will be back on Sept. 12-13th to neutralize the reaction.
- The Navy's contractor will monitor conditions at the site to allow us to know when the time is right to begin sampling.
- Will submit Phase V Inspection and Monitoring Status Report by September 9th.
- Quarterly Sampling to verify we met our cleanup objectives.

View From the Jet Fuel Pipeline (JFP) Site Looking North Beyond Trotter Road and Small Hangar.



View Looking South from Small Hangar Towards JFP Site



Tanker Carrying 50 % Hydrogen Peroxide



Trailer Which Contains Mixing Tanks for Catalysts, Injection System and Pressure Gages



Control Panel Inside Injection System Trailer

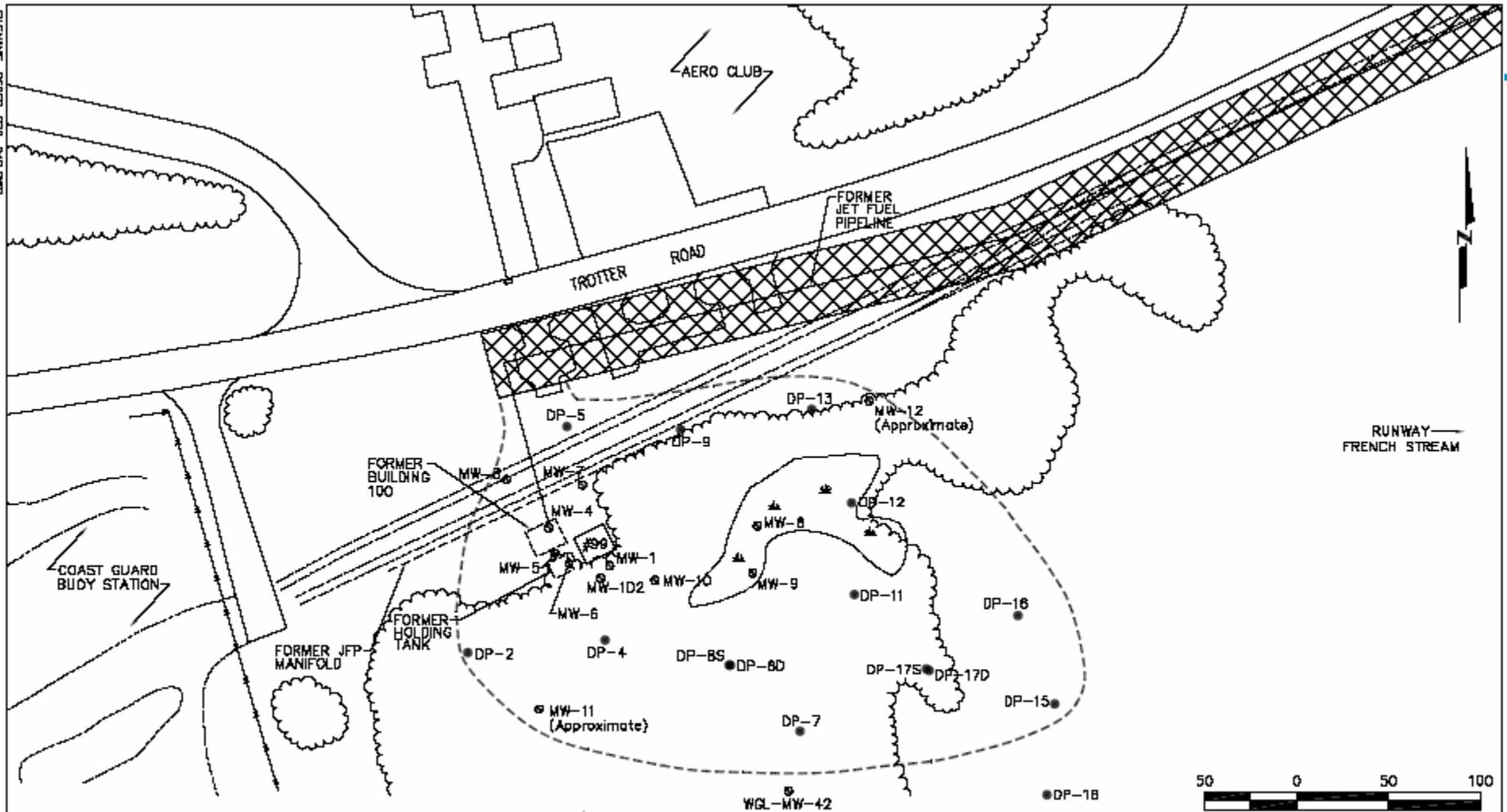


Close up of Control Panel and Pressure Gages to Monitor the Treatment Process.





FILENAME: 05080-078-DWG.DWG



LEGEND

MW-1	⊙	GROUNDWATER MONITORING WELL LOCATION
DP-2	●	DIRECT-PUSH WELL LOCATION
WGL-MW-42	⊙	WEST GATE LANDFILL MONITORING WELL
---		DISPOSAL SITE BOUNDARY

DRAWN BY K.P.B.	DATE 2/05
CHECKED BY L.H.	DATE
COST/ESTIMATED AREA	

DISPOSAL SITE BOUNDARY
HOLDING TANK AREA
JET FUEL PIPELINE SITE

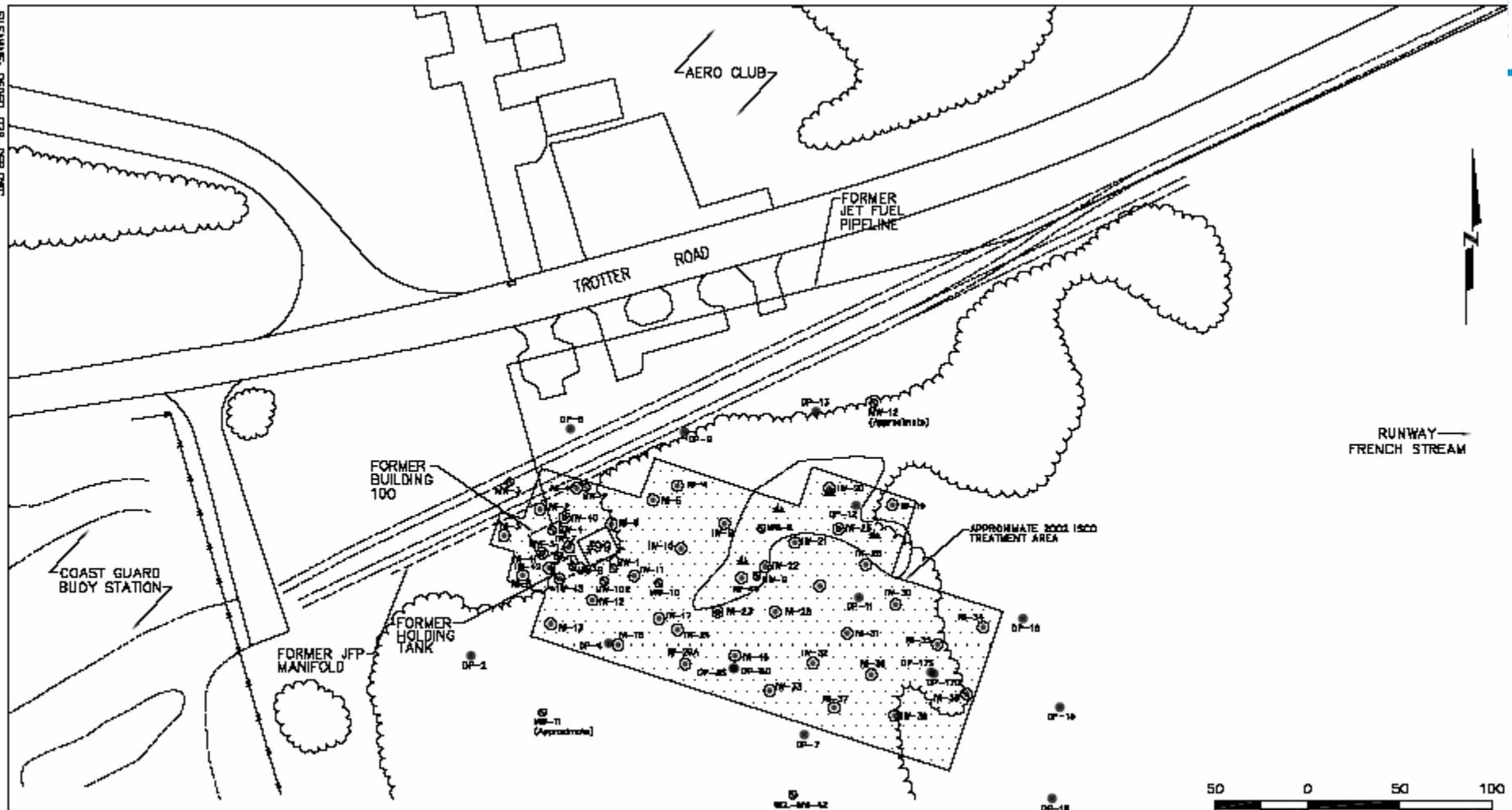


SCALE IN FEET
1" = 50'-0"

CONTRACT NO. M12487-04-D-0088	OWNER ICL C70-840
APPROVED BY	DATE
APPROVED BY	DATE



FILE NAME: 08080-076-058.DWG



LEGEND

- MW-1 ⊙ GROUNDWATER MONITORING WELL LOCATION
- DP-2 ⊙ DIRECT-PUSH WELL LOCATION
- WGL-MW-42 ⊙ WEST GATE LANDFILL MONITORING WELL
- ⊙ APPROXIMATE PHASE I INJECTOR LOCATION

DRAWN BY DATE
K.P.B. 2/05
CHECKED BY DATE
L.H.
DATE/ISSUED-AREA

INJECTOR LOCATIONS & TREATMENT AREA
HOLDING TANK AREA
JET FUEL PIPELINE SITE

CONTRACT NO. MIL2487-04-D-0088	OWNER NO. C70-040
APPROVED BY	DATE
APPROVED BY	DATE

Injection Hoses Carrying Catalyst and Hydrogen Peroxide to Injectors Located Within the JFP Plume.



Injection Hoses Carrying Catalyst and Hydrogen Peroxide to Injectors Located On Upgradient Side of the JFP Plume.



Tubing Used to Get Water Samples from Injection Points



Sampling Wells and Injectors for Calculating the Proper Concentrations of Catalyst and Hydrogen Peroxide.



Valve Configuration for Proper mixing of Catalysts and Hydrogen Peroxide.



Valve Configuration with Quick Disconnect Hose Connections

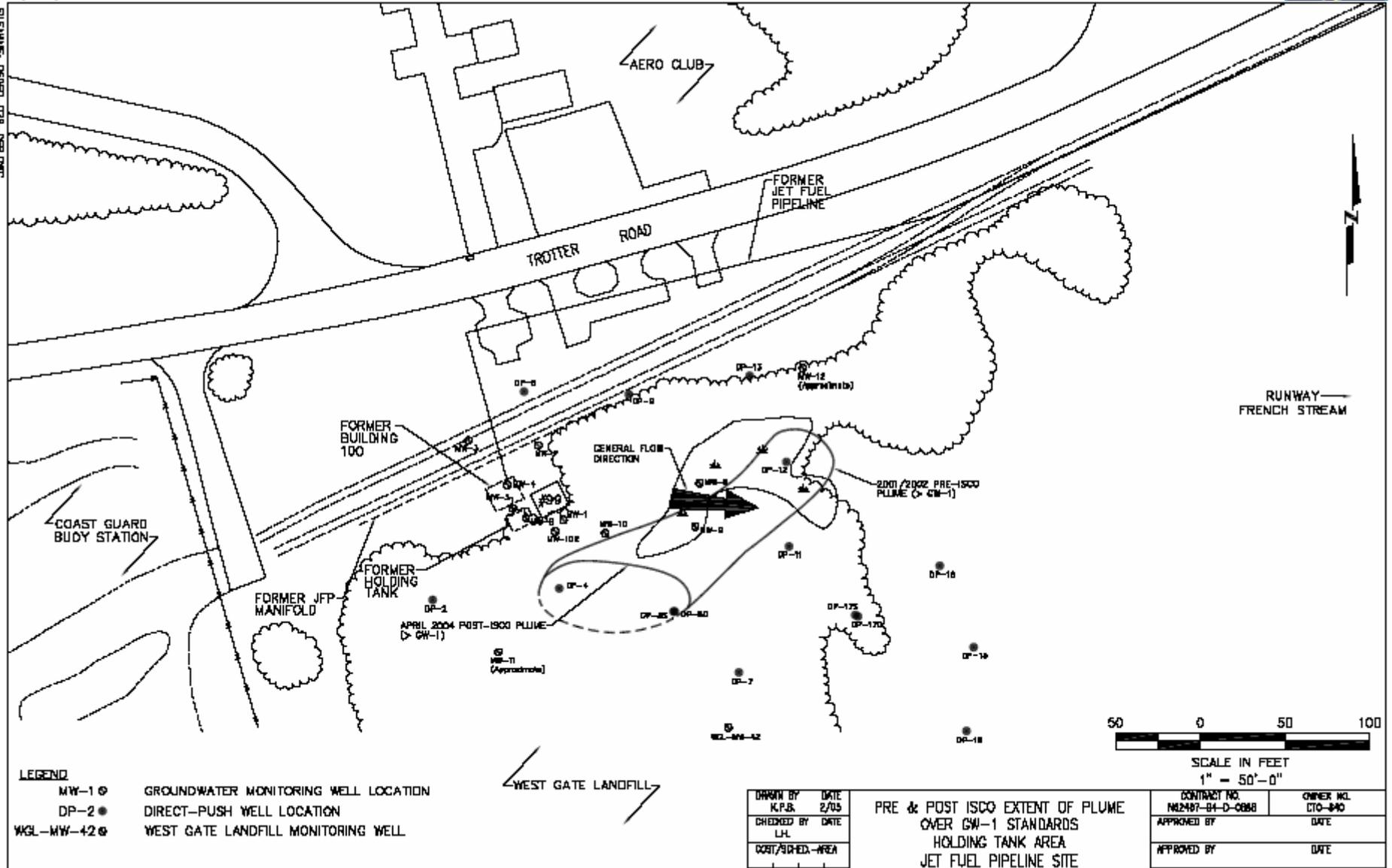


Drive Point Monitoring Well





FILENAME: 050801-078-000.DWG



- LEGEND**
- MW-1 ⊙ GROUNDWATER MONITORING WELL LOCATION
 - DP-2 ● DIRECT-PUSH WELL LOCATION
 - WGL-MW-42 ⊙ WEST GATE LANDFILL MONITORING WELL

DRAWN BY K.P.B.	DATE 2/05
CHECKED BY L.H.	DATE
CONT/SHED.-AREA	

PRE & POST ISCO EXTENT OF PLUME
OVER GW-1 STANDARDS
HOLDING TANK AREA
JET FUEL PIPELINE SITE

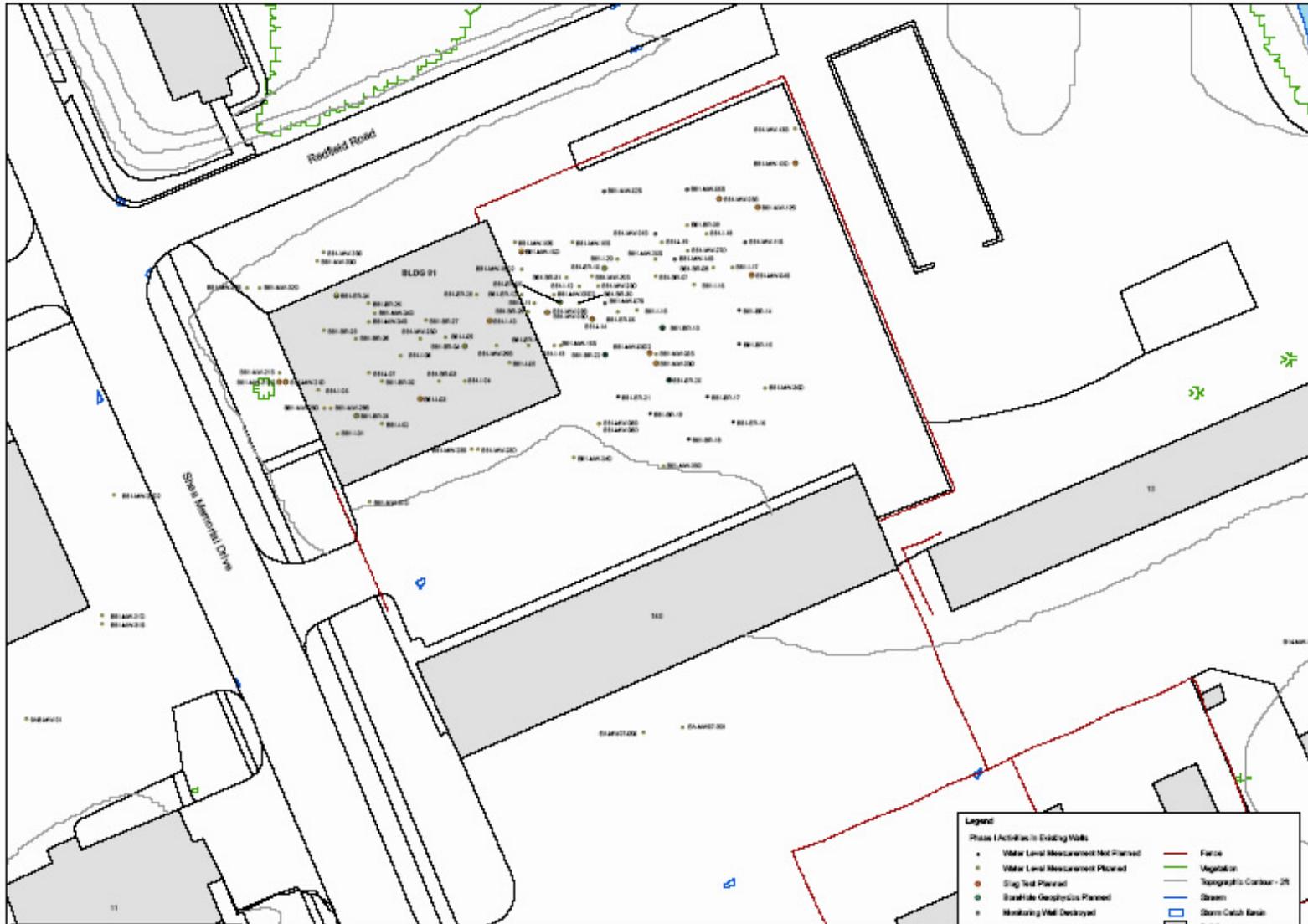
CONTRACT NO. M2407-04-D-0088	OWNER ICL C/O-840
APPROVED BY	DATE
APPROVED BY	DATE

Building 81 - Planned Field Activities



- **Well Inspections**
- **Well Development**
 - Surge wells/injectors - pumping or bailing
 - Measure pH, Conductivity, temperature, turbidity
- **Synoptic Ground Water level measurements**
- **Borehole Geophysics - begin week of September 19th.**
 - determine hydrogeologic characteristics and locations of water-bearing fractures.
 - Methods include: fluid temperature, fluid resistivity, caliper, acoustic televiewer, heat-pulse flow meter.
- **Hydraulic Conductivity Test**
 - Slug tests conducted to better characterize the hydraulic conductivity in the overburden and bedrock.

Plan View of the Monitoring Network for Building 81



Re-Developing Monitoring Wells



Continued Monitoring Well Re-Development and Collecting Waste Water.



Developing/Re-developing Monitoring Wells because they have not been used in several years.



Looking West Towards the Footprint of the former Building 81.



Interface Probe to Measure Water Levels as Well as the Potential for Free Product.



Collection Tanks Used to Collect Waste Water from the Development of the Monitoring Wells.



Collection Tanks Used to Collect Waste Water from the Development of the Monitoring Wells. Investigative Derived Waste (IDW)



Equipment required when Re-Developing a Monitoring Well.



Collecting IDW in 55 Gallon Drums.



Small Landfill Closure



- **Small Landfill was No Further Action under Superfund (CERCLA).**
- **Required to close out the landfill under the Massachusetts Solid Waste Regulations.**
- **Corrective Action Alternative Assessment (CAAA) is being submitted to the state this week. Similar to a feasibility study where it evaluates various cleanup alternatives.**
- **Needed to do some pre-CAAA field work in order to evaluate the alternatives properly.**
- **Conducted several days of test pitting and landfill soil gas analysis.**
- **The CAAA will be available for the Public to review.**
- **Once the CAAA is approved, the next step would be the Corrective Action Design (CAD) - Dec. 2005**

Small Landfill Test Pitting to Determine Vertical and Horizontal Extent of Debris at the Site.



Meander Type of Survey For Turtles



Finished Conducting Turtle Survey in Test Pitting Area



Backfilled and Staked Test Pit



Slam Bar Used to Insert Soil Gas Probe



Continued Installation of Soil Gas Probe



Installation of Landfill Soil Gas Probe



Summa Cannister Used to Collect Soil Gas for Lab Analysis



Test Pitting Near Eastern Edge of Small Landfill



Test Pitting on the Western Edge of the Small Landfill



Test Pitting on the Southern Edge of the Small Landfill



Telephone Pole Found on Southern Edge of the Landfill



Test Pitting Continues in Central Portion of Small Landfill



Test Pitting Continues in Central Portion of Small Landfill



Test Pit Along Southern Edge of Landfill



Test Pit in North Central Portion of the Small Landfill



