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March 23, 2010
File # 47750

Bob Stewart
NYSDEC – Spill Prevention and Response
Building 40
SUNY at Stony Brook
Stony Brook, New York 11790-2356

Re: Proposed Groundwater Investigation Work Plan – Revised
Nassau Uniform Services
525 Ray Street
Freeport, New York
Site No. 1-30-063
NYSDEC Spill #0751018

Dear Mr. Stewart:

This Groundwater Investigation Work Plan has been prepared to delineate and monitor onsite and offsite impacts to groundwater at the above referenced site. On-site activities will include the following:

- Installing six additional multi-level monitoring wells to vertically and horizontally delineate the extent of the plume
- Install one shallow monitoring well in the vicinity of the former oil/water separator
- Development of the newly installed monitoring wells
- Gauging both newly installed and existing monitoring wells
- Sampling both newly installed and existing monitoring wells
- Surveying monitoring well elevations

Groundwater Monitoring Well Installation

Six multi-level groundwater monitoring wells and one standard monitoring well will be installed as shown on Figure 1. Three multi-level monitoring wells will be installed within the building, one upgradient of the source area, one adjacent to the source area, and one downgradient of the source area. Two multi-level monitoring wells will be installed on the occupied condominium property, southwest of the subject property. One monitoring well will be installed at the northwest corner, adjacent to the unoccupied condominium property. A standard monitoring well will be installed outside of the building in the area of the former oil/water separator.

The drilling contractor will hand auger each borehole to five feet bgs before drilling commences. GF personnel will document soil lithology and field screen soil vapor headspace in sealable plastic

bags using a photoionization detector (PID). Groundwater is present at approximately five feet below ground surface (bgs). The drilling contractor will use hollow stem auger drilling to advance each borehole. Each borehole will be drilled to 40 bgs with the exception of the oil/water separator well which will be installed to 10 feet bgs.

The water level in the borehole will be measured periodically during drilling and immediately before construction of each well. The construction for each well is detailed in the table below:

Well Location	**Total Depth of Well(s) and Screened Interval**
MW-101	10 foot with 5 ft of well screen and 5 ft of riser pipe 20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe 40 foot with 5 ft of well screen and 35 ft of riser pipe
MW-102	10 foot with 5 ft of well screen and 5 ft of riser pipe 20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe 40 foot with 5 ft of well screen and 35 ft of riser pipe
MW-103	10 foot with 5 ft of well screen and 5 ft of riser pipe 20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe 40 foot with 5 ft of well screen and 35 ft of riser pipe
MW-104	10 foot with 5 ft of well screen and 5 ft of riser pipe 20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe 40 foot with 5 ft of well screen and 35 ft of riser pipe
MW-105	20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe
MW-106	10 foot with 5 ft of well screen and 5 ft of riser pipe 20 foot with 5 ft of well screen and 15 ft of riser pipe 30 foot with 5 ft of well screen and 25 ft of riser pipe 40 foot with 5 ft of well screen and 35 ft of riser pipe
MW-107	10 foot with 5 ft of well screen and 5 ft of riser pipe

All wells will be constructed of 1-inch diameter schedule 40 PVC pipe and 1-inch diameter, 0.020-inch (20 slot) PVC well screen. Solvent glue will not be used in assembling the well screen or riser casing. Number 2 Morie sand pack will be placed around each well screen from the bottom of each well to two feet above the well screen. A three-foot bentonite seal will be placed on top of the sand pack surrounding each screened interval. The remainder of the annulus will be filled with a cement grout-slurry to grade. A flush mounted manhole cover and locking "J" type cap will be provided.

Groundwater Monitoring Well Development

The newly installed monitoring wells will be developed using a peristaltic pump to ensure the removal of any drilling fines and to restore the hydraulic properties of the surrounding water bearing material. The flow rate of the pump will be controlled to create draw-down in the well but not dry the well. The monitoring wells will be developed until the turbidity is below 50 NTUs or ten well volumes have been removed, to provide sediment-free water for sampling.

Groundwater Sampling

The newly installed (MW-101 through MW-107) and existing monitoring wells (P-3, P-8, and MW-3) will be sampled in order of least suspected contamination to most suspected contamination to minimize cross-contamination. The table below details sample locations and depths. After removing the well cap, the depth to water in each well will be measured to the nearest hundredth of a foot using an electronic water-level indicator and recorded on the Sampling Log. Monitoring wells will be evacuated immediately prior to sampling using a peristaltic pump using low-flow sampling techniques. The flow rate of the pump will be controlled in order to create draw-down in the well but not dry the well. Measurements of pH, conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity will be recorded during the purge. The wells will be purged until all parameters stabilize.

Once the parameters stabilize, the pump and tubing will be removed from the well. Groundwater samples will be collected using disposable bailers and placed into laboratory-supplied glasswear. Sample bottles will be placed in a cooler and packed with ice or ice packs to maintain a temperature of approximately 4^{o} Celsius. Groundwater samples will be analyzed for the VOCs by United States Environmental Protection Agency (EPA) Method 8260 Category B deliverables.

Well Designation	Sample Depth	Well Designation	Sample Depth
MW-101	5-10 ft	MW-104	15-20 ft
MW-101	15-20 ft	MW-104	25-30 ft
MW-101	25-30 ft	MW-104	35-40 ft
MW-101	35-40 ft	MW-105	15-20 ft
MW-102	5-10 ft	MW-105	25-30 ft
MW-102	15-20 ft	MW-106	5-10 ft
MW-102	25-30 ft	MW-106	15-20 ft
MW-102	35-40 ft	MW-106	25-30 ft
MW-103	5-10 ft	MW-106	35-40 ft
MW-103	15-20 ft	MW-107	5-10 ft
MW-103	25-30 ft	P-3	5-10 ft
MW-103	35-40 ft	P-8	5-10 ft
MW-104	5-10 ft	MW-3	35-40 ft

Monitoring Well Elevation Survey
All monitoring well locations and monitoring well elevations (top of casing and top of manhole) will be surveyed by a NYS licensed surveyor. Survey information will be incorporated onto the baseline site plan (AutoCAD) of the project site and will be used to determine groundwater flow direction.

Soil and Groundwater Disposal
Soil cuttings generated from the installation of the well will be drummed and staged on-site pending characterization and disposal. Development and purge water will be drummed and staged on-site pending the results of laboratory analysis.

Summary Report
GF will submit a summary report detailing the activities stated above within 45 days of NYSDEC approval of this work plan.

Please feel free to call me at (516) 671-8440 with any questions.

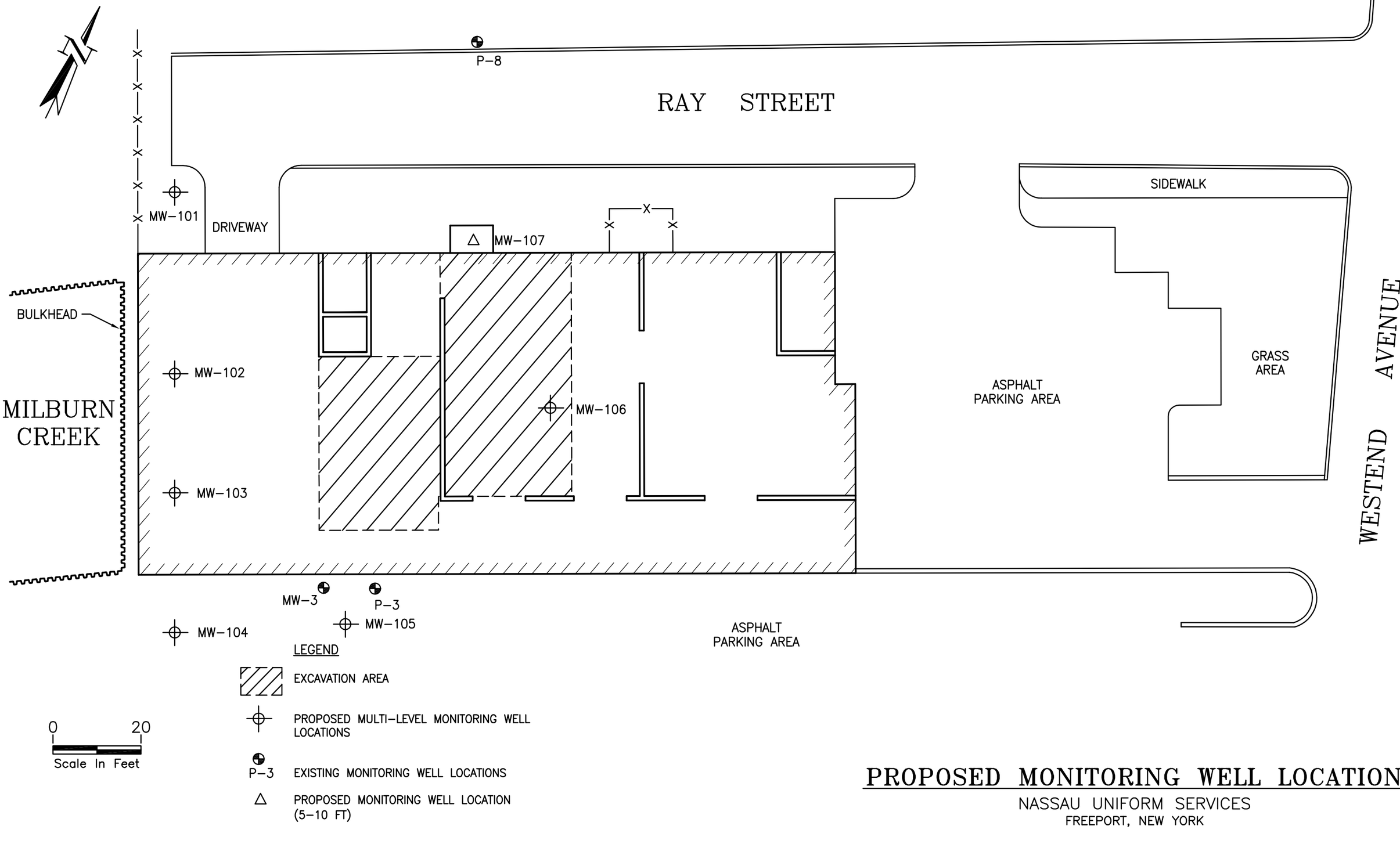
Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

JESSICA FERNGREN
Project Manager

Gannett Fleming

FIGURE 1



PROPOSED MONITORING WELL LOCATIONS

NASSAU UNIFORM SERVICES

FREEPORT, NEW YORK

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