21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.6399 FAX

www.TRCsolutions.com

January 9, 2019

Nigel N. Crawford, P.E.
New York State Department of Environmental Conservation
Region 2
47-40 21st Street, LIC
New York, NY 11101

Subject: Descriptive Work Plan
Leachate Management System Decommissioning/Demolition
Pelham Bay Closed Landfill
Bronx, NY

Dear Mr. Crawford:

TRC Engineers Inc. (TRC), on behalf of the City of New York Department of Parks and Recreation (NYCDPR), has prepared this correspondence to describe the work and sequence of tasks to be completed to decommission/demolish the leachate management system at the above-referenced site and to request your concurrence to proceed with the planned work. This letter addresses your comment in a March 6, 2018 email from your office regarding NYCDPR's plan to submit a work plan for the proposed activities.

Background

The Pelham Bay Landfill is a closed and capped landfill located in the Bronx, New York. Remedial Action goals for the landfill were specified in the Record of Decision (ROD) for the site, issued by NYSDEC in August 1993. The selected remedial alternative for the site includes a leachate collection system, a landfill cap to minimize infiltration of precipitation, and a cutoff wall with upgradient groundwater and downgradient leachate management systems (see attached map). Groundwater on the Park (upgradient) side of the cutoff wall is collected and directed into Eastchester Bay. Leachate on the landfill (downgradient) side of the cutoff wall is collected and ultimately discharged to the Hunt's Point Water Pollution Control Plant (WPCP). A curtain drain, divided into two segments, also collects leachate from along the western side of the site (see attached map). Water from the curtain drain was previously discharged to the

WPCP and is currently being discharged to Eastchester Bay as part of the leachate management system discontinuation pilot test (see hereafter).

In order to request your concurrence with the proposed activities, NYCDPR is following the protocol described in the Site Management Plan (SMP) (Arcadis, September 30, 2009) prepared for the site. Per Section 2.2.2.2 of the SMP, "*The Groundwater and Leachate Management System will not be discontinued without written approval by the NYSDEC. A proposal to discontinue the Groundwater and Leachate Management System may be submitted by the NYCDEP (now NYCDPR) after the site specific Remedial Action goals specified in the ROD (1993) have been achieved (see Section 1.4.4 of this SMP). These assessments will be based in part on contaminant levels detected in groundwater samples collected from monitoring wells located throughout the Site, leachate samples collected from Sump D-1, and leachate quantities that are being generated. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.*"

Previous NYSDEC Approvals

NYCDPR has previously submitted three petition letters to NYSDEC requesting approval of activities related to the decommissioning/demolition of the leachate collection system. Two of the petitions approved by your office concerned the decommissioning of lift station LS-2, as summarized below.

On October 4, 2016, NYCDPR submitted a letter petitioning NYSDEC's approval of pilot test activities to discontinue leachate pumping and collection at the subject site. This first petition addressed the deactivation of a portion of the downgradient leachate pumping system. NYSDEC approved this petition in correspondence to NYCDPR dated November 3, 2016. Based on the results of this pilot testing showing no adverse effects at the site, NYCDPR on February 26, 2018 submitted a letter requesting to permanently cease the discharge from the portion of the leachate collection system addressed by the pilot test. NYSDEC approved the permanent deactivation of this portion of the leachate management system in correspondence to NYCDPR dated March 1, 2018.

The third petition approved by your office concerned the decommissioning of the LS-1 lift station, as summarized below. Following the success of the initial pilot testing, NYCDPR in correspondence dated December 8, 2017 petitioned NYSDEC to expand the pilot testing to include redirecting the water collected by the curtain drain to the onsite stormwater system in lieu of Hunt's Point WPCP, as the system was configured at that time. NYSDEC's approval for the expanded pilot testing was provided in the correspondence to NYCDPR dated March 1, 2018. It should also be noted that the rerouting of the curtain drain water to the storm sewer (starting on April 16, 2018) resulted in a decrease in the discharge volume to the WPCP from an

average daily discharge of approximately 35,000 gallons per day (gpd) to approximately 5,000 gpd. Based on this reduced flow, on July 6, 2018 NYCDPR petitioned the New York City Department of Environmental Protection (NYCDEP) to eliminate the prohibition on discharging to the WPCP during combined sewer overflow (CSO) events. Industrial Wastewater Permit No. 13-P3179-1, which was in effect at the site, required NYCDPR to cease discharge to the WPCP during CSO events, and to temporarily store the water in five 20,000 gallon tanks at the site. On October 5, 2018, NYCDEP approved NYCDPR's request by replacing Industrial Wastewater Discharge Permit No. 13-P3179-1 with Order and Directive (Directive) No. 18-D3179-1 which eliminated the need to store the discharge during CSO events. As such, the five 20,000 gallon tanks are no longer needed.

Decommissioning/Demolition Activities

As discussed during bi-monthly conference calls with NYSDEC, NYCDPR would like to demolish the leachate collection system and storage tanks as part of its plan to return the closed landfill site to parkland use. Since NYSDEC has previously stated that it has no objection to the removal of the five 20,000 gallon fiberglass reinforced plastic (FRP) aboveground storage tanks (ASTs) (in an email from you to Marty Rowland of NYCDPR dated March 6, 2018), and since the pilot testing has shown no adverse effects at the site, NYCDPR would like to begin the decommissioning and demolition activities as soon as possible. The "150 Day System", installed as an Interim Remedial Measure (IRM), will be included in the proposed decommissioning/demolition effort.

A list of the required decommissioning/demolition tasks, with a brief description of each task, is provided hereafter. For ease of understanding, related tasks have been grouped together. Please note that the presentation order does not specifically indicate the chronological order in which the tasks will be initiated or completed.

1. **Demolition of Five (5) 20,000-Gallon ASTs**
   a. The chain-link fence surrounding the tanks will be removed with all materials being disposed off site.
   b. Any interior tank components, such as level monitoring sensors, will be removed and disposed off site.
   c. The tank interiors will be inspected and cleaned if necessary. All waste removed from the interior of the tanks will be properly tested and disposed off site at an appropriately permitted waste treatment/disposal facility.
   d. All FRP platforms and ladders that surround the tanks will be removed and disposed off site.

e. Pipe insulation will be inspected and/or sampled to ensure that it does not contain asbestos.
f. All fill and gravity-drain piping, insulation, and heating cables will be removed and disposed off site.
g. The tanks' off-gas control system piping and components will be removed and disposed off site.
h. The remaining hole in manhole D-1, where gravity piping from ASTs entered, will be patched.
i. The loading rack pumps, conductors, conduit, and control panels will be removed and disposed off site.
j. All loading rack piping will be removed and disposed off site.
k. The five 20,000 gallon FRP ASTs will be demolished by being crushed or cut into sections on site with the demolition materials being sent off site for disposal.
l. The concrete-filled FRP tank saddles will be demolished and shipped off site for disposal.

2. AST Secondary Containment Area

a. The concrete stairs adjacent to the tanks will be removed and disposed off site.
b. The various concrete slabs in the containment area will be inspected for staining. If staining is observed, potentially indicating contamination is present, samples of the concrete will be tested for residual contamination. The concrete slabs will then be removed and disposed off site at an appropriate facility.
c. The concrete barriers that are used to construct the berm for the containment area will be removed and shipped off site for disposal.
d. The gravel material that is used to fill the interior of the containment area (approximately six feet in depth, max.), and any sediment at the bottom of the containment structure and associated sump manhole structure, will be tested for residual contamination, removed, and disposed off site.
e. The containment area HDPE liner will be inspected, removed, cut into appropriately sized sections, and disposed off site. If the liner appears to be damaged such that a release of containment water may have occurred, NYSDEC will be notified to determine the need for any soil sampling/testing below the liner.
f. The containment area sump pumps, conductors, conduit, and control panels will be removed and disposed off site.
g. The containment area sump manhole structure will be excavated and removed, with all materials being disposed off site. The remaining excavation will be backfilled with clean fill from a tested off site source or with gravel from 2.d or 3.b if the test results indicate the material does not exceed the lower of the NYSDEC protection of groundwater or restricted residential soil cleanup objectives (6 NYCRR Part 375-6.8).

h. There are currently several decommissioned electrical control panels, conductors, and conduit located in the secondary containment area. These are for pumping components that were previously removed. The components will be removed and disposed off site.

3. Gravel Decon Pad Area Demolition

a. The concrete loading area slabs will be removed and disposed off site.
b. The gravel material that is used to fill the interior of the decon pad containment area (approximately five feet in depth, max.), and any sediment at the bottom of the containment structure and associated sump manhole structure, will be tested for residual contamination, removed, and disposed off site.
c. The decon pad containment area HDPE liner will be inspected, removed, cut into appropriately sized sections, and disposed offsite. If the liner appears to be damaged such that a release of containment water may have occurred, NYSDEC will be notified to determine the need for any soil sampling/testing below the liner.
d. The decon pad area sump pumps, conductors, conduit, and control panels will be removed and disposed offsite.
e. The decon pad sump manhole structure will be excavated and removed with all materials being disposed offsite. The remaining excavation will be backfilled with clean fill from a tested offsite source or with gravel from 2.d or 3.b if the test results indicate the material does not exceed the lower of the NYSDEC protection of groundwater or restricted residential soil cleanup objectives (6 NYCRR Part 375-6.8).
f. The piping from the collection sump to the AST area will be removed and disposed off site.

4. Curtain Drain/Lift Station (LS-1)

a. The existing storm sewer piping adjacent to LS-1 will be excavated and uncovered. A new manhole will be installed on the existing storm sewer piping adjacent to LS-1 with the remaining excavation backfilled with excavated soil.
b. New gravity drain piping will be installed from LS-1 to the new manhole.
c. The existing LS-1 pumps and associated piping will be removed and disposed off site.
d. The electrical conductors, conduit, and control panels associated with the LS-1 pumps will be removed and disposed off site.

5. Former Decontamination Trailer Area

a. The chain-link fence surrounding the decontamination trailer area will be removed with all materials being disposed off site.
b. The decontamination pump will be removed and disposed off site.
c. The electrical conductors, conduit, electrical boxes, and control panels associated with the decontamination pump will be removed and disposed off site.

6. **Lift Station LS-2**
   a. The existing pumps in LS-2 and manholes D-8 and D-10 will be removed and disposed offsite.
   b. All piping associated with LS-2 will be removed and disposed off site.
   c. All electrical conductors, conduit, and control panels associated with the LS-2, D-8, and D-10 pumps will be removed and disposed off site.
   d. The LS-2 concrete cover will be removed and disposed off site.
   e. The interior of LS-2 will be inspected. Any sediment in LS-2, if present, will be tested, removed, and disposed off site at a permitted waste treatment/disposal facility.
   f. The LS-2 manhole will be backfilled with flowable fill.

7. **150 Day System**
   a. The chain-link fence surrounding the 150 Day interceptor wells will be removed with all materials being disposed off site.
   b. All pumps will be removed from the five interceptor wells and disposed off site.
   c. All wellhead piping and components will be removed from the interceptor wells and disposed off site.
   d. All above ground piping associated with the interceptor wells will be removed and disposed off site.
   e. All electrical conductors, conduit, and control panels associated with the interceptor well pumps will be removed and disposed off site
   f. The interceptor wells will be abandoned in accordance with the latest version of the NYSDEC guidance for abandoning wells (CP-43: Groundwater Monitoring Well Decommissioning Policy) by a driller licensed in the State of New York.

8. **Final Grading**
   a. It should be noted that all demolition/decommissioning activities that will disturb extensive areas of the surface cover will take place outside the extents of the landfill cap. All disturbed areas will be regraded and either restored with gravel or soil/grass as needed. Any required fill material will be clean fill from a tested off-site source or gravel from 2.d or 3.b if the test results indicate the material does not exceed the lower of the NYSDEC protection of groundwater or restricted residential soil cleanup objectives (6 NYCRR Part 375-6.8).

A schematic diagram showing the leachate pumping system components to be decommissioned/demolished and those to remain, is attached to this correspondence.

Please note that the majority of the tasks described above include some type of off-site disposal of materials. All material will either be recycled (to the maximum extent practical), or disposed of at a facility appropriately permitted for the materials.

It should be further noted that several of the tasks associated with the decommissioning/demolition activities will require additional and/or more detailed design documents or work plans prior to their implementation. These include the sampling of materials for potential contamination and waste disposal characterization, testing of materials to be used as fill on site, installation of the new manhole and drainage piping at LS-1, the abandonment of the interceptor wells, and possibly a final grading plan.

We trust that the information provided herein is sufficient to allow NYSDEC to concur with NYCDPR's plans to decommission/demolish the leachate management system. As noted in the previous paragraph, supplemental information will be provided to NYSDEC for certain specific tasks with a request for your approval as applicable.

Should you have any questions regarding this correspondence, please do not hesitate to contact me at your earliest convenience.

Very truly yours,
TRC

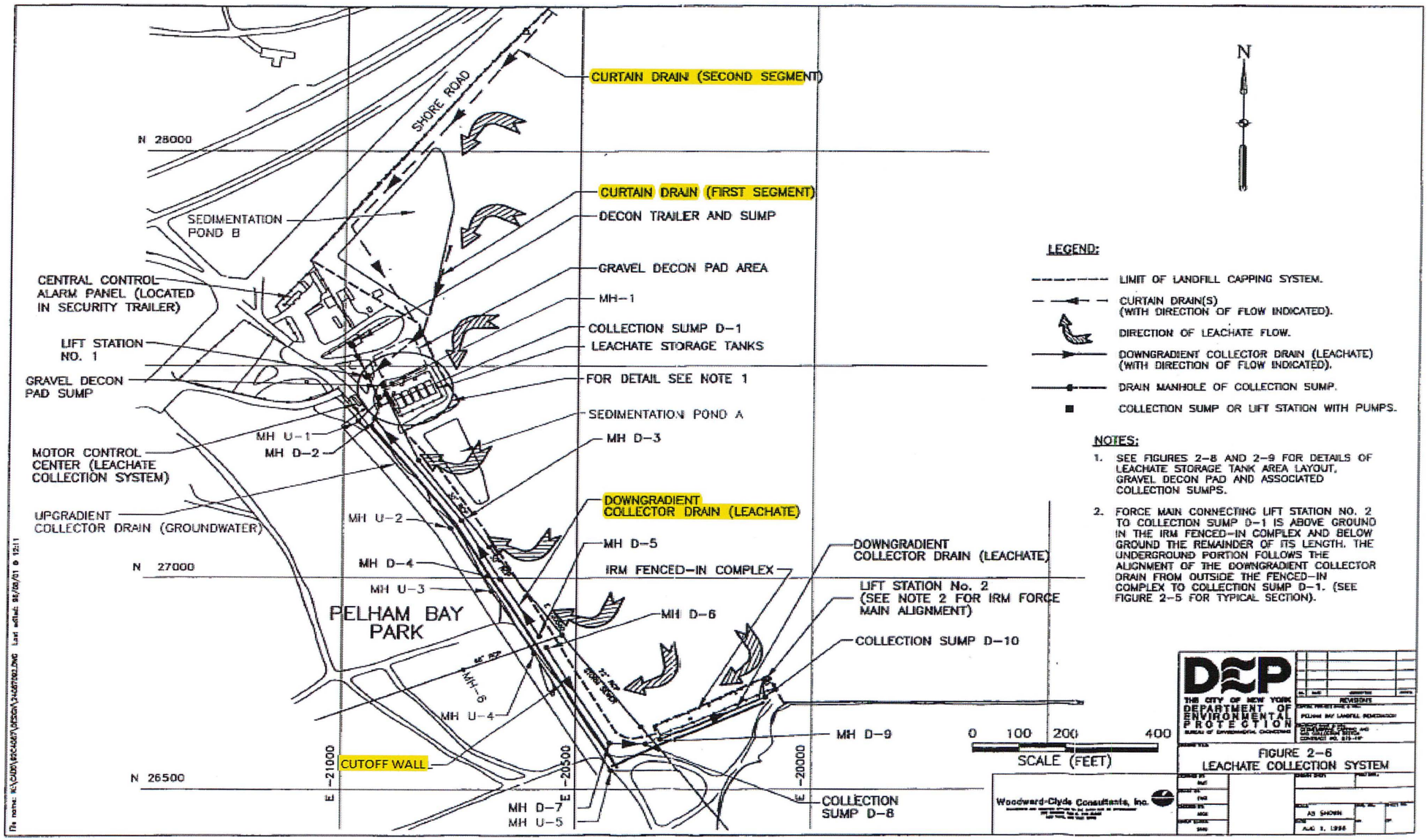
Barry A. Kline, P.E.
Senior Project Engineer

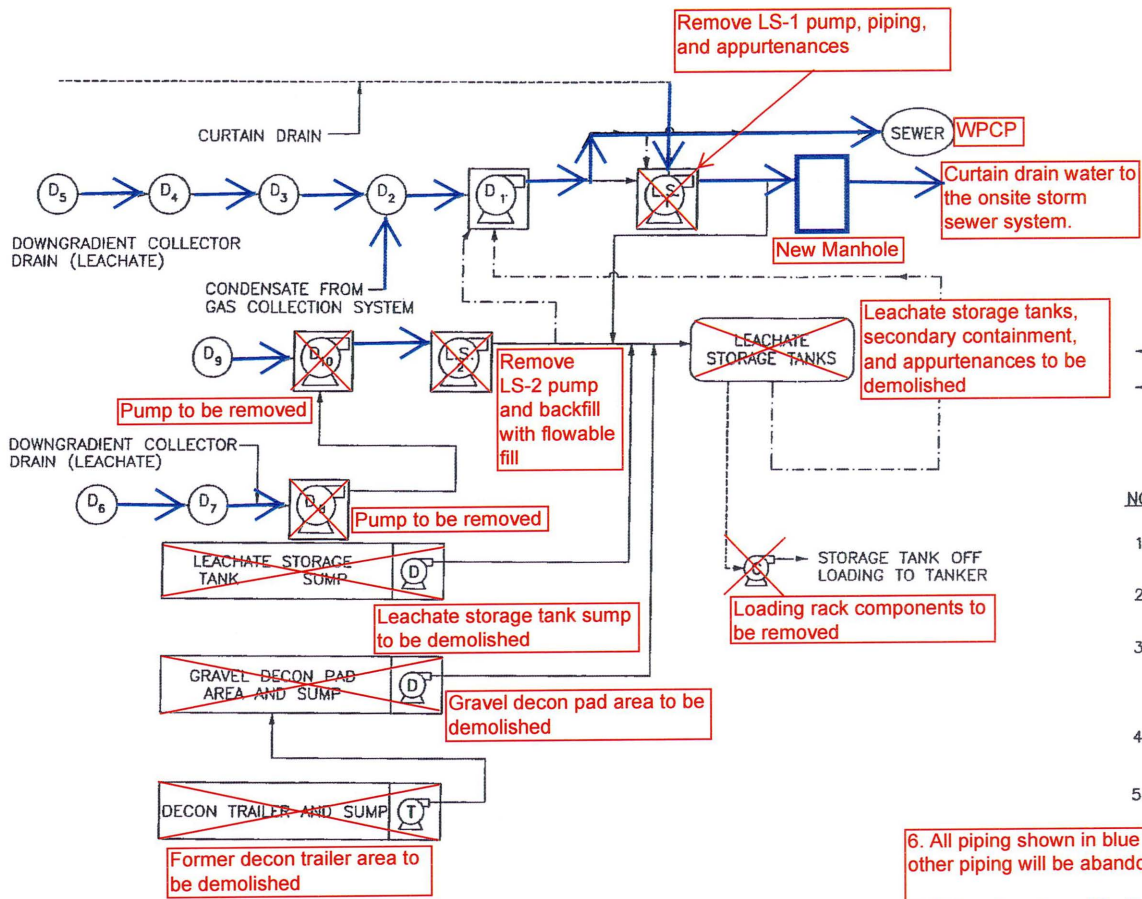
w/enclosures

cc: Mr. Marty Rowland – NYCDPR

I:\Kline\Pelham Bay Landfill\Tank Demolition\Final Descriptive Work Plan for Leachate Management System Decommissioning-Demolition, Pelham Bay Landfill 01.09.19.doc

TRC


CURTAIN DRAIN (SECOND SEGMENT)
SHORE ROAD
N 28000
CURTAIN DRAIN (FIRST SEGMENT)
SEDIMENTATION POND B
DECON TRAILER AND SUMP
CENTRAL CONTROL ALARM PANEL (LOCATED IN SECURITY TRAILER)
GRAVEL DECON PAD AREA
MH-1
COLLECTION SUMP D-1
LIFT STATION NO. 1
LEACHATE STORAGE TANKS
GRAVEL DECON PAD SUMP
FOR DETAIL SEE NOTE 1
SEDIMENTATION POND A
MH U-1
MH D-2
MH D-3
MOTOR CONTROL CENTER (LEACHATE COLLECTION SYSTEM)
DOWNGRADIENT COLLECTOR DRAIN (LEACHATE)
UPGRADIENT COLLECTOR DRAIN (GROUNDWATER)
MH U-2
MH D-5
MH D-4
IRM FENCED-IN COMPLEX
N 27000
MH U-3
PELHAM BAY PARK
MH D-6
MH-6
MH U-4
E 21000
E 20500
E 20000
CUTOFF WALL
N 26500
MH D-7
MH U-5
COLLECTION SUMP D-8
DOWNGRADIENT COLLECTOR DRAIN (LEACHATE)
LIFT STATION No. 2 (SEE NOTE 2 FOR IRM FORCE MAIN ALIGNMENT)
COLLECTION SUMP D-10
MH D-9
N
LEGEND:
LIMIT OF LANDFILL CAPPING SYSTEM.
CURTAIN DRAIN(S) (WITH DIRECTION OF FLOW INDICATED).
DIRECTION OF LEACHATE FLOW.
DOWNGRADIENT COLLECTOR DRAIN (LEACHATE) (WITH DIRECTION OF FLOW INDICATED).
DRAIN MANHOLE OF COLLECTION SUMP.
COLLECTION SUMP OR LIFT STATION WITH PUMPS.
NOTES:
1. SEE FIGURES 2-8 AND 2-9 FOR DETAILS OF LEACHATE STORAGE TANK AREA LAYOUT, GRAVEL DECON PAD AND ASSOCIATED COLLECTION SUMPS.
2. FORCE MAIN CONNECTING LIFT STATION NO. 2 TO COLLECTION SUMP D-1 IS ABOVE GROUND IN THE IRM FENCED-IN COMPLEX AND BELOW GROUND THE REMAINDER OF ITS LENGTH. THE UNDERGROUND PORTION FOLLOWS THE ALIGNMENT OF THE DOWNGRADIENT COLLECTOR DRAIN FROM OUTSIDE THE FENCED-IN COMPLEX TO COLLECTION SUMP D-1. (SEE FIGURE 2-5 FOR TYPICAL SECTION).
0 100 200 400
SCALE (FEET)
DEP
THE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION
Woodward-Clyde Consultants, Inc.
FIGURE 2-6
LEACHATE COLLECTION SYSTEM
AS SHOWN
AUG 1, 1996



LEGEND:

- COLLECTION SUMP WITH PUMPS (2)
- LIFT STATION WITH PUMPS (2)
- MISC. CONCRETE MANHOLE SUMP WITH PUMPS (2)
- DECON TRAILER SUMP WITH PUMP (1)
- CENTRIFUGAL PUMPS (2)
- LEACHATE COLLECTION MANHOLES
- FLOW DIRECTION IN PIPE
- FLOW DIRECTION OF GRAVITY DRAIN TO MANHOLE OR COLLECTION PUMP

NOTES:

1. D_1, D_8 AND D_{10} SUMP PUMPS HAVE SIMILAR OPERATING CHARACTERISTICS.
2. LIFT STATIONS 1 AND 2 SUMP PUMPS HAVE SIMILAR OPERATING CHARACTERISTICS.
3. DURING STORM EVENTS LEACHATE FLOW WILL AUTOMATICALLY BE DIVERTED FROM SEWER DISCHARGE AND HELD IN LEACHATE STORAGE TANKS.
4. ISOLATION AND CONTROL VALVES NOT SHOWN. SEE CONTRACT HP-875 RECORD DRAWINGS FOR DETAILS.
5. SEE VOLUME III SECTION 4 FOR PUMP MODELS AND DESCRIPTIONS.

6. All piping shown in blue is new or will remain. All other piping will be abandoned or removed.

7. Although not specifically shown on this figure, the 150 Day System, including the interceptor wells and appurtenances, will be also be demolished.

NOT TO SCALE

THE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION

FIGURE 2-7
SCHEMATIC DIAGRAM
LEACHATE COLLECTION SYSTEM

Woodward-Clyde Consultants, Inc.

HOT TO SCALE

AUG 1, 1996

File name: K:\CADD\92C4087\DESIGN\24087102.DWG Last edited: 96/08/09 @ 11:59