

## **Work Task Description – Near-Term Removal of Accumulated Water from Lower Raceway Allen Mill Hudson Falls, New York**

### **Background and Objective**

This work task description presents the approach for the near-term removal of accumulated water from the Lower Raceway located in the Allen Mill. It is necessary to remove the water accumulated in the Lower Raceway to:

- Allow for access into the Lower Raceway to facilitate pre-design investigation (PDI) activities associated with the Allen Mill.
- Allow for access for future near-term inspection of the Lower Raceway and Allen Mill structure.

The water will be conveyed to General Electric's (GE's) onsite Water Treatment Plant (WTP). A request for approval to treat the water in the WTP based on analytical data was submitted to the New York State Department of Environmental Conservation (NYSDEC) on August 29, 2023. Removal and conveyance activities will be performed during normal WTP operating hours (7:00 AM – 3:00 PM) until the accumulated water has been removed from the Lower Raceway. An estimated volume of approximately 35,000 gallons of water is currently accumulated in the Lower Raceway.

Arcadis US, Inc. (Arcadis) will complete the Lower Raceway water removal with assistance from GE personnel.

### **Health and Safety**

- Work will be performed consistent with Arcadis' Site Health and Safety Plan (HASp), the project H&S documents, relevant Standard Operating Procedures (SOPs), Job Safety Analyses (JSAs). Existing SOPs and JSAs relevant to the work described herein will be reviewed and modified to reflect task specific activities, anticipated means, methods, and procedures, and potential site and worker risks.
- Critical performance functions related to H&S, worker training, equipment, tools, procedures, etc. will be consistent with practices performed by National Grid and its contractors.
- Work conducted near or within the Allen Mill and other project areas within National Grid's property will involve a two-person team (minimum) and will not be performed during periods of inclement weather such as heavy rainfall or high-wind events.
- The activities described herein will not require ambient air monitoring.
- Work activities performed in the Allen Mill will be performed in modified Level D personal protective equipment (PPE) with the addition of nitrile gloves due to the potential contact with residual contamination (i.e., polychlorinated biphenyls [PCBs]) in the water.
- Observation of conditions will be made before workers enter the Allen Mill and photo documented. The Allen Mill Entry Checklist (Version 1, dated August 19, 2023) will be completed by the Qualified Entry Supervisor prior to any workers entering the Allen Mill. All workers are to exercise stop-work authority if a safety concern is identified.

## **Equipment**

The following equipment will be used for this work task:

- Portable generator (gasoline fueled), within secondary containment.
- Submersible electric pump (25 gallon per minute [gpm] pumping rate. Submersible pump specifications are included as Attachment 1.
- Two-inch diameter conveyance piping and associated fittings (connections, check valves, etc.) with secondary containment around splice connections.

A figure presenting the anticipated discharge hose route is included as Figure 1.

## **Water Removal Procedures**

Equipment placement will be completed as follows and discharge hosing and tubing will generally be routed as shown on Figure 1 (subject to change based on access needs or for other simultaneous operations):

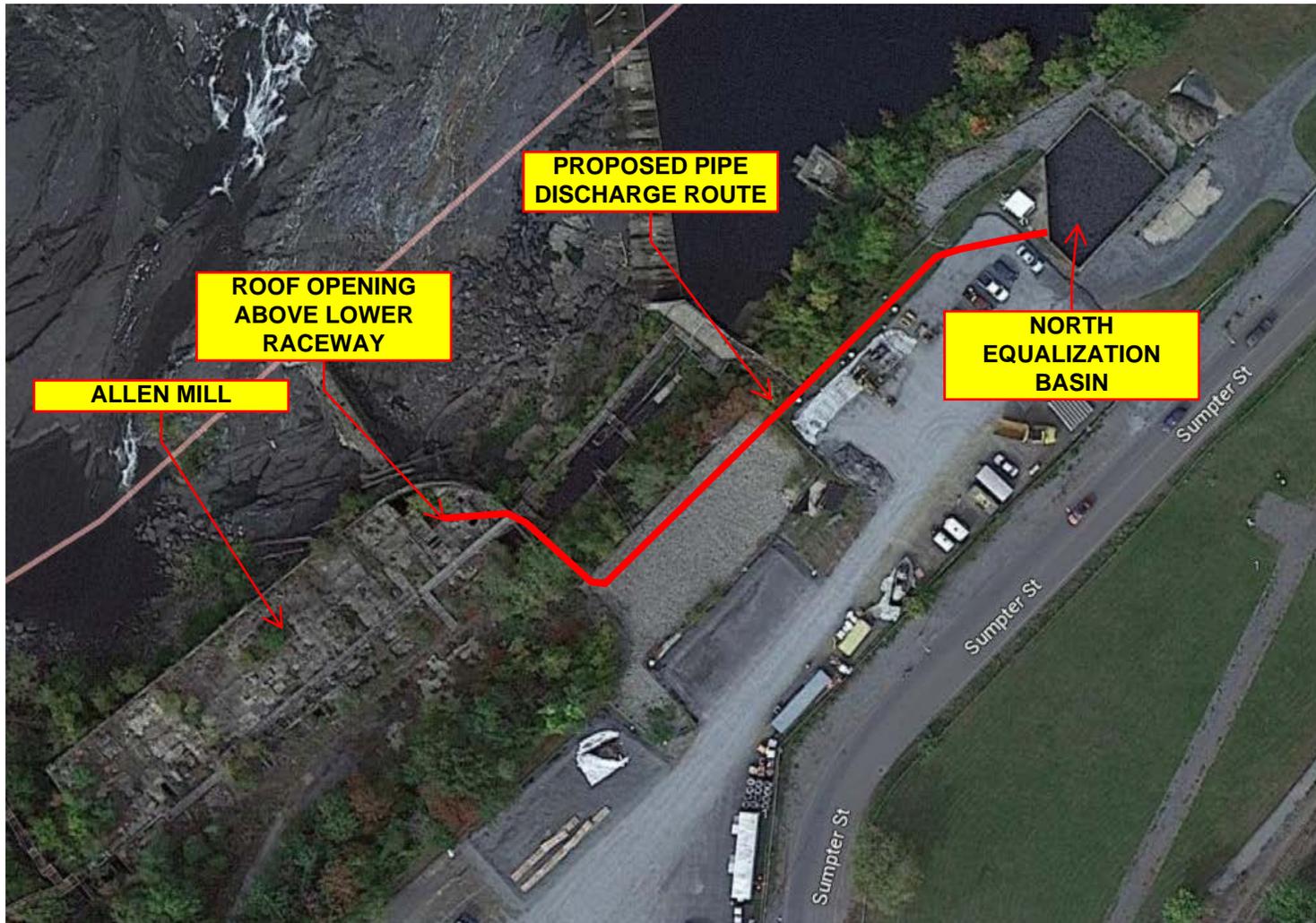
- Establish the layout and alignment of the discharge piping from the Lower Raceway to GE's North Basin.
- Assemble approximately 200 feet (at minimum) in two separate section of two-inch conveyance piping and attach to the submersible pump.
- Attach safety cable to the pump. Safety cable is to be installed to prevent pump from falling into the Lower Raceway.
- Identify safe access to the Allen Mill roof opening.
- Manually lower the submersible pump, conveyance piping, safety cable, and electrical cord into the Lower Raceway using rope through the existing Allen Mill roof opening located over the open portion of the Lower Raceway. Additional cushioning or other measures will be implemented on surfaces where needed to protect the exterior surface of the pipe associated with friction.
- Secure the submersible pump in place with wire rope and cable clamps.
- The pump will be located above the floor of the Lower Raceway to prevent debris accumulation in the pump and conveyance piping.
- Start the generator and check the conveyance piping for leaks once the pump starts discharging. Periodically inspect the pump and conveyance piping for leaks and proper operation.

## **Schedule**

National Grid proposes to install the dewatering pump and begin dewatering as soon as possible following United States Environmental Protection Agency- (EPA-) approval of this document. The pump will remain in place until investigations activities in the Lower Raceway are completed but will be removed (or properly drained) prior to freezing conditions. A new WTD will be provided for EPA approval if additional pumping is necessary beyond this effort. GE will perform a bucket test to confirm flow rate. Additional bucket tests may be performed as needed or as pump condition may change.

This work task description will be subject to continued review with modifications as warranted to reflect changes in physical, environment, and/or structural conditions associated with the Allen Mill and general project area.

# Figure 1



ALLEN MILL  
HUDSON FALL, NEW YORK

**LOWER RACEWAY DEWATERING  
DISCHARGE PIPING ROUTE**



FIGURE

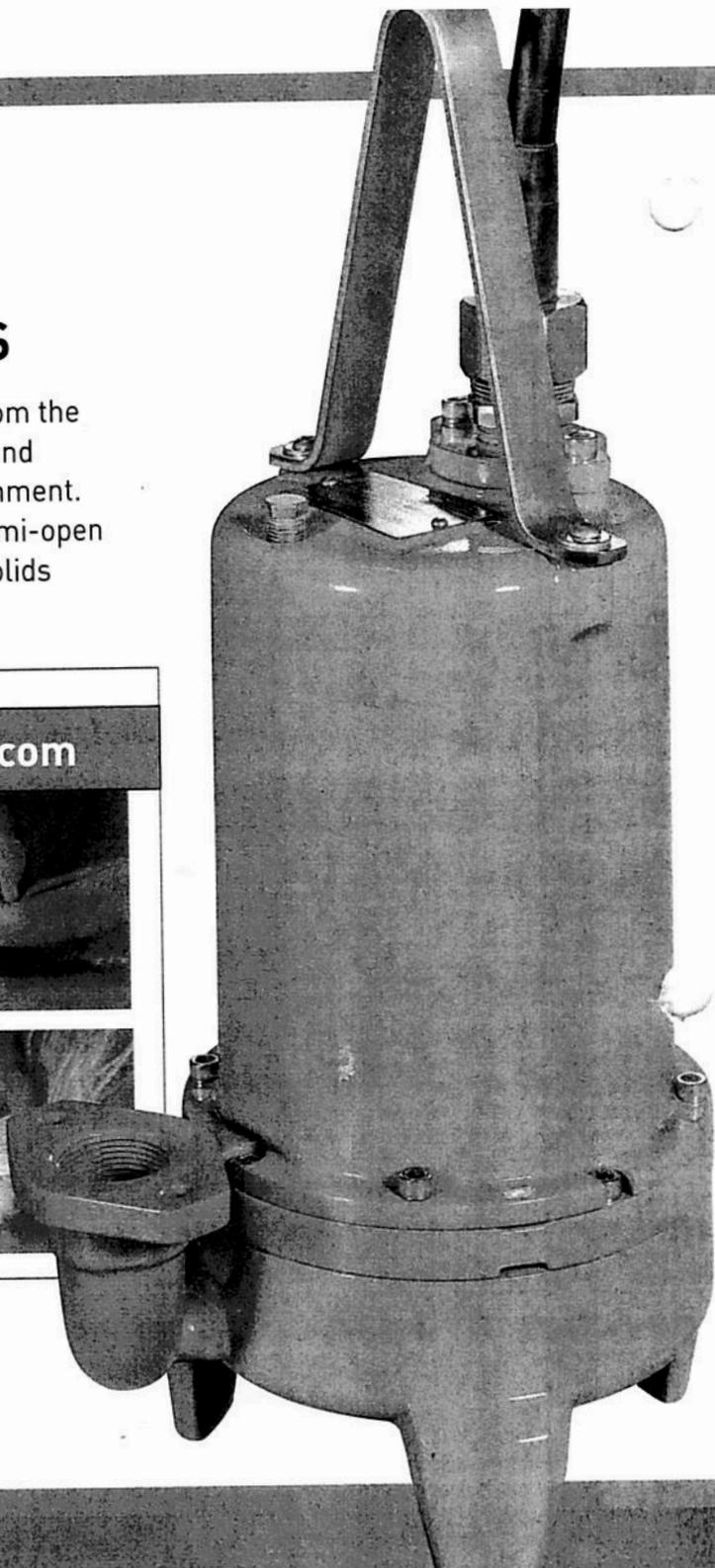
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# Attachment 1

## HYDROMATIC® HV200 SERIES SUBMERSIBLE GRINDER PUMPS

The Hydromatic HV200 Series grinder is engineered from the ground up, in order to overcome the increased debris and higher pressure required in today's wastewater environment. It features a patent-pending axial cutter design and semi-open impeller to effectively macerate challenging sewage solids into a fine slurry.

Watch the video at [www.hydromatic.com](http://www.hydromatic.com)



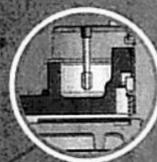
### PATENT-PENDING AXIAL CUTTER TECHNOLOGY

Easily slices through solids and trash found in domestic wastewater without roping or clogging.



### ADVANCED HYDRAULICS

The only single stage 2 HP grinder that can deliver up to 180' of lift for superior performance and reliability.

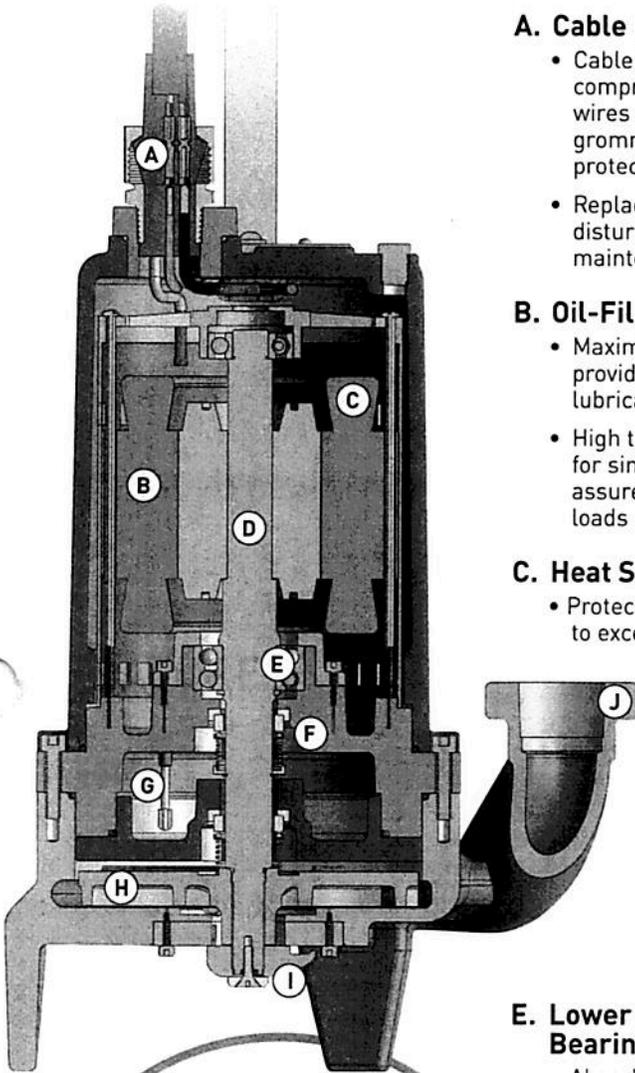


### LEGENDARY SEAL LEAK DETECTION

True early warning system for reduced downtime and maintenance costs.



# FEATURES



## A. Cable Entry System

- Cable jacket sealed by compression fitting; individual wires sealed by compression grommet for double seal protection against water ingress
- Replace power cord without disturbing motor for ease of maintenance

## B. Oil-Filled Motor

- Maximizes heat dissipation; provides constant bearing lubrication for long life
- High torque start/run capacitor for single or three-phase motors, assured starting under heavy loads

## C. Heat Sensor

- Protects motor from burnout due to excessive heat from any overload condition
- Automatically resets when motor has cooled

## D. Heavy 416 SST Shaft

- Corrosion resistant, reduces shaft deflection for long life

## E. Lower Double Row Ball Bearings

- Absorb both axial and radial loads for increased durability

## F. Double Mechanical Shaft Seals

- In oil-filled seal chamber for continuous lubrication, superior motor protection

## G. Seal Leak Probe

- Located in seal chamber instead of motor area for true early warning of water leaks. Allows corrective action before costly motor or bearing failure occurs.
- Activates warning light in control panel

## H. SST Semi-Open Impeller

- Provides improved performance, resists clogging
- Pump-out vanes help keep trash from seal, reduces pressure at seal face for longer life

## I. Axial Cutter System

- Constructed of 440 SST hardened to 57-60Rc for long life
- Easily replaceable without dismantling pump

## J. Volute Case

- Cast iron 1-1/4" NPT vertical flanged discharge

## CUTTING SYSTEM

Easily switch between standard and high head flows by simply changing the impeller and cutter plate.

HIGH HEAD CUTTING PLATE

STANDARD CUTTING PLATE

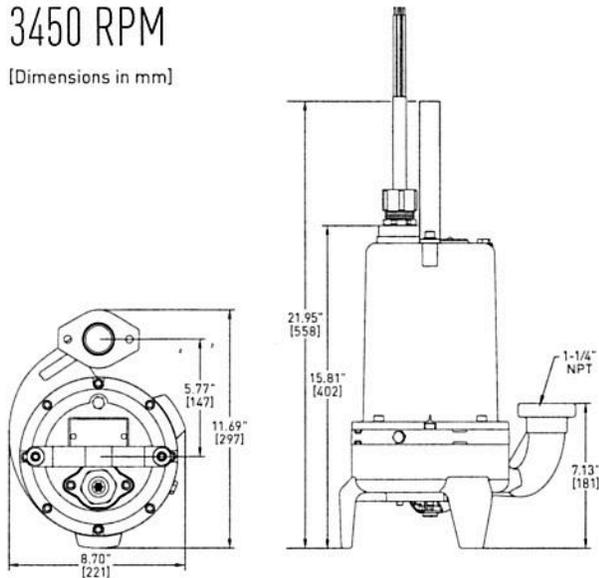




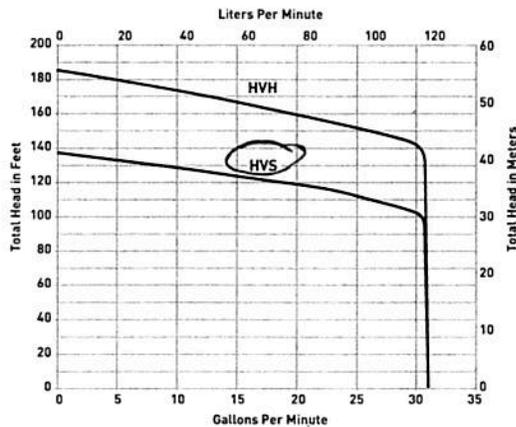
# PERFORMANCE DATA AND DIMENSIONS

3450 RPM

[Dimensions in mm]



Product Capabilities		
Capacities To	31 gpm	117.3 lpm
Heads To	185 ft.	56.38 m
Liquids Handling	domestic raw sewage	
Intermittent Liquid Temp.	up to 140°F	up to 60°C
Winding Insulation Temp. (Class F)	311°F	155°C
Motor Electrical Data <small>(Single phase motors are capacitor start type. Hydromatic control panels or capacitor kits are recommended for proper operation and warranty.)</small>	2 hp, 3450 rpm 1 ph - capacitor start/run. 230 volts; 60 Hz 3 ph - induction run 200, 230, 460 volts, 60 Hz	
Std. Third Party Approvals	CSA	
Acceptable pH Range	6 - 9	
Specific Gravity	.9 - 1.1	
Viscosity	28 - 35 SSU	
Discharge (Flange Dia.)	1-1/4 in.	31.75 mm
Min. Sump Diameter		
Simplex	24 in.	61.0 cm
Duplex	36 in.	91.4 cm



Construction Materials	
Motor Housing, Seal Housing, Cord Cap and Volute Case	Cast Iron, Class 30, ASTM A48
Impeller	Semi-Open, Stainless Steel
Power Cord	20' S00W
Mechanical Seals: Standard Optional	Double Tandem Carbon and Ceramic Lower Tungsten Carbide
Pump, Motor Shaft	416 SST
Fasteners	300 Series SST
Rotating Cutter, Stationary Cutter	440 SST 57-60 Rockwell

	V/Ph/Hz	HP	Start Amps	FL Amps	Full Load kW	Start KVA	FL KVA	NEC Code Letter	Service Factor	Model	Standard Cord	
											20'	35'
High Head	230/1/60	2	49	18.5	4.2	11.27	4.26	G	1	Catalog Eng	HVH200M2-2-20 153810007	HVH200M2-2-35 153810047
	200/3/60	2	53	12.5	3.9	18.3	4.33	L	1	Catalog Eng	HVH200M6-2-20 153810017	HVH200M6-2-35 153810057
	230/3/60	2	46	12	3.9	18.3	4.77	L	1	Catalog Eng	HVH200M3-2-20 153810027	HVH200M3-2-35 153810067
	460/3/60	2	23	6	3.9	18.3	4.77	L	1	Catalog Eng	HVH200M4-2-20 153810037	HVH200M4-2-35 153810077
Standard	230/1/60	2	49	13.5	3.2	11.27	3.12	G	1	Catalog Eng	HVS200M2-2-20 153820007	HVS200M2-2-35 153820047
	200/3/60	2	53	10	3.2	18.3	3.46	L	1	Catalog Eng	HVS200M6-2-20 153820017	HVS200M6-2-35 153820057
	230/3/60	2	46	9	3.2	18.3	3.58	L	1	Catalog Eng	HVS200M3-2-20 153820027	HVS200M3-2-35 153820067
	460/3/60	2	23	4.2	3.2	18.3	3.35	L	1	Catalog Eng	HVS200M4-2-20 153820037	HVS200M4-2-35 153820077



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