REGION 1

NEW ENGLAND REGIONAL LABORATORY
NORTH CHELMSFORD, MA 01863

Finalized Date: Dated as shown on electronic signature(s)

Subj: Inspection Report Clean Water Act

From: Nafisah Ali, Inspector
Laboratory Services and Applied Science Division (LSASD)
Field Services Branch (FSB)

Ali, Nafisah Digitally signed by Ali, Nafisah Date: 2024.12.12 14:40:07 -05'00'

Reviewed By: Jerome Keefe, Investigations Team Leader, LSASD-FSB

ERIC MAGNAN Digitally signed by ERIC MAGNAN Date: 2024.12.12 13:08:35 -05'00'

To: Newton Tedder, Manager, Water Compliance Section 1
Enforcement and Compliance Assurance Division

I. Facility Information

A. *Facility Name:* Boston Concrete Corporation (the "Facility")
https://bostonconcrete.com

B. *Facility Location*: 706 Broadway Street
Lowell, MA 01854
42° 38' 22" N
71° 19' 42" W

C. *Facility Contacts:* Ms. Karin Marshall, General Manager
kmarshall@bostonconcrete.com
(978) 937-7222 x5 (Tel)
(978) 265-6311 (Cell)

Roger Ploof, President
rploof@sandcorp.com

D. *ID No(s):* ICIS-NPDES (MAR054014)
Facility Registry Service ID (110070079042)

II. Background Information

A. *Date(s) of inspection:* October 3rd, 2024

B. *Weather Conditions:* Sunny, 72°F

C. *US EPA Inspector(s):* Joseph Canzano, Nafisah Ali, Anna Hatke

D. *State/Local Representative(s):* None

E. *Federally Enforceable Requirements Covered During the Inspection:*
- 40 C.F.R. Part 122.26, NPDES Stormwater Regulations

III. Type and Purpose of Inspection

The purpose of the site inspection is to investigate benchmark indicator monitoring parameter exceedance for Total Suspended Solid (TSS). The facility is currently identified at AIM level 3 for TSS. EPA's 2021 Multi-Sector General Permit (MSGP) authorizes stormwater discharges associated with industrial activities including concrete manufacturing operations. Conditions associated with Additional Implementation Measures (AIM) is described in Part 5.2 of the 2021 MSGP and can be triggered by either an exceedance of the annual average for four-quarters for an indicator parameter or if a single result exceeds the indicator benchmark monitoring parameter value more than four times which demonstrates mathematical certainty.

Disclaimer:

Unless otherwise noted, this report describes conditions at the Facility/property as observed by EPA, and/or through records provided to and/or information reported to EPA by Facility representatives and as understood by EPA. This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern or issue. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or more formal action.

IV. Facility Description & History

The Facility manufactures concrete, including ready-mix concrete, inter-locking concrete blocks and colored concrete. The plant can manufacture up to 1,200 cubic yards per mix. The Facility's Standard Industrial Classification (SIC) Code is 3273 (establishments primarily engaged in manufacturing concrete and delivering to a purchaser in concrete trucks. This industry includes production and sale of central mixed concrete, shrink-mixed concrete, and truck-mixed concrete. According to the Facility information the estimated area of industrial activity at the Facility exposed to stormwater is 2.5 acres. The plant is newly constructed and began operating in 2017. The Facility operates Monday through Friday, 5:00 a.m. through 5:00 p.m. with occasional Saturdays as needed.

According to Facility personnel, the plant has 32 full-time employees. Operations and industrial

activities include but are not limited to, 20 concrete mixer trucks, aggregate material conveyor belt system is used to transport stone, sand and mixes from a roofed storage building into the concrete manufacturing plant. Concrete is then loaded into concrete mixer trucks for transport to various locations. Inter-locking concrete blocks production, separate from the ready-mix concrete manufacturing, is in the southwest portion of the site located along Pawtucket Canal. Outside storage of raw materials (aggregates) and finished products (concrete blocks) were observed by inspection team throughout the Facility's south portion. Equipment storage outside and other day-to-day activities exposed to rain has potential to impact stormwater quality discharge from the Facility includes diesel fuel tanks, concrete washout pit, concrete transport, equipment service garage, salt storage (own by other, S&R Corporation), unused equipment, and solid waste dumpsters and sand on the pavement throughout the yard.

The Facility has identified 3 stormwater outfalls in the Stormwater Pollution Prevention Plan (SWPPP) dated 5/27/2021. Outfall 001 is located within a drainage area that collects runoff from the back of the Facility which represents approximately 50% of the Facility's area. The concrete manufacturing plant, aggregate bins, conveyor belt, concrete washout pit, and concrete block pouring are all located in this drainage area. The drain path for stormwater in this drainage area flows towards the Pawtucket Canal and discharges into the canal through a 4-inch diameter pipe. Stormwater in this drainage area is subject to minimal treatment. Crushed stone is placed on pavement at, and around, the inlet to drainage pipe along with swaddles to trap sediment and absorb any oils. Outfall 002 receives runoff from a drainage area that is located in the middle of the Facility yard. This drainage area comprises about 30% of the Facility's area. Runoff from S&R Corp contributes to flow to Outfall 002. Stormwater runoff from this drainage area flows from the Facility's maintenance garage toward the back of the Facility and flows around the S&R maintenance garage toward the canal where it discharges directly from concentrated flow into the canal. Outfall 003 receives runoff from a drainage area fronting Broadway Street. This drainage from the area represents about 20% of the Facility's area. Industrial activities in this area include a maintenance garage, vehicle parking, and truck and equipment washing. Truck and equipment washing occur within the garage. Stormwater in this drainage area flows to Broadway Street where it concentrates and enters the municipal separate storm sewer system which discharges into the canal.

IV. In-Briefing – Telephone Call September 19, 2024

The Facility inspection was announced by telephone on September 19th, 2024, by Inspector Ali to the Facility representative Ms. Karin Marshall, General Manager. The inspection is being conducted under the authority of the Clean Water Act and will focus on the Facility's AIM level 3 exceedances. Inspector Ali informs Ms. Marshall, the Facility is shown as being in significant noncompliance for TSS, exceeding benchmark levels. Inspector Ali talks about the laboratory analysis results for TSS entered by the Facility into EPA's NetDMR system. Inspector Ali explains to Ms. Marshall the results for TSS are consistently above the benchmark monitoring standards and trigger AIM level 3. The purpose of the facility inspection is to discuss next steps that would bring the facility into compliance reporting levels. Ms. Marshall confirmed inspection date for 10/3/2024 at 9:00am on 9/26/2024.

V. Site Inspection – October 3rd, 2024

On 10/3/2024, EPA employees Joe Canzano, Nafisah Ali and Anna Hatke ("the EPA Inspectors") conducted an announced inspection at Boston Concrete Corporation Inc. The EPA inspectors arrived at the facility at 8:50 a.m. and were greeted in the parking lot by Ms. Karin Marshall, General Manager and Mr. Pat O'Malley, Health & Safety Manager (facility representatives). The EPA inspectors introduced themselves and presented credentials. Inspector Canzano explained the purpose and scope of the inspection which includes the facility's AIM level 3 status for TSS exceedances above benchmark indicator monitoring levels. Inspector Canzano noticed the "automotive repair and paint building" on the property was missing. Ms. Marshall explained that the business that occupied the paint building caught on fire and burnt down in November 2022. The area where the paint building occupied is now empty and is being used for additional parking space. Ms. Marshall invited the EPA inspection team to an office inside the garage to continue the in briefing for the inspection.

The inspection team was joined by Eric Gulbicki, Project Scientist, SAK Environmental, LLC (company stormwater environmental consultant) and Roger Ploof, co-owner of Boston Concrete Corporation, Inc. Inspector Canzano showed TSS sample results/data submitted by the Facility from Quarter 3 of 2021 to Quarter 2 of 2024 to facility representatives (Attachment B). Inspector Canzano explained that the benchmark indicator monitoring value for TSS in the MSGP under Sector E is 100 milligrams per liter ("mg/l") and laboratory analysis results for TSS from Outfall 001, Outfall 002 and Outfall 003 are above benchmark value and as a result stormwater discharges are identified at AIM level 3. Inspector Canzano asked about process wastewater discharges at the facility that might be contributing to elevated results for TSS. Ms. Marshall confirms that the Facility continues to only have 3 outfalls that discharge, and the company has developed a plan to eliminate process water discharges. Inspector Ali asked facility representatives about sampling methods and techniques used for sample collection. Ms. Marshall directed the question to Mr. Gulbicki. Mr. Gulbicki stated that he's been with SAK Environmental, LLC since February of 2024 and did the sampling for Quarter 2 of 2024. Mr. Gulbicki explained that samples are collected in a bucket for outfalls near the canal and a dustpan is used for outfall 001. The dustpan is cleaned and sanitized before sampling. Inspector Ali then asked what analytical laboratory SAK Environmental, LLC submit their samples to be analyzed. Mr. Gulbicki said they use various laboratories. Inspector Ali pointed out after reviewing DMR records of laboratory chain of custodies that ice was being listed as a preservative, which is not necessary. Inspector Canzano recommends the use of, when conducting routine facility inspections, hydrogen ion concentration ("pH") indicator strips/paper to obtain pH data for runoff and identify likely source for concrete process wastewaters comingling with stormwater runoff throughout drainage areas.

Inspector Ali asked Mr. Gulbicki about remediation efforts implemented by the company after the Facility received notice from EPA regarding AIM level 3 criteria for results for TSS above the indicator monitoring benchmark level of 100 mg/l. Ms. Marshall informed the EPA inspectors that the facility owns and operates their sweepers and conducts daily sweeping in the morning, i.e., 5:00 a.m. Additionally, water trucks spray water on the pavement periodically throughout the day for dust suppressant. . Ms. Marshall informed EPA inspectors that the facility has received permit approval from the town of Lowell for the installation of a new/proposed stormwater subsurface infiltration gallery/system. According to Ms. Marshall, the new system is designed to achieve a zero discharge of stormwater runoff to surface waters. Mr. Ploof stated

that re-grading the parking lot area would occur to ensure the new filtration system would function at optimum. Inspector Canzano recommended to facility representatives the company should respond to EPA's AIM level 3 notification with a letter and include the matter of Facility improvement/s including the addition of the proposed new infiltration system.

Inspector Canzano asked facility representatives when the liner in the washout pit was last replaced. Ms. Marshall stated that the liner had been replaced two times this year. Inspector Canzano then showed facility representatives 3 google earth images (Attachment C) showing liquid flow path and water staining from certain areas leading to outfall 2. Mr. Ploof explained that some of the staining on the asphalt is from sand delivery and when the sand becomes wet and saturated, the drag out from the sand can cause staining. The dark staining seen on the google earth images was the staining from such events. Inspector Ali asked about the production of colored concrete. Ms. Marshall stated that the company adds coloring, and it is listed as being a biodegradable pigment and operators add color in the concrete mixer truck on arrival to customers. Ms. Marshall informed the inspection team color of concrete doesn't occur on site.

The facility walk-through started in the garage. EPA inspectors observed sealed floor drains in the garage bay. The garage bay is used to store concrete trucks and equipment. Ms. Marshall escorted the EPA inspectors to outfall 001. EPA inspectors observed 3 catch basins alongside the facility entrance on Broadway Street. Ms. Marshall stated that the catch basins have fabric liners for filtering solids. Liners are frequently cleaned and replaced. EPA inspectors walked to outfall 002. EPA inspectors observed a 1,500-gallon double walled diesel fuel tank and a spill kit. Inspector Ali asked how stormwater samples are collected. Mr. Gulbicki indicates he uses a bucket to collect a sample of the discharge, and he then transfers the sample to a collection bottle provided by the analytical laboratory. Inspector Ali suggested using a sample pole with an attachment for the collection sample bottle, to avoid contamination. Using pH indicator paper, Inspector Canzano collected a sample of standing water on the pavement that has potential to flow to outfall 002, and the pH result was at 9.0 Standard Units ("S.U."). EPA inspectors then collected another sample from standing water in front of dumpsters located next to Outfall 002. The pH result was between 9.0 S.U. and 10 S.U. Ms. Marshall then escorted EPA inspectors to outfall 003. EPA inspectors observed the inlet leading/draining to Outfall 003 appeared to be blocked/plugged. Mr. Gulbicki explained there is only a discharge when the company unplugs the outlet to generates a discharge to surface water from Outfall 003.

EPA inspectors then walked toward aggregate (dimensional stone and sand) storage pile. Inspector Ali collected a sample for pH using indicator paper of water on the pavement and puddling in front of the aggregate piles and the result was pH 7.0 S.U. As EPA inspectors walked to the concrete truck and chute washout pit located next to the plant. At the washout pit EPA inspectors observe an operator washout out a concrete truck. The processes duration was estimated to lasted for about approximately 10 minutes. Inspector Hatke collected a pH sample using indicator paper of process wastewaters pooling next to the truck washing operation and in front of the washout pit. The pH result was observed to be between 10.0 S.U. and 11.0 S.U. Inspector Canzano informed Ms. Marshall wastewaters from the truck and chute washing operations are process wastewater and should not be commingled with stormwater.

EPA inspectors walked into the concrete manufacturing plant/building and collected another sample from a puddle of water at the back of the aggregate building which yielded a pH result reading of 7.0 S.U. EPA inspectors observed several chemical tanks containing corrosion

inhibitors Ms. Marshall then escorted the EPA inspectors to the plant's control room. EPA inspectors were shown engineering plans and specifications for the new filtration system (Attachment D). Inspector Canzano recommended company submit the information to EPA and respond to the AIMs notification. At the control room Inspector Canzano asked how water usage is tracked. An employee who monitors the room informed the EPA inspectors that water usage is tracked by a computer system. Inspector Canzano asked the employee how much water is used on average. The employee stated, on average, 5 yards is approximately 100 gallons of water. The concrete trucks are 11 yards in size and can use approximately 220 gallons of water. EPA inspectors were then directed to the concrete truck loading area. Inspector Canzano collected a sample of water on the pavement in the loading area and the result pH reading was observed to be 13.0 S.U. Inspector Canzano informed Ms. Marshall that the water is considered process wastewater and should not be discharged or comingled with stormwaters.

VI. Closing Conference

Following the facility walk-through the following issues and observations were discussed with Ms. Marshall.

- Inspector Canzano informed Ms. Marshall to respond to EPA's AIMs letter and include a discussion about the company's proposed subsurface stormwater infiltration system.

- Inspector Ali informed Ms. Marshall for the Quarter 3 of 2024 Net DMR submission for TSS, if the results are still exceeding benchmark limits the facility would still be at AIM level 3.

EPA Inspectors departed the facility at 11:50 a.m.

End of Report.

Attachments:

Attachment A: Photo Log

Attachment B: EPA's NetDMR submission for Total Suspended Solids (TSS) for MSGP Quarters 3 of 2021 to Quarter 3 of 2024

Attachment C: Google Images

Attachment D: Boston Concrete engineering plans and specifications for the new filtration system


Boston Concrete Corporation
706 Broadway Street Lowell, MA 01854
USEPA Inspection 10/3/2024
Google Earth Image 2024
42° 38' 27" N
71° 19' 40" W
S&R
Corporation

Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24

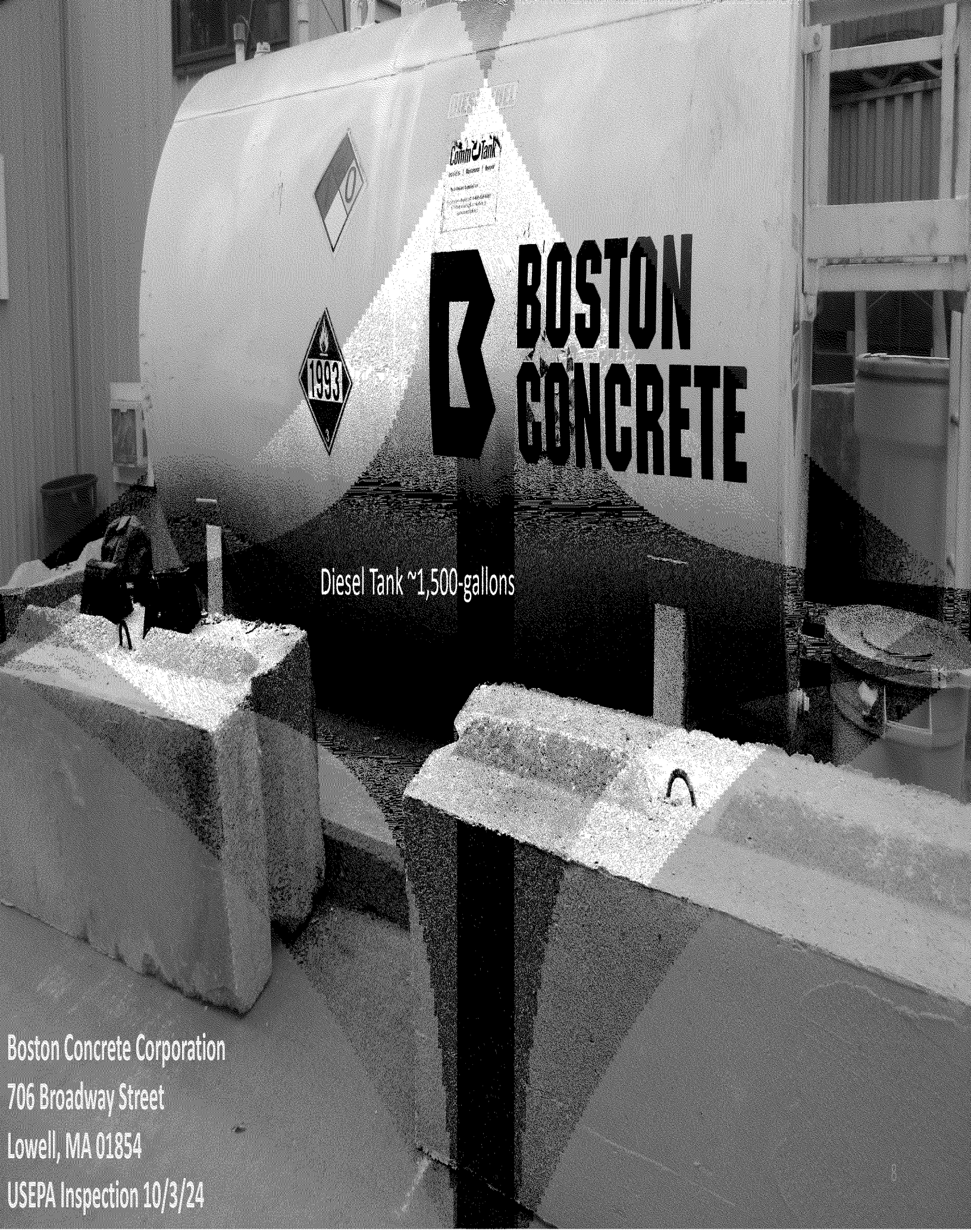
Garage where concrete trucks are stored


Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24
Sealed drain in garage

Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24


8-937-7222
Oil staining observed on parking lot area
Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24


Replacement street sweeper head, made of Polypropylene
Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24



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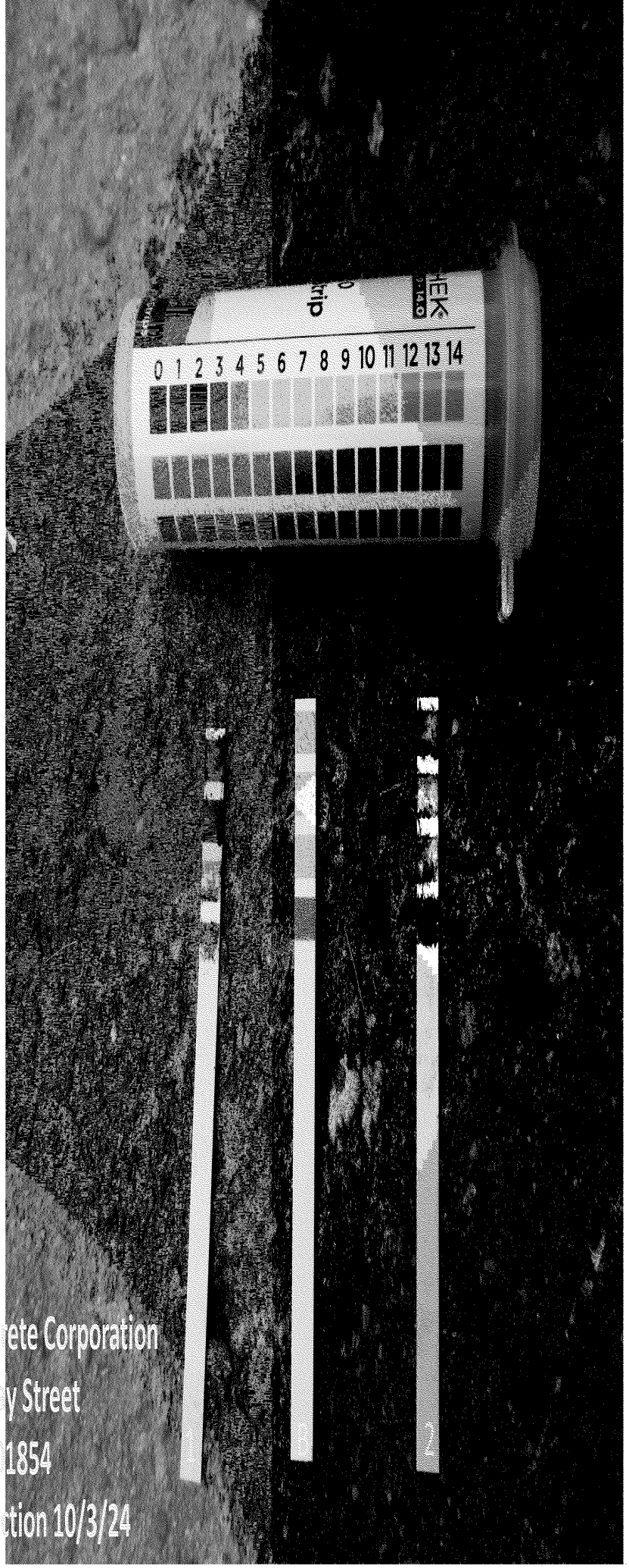

pH reading for Outfall 002:

pH strip #1 = 9 S.U

pH strip B = Blank, unused strip for reference

pH reading from standing water in front of Outfall
002:

pH strip #2 = 10 S.U

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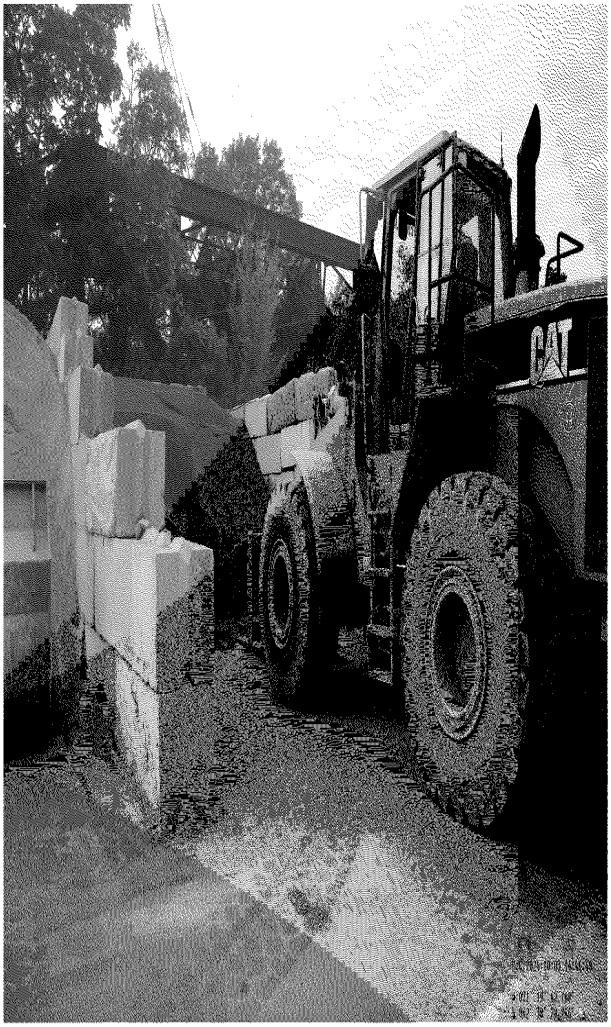

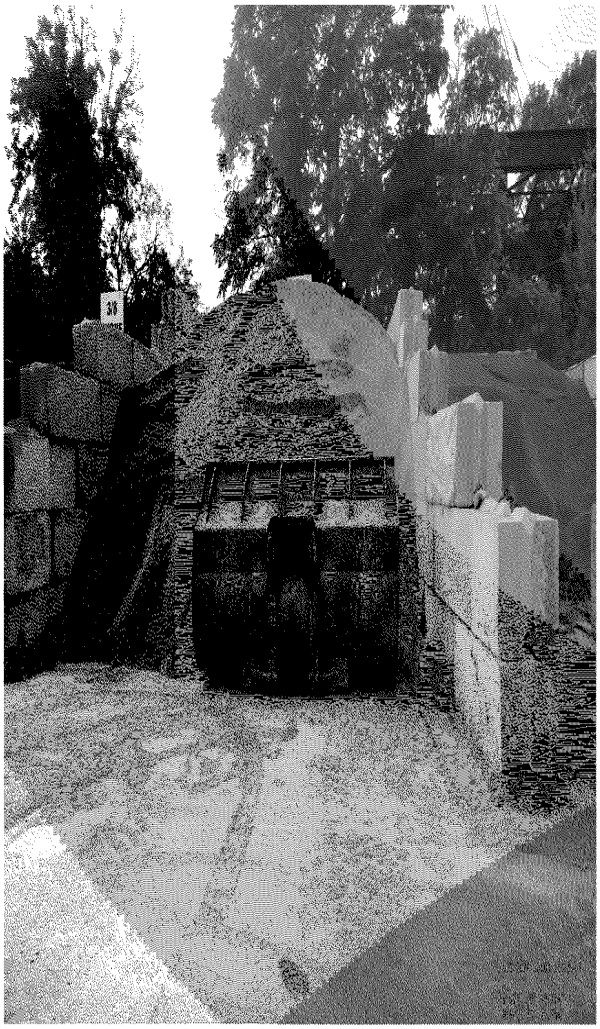

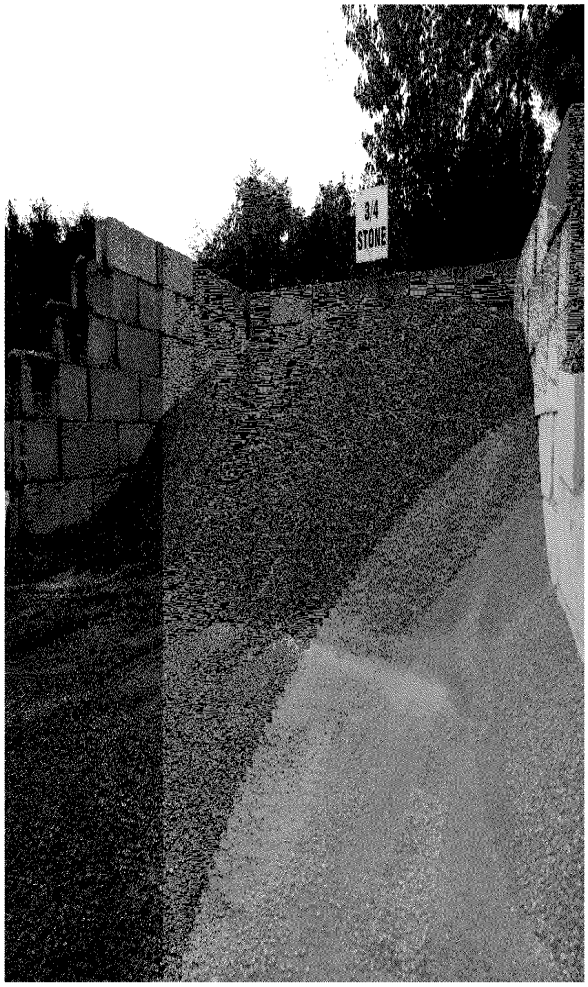

Boston Concrete Corporation

706 Broadway Street

Lowell, MA 01854

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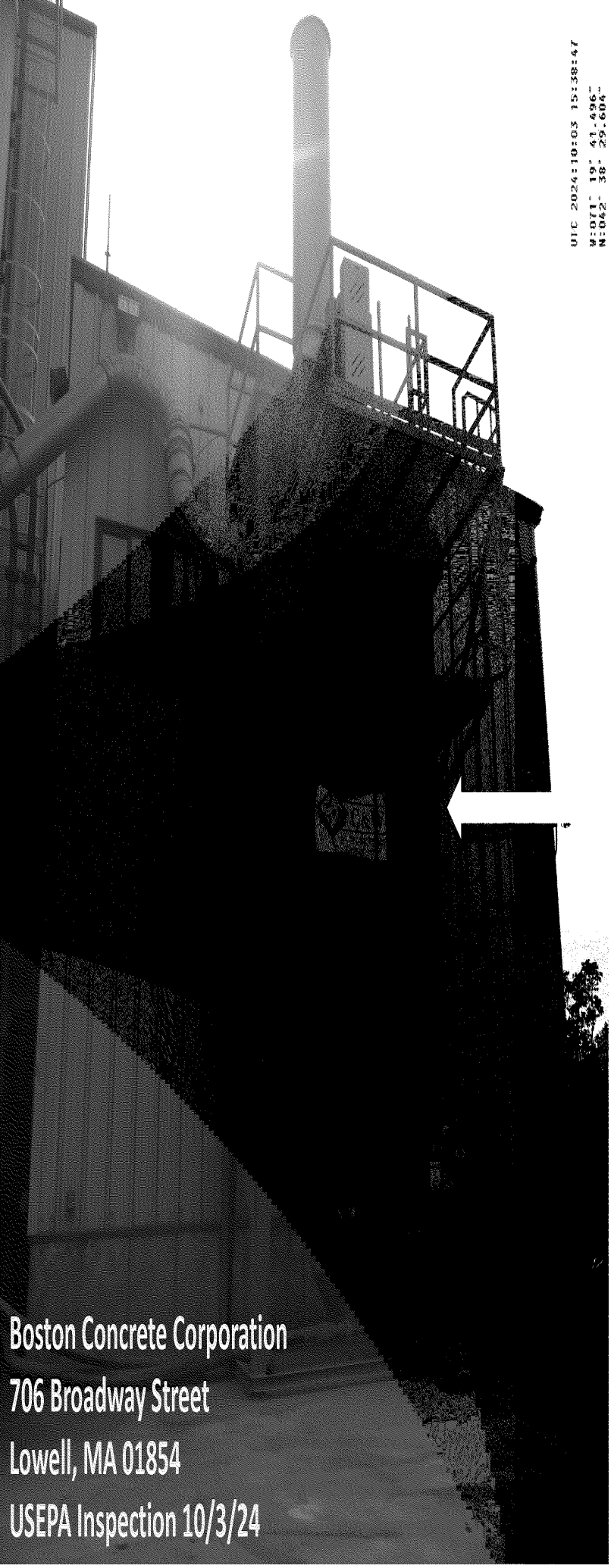

Dust Collector Unit

Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24

Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24


Truck washing operation and in front of the
pH result was observed to be between 10.0 S.U. and 11.0 S.U.
Boston Concrete Corporation
706 Broadway Street
Lowell, MA 01854
USEPA Inspection 10/3/24

Attachment B: EPA's NetDMR submission for Total Suspended Solids (TSS) for MSGP Quarters 3 of 2021 to Quarter 3 of 2024.

	Table 1			
	Boston Concrete			
	Stormwater Wastewater Discharge Sampling Data			
	Subsector E2, Table 8.E-2			
	MSGP Quarters	Total Suspended Solids (TSS) "mg/l" Benchmark Standard 100 mg/l		
		Outfall 001	Outfall 002	Outfall 003
Sep-21	Q3 - 2021	660	160	
Dec-21	Q4 - 2021	250	110	300
Mar-22	Q1 - 2022	1900	410	240
Jun-22	Q2 - 2022	1500	130	570
Sep-22	Q3 - 2022	230	110	970
Dec-22	Q4 - 2022	1500	190	300
Mar-23	Q1 - 2023	600	200	740
Jun-23	Q2 - 2023	630	190	270
Sep-23	Q3 - 2023	242	525	448
Dec-23	Q4 - 2023	1150	768	188
Mar-24	Q1 - 2024	972	1020	396
Jun-24	Q2 - 2024	408	486	317
Sep-24	Q3 - 2024	340	146	1020
Dec-24	Q4 - 2024			
	Annual Average	573.3333333	550.666667	577.6666667

Attachment C: Google Earth Images

Image 1: Date 10 /12/2021

Image 2: Dated 3/29/2024

Image 3: Dated 8/4/2024

Attachment D: Boston Concrete engineering plans and specifications for the new filtration system

Image 1

Image 2