



April 1, 2024

Jenna Giguere, Esq.  
Rhode Island Department of Environmental Management  
Office of Legal Services  
235 Promenade Street, Suite 425  
Providence, Rhode Island 02908

RE: Conceptual Remedy for On-Site Encapsulation of Regulated Soil  
434 Allen's Avenue  
Providence, Rhode Island  
Plat Map 47 / Lot 601 & Plat Map 55, Lot 10  
RIDEM File No. SR-28-0143

Dear Ms. Giguere:

This correspondence is in response to your March 19, 2024 letter to Rhode Island Recycled Metals wherein you requested additional information relative to the preferred remedial alternative for the above-referenced Site.

As you know, Lake Shore Environmental (LSE) submitted a Site Investigation Report (SIR) to the Department on December 27, 2023 and the stated preferred remedial alternative was described as on-Site encapsulation beneath an engineered barrier in conjunction with an amended environmental land use restriction (ELUR). Considering that the design for a stormwater management system at the Site is proceeding simultaneously with the SIR, it is appropriate to implement a remedy that incorporates requirements for both engineered controls and a stormwater management system.

LSE has reviewed the 75% Permitting Plans included as part of the preliminary Stormwater Management Report for the Site prepared by Independence Engineering, LLC. The stormwater plans will partition the Site into two areas as shown in Drawing-1:

- Area#1 will be where active metal recycling activities currently occur for both ferrous and non-ferrous metals and represents an area of approximately 4.22 acres.
- Area#2 will be near the waterfront and will be used for marine salvage staging only (i.e. no metal processing will occur other than size reduction). Area #2 represents an area of approximately 0.95 acres.

#### Area#1 Engineered Controls

Soils in Area #1 will be encapsulated beneath several different engineered controls consistent with the Department's Presumptive Remedies. The existing narrow concrete slab at the southwest corner of the Site will remain in place and four new concrete pads will be poured at locations shown in Drawing-1. New concrete pads will be used for specific metal recycling operations and will consist of 4 inches of concrete over six inches of clean sub-base aggregate material. A new 5,000 square foot building will be constructed as slab on grade and be located in the northwest corner of the Site. A new 6,400 square foot paved parking lot to be located just south of the new building will consist of 4 inches of hot asphalt (2-inch binder and 2 inch top coat) over six inches of clean sub-base aggregate material. The remainder of Area#1 will consist

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of three to four inches of compacted ground asphalt tailings over crushed stone on top of an impervious liner. Surface grades throughout Area#1 will be pitched towards a series of stormwater catch basins that will be directed to a stormwater containment and treatment system. A series of sub-drains will collect water from the impervious liner and direct it towards the same stormwater treatment system. A stormwater maintenance plan will specify the frequency of cap inspections as well as maintenance and repair procedures.

The stormwater treatment system will be located in the south-southeast portion of the Site and will consist of a large network of Retain-It, 3-foot chambers for storage, a Model 40 Clara Gravity Separator and an AQUIP Storm water Filter design to remove metals from stormwater. Design details of the stormwater system can be found in the 75% Permitting Plans developed by Independence Engineering, LLC.

### Area#2 Engineered Controls

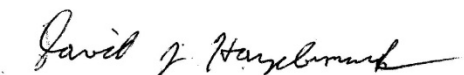
Soils in Area #2 will be encapsulated beneath one engineered barrier consisting of 12 inches of crushed stone over filter fabric consistent with the Department's Presumptive Remedies. No soils within Area#2 have been found to contain an exceedance GB Leachability Criteria so passive infiltration of stormwater in Area#2 does not pose a risk to groundwater quality. However, due to the compacted nature of surficial soil throughout the Site, the majority of stormwater in Area#2 will runoff through the crushed stone cap. Area#2 stormwater will not be collected and directed to the stormwater treatment system.

### Summary

The engineered controls at the RIRM will be constructed in conjunction with the stormwater system infrastructure. All stormwater at Area#1 where metal processing will occur will be collected and treated before being discharged through a discharge pipe located at the southeast side of the Site. Stormwater at Area#2 will either travel as runoff through the crushed stone cap or passively infiltrate through native soils. Both areas will provide protection against possible exposure through direct contact with impacted soils.

If you have any questions regarding the description of the preferred remedy for the Site, please feel free to contact the undersigned.

Sincerely,



David J. Hazebrouck, P.G., LSP, LEP  
Principal

Attachments

C: Richard Nicholson, Nicholson & Associates, LLC

Notes:

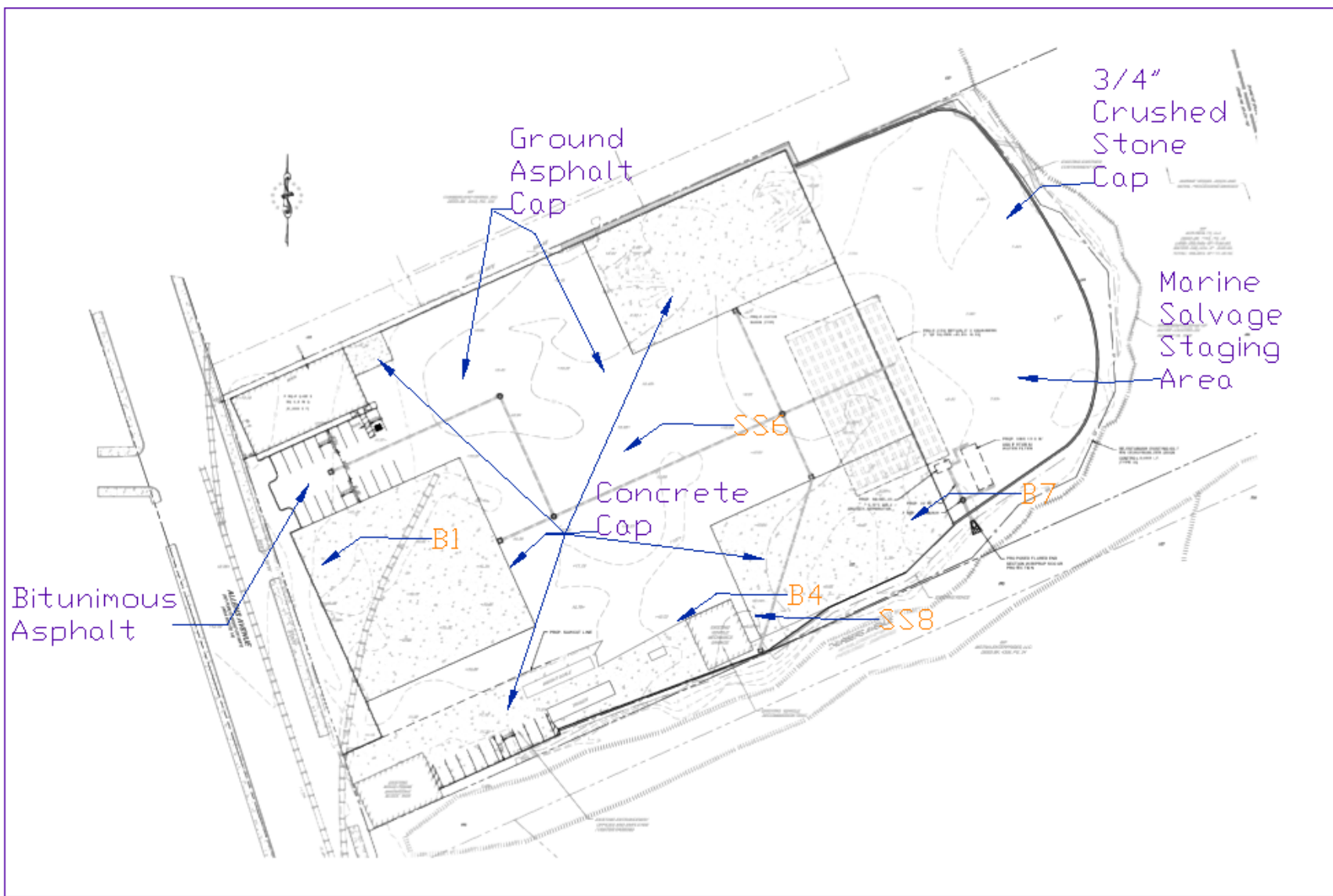
- \* Base map identified as 75% Permitting Plan provided by Independence Engineering, LLC.



LOCUS

Legend:

Soil Sample Locations Shown Where Where TPH Exceeded GB-LC



SCALE:	As Shown
DATE:	4/1/2024
PROJECT:	09250410
CATEGORY:	RMN
SITE:	434 Alms Ave. Providence, RI
DRAWN BY:	0.21
CHECKED BY:	IG



DTL: Site Plan Showing Details of Planned Engineered Controls Associated with Stormwater Infrastructure

DRAWING:	REV.
Drawing 1	A