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DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE SECTION

Your Name:	Daniel Girdner
Document Category:	Facility
Document Group:	Inspection/Investigation (I)
Document Type:	Compliance Evaluation Inspection (CEI)
EPA ID:	NCD071574164
Facility Name/Subject:	Former Seaboard Chemical Corporation
Document Date: (or Inspection Date)	12/5/2023
Description:	Non-commercial TSD with groundwater remediation (Attachement List Facility), VSQG. No Violations.
Author:	Daniel Girdner
Branch/Unit:	Compliance Branch-Eastern Region
Facility/Site Address:	5899 Riverdale Drive
Facility/Site City:	Jamestown
Facility/Site State:	North Carolina
Facility/Site Zipcode:	27263
Facility/Site County:	Guilford

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STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE SECTION
COMPLIANCE EVALUATION INSPECTION (CEI) REPORT

1. **FACILITY INFORMATION:**

Name:	Seaboard Chemical Corporation (SCC)
EPA ID Number:	NCD071574164
Type of Facility:	Administrative Order in lieu of a traditional Post-Closure Permit; VSQG
Facility Location:	5899 Riverdale Drive, Jamestown, NC 27263
County:	Guilford

2. **AUTHOR OF REPORT:** Dan Girdner, Environmental Specialist II, NCDEQ
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3. **FACILITY CONTACTS:**

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4. **SURVEY PARTICIPANT(S):** Gary Babb, P.G. (Babb & Associates); Rich Glover, P.E. (Glover Engineering); Craig Coslett (De Maximus, Inc.); Matt Grubb (De Maximus, Inc.) Melinda King (City of High Point); Robby Stone (City of High Point); Bruce Braswell (Marsh Furniture); Jim Schenker (Sherwin-Williams); Tom Lennon (PIS); Eric Aufderhaar, (NCDEQ); Daniel Girdner (NCDEQ)

5. **SURVEY INSPECTOR:** Dan Girdner, Environmental Specialist II, NCDEQ HWS, Compliance Branch; Eric

Aufderhaar, Environmental Program Consultant, NCDEQ HWS, Facilities Management Branch.

6. **DATE OF INSPECTION:** December 5, 2023, START: 10:00 AM END: 1:00 PM

7. **PURPOSE OF EVALUATION:** An annual inspection to determine compliance with the hazardous waste management requirements set forth in North Carolina Solid Waste Management Act, N.C.G.S. Chapter 130A, Article 9, and the North Carolina Hazardous Waste Management Rules, 15A NCAC Subchapter 13A.

8. **FACILITY DESCRIPTION:**

Summary: Seaboard Chemical Corporation is a closed Treatment, Storage and Disposal (TSD) facility that is bankrupt and undergoing closure. The Seaboard Group, Potentially Responsible Parties (PRPs) have removed all chemicals stored above ground. The Seaboard Group II was formed to address subsurface contamination and remediation. Since the subsurface contamination incorporates the City of High Point's landfill site adjacent to Seaboard Chemical's property, the City of High Point is working in conjunction with the Seaboard Group II in the remediation effort. The Hazardous Waste Section completed the five-year review of the hazardous waste land disposal permit in accordance with the requirements specified in 40 CFR 270.50 (d) as adopted in 15A NCAC 13A .0113 (h) without modification, in a letter dated January 8, 2021. The facility is also notified as a Very Small Quantity Generator (VSQG). The site consists of two properties. The former Seaboard Chemical facility property is located at 5899 Riverdale Drive, Jamestown, NC and consists of approximately 13 acres. The adjacent Riverdale Drive Landfill (a closed municipal solid waste landfill) consists of approximately 150 acres and bounds the Seaboard facility on two sides.

Background: The Seaboard Facility is comprised of approximately 13 acres of land, of which approximately 5-acre were developed for use as a plant and office area. The remaining area is undeveloped, wooded and bisected by a small unnamed stream. The Seaboard Facility is bordered to the north and east by the Riverdale Landfill, a closed municipal solid waste landfill.

Between 1974 and 1989 Seaboard Chemical Corporation operated solvent recovery and fuel blending processes at the facility and was granted Interim Status under the Resource Conservation and Recovery Act ("RCRA") as a treatment, storage, and disposal facility in 1982. The facility was divided into 13 operating areas corresponding to the different activities conducted. These included, among other things, distillation, fractionation, and condensation of organic solvent wastes. Seaboard also provided services such as thermo-setting monomer purification and recovery, chrome steel drum drying, solids pulverizing, batching, and mixing. In addition, three surface impoundments were in service at the facility during the time that Seaboard was in operation. Other supporting operations included wastewater treatment, storage of incoming wastes in drums and above ground storage tanks, storage of certain recyclable materials in dedicated tanks and operation of two boilers located in a house. The property had also been used for chemical processing before Seaboard's ownership, during the period prior to 1974. Prior to that, time the property was reportedly used as a hog-slaughtering and processing facility.

The Seaboard Chemical Corporation ceased all activities in 1989, and the facility is no longer in operation. The Company ceased all activities when it was denied a special use permit by Guilford County. The corporation declared bankruptcy in 1989 and was not able to fund the cost of performing the necessary site closure. The property is owned at this time by the bankruptcy estate of Seaboard Chemical Corporation and administered by J. Brooks Reitzel, Jr. bankruptcy trustee.

Following abandonment of the facility by the owner, DENR requested parties that may have used the services of Seaboard Chemical Corporation in the past (also referred to as potentially responsible parties or "PRPs") attend a meeting held in Raleigh, NC in 1990. Following that meeting, Seaboard Group I was formed by the PRPs for the purpose of conducting a voluntary removal action for potentially hazardous materials remaining at the site and to develop some initial assessment information.

Removal activities were conducted during 1990 and 1992 to remove all remaining waste materials and certain tanks and equipment from the Seaboard Facility. In addition, an initial screening evaluation of the Site was

performed, and a Remedial Investigation Work Plan was developed. Following that removal activity, Seaboard Group I was dissolved.

All structures at the Seaboard Facility have been removed. A second security fence has been constructed around the entire perimeter of the Seaboard Facility to prevent unauthorized access. Institutional controls and land use restrictions approved by DENR were implemented at the Site and necessary adjacent areas. Land use restrictions are placed on the property to restrict future uses that could present potentially unacceptable exposure risks (e.g., residential development, use of impacted ground water, etc.). The land use restrictions are in the form of perpetual declarations to be recorded with the property deed and/or through the development of zoning or permit restrictions against the potentially unacceptable activities. A deed declaration will describe the scope of the land use restrictions and will include a survey and property description to define the areas of concern. The VOC-impacted soils underlying the former operations area of the Seaboard Facility are currently covered by concrete pavement. As part of the remediation plan, the existing concrete pavement would be utilized and maintained as a cap to prevent direct exposure to impacted soils and reduce infiltration of rainfall and potential migration of soil contaminants. An engineering evaluation (based on a visual inspection) has determined the general integrity of the existing concrete pavement and verified its effectiveness for use as a remedial cap.

The Riverdale Drive Landfill was operated from the 1950's until October 1993. The Landfill was permitted by the North Carolina Department of Environment and Natural Resources Solid Waste Section in 1979. During Landfill operations, sections of the two tributary streams that cross the landfill property were piped and solid waste was used to fill the drainage valleys. The two streams are referred to as the Southern Intermittent Stream and the Norther Intermittent Stream. During filling of the Southern Intermittent Stream valley, a leachate collection system was installed adjacent to the stream channel to collect leachate migrating from the overlying solid waste. In 1989, a leachate collection system was added to control surface seeps (leachate leakage) along the slopes of the landfill. The leachate is collected in concrete storage tanks and then pumped to Lift Station 1 and subsequently treated along with the groundwater. From approximately 1966 to 1970, Landfill operations include the disposal and open burning of spent solvents in shallow pits located just north of the former Landfill scale house. Periodically, these burn pits were cleaned of residue that was accumulated in a mound to the south of the burn pits. Presently this mound consists of approximately 600 cubic yards of contaminated residue capped by a synthetic liner and is referred to as the "soil residue mound". Testing during the remedial investigation determined the material was not characteristically hazardous waste. The Landfill is now capped and maintained under an approved post closure plan.

Seaboard Group II ("Group") was formed to perform a remedial investigation and to prepare a baseline risk assessment, feasibility study and flow and solute transport model for the Site. Seaboard Group II was also to perform certain other functions necessary to develop a conceptual remedy for the Site. The Group entered into an agreement with the City of High Point to perform a remedial investigation since the close proximity of the landfill and Seaboard Chemical Corporation facility made joint investigation of the two sites advantageous for both the City and the Group. The Parties entered into an Administrative Order on Consent (AOC) with NC DENR on January 30, 1996, to perform the remedial investigation. The feasibility study was conducted under a separate AOC dated July 22, 1997.

Remedial investigations conducted at the Site have documented the presence of chlorinated and non-chlorinated volatile organic compounds (VOCs) in soils, landfill leachate, groundwater, and surface water. The remedial investigation results indicate that the VOC- affected groundwater is migrating to Randleman Lake, which bounds the Site along the northern and eastern property boundary of the Landfill. The Randleman Lake was created by the impoundment of the Deep River in 2006 by Randleman Lake Dam, which is located approximately 11.5 miles downstream of the Site.

The Seaboard Group II and the City of High Point entered into a Remedial Action Settlement Agreement (RASA) with NC DENR on December 29, 2008. The RASA provides for the design and implementation of the approved remedial action program for the site as well as completion and reporting of annual groundwater and surface water monitoring activities.

The proposed remedial design consisted of groundwater extraction and treatment in combination with institutional controls including site access control, recorded land use restrictions and restriction of water supply well construction. The proposed remedy would prevent movement of contaminants into the Deep River and the Northern and Southern Intermittent Streams and prevent exposure to impacted soils and groundwater at the Site. Because this remedy would involve a long time frame, extraction of ground water at a rate necessary to contain contaminant migration is proposed. Groundwater and surface water sampling would monitor the effectiveness of the remedy to ensure that there is no unacceptable migration of contaminants to the Deep River or Randleman Reservoir.

It was determined that the most effective long-term method to accomplish the hydraulic containment of the plumes and treatment of the groundwater and leachate collected at the Site would be groundwater extraction in conjunction with leachate recovery and treatment in natural systems. This is primarily due to the presence of chlorinated and non-chlorinated organics, dense non-aqueous phase liquid organics (DNAPL), and 1,4-dioxacyclohexane (1,4-dioxane) in the shallow and deep groundwater and landfill leachate.

The Remedial Treatment System refers to the overall treatment process, which include the Physical and Natural Treatment Systems. The Main Treatment Area, or Mechanical Treatment Area (Physical Treatment) is located near the end of Recovery Way, just east of the junction with the MRF access road and the east side of the Soil Residue Mound. This is the area with the majority of the Remedial Treatment System equipment is installed in what is referred to as Enclosures 1 through 7. These enclosures house the Settling Vat, Effluent Filters, the water chemistry laboratory, the Effluent Storage Tanks, and LS-2 (the AOP Unit was removed in 2019). The Filter Building, Maintenance Building, main electrical transformer, weather station and storage enclosure are also located here. A clarifier and sludge management unit were constructed to reduce the amount of solids in the leachate prior to treatment. Currently, prior to being pumped to the cap of the landfill for phytoremediation, the leachate and groundwater from the extraction wells goes through the clarifier (for solids to settle), treatment to remove metals, and an air stripper which reduces the volatile organics concentration.

The Natural Treatment System (referred to as the Phytoremediation System) is currently established and maturing on the cap of the Landfill -- roughly 12.5 on the East Lobe and 20.5 on the West Lobe. The 33-acre tree stand consists of a variety of conifer tree species (primarily pine tree species). They are used for phytoremediation and biodegradation of the treated Remedial Treatment System process effluent. The non-native tree zones are planted with several species of conifer trees that comprise the Natural Treatment System. The original buried drip-irrigation system is being replaced with flexible lines close to the surface facilitate monitoring and repair. A rotation of the sixteen zones occurs based on soil moisture (detected by probes).

The Declaration of Perpetual Land Use Restrictions (DPLUR) Certification was submitted on February 3, 2022.

The five-year review of the Administrative Order of Consent in Lieu of a post-closure permit was last completed by the Facilities Management Branch (FMB) in January 2021 with no modifications required at that time. Based on the remedial action system becoming fully operational by August 25, 2017, the first five-year review for the RASA was submitted to DEQ for review on February 27, 2023.

9. **HAZARDOUS WASTE (HW) GENERATED:** The site notified as a Very Small Quantity Generator (VSQG) on February 28, 2020, to facilitate the use of Episodic Generator events if needed for a clean-out or to discard chemicals no longer used in the treatment system. No hazardous waste was being generated or accumulated at the site during the inspection.

10. **AREAS OF REVIEW AND INSPECTION:** A site meeting began at the Treatment Building and LS-2 process building, where the survey and inspection participants met. The facility maintains emergency contact information and a contingency plan in binders. The treatment system was operating during the visit. 15,250,714 gallons of water have been treated during the 2023 calendar year. System shutdown time totaled 30.7 days in 2023, with an average of 7.7 days per quarter close to the recorded values. No hazardous waste was accumulating in the remediation buildings or areas.

The Soil Residue Mound from the closed Riverdale Landfill, located next to the Treatment Building was observed to be vegetated and in good condition with no exposure of the synthetic cap. The following Monitoring Wells in this area were also observed to be locked, labeled, and in good condition: MW-17, MW-15A, and MW-15B.

The group walked to the West Phytoremediation Zone to review the completion of the irrigation system redesign. A total of twenty-four miles of HDPE flexible pipe for irrigation drip lines were replaced to ensure biofouling and scale were not blocking or restricting flow. The drip lines are closer to the surface but covered for protection against mowing and and run along the base of trees in rows, secured every five feet with soil staples. Freezing was not a major concern based on the flow of water in frequent cycles, and the strength and flexibility of the HDPE materials used, but heat trace tape is used on valves and other components prior to the irrigation drip lines. Part of the redesign included higher flow to higher ground and drier areas, and lower flow lines to lower, wetter areas. The facility still maintains lysimeters in order to compare water volume and concentration with mass removal. The facility also tracks and documents phytoremediation system maintenance and performance. The phytoremediation system has included loblolly pines, with red cedars recently added depending on soil conditions. In general, the irrigation and establishment of the tree stands has improved soil conditions for the trees. The phytoremediation system was visually observed, with the rows of trees that appeared green and healthy, with a full canopy and pine straw litter limiting undergrowth for most of the West Phytoremediation Zone.

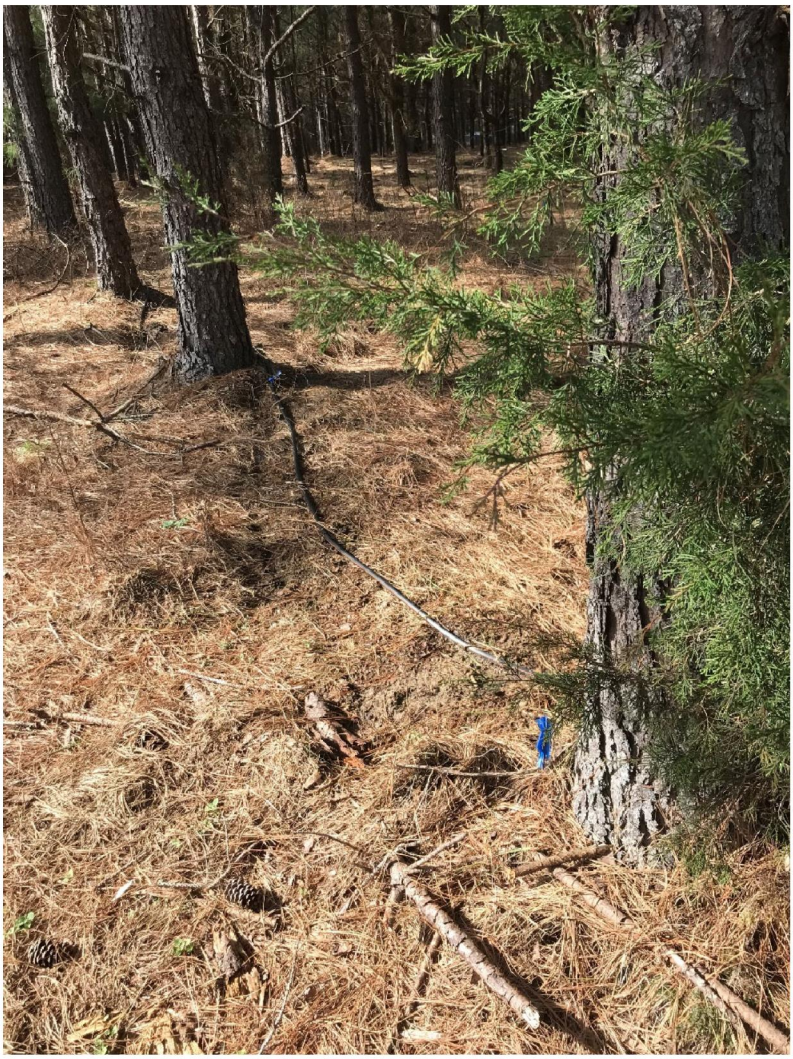

Photo: 1 of 3, from February 15, 2023, Western Phytoremediation Zone, (Zones 1-11). This area was observed to be similarly operating and in good condition on December 5, 2023.

The Eastern Phytoremediation Zone also appeared to be established and healthy based on visual observations during the inspection and from the information provided by Mr. Glover. In addition, the perimeter fencing was observed standing and in good condition.

The inspection included the Lift Station Number 1 (LS-1) pump-and-treat system building and basin area in the eastern half of the landfill to review the groundwater and leachate extraction well system. Visual observations were made of groundwater monitoring and remediation wells encountered in route which were all observed locked and in good condition (If any wells were observed in poor condition, the name, location, and deficiencies of the well would be noted for the report). The following compliance monitoring wells, observation wells, and extraction wells: MW-1, MW-3A, MW-3B, MW-3C, MW-11, PW-5D, PW-13I, PW-DR1, PW-SF1, PW-SIS1, and PW-SIS4 were more closely inspected and found well maintained with well pads in good condition, with secured casings, and identification tags. The sediment basin was observed at lower water stand than previously observed, which was attributed to the recent dry spell, but also to the improved performance of the pump-and-treat system maintaining groundwater drawdown in the basin area. Pneumatic extraction pumps were reported to all be in good operating condition, and pneumatic operation and flow could be heard near the active pumps. In addition, the interior LS-1 building was observed in operation and was clean, organized, and in good operating condition. Mr. Glover walked the inspectors through the current process, which includes two main lines that can be alternated for maintenance, primarily mineral de-scaling operations using citric acid.

The inspection continued at the closed Seaboard Chemical Corporation property, which was accessed through the south facing gate on Riverdale Drive. The gate and fencing were in good condition and secured. The group walked the former foundation areas, which are concrete slabs that are overall intact, with no evidence of erosion or site disturbance. The RCRA cap is over the former SCC Pond 3 management unit and was found clean, dry, and free of pine needles, sediment, or debris, to facilitate the inspection of the entire cap surface. An epoxy patch material was used to repair a small area of surface spalling and cracks on the concrete slab. The integrity of the RCRA cap was intact and being well maintained in good condition.

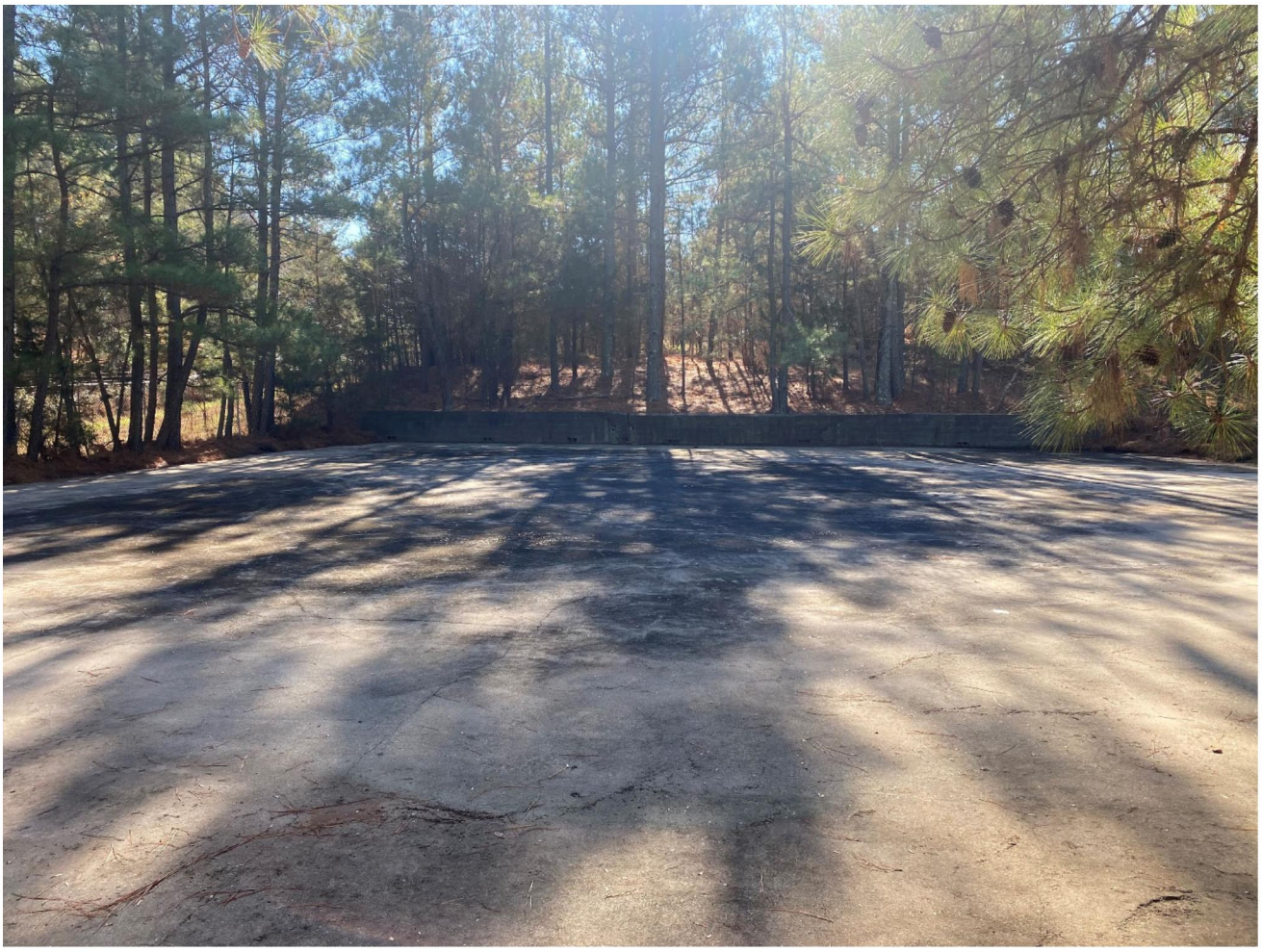

Photo 2 of 3, December 5, 2023, the RCRA Cap facing south.

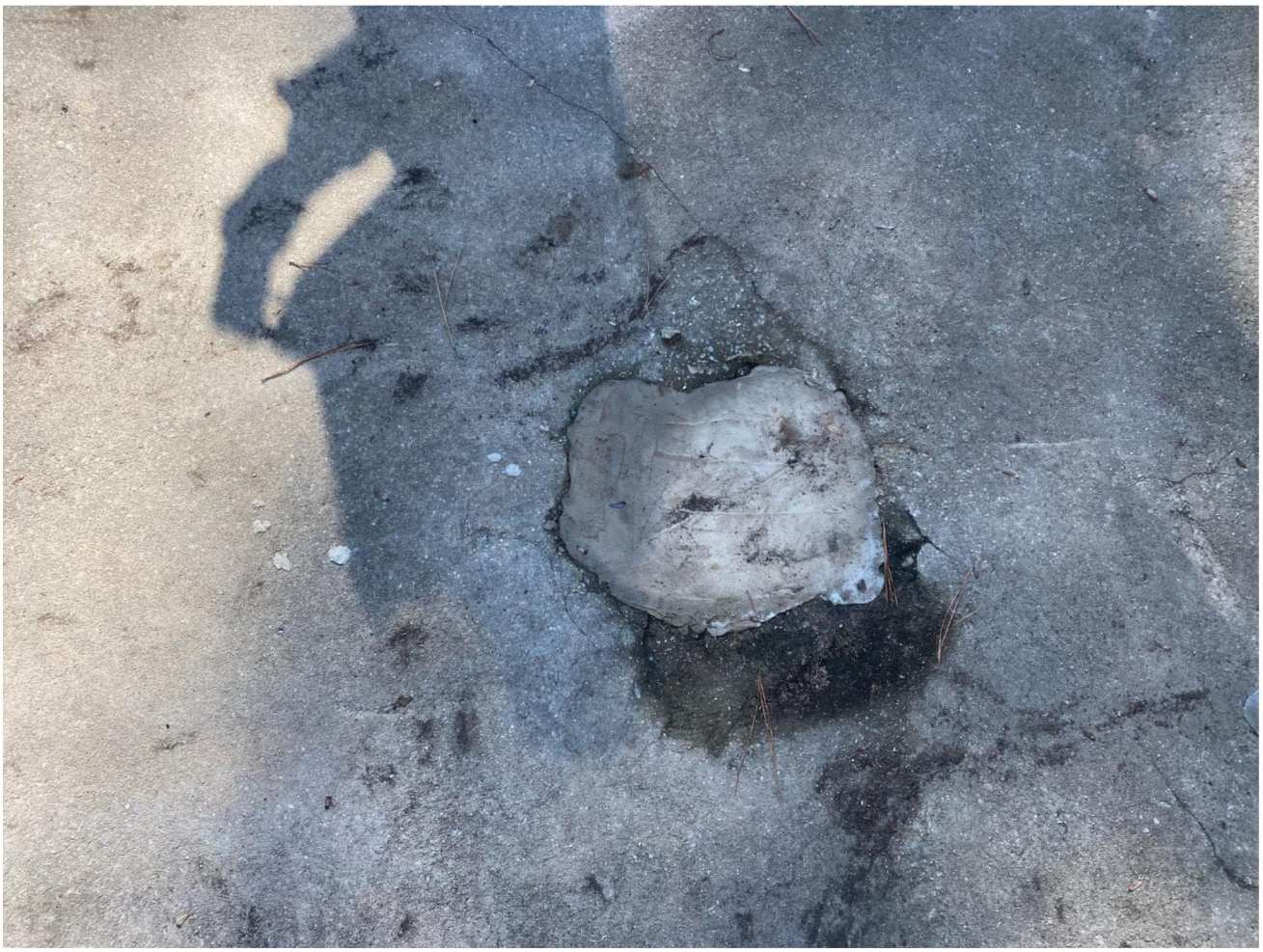

Photo 3 of 3, December 5, 2023, RCRA Cap surface spalling spot cleaned out and repaired, located near the north edge.

SITE DEFICIENCIES: None Observed.

COMMENTS AND RECOMMENDATIONS:

- The assistance of the Seaboard II participants was greatly appreciated during the site visit. If you have any questions about this report or maintaining compliance with the (RCRA) hazardous waste management regulations, please contact me at Daniel.girdner@deq.nc.gov or by telephone at 919-621-7747.

Daniel Girdner 1/12/2024

INSPECTOR **(DATE)**

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