North Carolina Department of Environmental Quality
Division of Waste Management

Re:	Former Heatcraft Remediation Site 602 Sunnyvale Drive Wilmington, North Carolina 28412 EPA ID Number: NCD 057 451 270	)	**Administrative Order in Lieu of Post-Closure Permit** **Docket Number 2012-028** **Original Issue: August 14, 2012** **Modified: March 2017**
Owner:	Port City Distribution, LLC 6618 Providence Road Wilmington, NC 28411	)	
Operator:	Daikin Applied Americas Inc. 13600 Industrial Park Boulevard Plymouth, MN 55441	)	

ADMINISTRATIVE ORDER IN LIEU OF POST-CLOSURE PERMIT
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Daikin Applied Americas Inc. (Daikin Applied), and the North Carolina Department of Environmental Quality, Division of Waste Management (the Division), acting through its Hazardous Waste Section (the Section) enter into this Administrative Order in Lieu of Post-Closure Permit (Order) for the Facility identified on the Figure presented in Attachment 1 and further described in Section III.E.

This Order is explicitly between Daikin Applied and the Section. In the event that Daikin Applied becomes unable or unwilling to comply with this Order to the Section's satisfaction, the Section reserves any and all of its rights against Port City Distribution, LLC (current property owner), and any other owner or operator. This requires Port City Distribution, LLC, not to interfere with the integrity or maintenance of any institutional controls at the property and not to refuse to grant Daikin Applied sufficient access to the property to allow Daikin Applied to meet the requirements of this Order.

I. Statement of Purpose

A. This Order concerns the application to the Facility of the North Carolina Solid Waste Management Act (the Act) contained in Chapter 130A of the North Carolina General Statutes and the rules promulgated thereunder and codified in Subchapter 13A of Title 15A of the North Carolina Administrative Code (the State Hazardous Waste Rules), and the federal Resource Conservation Recovery Act (RCRA), 42 U.S.C. 6901 et seq. The purpose of this Order is to provide an enforceable administrative order in lieu of a post-closure permit, including recognition of corrective actions already taken and further corrective actions to be taken, for the Facility located at 602 Sunnyvale Drive in Wilmington, North Carolina, and the surrounding impacted areas in a manner that is consistent with State and federal laws and rules.

B. The Parties stipulate that the objectives for completion of the work required by this Order are, to the extent not already accomplished: (1) to identify releases of hazardous waste, hazardous constituents, and petroleum constituents relating to Facility operations; (2) to remove, if identified, imminent threats to human health and the environment through source removal or treatment; (3) to characterize the Facility's geologic and hydrogeologic conditions and determine the extent of contamination; (4) to perform corrective action at the Facility, and beyond the Facility boundaries as necessary, to include, at a minimum, establishing remediation goals for the Facility and conducting remediation to meet those goals; (5) to implement and maintain a comprehensive monitoring program until remediation is complete; (6) to provide opportunities for public participation; and (7) to provide financial assurance for assessment and for remediation.

C. This document constitutes an Order of the Secretary of the Department of Environmental Quality for the purposes of N.C.G.S. § 130A-18(a).

D. Therefore, to further the public interest, the Parties enter into this Order.

II. Jurisdiction

A. The Division has authority pursuant to N.C.G.S. § 130-290, *et seq.*, to require corrective action by owners and operators with respect to facilities at which hazardous wastes were generated and treatment, storage, or disposal has occurred.

B. Although this Order requires corrective action mandated by 40 CFR 264.101 and 265.121, incorporated by reference in 15A NCAC 13A .0109(g) and .0110(g), Daikin Applied stipulates to issuance of this Order without a hearing and to compliance with the terms of the Order. Daikin Applied further stipulates that it will not contest the Section's jurisdiction to (1) issue the Order, (ii) require compliance with the Order, (iii) compel compliance with the Order in any subsequent enforcement proceeding, either administrative or judicial; or (iv) impose sanctions for any violation of the Order.

III. Stipulations of Fact

A. Authority of the Hazardous Waste Section

1. The United States Environmental Protection Agency (EPA) has authorized North Carolina to operate the State RCRA Hazardous Waste Program in accordance with the Act and the Rules.

2. The North Carolina Department of Environmental Quality (the Department or DEQ) is authorized and required to enforce the laws and rules governing the management of solid waste, including hazardous waste. The Secretary has delegated this authority and responsibility to the Director of the Division. The Director has issued a sub-delegation of this authority and responsibility to the Chief of the Hazardous Waste Section, Julie S. Woosley.

B. Daikin Applied Americas Inc. Corporate Information

1. Daikin Applied Americas Inc. (Daikin Applied) is a corporation organized under the laws of Delaware and is authorized to transact business in North Carolina.

2. SnyderGeneral Corporation operated at the Facility from 1982 until 1994. In 1994 SnyderGeneral Corporation was acquired by Hong Leong Group Malaysia and renamed AAF-McQuay Inc. and divided into two companies: AAF International and McQuay International.

3. From 1982 until 1988, AAF-McQuay Inc., under the name SnyderGeneral Corporation, manufactured copper and aluminum heating and air conditioning heat exchangers as owner/operator of the Facility.

4. In June 1988, AAF-McQuay Inc. under the name SnyderGeneral Corporation sold the Facility to Heatcraft, Inc., a wholly owned subsidiary of Lennox International, Inc. Lennox International Inc. continued manufacturing operations until April 30, 1991, when the plant was shut down.

5. During the time Lennox International Inc. owned the property, AAF-McQuay Inc. retained financial responsibility for the environmental liability associated with the Facility.

7. Both AAF International and McQuay International were operated internationally under the auspices of O.Y.L. Industries, which was part of Hong Leong Group Malaysia. In 2006 O.Y.L. Industries was acquired by Daikin Industries Ltd.

8. The AAF McQuay businesses were split up in late 2013. McQuay was renamed Daikin Applied Americas Inc. Daikin Applied Americas Inc. is listed as the legal operator on the April 1, 2016, RCRA Subtitle C Site Identification Form.

C. Port City Distribution, LLC, Corporate Information

1. Port City Distribution, LLC (Port City Distribution), is a domestic corporation authorized to transact business in North Carolina.

2. In January 2011, Port City Distribution purchased the property from Lennox International Inc. Port City Distribution currently crates and packages large items for overseas barge shipping under the name S & R Packing and Crating.

3. Port City Distribution is listed as legal owner on the August 1, 2016, RCRA Subtitle C Site Identification Form.

D. Regulatory Information

1. Chlorinated solvents, including trichloroethylene (TCE) and 1,1,1-trichloroethane (TCA), were both used in metal cleaning processes in connection with the manufacturing of fabricated copper/aluminum air conditioner coils and heat exchangers.

2. It was discovered on November 18, 1983, that one of the two former TCA storage tanks had leaked. It was estimated that approximately 400 to 500 gallons of waste TCA had been released and had entered into a ditch located adjacent to the northwest property line.

3. At the time of the 1983 release, the State of North Carolina, Division of Health Services, Environmental Health Section, Solid Waste Management Branch was notified of the release. The State advised that the release be contained and impacted soils removed.

4. A second release of waste TCA occurred at the Facility on July 16, 1987, when a drum containing vapor degreasing sludge was observed overflowing and discharging into the same ditch as the 1983 release. It was estimated that the 1987 release involved approximately 50 gallons of waste TCA. Information regarding the 1987 release was reported to the State on July 24, 1987.

5. To prevent the TCA from migrating offsite and potentially into the Cape Fear River, an earthen dam was constructed across the ditch in response to the July 16, 1987, spill. This dam formed an impoundment that was approximately 12 feet wide, 125 feet in length, and 4 feet deep, with a concrete pad existing between the waste management unit and the main manufacturing building.

6. Approximately 4,500 cubic feet of impacted soil were mixed with 350 bags of Portland cement on November 12, 1987, in order to solidify the contaminated soils in the impoundment. The solidified soils were excavated and shipped to the GSX Pinewood, South Carolina, landfill for disposal. Subsequent sampling indicated residual levels of 1,1,1-TCA remaining the soil.

7. Heatcraft, Inc. (a wholly owned subsidiary of Lennox International Inc.), entered into an Administrative Order on Consent, Docket # 88-139 (AOC) with the State, signed and dated April 20, 1989. AAF McQuay Inc. retained financial responsibility for the environmental liability associated with the Facility as an “operator.” Daikin Applied assumed that responsibility when it acquired O.Y.L. Industries in 2006.

8. Requirements of the AOC included:

- Characterization of subsurface conditions
- Characterization of the area of release
- Implementation of a groundwater monitoring program
- Submission of a groundwater sampling and analysis plan
- Submission of a closure plan
- Submission of a post closure plan
- Submission of a Part A Application

9. In accordance with the approved closure plan (dated July 1989, revised February and June 1990), a multimedia cap was placed over and extended five feet beyond the ditch impoundment (hazardous waste management unit) and made integral with the existing concrete pad. The multimedia cap, from below ground surface to ground surface consisted of clean fill material, geotextile fabric, clay cap, synthetic liner, and clean fills. Erosion control stone was placed as final cover and the concrete pad within five feet of the hazardous waste management unit was coated with and epoxy sealer.

10. Daikin Applied is currently maintaining a regulated disposal unit under 40 CFR 265.117, incorporated by reference in 15A NCAC 13A .0110, post-closure provisions. These provisions require groundwater monitoring and regular inspections of the cap overlying the former release area.

E. Facility Information (Physical)

1. The Facility is located at 602 Sunnyvale Drive in Wilmington, New Hanover County, North Carolina (see Figure contained in Attachment 1). The operational portion of the Facility is located on approximately 16.28 acres and is zoned industrial. The industrial portion of the Facility includes a 230,000 square foot building comprising office space, a large manufacturing area, a maintenance shop, and loading docks. Undeveloped woodlands, located to the southeast, are zoned residential.

2. The surrounding properties to the north and west consist of industrial facilities and the surrounding property to the south consists of undeveloped woodlands also zoned as industrial land. Residential homes and land, which are zoned residential, are located to the east of the Facility, and a residential housing community is located to the southeast of the Facility properties.

3. The topography is relatively flat with a slight northeast topographic gradient. The majority of stormwater flow is to the east-southeast into an unnamed tributary located near the eastern property boundary of the Facility. A second unnamed tributary is located along the western property boundary of the Facility. Both streams are classified as Class C unnamed tributaries and flow in a southerly direction discharging into Barnards Creek located to the south. Barnards Creek flows westward and discharges into the Cape Fear River.

4. At the Facility, the general stratigraphic sequence includes Quaternary in age surficial sand deposits underlain by the Castle Hayne Limestone, followed at depth by the Peedee Formation. The surficial/near surface deposits are between 35 and 40 feet thick across the Facility and consist of fine to medium grained sand overlying clay and sand beds. These clay and sand beds overlie the Castle Hayne Limestone which is estimated to range between 20 to 30 feet thick.

5. Underlying the Castle Hayne Limestone is the Peedee Formation which consists of unconsolidated sands, silts, and clays interbedded with consolidated sandstone and limestone. The uppermost portion of the Peedee Formation contains a clay confining bed which separates the Peedee Sandstone Aquifer from the overlying Castle Hayne Limestone. This confining clay bed is estimated to be 45 feet thick in the vicinity of the Facility and has been encountered at 60 feet below ground surface.

6. The unconfined surficial aquifer is described as an unconsolidated sand unit that averages 30 feet thick, and limestone unit (Castle Hayne Limestone) that averages 10-15 feet thick. These litholgically distinct units behave as one groundwater bearing unit, with the primary differences being the lithologic matrix and hydraulic conductivity (permeability). The sand unit contains fine to coarse grained sediments, gravels, with varying degrees of cementation, while the limestone unit contains a weathered surface that consists of fossil fragments, marl, and fractured limestone which averages 5 feet thick. The remainder of the limestone unit is approximately 10 feet thick and consists of massive, competent, and fractured limestone. The aquifer is heterogeneous and anisotropic. Groundwater flow in the surficial aquifer is to the southeast toward the unnamed tributary (AOC-1) of Barnards Creek. Under static, non pumping conditions, the hydraulic gradient is 0.01 feet/foot and increases to 0.06 feet/foot near the unnamed tributary.

7. The deep aquifer at the Facility is classified as the Peedee Aquifer with an average thickness of 100 plus feet. The Peedee Aquifer is overlain by a silty unit (Peedee Silt) that represents a leaky confining unit and is underlain by a separate silt bed that forms an underlying confining unit. It is comprised of alternating hard and soft bedded sandstone with groundwater flow primarily within the sand matrix and secondary flow along fractures. Under static, non-pumping conditions, groundwater flow within the Peedee Aquifer is the south-southwest at an average rate of 0.003 feet/foot toward the Cape Fear River located approximately 1 mile west and south of the Facility.

F. Operations/Waste Generation and Disposal Information

1. Prior to the 1960's the Facility was undeveloped land. The Facility was purchased and developed by Singer Company during the 1960's. SnyderGeneral Corporation purchased the Facility from Singer Company's Climate Control division in 1982.

2. Former manufacturing operations at the Facility included fabrication of copper/aluminum heating and air conditioning coils from 1960 to 1991. The process involved metal fabrication and required the use of TCE in the cleaning process. In 1976, the Facility changed from using TCE to TCA.

3. There is no information concerning the waste practices that occurred prior to the 1980's, however, during the 1980's, two primary waste streams were generated as part of operations conducted at the Facility.

4. The first waste stream was created from the degreasing system that was used to clean the heating and air conditioning heat exchangers. Two or three times a week, the vats of degreaser were allowed to boil down to a sludge which was drained into a 55-gallon drum equipped with a pump. The sludge was then pumped to one of two aboveground storage tanks, which were 2,500 and 3,000 gallons in capacity, respectively. About every 75 days, 4,000 gallons of the spent TCA was transported via bulk truck to the Prillaman Company, Martinsville, Virginia, plant for recovery.

5. The second waste stream was produced from the paint booth that was located northwest of the manufacturing building. Paint and virgin paint thinner were stored onsite prior to being used in the paint booth. As needed, paint was applied to the cabinetry that housed the heating and air conditioning equipment that was produced at the Facility. After painting, paint thinners were used to clean the associated paint spray guns. The paint waste and spent thinner were collected and stored in drums and other alternate disposal containers provided by the Prillaman Chemical Company of GSX. The hazardous wastes generated at the Facility during the manufacturing process included paint waste and spent thinner, TCA, Methyl Ethyl Ketone (MEK), and sulfuric acid.

6. Manufacturing operations continued at the Facility until April 30, 1991, when the plant was shut down. Subsequent to shut down, in 1996, space in the vacant manufacturing building was leased to International Paper which utilized the Facility for warehousing and cardboard recycling operations. Subsequent to 1996 and until January 2011, the Facility was leased to Port City Distribution, LLC. Port City Distribution, LLC, purchased the property in January 2011.

7. At the time of the 1983 and 1987 releases, the Facility was classified as a large quantity generator in that they generated an amount of hazardous waste equal to, or in excess of 1,000 kilograms in one calendar month during the calendar year.

G. Summary of Past Regulatory Actions

1. Subsequent to the installation of the RCRA Cap, and as per the 1989 AOC, multiple phases of groundwater investigative/assessment activities were conducted between 1989 and present.

2. A groundwater extraction system was installed in June 1994 to address groundwater contamination identified by sampling the installed monitoring wells. Initially the remediation system was designed to extract groundwater from two extraction wells, which included EW-1 screened in the surficial aquifer and EW-6 screened in the Peedee Aquifer.

3. The recovered groundwater is routed to air stripping units to remove volatile organic compounds (VOCs) from the liquid phase. Treated water is then discharged to an unnamed tributary, on the western portion of the Facility under an approved National Pollutant Discharge Elimination System (NPDES) Permit.

4. The extraction system was expanded in June 2000, under an approved Interim Measures Workplan dated May 1999. The expanded system included the installation of five (5) additional extraction wells (EW-2, EW-3, EW-4, EW-5, and EW-7). In addition extraction well EW-1 was re-drilled to a greater depth and constructed with a larger diameter casing and screen.

5. An onsite pulse air sparge (PAS) remediation system was installed in 2012 to expedite shallow aquifer remediation efforts and address the vinyl chloride impacts as they relate to offsite migration to surface water at concentrations in excess of 2B standards for Class C streams. The PAS consists of seven air sparge points.

H. Summary of Recent Regulatory Actions

1. Current remedial activities include inspections and maintenance of the RCRA Cap, operation and maintenance of the groundwater remediation systems, and monitoring activities as per the Facilities' most recently approved Sampling and Analysis Plan.

2. A visual inspection of the Facility was conducted on August 5, 2004, by Booz Allen Hamilton, contractor for EPA. As a result of this inspection, a RCRA Facility Assessment (RFA) Report, dated January 11, 2005, was completed. A total of sixteen (16) solid waste management units (SWMUs) and one (1) Area of Concern (AOC) were identified at the Facility. A description of each is provided below:

SWMU-1: Former Drum Storage Area for Investigative Derived Waste
SWMU-2: Groundwater Remediation System
SWMU-3: Former Petroleum UST Area
SWMU-4: Capped Hazardous Waste Management Unit
SWMU-5: Former Degreasing Unit
SWMU-6: Former Paint Booth Waste Area
SWMU-7: Former 90-Day Storage Area/Former 50'X50' Drum Storage Area
SWMU-8: Former 6,000 Gallon Waste Solvent AST
SWMU-9: Former 3,000 Gallon Waste Solvent ASTs (2)
SWMU-10: Parts Washer
SWMU-11: Scrap Paper Processing System
SWMU-12: Scrap Metal Hoppers and Roll-Off Container
SWMU-13: Compressor Condensate AST
SWMU-14: Used Oil Storage Area
SWMU-15: Solid Waste Roll-Off Containers (2)
SWMU-16: Former Non-Hazardous Drum Storage Area
AOC-1: North Tributary (containing elevated levels of VOCs)

3. Of the SWMUs and AOC listed in Paragraph III.H.2, no further action was recommended for SWMU-1, SWMU-2, SWMU-6, and SWMU-10 through SWMU-16.

4. Of the SWMUs and AOC listed in Paragraph III.H.2, no further action was also recommended for SWMU-3, SWMU-4, SWMU-5, SWMU-8, and SWMU-9; however, this status was contingent upon the continued operation of the groundwater extraction system and continued groundwater monitoring.

A Figure identifying the SWMUs that require either continued or further action is presented in Attachment 1. SWMU-3, SWMU-4, SWMU-5, SWMU-8, and SWMU-9 are illustrated on the Figure as their status of No Further Action is contingent upon continued remediation. SWMU-7 (confirmatory sampling) and AOC-1 (RFI necessary) are also illustrated.

5. The groundwater extraction system addresses contamination in both the surficial aquifer and the Peedee Aquifer. Currently there are six (6) extraction wells (EW-1, EW-2, EW-3, EW-4, EW-5, and EW-7) screened within the surficial aquifer, all to a total depth of 55 feet below ground surface, with the exception of EW-7 which is screened to a total depth of 40 feet below ground surface. These shallow extraction wells are designed to pump at a rate between 25 and 30 gallons per minute. Currently there is one (1) extraction well (EW-6) screened within the Peedee Aquifer to a total depth of 137 feet below ground surface and it

is designed to pump at a rate between 70 and 90 gallons per minute.

6. The recovered groundwater is routed to air stripping units to remove VOCs from the liquid phase. Treated water is discharged to an unnamed tributary, on the western portion of the Facility under an approved National Pollutant Discharge Elimination System (NPDES) Permit.

7. The shallow (surficial) aquifer monitoring well network currently consists of twenty-five (25) monitoring wells. Recent groundwater monitoring results indicate that 15A NCAC Subtitle 2L Groundwater Standards are exceeded in the shallow aquifer for the following constituents of concern: 1,1,1-TCA, 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), trichloroethene (TCE), vinyl chloride, and 1,4-dioxane. Groundwater samples are collected and analyzed in accordance with the Facilities' most recently approved Sampling and Analysis Plan.

8. The Peedee Aquifer monitoring well network currently consists of eight (8) monitoring wells. Recent groundwater monitoring results indicate that 15A NCAC Subtitle 2L Groundwater Standards are exceeded in the Peedee Aquifer for the following constituents of concern: 1,1-DCA, 1,1-DCE, cis-1,2-DCE, vinyl chloride, and 1,4-dioxane. Groundwater samples are collected and analyzed in accordance with the Facilities' most recently approved Sampling and Analysis Plan.

9. Of the SWMUs and AOC listed in Paragraph III.H.2, confirmatory sampling was recommended for SWMU-7. Specifically, confirmatory sampling of surface and subsurface soils surrounding the concrete pad was recommended to determine if waste management practices at SWMU-7 resulted in the release of hazardous constituents to the environment.

    a. In May 2010, five (5) soil borings (SB-1 through SB-5) were installed using direct push drilling techniques in the vicinity of SWMU-7. Soil samples were collected within each boring at depths of 1-2 feet below ground surface and at 4-5 feet below ground surface and analyzed for the presence of Volatile Organic Compounds by EPA method 8260B.

    b. Analytical results indicated VOC concentrations in all soil samples, with the exception of those collected from SB-3, to be below the laboratory practical quantitation limit.

    c. Analysis of the soil sample collected at a depth between 1-2 feet within SB-3 revealed a cis-1,2-DCE concentration of 143 micrograms per kilogram (µg/kg) and a naphthalene concentration of 82.4 µg/kg. Both constituent concentrations were below their respective North Carolina Soil Screening Level (SSL) of 360 µg/kg and 210 µg/kg considered protective of groundwater. The soil sample collected at a depth between 4-5 feet reported a naphthalene concentration of 1,580 µg/kg and a TCE concentration of 250 µg/kg and both constituent concentrations exceeded their respective SSL of 210 µg/kg and 18 µg/kg considered protective of groundwater.

    d. In October 2010, seven (7) additional soil borings were installed to further investigate the areal extent of VOC constituents in shallow soils in the vicinity of SWMU-7. Two (2) soil samples were collected within each

boring at depths ranging from 2.5 to 6.5 feet below ground surface and analyzed for the presence of Volatile Organic Compounds via EPA method 8260B.

e. Analytical results indicated the presence of concentrations of naphthalene, cis-1,2-DCE, 1,1-DCE, TCE, PCE, and vinyl chloride within soil samples collected from boring SB-8, SB-9, and SB-10 in excess of SSLs considered protective of groundwater. In addition, several constituent concentrations were in excess of both the EPA's Industrial and Residential Regional Screening Levels considered protective of human health.

10. Of the SWMUs and AOC listed in Paragraph III.H.2, further investigations and continued monitoring of the North Tributary (AOC-1) was recommended. Specifically, it was recommended that AAF McQuay, and then Daikin Applied, continue to monitor the North Tributary (AOC-1) for the presence of VOCs as TCA, DCE, TCE, and vinyl chloride had been detected in surface water samples. In addition, it was recommended that the source and extent of contamination observed in the surface water samples be identified.

a. Surface water samples are collected and analyzed in accordance with the Facilities' most recently approved Sampling and Analysis Plan.

b. Analytical results from recent sampling events indicate that vinyl chloride concentrations exceed the 15A NCAC 2B Surface Water Standard.

c. Onsite investigative activities for AOC-1 were conducted in May 2010. The objective of the investigation was to determine the source and extent of the groundwater to surface water discharge pathway contributing VOC constituents to the North Tributary (AOC-1). Three soil borings (BH-1, BH-2, and BH-3) were installed on the western side of the tributary between the onsite monitoring wells (FNW-3 well cluster) and the tributary for the collection of groundwater and soil samples to be analyzed for the presence of VOCs. In addition, two (2) surface water samples were collected from the portion of the north tributary located on the northern side of Sunnyvale Drive and analyzed for the presence of VOCs.

d. Analytical results indicated that all groundwater and surface water samples collected reported VOC constituent concentrations below their respective 15A NCAC 2B surface water standard for Class C waters. The data suggests that the groundwater to surface water discharge point, at concentrations greater than the 2B surface water standard for Class C waters is likely located offsite, on the southern side of Sunnyvale Drive.

e. Daikin Applied entered into an access agreement with the City of Wilmington signed and dated February 3, 2011, to investigate the source and extent of the offsite groundwater to surface water discharge pathway contributing VOC constituents to the North Tributary (AOC-1).

f. Offsite investigative activities for AOC-1 were conducted in August 2011. The objective of the investigation was to determine the offsite extent of the groundwater to surface water discharge pathway contributing VOC constituents to the North Tributary (AOC-1). Two permanent monitoring

well nests were constructed offsite on the City of Wilmington easement property located to the southeast of the Facility. Each separate well nest consisted of three separate well screen intervals to monitor the full thickness of the shallow aquifer.

g. Analytical results indicated the offsite groundwater to surface water discharge pathway contributing VOC constituents to the North Tributary (AOC-1) is likely associated with the upper 10 feet of the surficial aquifer.

h. As an Interim Measure, the Section approved the construction of onsite PAS based on the results of a completed Pulse Air Sparge pilot study conducted onsite in February 2011.

11. The Parties' current understanding of the geology and hydrogeology of the Facility is based on the following documents:

Closure Plan, July 1989
Post Closure Plan, 1990, Revised October 1991
Certification of Closure, November 1991
Offsite Domestic Well Survey, September 1993
Results of Phase III Groundwater Investigation, October 1993
Phase IV Groundwater Investigation Report, August 1994
Results of Phase V Groundwater Investigation, January 1995
Results of Surficial Aquifer Pump Test, August 1995
Interim Measures Workplan, May 1999
Risk Assessment Screening Report, August 2003
HBI Indoor Air Quality Testing May 2004
RCRA Facility Assessment, January 2005
Bedrock Monitoring Well Installation, November 2006
Water Well Reconnaissance Report, November 2006
Comprehensive Monitoring Evaluation, February 2008
Domestic Well Canvassing Report, April 2008
North Creek Investigation, On-site Soil Boring Interim Report, August 2010
Offsite Water Well Test Report, October 2010
SWMU-7 Remedial Assessment Report of Findings, January 2011
North Creek Investigation, Off-Site Investigation Report, April 2011
Pulse Air Sparge System Pilot Test Report, July 2011
Off-Site Monitoring Well Nest Installation Report, October 2011
Off-Site Soil Boring Assessment Report, August 29, 2012
Former Solid Waste Management Unit #7 Excavation Report and Corrective Action Summary Report of Findings, October 18, 2012
Revised Two-Dimensional Bedrock Aquifer Model, March 12, 2013
Investigative Work Plan to Install Offsite Peedee Aquifer Monitoring Wells OSW-3, May 28, 2013
Proposed Work Plan to Conduct Pumping Test to Evaluate Removal of Free Phase Hydrocarbons as part of Corrective Action, September 18, 2013
Hydrocarbon Pumping Test and Storm Drain Investigation Report of Findings, January 2014
Updated Groundwater Sampling and Analysis Plan, April 17, 2014
Offsite Monitoring Well Nest OSW-10 Report of Findings, July 2015
Indoor Air Quality Testing Report of Findings, February 2016
CORR Environmental Resources Inc., periodic groundwater monitoring and system effectiveness reports

12. Based on the above-referenced documents and all other recorded information related to the Facility, the Parties concur that the main contaminant pathways of concern at the Facility known at the present time include: (a) ground water to potable wells; (b) ground water to surface water; and (c) groundwater to indoor air. The known contaminants of concern at the Facility include Volatile Organic Compounds and 1,4-dioxane.

13. Certain actions have been taken and continue to be taken, as described below, to address the groundwater to potable well, groundwater to surface water, and groundwater to indoor air of contamination in and around the Facility. These actions are documented in the reports referenced above in Paragraph III.H.11. of this Order.

a. Ground Water to Potable Well – Surficial Aquifer

Groundwater flow within the surficial aquifer is to the southeast toward the intersection of Sunnyvale Drive and Chula Vista Drive. In this direction there are two residential neighborhoods. A survey of offsite domestic wells in these neighborhoods was conducted in 1993. The objective of the investigation was to locate private wells, obtain water samples for VOC testing, gather well construction information, and determine past and present usage history as a source of potable water. Analytical results identified three residential wells in two down-gradient neighborhoods that contained reportable amounts of chlorinated solvents. Two of these wells, located at 131 Chula Vista Drive and 133 Chula Vista Drive, contained concentrations of chlorinated solvents in excess of applicable 2L standards. The property owners were notified and asked to cease using their wells since the residences were provided potable water by the City of Wilmington Public Utilities water and sewer system.

Daikin Applied performed a visual well survey at residences located at 131 Chula Vista Drive and 133 Chula Vista Drive in August 2010. The survey revealed that the water well located at 133 Chula Vista Drive had been damaged and/or removed and is no longer operational. The survey revealed that the water well located at 131 Chula Vista Drive remained operational and used for irrigation purposes. At the request of the Section, Daikin Applied collected a groundwater sample from this well in August 2010 to be analyzed for the presence of VOCs by EPA Method 8260B. Results indicated the presence of vinyl chloride in excess of applicable 2L standards. Based on the results, the property owner was notified and again informed this well should not be used for purposes other than irrigation since the residence is provided potable water from the City of Wilmington. The Section requested that Daikin Applied negotiate an agreement with the property owner to sample this well on at least an annual basis. The Section has since been informed that the pump at 131 Chula Vista Drive had failed and the well was no longer in use.

To address contaminated groundwater in the surficial aquifer, a group of extraction wells were installed along the southern property line adjacent to Sunnyvale Drive to reduce the migration of contaminated groundwater beyond the property boundary. The recovered groundwater is pumped to a transfer tank, and then routed to the onsite remediation system to remove VOCs from the liquid phase by air stripping units. Treated water

is discharged to an unnamed tributary, on the western portion of the Facility under an approved National Pollutant Discharge Elimination System (NPDES) Permit.

b. Ground Water to Potable Well – Peedee Aquifer

Groundwater flow within the Peedee Aquifer is to the southwest towards the intersection of Sunnyvale Drive and Bryan Road. In this direction there are several residences and commercial buildings. Initial well canvassing activities were conducted in November 2006. Results indicated that seven (7) residential homes had visible well boxes, however, all residences were supplied with or had active city supplied potable water service. City records indicated twelve (12) residences within the canvass area without municipal water supply service. Based on this information, the Section mailed letters to each of the twelve (12) addresses requesting information about their well and permission to obtain water well samples for VOC analysis. The issuance of the letters produced no responses from residents. Daikin Applied conducted an additional domestic water well canvassing investigation in April 2008. This included interviewing residential owners. The interviews indicated that all of the 12 residences are either provided or connected to the City of Wilmington's Public Utilities water and sewer system.

To address contaminated groundwater in the Peedee Aquifer, an extraction well was installed in close proximity to the release area to help reduce contaminant migration within this aquifer. Recovered groundwater is routed to the onsite remediation system to remove VOCs from the liquid phase by air stripping units. Treated water is discharged to an unnamed tributary, on the western portion of the Facility under an approved National Pollutant Discharge Elimination System (NPDES) Permit. In addition, the Section requested that Daikin Applied develop a fate and transport model of the contaminant plume in the Peedee Aquifer specifically to show if, and/or when, the contaminant plume will naturally attenuate prior to reaching offsite receptors.

c. Groundwater to Surface Water

Based on the information presented in the documents listed in Paragraph III.H.11., groundwater movement within the surficial aquifer is to the southeast and ultimately discharges into the unnamed tributary of Barnards Creek (AOC-1). As a result of this groundwater-surface water pathway, surface water samples are collected and analyzed in accordance with the Facilities' most recently approved Sampling and Analysis Plan.

Daikin Applied installed an onsite pulse air sparge (PAS) remediation system to expedite shallow aquifer remediation efforts and to address the vinyl chloride impacts as they relate to offsite migration to surface water at concentrations in excess of 2B standards for Class C streams. The Environmental Health Director for New Hanover County was contacted on May 11, 2016, in regards to posting signage along the unnamed tributary. The purpose of the signage is to prevent or limit potential exposures to vinyl chloride in the unnamed tributary running adjacent to the residential neighborhood. The signs were posted on August 4, 2016.

Signage is a precautionary measure. The Facility designed and installed an active, onsite pulse air sparge remediation system in 2012 to expedite remediation efforts and to address the vinyl chloride impacts as they relate to offsite migration to surface water.

d. Groundwater to Indoor Air

Indoor air quality testing was conducted in April 2004 in the enclosed office spaces of the onsite factory building. Analytical results indicated reportable concentrations of 1,1-DCE, cis-1,2-DCE, 1,1,1-TCA, and TCE in all enclosed areas of the onsite factory building. Upon comparison with EPA's Regional Screening Levels for Industrial Air (updated November 2010), which are calculated using a carcinogenic risk factor of $1x10^{-6}$, all reported concentrations were below their respective standards with the exception of TCE. Reported TCE concentrations in the main office ranged from 6.5 micrograms per cubic meter ($\mu g/m^3$) to 6.8 $\mu g/m^3$, and one sample collected in the break room reported a TCE air concentration of 12 $\mu g/m^3$. These TCE air concentrations in the main office and break room exceed EPA's Regional Screening Levels for Industrial Air (November 2010) of 6.1 $\mu g/m^3$.

Additional indoor air quality testing was conducted in January 2016. Trichloroethylene was measured at concentrations ranging from 3.5 to 42 micrograms per cubic meter (ug/M^3) in seven indoor air samples. The North Carolina Division of Waste Management Non-Residential Indoor Air Action Level of 8.8 ug/M^3 was exceeded in three of the seven samples. Exceedences of the Action Level corresponded to the active work area, the warehouse storage area, and the former degreasing area. These areas overly the most highly contaminated portions of the groundwater contaminant plume.

The Section contacted the property owner and discussed the potential for adverse health effects to sensitive populations. It was recommended that women of child bearing age be kept out of the affected areas.

Given the presence of elevated levels of TCE in indoor air, the Section worked with Daikin Applied to investigate and mitigate onsite indoor air levels. Mitigation efforts included enhancements to increase air flow on the interior of the building and installation of subslab soil ventilation points. This work is ongoing.

The potential for vapor intrusion in offsite, residential homes was also investigated. Constituents measured in soil gas samples located in close proximity to residential homes did not exceed applicable screening levels.

IV. Conclusions of Law and Determinations

Based upon the foregoing stipulations of fact and all other information available on the effective date of this Order, the Section concludes and determines that:

A. Definitions

1. "Hazardous wastes" shall mean those hazardous wastes defined in N.C.G.S. § 130A-290(a)(8) and 40 CFR Part 261, incorporated by reference in 15A NCAC 13A .0106(a) through .0106(e).

2. "Hazardous constituents" shall mean those constituents listed in Appendix VIII to 40 CFR Part 261, incorporated by reference in 15A NCAC 13A .0106(e), or any constituent identified in Appendix IX to 40 CFR Part 264, incorporated by reference in 15A NCAC 13A .0109(a), or under N.C.G.S. § 130A-294.

3. "Landfill" shall have the meaning given in N.C.G.S. § 130A-290(a)(16).

4. The term "Facility" shall have the meaning given in 15A NCAC 13A .0102(c)(1).

5. The term "disposal" shall have the meanings given in N.C.G.S. § 130A-290(a)(6).

6. The term "Facility boundary" as used in this Order is the furthermost extent of the property, formerly owned and currently operated by Daikin Applied, shown on the Figure contained in Attachment 1.

7. The term "Active Portion" shall have the meaning given in 40 CFR 260.10, incorporated by reference in 15A NCAC 13A .0102(b).

8. The term "Corrective Action" shall mean all activities, including activities conducted beyond the Facility boundary, that are proposed or implemented to facilitate assessment, monitoring, and active or passive remediation of releases of hazardous waste or hazardous constituents to soil, groundwater, surface water, or the atmosphere associated with Hazardous Waste Management Units (HWMUs), Solid Waste Management Units (SWMUs), and/or Areas of Concern (AOCs) located at the Facility.

B. Status of Daikin Applied Americas Inc.

1. Daikin Applied Americas Inc. is a person as defined in N.C.G.S. § 130A-290(a)(22).

2. Daikin Applied Americas Inc. is an operator as defined in 40 CFR 260.10, adopted by reference at 15A NCAC 13A .0102(b), and 40 CFR 270.2, adopted by reference at 15A NCAC 13A .0113(a).

C. Status of Port City Distribution, LLC

1. Port City Distribution, LLC, is a person as defined in N.C.G.S. § 130A-290(a)(22).

2. Port City Distribution, LLC, is an owner as defined in 40 CFR 260.10, adopted by reference at 15A NCAC 13A .0102(b), and 40 CFR 270.2, adopted by reference at 15A NCAC 13A .0113(a).

D. Application of RCRA Standards

1. Pursuant to 40 CFR Part 261, Appendix VII, incorporated by reference in 15A NCAC 13A .0106(e), waste TCA is a listed hazardous waste assigned EPA waste code F001.

2. Pursuant to 40 CFR 262.34, incorporated by reference in 15A NCAC 13A .0107(c), a large quantity generator of hazardous waste that stores the waste for less than 90 days in a container or a tank and, therefore is not required to obtain a RCRA permit or obtain interim status, must nonetheless comply with the rules set forth in 40 CFR, Part 265, Subpart I, interim status regulations for use and management of containers, and the applicable parts of Subpart J, interim status regulations for tank systems. Pursuant to this regulation, compliance with 40 CFR Part 265, Subpart I, and applicable parts of Subpart J, throughout the time the Facility was operated was required.

3. In accordance with 40 CFR 265.196, incorporated by reference in 15A NCAC 13A .0110(j), if a generator using a tank to accumulate hazardous waste determines that there is a leak or spill, and the generator cannot meet the requirements for returning the tank system to service, the tank system must be closed in accordance with 40 CFR Part 265.197. After the spills in 1983 and 1987, the requirements to return the tank systems to service could not be met, including the ditch into which waste TCA was deposited; therefore, the systems and areas of contamination were required to be closed pursuant to the standards of 40 CFR Part 265.197.

4. In accordance with 40 CFR Part 265.197, incorporated by reference in 15A NCAC 13A .0110(j), at closure of a tank system, if the owner or operator demonstrates that not all contaminated soils can be practically removed or decontaminated, the tank system is then “considered to be a landfill” and the owner or operator must close the tank system and perform post closure care in accordance with closure and post closure care requirements at 40 CFR Part 265.310 that apply to landfills. The full extent of contaminated soils could not be practically removed or decontaminated after the 1983 spill from the tank system and waste residue remained after soil removal; therefore, the tank system, including the ditch into which waste TCA was deposited, was required to be closed as a landfill. Post closure care, including treating the ditch as a landfill, pursuant to 40 CFR Part 265.310, incorporated by reference in 15A NCAC 13A .0110(n), was required.

5. A “landfill” is also a “land disposal facility”; therefore, the owner and operator are subject to all the requirements for landfills set out in 40 CFR Part 265, Subparts G and H, incorporated by reference in 15A NCAC 13A .0110(g) and (h).

6. The groundwater monitoring requirements of 40 CFR Part 265, incorporated by reference in 15A NCAC 13A .0110, also apply to a generator’s facility where a tank system has been designated a landfill until a post closure permit is issued.

7. Similarly, 40 CFR Part 262.34, incorporated by reference in 15A NCAC 13A .0107(c), provides that when an accumulation container storage area is closed, the owner and operator must comply with 40 CFR Part 265.111 and 40 CFR Part 265.114, incorporated by reference in 15A NCAC 13A .0110 (g), and remove all hazardous waste from the facility within ninety (90) days of when it was generated. EPA has adopted a policy that if the generator is unable to

practicably remove or decontaminate all contaminated soils resulting from the practice of accumulating waste in containers, the accumulation storage area is a "landfill" and the closure and post closure requirements discussed in Paragraphs IV.C.3 through Paragraphs IV.C.6 of this Order apply to this area. As stipulated above, contamination of media also resulted from the Facilities' management of hazardous waste in containers, specifically the 1987 spill of approximately 50 gallons of TCA from a drum containing vapor degreasing sludge.

8. Additionally, 40 CFR 270.1(c), adopted by reference in 15A NCAC 13A .0113(a), requires that owners and operators of landfills that certify closure after January 26, 1983, must have post-closure permits, unless it demonstrates closure by removal (i.e., "clean closure"). Based on the foregoing and pursuant to 40 CFR 270.1(c), incorporated by reference in 15A NCAC 13A .0113(a), the Facility is required to have a post-closure permit or be bound by the requirements of this Order.

9. Pursuant to 40 CFR 265.121, incorporated by reference in 15A NCAC 13A .0110(g), owners and operators who are subject to the requirement to obtain a post-closure permit under 40 CFR 270.1(c), incorporated by reference in 15A NCAC 13A .0113(a), but who obtain enforceable documents in lieu of a post-closure permit, as provided under 40 CFR 270.1(c)(7), incorporated by reference in 15A NCAC 13A .0113(a), must comply with the following requirements:

    a. The requirements to submit information about the Facility in 40 CFR 270.28, incorporated by reference in 15A NCAC 13A .0113(b);

    b. The requirements for Facility-wide corrective action in 40 CFR 264.101, incorporated by reference in 15A NCAC 13A .0109(g);

    c. The requirements of 40 CFR 264.91 through 264.100, incorporated by reference in 15A NCAC 13A .0109(g).

10. AAF McQuay, and later Daikin Applied, have complied with the requirements of 40 CFR 270.28, incorporated by reference in 15A NCAC 13A.0113.

11. As substantiated in the reports submitted by AAF McQuay, and later Daikin Applied, referenced in Paragraph III.H.11., the Section has determined that the closed regulated unit, identified as SWMU-4, is situated among one or more solid waste management units and/or areas of concern at the Facility. The Section has determined that a release has occurred at the Facility, and that both the regulated unit and one or more solid waste management unit(s) and areas of concern may have contributed to the release. Therefore, as provided in 40 CFR 264.90(f), incorporated by reference in 15A NCAC 13A .0109(g), the regulated unit is eligible to be remediated under the corrective action requirements of 40 CFR 264.101, incorporated by reference in 15A NCAC 13A .0109(g), and is not required to comply separately with the requirements of 40 CFR 264.91 through 264.100, incorporated by reference in 15A NCAC 13A .0109.

12. Daikin Applied agrees that additional monitoring and corrective action may be required as a result of any additional characterization that shall be completed pursuant to this Order. Daikin Applied further agrees to conduct additional monitoring and corrective action to the extent required by applicable laws, policies, and regulations.

13. This Order is being issued at the discretion of the Chief of the Section in lieu of a post-closure permit, pursuant to N.C.G.S. Chapter 130A, Article 9; 40 CFR 270.1(c)(7), incorporated by reference in 15A NCAC 13A .0113(a); 40 CFR 265.121, incorporated by reference in 15A NCAC 13A .0110(g); and all applicable portions of 40 CFR Parts 124, 264, 265, and 270, incorporated by reference in 15A NCAC 13A .0105, .0109, .0110, and .0113.

E. Integration of Order

1. Daikin Applied agrees to continue implementing the requirements stated in the 1990 Post-Closure Plan, which was revised in October 1991, for the Regulated Unit (SWMU-4). Unless specifically superseded by the terms of this Order, the requirements specified in the Post-Closure Plan and any current Division approved work orders remain in effect. With these specified, limited exceptions, this Order supersedes any other agreement, verbal or written, between AAF McQuay or Daikin Applied and the Section that may have been entered into prior to the date of execution of this Order.

2. If any conflict exists between the specified methods of completing work pursuant to the documents referenced in Paragraph III.H.11. and this Order, the terms of this Order shall control.

3. Daikin Applied shall develop a remediation program as described in Paragraph V.M.1, designed to meet the remedial goals described in Paragraph V.L.1. The remediation program shall continue until one or more of the following conditions are met: (1) the Section determines that such activities are no longer necessary for the effective remediation of the Facility; (2) the Section determines that new interim measures are required for the Facility as provided in Paragraphs V.K.1–V.K.6; or (3) a new remedial program is implemented pursuant to Paragraph V.M.5.

F. Acceptance of Previous Work

1. The Section acknowledges that AAF McQuay or Daikin Applied may have completed some of the tasks required by this Order and that some of the information and data required by this Order may be available. This previous work may be used to meet the requirements of this Order.

2. The corrective action activities, including the RCRA Cap inspection, operation and maintenance of onsite remediation systems, and monitoring activities in accordance with the most recently approved Sampling and Analysis Plan will be recognized by the Section as appropriate, but not necessarily sufficient, in the development and implementation of any further activities under this Order.

G. Responsibility Issues

1. Daikin Applied accepts full responsibility for satisfactory completion of all required tasks and activities in accordance with the terms and conditions of this Order and, subject to the provisions of Section XIII of this Order, accepts further direction by the Section to achieve satisfactory completion of the corrective action required by this Order.

V. Scope of Work

A. Owners and operators of the Facility must ensure that an updated Part A application meeting the requirements of 40 CFR 270.28, incorporated by reference in 15A NCAC 13A .0113(b), including signatures by the appropriate corporate officers, is on file with the Hazardous Waste Section.

B. Daikin Applied shall complete any additional characterization activities required to select and design a final remedy for the Facility. In conducting any such Work, Daikin Applied shall prepare appropriate Workplans and reports for Section approval.

C. All actions required pursuant to this Order shall be in accordance with applicable local, state, and federal laws and regulations applicable at the time the Work is undertaken.

D. If documents submitted to the Section include any work that would constitute the practice of engineering as defined by N.C.G.S. Chapter 89C, the signature and seal of a professional engineer is required. If documents submitted include any work that would constitute the practice of geology as defined by N.C.G.S. Chapter 89E, the signature and seal of a licensed geologist is required. If any work is to be done on a well that would constitute well contractor activities as defined in N.C.G.S. Chapter 87, a certified well contractor shall be employed to perform the work.

E. Any applicable standard, requirement, criteria, or limitation under an environmental law or facility siting law promulgated by North Carolina that is more stringent than any federal standard, requirement, criteria, or limitation with respect to any hazardous waste or constituent is applicable to the Work to be done at this Facility; e.g., the groundwater standards promulgated at title 15A NCAC Subchapter 2L, shall apply to releases at the Facility and beyond the Facility boundary.

F. Facility Site Conceptual Model (SCM)

1. The information in the documents listed in Paragraph III.H.11. serves as the foundation for current characterization and remediation decision making. The Section has determined the current Facility Site Conceptual Model (SCM) is appropriate; however, if an updated SCM is required it shall include, at minimum, the following:

    a. the geologic/hydrogeologic conditions at the Facility;

    b. the sources, types, and distribution of contaminants and any breakdown products;

    c. a holistic overview of the sources contamination, including known or potential pathways of migration, and known or potential receptors;

    d. the actual or reasonably inferred extent of migration beyond the Facility boundary;

    e. possible environmental and human health risks.

    The SCM(s) shall include maps, cross-sections, flownets, narrative, data tables, groundwater flow models, contaminant transport models, and any other information needed to gain a full understanding of the Facility.

2. Daikin Applied shall submit a modified or updated SCM when either the Section or Daikin Applied determine there is a need for a new SCM. Submissions of updated SCMs shall occur pursuant to this Paragraph until the Section determines (a) that corrective action at the Facility is completed or (b) that further updates of the SCM are no longer necessary. After review of the updated SCM, the Section shall notify Daikin Applied in writing that the SCM has been approved or that there are material deficiencies in the SCM. After receiving written notification from the Section of any material deficiencies in the SCM, Daikin Applied shall submit to the Section, within a mutually-agreed-to time period, information or material sufficient to correct such deficiencies.

3. The SCM shall be an adaptable model of the Facility that is used to develop hypotheses regarding the location and movement of contamination at the Facility and the potential impacts that may occur to human health and the environment. Daikin Applied shall use EPA and Department guidance documents appropriate and applicable at the time the work is undertaken in developing any updated SCM.

4. Using the SCM as a guide, Daikin Applied shall conduct such Facility investigations and assessments determined to be required under applicable laws and regulations for the development and implementation of a Facility-wide corrective measures program. The SCM shall guide corrective actions taken pursuant to this Order.

5. Additional Facility investigations required by this Order may include investigation and characterization of the sources, nature, extent, direction, rate, movement, and concentration of hazardous waste or hazardous constituents that have been or are likely to be released into the environment from the Facility, and the collection and analysis of relevant Facility hydrogeologic and chemical data.

G. Facility Characterization to be Performed

1. Although a significant amount of work has been conducted at the Facility, Daikin Applied shall submit Workplans to complete investigative/characterization activities as appropriate. The need for additional characterization at the Facility can be instigated by either Daikin Applied or the Section.

2. If any additional contamination is discovered, Daikin Applied must sufficiently characterize the extent of contamination within the environmental media (groundwater, surface water, soil, sediment, indoor air) affected and characterize the groundwater flow patterns, including any preferential flow pathways that might influence contaminant migration.

3. Daikin Applied must perform assessment sufficient to determine the appropriate remedial measures to achieve remediation goals, or to perform interim measures consistent with overall remediation goals.

H. Facility Characterization Workplans/Quarterly Progress Reports

1. Within sixty (60) calendar days after notification from the Section that additional Facility characterization is required, Daikin Applied shall submit a Facility Characterization Workplan based upon the SCM outlining the activities that shall be undertaken. The Workplan shall include a schedule of implementation. The

schedule of implementation shall include the submission of quarterly progress reports to the Section in accordance with Paragraph V.H.4.

2. The Section will either accept or provide comments on the proposed Facility Characterization Workplan. Within thirty (30) calendar days of receiving notice from the Section of any deficiency in the Facility Characterization Workplan, Daikin Applied shall submit to the Section information or material sufficient to correct such deficiency. Daikin Applied shall begin to implement the Workplan within thirty (30) calendar days of receiving concurrence from the Section.

3. If it is determined that additional investigative or mitigation activities are required following completion of the work outlined in the described Workplans; then Daikin Applied shall perform those additional tasks according to a schedule mutually agreed upon by Daikin Applied and the Section. Such work shall also conform to the requirements of this Order.

4. If additional Facility characterization activities are needed, and if the Section deems necessary, Daikin Applied shall submit semi-annual reports on the progress of such activities. These reports shall include:

   a. A description of the portion of the Facility characterization completed;
   b. Summaries of findings;
   c. Summaries of any deviations from the approved Facility Characterization Workplan(s) during the reporting period;
   d. Summaries of any significant contacts with local community public interest groups or state government;
   e. Summaries of any problems or potential problems encountered during the reporting period;
   f. Actions taken to rectify problems;
   g. Changes to relevant personnel;
   h. Projected work for the next reporting period; and
   i. Copies of laboratory/monitoring data including QA/QC data.

I. Facility Characterization Reports

1. Daikin Applied shall prepare and submit to the Section the Final Facility Characterization Reports for the investigations conducted pursuant to the Workplans, the work performed as part of the Facility investigation, and include an update to the SCM. Daikin Applied shall submit the Final Facility Characterization Reports to the Section according to the schedule established by the Section. The Final Facility Characterization Reports shall include an analysis and summary of all required investigations of the hazardous waste management unit, SWMUs, and AOCs, and the investigation results. The summary shall describe the type and extent of contamination at the Facility, including sources and migration pathways, and a description of actual or potential receptors. The Reports shall also describe the extent of contamination in relation to background levels indicative of the area.

2. The Section shall review the Final Facility Characterization Report and notify Daikin Applied of the need for further investigative action and/or the need for a remediation program in accordance with 40 CFR 264.101, incorporated by reference in 15A NCAC 13A .0109(g). Subject to the provisions of Section XIII,

Daikin Applied shall prepare and implement any further investigative action required by the Section according to a schedule approved by the Section. Remediation shall be conducted using the procedures specified in this Order.

J. Facility-Wide Monitoring Program

1. Daikin Applied shall continue to implement the monitoring program described in the most recently approved *Sampling and Analysis Plan.* Any request to modify the existing monitoring program shall be made, approved, and implemented pursuant to Paragraphs V.J.2 through V.J.4.

2. Additional Facility characterization may require modifications to the existing monitoring program. If the Section determines the monitoring program or any aspect of the monitoring program is inadequate to monitor conditions at the Facility or does not comply with applicable regulatory requirements, then the Section shall notify Daikin Applied in writing. Within thirty (30) calendar days of receiving written notification from the Section, Daikin Applied shall develop and submit an amended monitoring program for the Facility.

3. If Daikin Applied seeks to modify the existing monitoring program, then Daikin Applied shall submit to the Section a written explanation of the proposed modification.

4. The Section will approve, disapprove, or provide comments on any proposed modification to the monitoring program. Within thirty (30) calendar days of receiving notice from the Section of any deficiency in a proposed modification to the monitoring program, Daikin Applied shall submit to the Section information or material sufficient to correct such deficiency. Daikin Applied shall implement the modified monitoring program within thirty (30) calendar days of receiving approval from the Section.

K. Interim Measures

1. Interim Measures must be undertaken as necessary in order to minimize or prevent the further migration of contaminants and to limit human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and implemented. If, prior to implementation of a final remedy, the Section determines that there is a need to implement interim remedial measures or to modify existing interim remedial measures, then Daikin Applied shall prepare and submit an Interim Measures Workplan (IM Workplan) within thirty (30) calendar days of receiving written notification from the Section.

2. The IM Workplan shall ensure that the proposed interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term corrective measures program at the Facility. The IM Workplan shall include a discussion of (a) the objectives of the interim measures program; (b) the required Facility procedures for either the implementation of any modification to the existing interim remedial measure or the addition of new interim measures (including any designs, plans, or specifications); and (c) the schedule for the implementation of the modification to or the addition of interim measures.

3. The IM Workplan shall be submitted to the Section within thirty (30) days of recognition that interim measures are necessary. It shall be approved by the Section in writing prior to its implementation. If the Section disapproves the IM Workplan, the Section shall either (a) notify Daikin Applied in writing of the IM Workplan's deficiencies and specify a due date for the submission of a revised IM Workplan; or (b) conditionally approve the IM Workplan and notify Daikin Applied of the conditions upon which interim measures shall be implemented. Daikin Applied shall implement any required modification to or addition of interim measures in accordance with the Section's directions.

4. Daikin Applied shall give notice to the Section as soon as possible of any proposed changes to the IM Workplan. Such modifications shall be implemented only with the Section's approval and shall conform to the requirements of this Order.

5. If the time required for the completion of any modification to or addition of an interim measure is more than one (1) year, Daikin Applied shall provide the Section with progress reports at intervals specified in the approved IM Workplan. The progress reports shall contain the following information at a minimum: (a) a description of the portion of the interim measures completed; (b) summaries of any deviations from the IM Workplan during the reporting period; (c) summaries of any problems or potential problems encountered during the interim period; (d) projected work for the next reporting period; and (e) copies of all laboratory/monitoring data generated during the reporting period.

6. Daikin Applied shall prepare and submit a final Interim Measures Report (IM Report) to the Section within ninety (90) calendar days of the completion of any interim measure. The IM Report shall contain the following information at a minimum: (a) a description of the interim measures that were implemented; (b) summaries of the results of such interim measures; (c) summaries of any problems encountered; (d) summaries of the accomplishments and effectiveness of interim measures; and (e) copies of all relevant laboratory/monitoring data.

L. Remedial Strategy

1. The Section's remedial goals for the Facility include protection of known and suspected potential receptor exposure points, remediation of soil to unrestricted use standards or to industrial use standards with appropriate land use restrictions, and remediation of groundwater and surface water to applicable standards. The Facility developed and submitted a remedial strategy to address onsite and offsite contamination on August 24, 2016. The Remedial Strategy clearly and concisely states the environmental media that have impacted, potential exposure pathways, and remedial actions that have been or will be taken to address potential health risks and achieve regulatory objectives. The Remedial Strategy includes components of source control, in situ treatment, containment of offsite migration, and solvent mass removal. If Daikin Applied determines that alternate remediation levels would be protective of human health and the environment, then such alternate levels may be submitted to the Section for evaluation after Facility characterization is complete.

2. Remedial Strategies must be flexible to account for emerging or changing contaminant trends, human health issues, and/or technological advancements. The Remedial Strategy may be updated or modified at the request of either the

Section or Daikin Applied in the event of changing conditions. Changes to the Remedial Strategy will require concurrence and approval from the Section.

M. Remediation Program

1. Upon completion of Facility characterization activities and evaluation of current and/or future interim remedial measures, Daikin Applied shall submit a Corrective Measures Study (CMS) to the Section. The CMS evaluates the effectiveness of past and interim remedies and potential future remedies for the remaining impacted areas at the Facility and beyond the Facility boundary. The CMS considers (a) the SCM; (b) contaminants of concern; (c) the nature and extent of contamination; (d) the rate of contaminant movement; (e) the amount of time required to remediate the Facility; (f) media and receptors impacted; and (g) other relevant information gathered during the prior investigations at the Facility. The CMS includes a summary of remedial options considered, an implementation schedule, a method of evaluating the effectiveness of the remediation program, a method of determining when remediation is complete, and an estimate of the required duration of the remediation program to meet the remedial goals.

2. The CMS shall be approved by the Section in writing. If the Section disapproves of the CMS, Daikin Applied shall update the document upon written request from the Section, and at any other time, Daikin Applied deems appropriate. Within thirty (30) calendar days of receiving written notice from the Section of any deficiency in a proposed CMS, Daikin Applied shall submit to the Section information or material sufficient to correct such deficiency. When the Section determines that a remedial strategy has been amended appropriately, then the Section shall notify Daikin Applied in writing of its approval.

3. The CMS includes a Workplan that may be implemented in phases and Daikin Applied, at the completion of each phase, may propose additional investigations, if required, to address data gaps and/or to test and/or evaluate potential remedies. Corrective Measures Status Reports shall be submitted at each applicable phase of work. A description of the remediation program shall be included in each report. The remediation program shall at all times be technically consistent with appropriate and applicable EPA and Department guidance on the development and use of remediation technologies.

4. Within thirty (30) calendar days of receiving the Section's concurrence on the final Corrective Measures Study, Daikin Applied shall provide the Section with applicable information for the Section to commence the public participation process as specified in Paragraphs XI.A-XI.B. Upon completion of the public participation process, the Section shall approve, approve with modification, or disapprove the remediation program.

5. Within ninety (90) calendar days after approval of the final Corrective Measures Study, Daikin Applied shall submit to the Section the specifications for the remediation program and shall begin implementation of the remediation program. The remediation shall not be deemed complete pursuant to Paragraphs XIV.A. through XIV.C. of this Order until the remedial goals have been met.

6. If the approved final remedy for the Facility includes institutional controls or other land use restrictions (collectively, the Restrictions), Daikin Applied agrees to

obtain approval from the owners of the property subject to the Restrictions to record the Restrictions with the New Hanover County Register of Deeds.

VI. Data Quality Assurance and Quality Control

A. Workplans shall contain quality assurance/quality control (QA/QC) and chain of custody procedures for all sampling, monitoring, and analytical activities. Daikin Applied shall document in the applicable report any deviations from the QA/QC and chain of custody procedures in approved Workplans, including reasons for the deviations.

B. To ensure that data of known and appropriate quality are obtained and are sufficient to support their intended use(s), Daikin Applied shall submit Workplans and reports to the Section that include data quality objectives for each collection activity.

VII. Property Access and Sampling Access

A. Daikin Applied shall assure that the Section and its representatives, including contractors, have access at all reasonable times to the Facility and to any other property where access is necessary to ensure performance of the activities required by this Order.

B. To assure access to property beyond Facility boundaries, Daikin Applied shall use their best efforts to obtain access agreements and easements from current owners of property impacted by contamination originating at the Facility, as required by the Act and the State Hazardous Waste Rules, which agreements shall be legally sufficient to run with the land if the property is sold; shall be recorded with the New Hanover County Register of Deeds office; and shall be indexed with the State of North Carolina as the Grantee.

C. In the event that the access agreements and easements required by Paragraph VII.B. cannot be obtained as per Daikin Applied's best efforts, Daikin Applied shall notify the Section and provide documentation regarding its efforts to obtain such agreements. If necessary, the Section may exercise its legal authority to assist Daikin Applied in obtaining access to properties beyond the Facility boundary.

D. The Section or its representatives may take split or duplicate samples of any samples collected by Daikin Applied, or any authorized representative of Daikin Applied, pursuant to this Order. Daikin Applied or its authorized representatives shall notify the Section no less than ten (10) working days in advance of any field activities. Daikin Applied may give verbal notification to the Section in this instance.

E. Daikin Applied shall allow the Section or its representatives to access the Facility at reasonable times, upon notice to property owner, to review the progress of activities required by this Order, to conduct such tests as the Section deems necessary in connection with this Order, and to otherwise assess Daikin Applied's compliance with this Order.

F. All persons with access to the Facility pursuant to this Order shall comply with Facility-specific health and safety plans and any applicable security procedures.

G. Daikin Applied shall comply with the security requirements specified in 40 CFR 264.14, incorporated by reference in 15A NCAC 13A .0109(c), and consequently prevent or minimize the unknown or unauthorized entry of people, pets, or livestock onto the active portions of the Facility.

H. Nothing in this Order shall limit any access rights the Section may have pursuant to law.

VIII. Data Collection/Document Availability/Reporting Requirements

A. Daikin Applied shall, upon request, furnish the Section with copies of records required by this Order, including copies of daily reports, inspection reports, and laboratory/monitoring data.

B. All data, factual information, and documents submitted by Daikin Applied pursuant to this Order shall be subject to public inspection. Daikin Applied shall not assert any confidentiality or privilege claim concerning any data gathered during any investigations or other actions required by this Order, including any hydrogeological or chemical data, any data submitted in support of a remedial proposal, or any other scientific or engineering data especially as regards an interim or final remedy. Except as specifically prohibited by this paragraph, Daikin Applied may assert a claim of confidentiality as to any process, method, technique, or any description thereof that Daikin Applied claims constitutes proprietary or trade secret information developed by Daikin Applied or developed by their contractor(s). Except as specifically prohibited by this paragraph, Daikin Applied may assert business confidentiality claims, if applicable, at the time information is submitted for information provided in connection with this Order in accordance with 40 CFR 2.203(b), incorporated by reference in 15A NCAC 13A .0104(c), Chapter 132 of the North Carolina General Statutes, N.C.G.S. § 130A-304, or any other applicable State law. Any claim for confidentiality submitted pursuant to this paragraph shall be subject to North Carolina's confidentiality determination procedures and, if determined to be confidential, afforded protection by the Section as provided by North Carolina law.

C. Documents that are asserted to be attorney work product or subject to privilege under law shall not be subject to inspection or copying under this Order. Daikin Applied shall provide the Section with (1) an identification of the date, title and subject matter of each document for which a privilege is asserted; and (2) an explanation as to why the privilege is applicable to the document or portions therefore. Notwithstanding the foregoing provision, the Section may seek disclosure of such documents through a court of competent jurisdiction.

D. Daikin Applied shall notify the Section in writing as soon as possible, and no later than fifteen (15) working days after Daikin Applied obtains knowledge, of any planned physical alterations or additions which may impact the SWMUs, AOCs, or areas contaminated by releases from these units.

E. Daikin Applied shall report to the Section any situations that may endanger human health or the environment. These reports shall be communicated orally within 24 hours and submitted in writing within five (5) working days of when Daikin Applied becomes aware that the situation exists. Depending upon the circumstances, the Section may waive the five-day requirement and allow Daikin Applied to submit the written report within fifteen (15) working days.

F. Daikin Applied shall submit a biennial report to the Section by March 1 of each even numbered year as required by 40 CFR 264.75, incorporated by reference in 15A NCAC 13A .0109(f). The biennial report shall be submitted on EPA form 8700-13 A/B. The report shall cover activities required by this Order during the previous calendar year. The certification submitted with the biennial report shall be signed by an authorized corporate officer of Daikin Applied.

G. Daikin Applied shall preserve, for at least three (3) years after the termination of this Order, all records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys that relate in any way

to this Order. For any hazardous waste generated, Daikin Applied shall retain a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation for at least five (5) years from the date the last waste was treated, stored, or disposed (either at the Facility or beyond the Facility) or until the Section determines corrective action is completed, whichever date is later. As required under 40 CFR 264.74(b), incorporated by reference in 15A NCAC 13A .0109(f), the retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding Daikin Applied or as requested by the Section.

H. Notification and data collection/assessment requirements for newly identified SWMUs and AOCs.

1. Daikin Applied shall notify the Section in writing, within fifteen (15) calendar days of discovery, of any newly identified SWMU or AOC. The notification shall include, at a minimum, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release).

2. Daikin Applied shall prepare and submit to the Section, within ninety (90) calendar days of notification, a SWMU Assessment Report (SAR) for each newly identified SWMU or AOC. At a minimum, the SAR shall provide the following information:

   a. Location of unit on a topographic map of appropriate scale such as required under 40 CFR 270.14(b)(19), incorporated by reference in 15A NCAC 13A .0113(b).
   b. Designation of type and function of unit.
   c. General dimensions, capacities and structural description of unit (including any available plans/drawings).
   d. Dates that the unit operated.
   e. Specification of all wastes that have been managed at/in the unit to the extent available, including any available data on hazardous constituents in the waste.
   f. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit (to include ground water data, soil analyses, air, and/or surface water data).

3. Based on the data in the SAR, the Section shall determine the need for further investigations at the newly identified SWMU or AOC. If the Section determines that further investigations are needed, the Section shall require Daikin Applied to develop a plan for such investigations and to obtain Section approval before implementing the plan.

I. Notification requirements and data collection/assessment for newly discovered releases at previously identified SWMUs and AOCs.

1. Daikin Applied shall notify the Section in writing of any newly discovered release(s) of hazardous waste or hazardous constituents identified during the course of groundwater monitoring, field investigations, environmental audits of previously known SWMUs or AOCs, or by other means, within fifteen (15) calendar days of discovery. This requirement also applies to newly discovered releases at known SWMUs and AOCs for which additional investigation was not previously required.

2. If the Section determines that further investigation of the SWMUs or AOCs is needed, the Section shall require Daikin Applied to develop a plan for such investigation and to obtain Section approval before implementing the plan.

J. Daikin Applied shall furnish the Section with any relevant information that may be used to determine whether cause exists to terminate or revise this Order.

K. Daikin Applied shall provide one (1) hard copy and one (1) electronic copy of all submittals required by this agreement. Electronic documents shall be in a MS Word format, a common text format, or a PDF format. All monitoring data, including soil, groundwater, surface water and/or air shall also be submitted electronically in spreadsheet or database format.

IX. Inspection and Training Requirements

A. A general inspection and maintenance schedule for post-closure care has been submitted to the Section and approved. If changes to the inspection and maintenance schedule are warranted, Daikin Applied shall notify the Section in writing. This plan shall be consistent with 40 CFR 264.15, incorporated by reference in 15A NCAC 13A .0109(c), and shall be updated as necessary to include additional or modified monitoring and remedial action systems required by this Order.

B. A personnel training plan for employees and contractors involved with environmental monitoring and maintenance of the remediation systems has been submitted to the Section and approved. If changes to the personnel training plan are warranted, Daikin Applied shall notify the Section in writing. The plan shall be consistent with 40 CFR 264.16, incorporated by reference in 15A NCAC 13A .0109(c). Training shall include instruction for emergency response, sampling, and operation and maintenance procedures. The personnel training plan shall be updated as necessary to incorporate additional or modified monitoring and remedial action systems required by this Order. Daikin Applied shall maintain copies of training documents and records according to the requirements of Paragraph VIII.G. of this Order.

X. Cost Estimate, Financial Assurance, and Adjustments

A. In accordance with 40 CFR 265.121, incorporated by reference in 15A NCAC 13A .0110(g), Daikin Applied shall comply with the requirements listed in 40 CFR 264.100 and 264.101, incorporated by reference in 15A NCAC 13A .0109(g), for corrective action as defined in Paragraph IV.A.7.

B. Daikin Applied has submitted for Section review and approval a written cost estimate as described in 40 CFR 264.144, incorporated by reference in 15A NCAC 13A .0109(i), for the actions required by this Order. This estimate is based on Daikin Applied's proposed corrective action.

C. Subsequent cost estimates shall be prepared and submitted within sixty (60) days following a request from the Section, as described in 40 CFR 264.144(a), incorporated by reference in 15A NCAC 13A .0109(i), and shall be based on the most recently approved Remedial Strategy or Remediation Program. Additionally, the following requirements shall apply to the cost estimate.

1. As described in 40 CFR 264.144(b), incorporated by reference in 15A NCAC 13A .0109(i), Daikin Applied shall adjust the cost estimate annually for inflation. The adjusted cost estimate shall be provided to the Section sixty (60) days prior to the anniversary date of the establishment of the financial assurance mechanism unless using a financial test or corporate guarantee, in which case the estimate shall be updated thirty (30) days after the close of the firm's fiscal year.

2. Daikin Applied shall, as described in 40 CFR 264.144(c), incorporated by reference in 15A NCAC 13A .0109(i), submit cost adjustments for modifications to the Remedial Strategy described in Section V.L. or the Remediation Program described in Section V.M. within thirty (30) calendar days after receiving approval of the modification if the change increases the cost of corrective action.

D. Daikin Applied shall maintain at the Facility a copy of the latest cost estimate as described in 40 CFR 264.144(d), incorporated by reference in 15A NCAC 13A .0109(h).

E. Within sixty (60) calendar days following approval of the estimate provided in Paragraph X.B, Daikin Applied shall establish financial assurance for corrective action by use of one or more of the mechanisms described in 40 CFR 264.145, incorporated by reference in 15A NCAC 13A .0109(i). The amount of financial assurance to be established for corrective action shall at least be equal to the amount of the written cost estimate as provided in Paragraphs X.B. and X.C. of this Order or for an amount agreed upon by the Section. Financial assurance established pursuant to this Paragraph can be used solely for the purpose of conducting the activities required by this Order.

F. Financial assurance mechanism(s) established by Daikin Applied to satisfy the financial requirements for corrective action shall be worded as specified in 40 CFR 264.151, incorporated by reference in 15A NCAC 13A .0109(i), except that references to regulatory requirements for closure and/or post-closure care shall be replaced with the phrase closure, post-closure care, and/or corrective action.

G. Daikin Applied may change the mechanism(s) used to demonstrate financial assurance for corrective action required by this Order at any time, with prior

notice to the Section, provided the alternate mechanism(s) meets the requirements of this Order.

H. Daikin Applied's failure to demonstrate its financial ability to complete Facility characterization and remediation shall not excuse the company's independent obligation to perform the activities required by this Order.

XI. Public Participation

A. The Section shall publish public notices and hold public hearings at the following times in accordance with 40 CFR 265.121, incorporated by reference in 15A NCAC 13A .0110(g):

1. Prior to the issuance of this Order;

2. Upon development of the proposed remediation program, regarding the proposed preferred remedy and the assumptions upon which the remedy is based, in particular those related to land use and Facility characterization; and

3. Upon completion of corrective action at the Facility or a portion of the Facility, but prior to the Section issuing a No Further Action determination for a portion of the Facility or an Acknowledgement of Termination pursuant to Paragraph XIV.C. of this Order.

When deemed necessary by the Section, additional public meetings will be held to address the public's concerns.

B. Consistent with the intent of N.C.G.S. Chapter 150B, at any hearing required by Paragraph XI.A. of this Order, the Section shall receive oral and written comments from the public and shall also receive written comments submitted by Daikin Applied in response to the public comments. The Section shall consider all these comments in making its decisions regarding continuing characterization of the Facility, remedy selection, and completion of corrective action for the Facility or a portion of the Facility.

XII. Delay in Performance

As soon as Daikin Applied becomes aware of the potential for delay in achieving the requirements of this Order, Daikin Applied shall submit to the Section written documentation stating the reasons for the delay and the efforts made by Daikin Applied to avoid the delay, as well as a time by which such work can be completed. The Section shall review the documentation and shall approve the new schedule if Daikin Applied demonstrates good cause for the potential delay. Good cause shall include, but is not limited to, extraordinary weather, natural disasters, and national emergencies. The burden of demonstrating that there is good cause for the proposed delay rests solely with Daikin Applied.

XIII. Dispute Resolution

If Daikin Applied disputes any decision of the Section made pursuant to this Order, and the matter cannot be resolved through less formal negotiations, Daikin Applied shall submit to the Section a written statement of the grounds for dispute within fourteen (14) calendar days of being notified of such decision. Within a reasonable period following receipt of Daikin Applied's statement of dispute, the Section shall issue a written decision on the disputed matter.

Within fourteen (14) calendar days of receiving the Section's written decision on the dispute, Daikin Applied shall provide a written statement as to whether it shall abide by the decision. If the Section does not receive from Daikin Applied a statement to abide by the Section's decision, or the statement is to the effect that Daikin Applied shall not abide by the Section's decision on the disputed matter, the Section shall have the right to deem the Order dissolved.

In the event that the Order is dissolved pursuant to the Dispute Resolution provision, the Section shall retain all its applicable enforcement rights against Daikin Applied, including calling for submittal of a RCRA application and financial assurance for a Post-Closure Permit and corrective action for the Facility. Daikin Applied shall retain any applicable defenses.

Daikin Applied's invocation of the Dispute Resolution provision shall not alone excuse noncompliance with this Order or any requirement established pursuant thereto.

XIV. Satisfaction of Order

A. When Daikin Applied determines that all requirements of this Order have been completed, it shall (1) give written notice to the Section indicating the Work required by the Order has been completed; and (2) file a petition to terminate the Order. Daikin Applied may also petition the Section to issue a No Further Action determination for a portion of the Facility. After completion of the Public Participation process required by Paragraphs XI.A.-XI.B. of this Order, the Section shall either agree or disagree with Daikin Applied's Termination Petition or No Further Action Petition for a portion of the Facility.

B. If the Section determines that the Work required by this Order has not been completed, the Section shall notify Daikin Applied in writing of activities that must be undertaken to complete the Work, including a schedule for the performance of such activities. Once these additional activities are completed, Daikin Applied may file another petition pursuant to Paragraph XIV.A.

C. If, after completion of the Public Participation process required by Paragraphs XI.A.-XI.B., the Section concludes that the Work required by this Order has been satisfactorily performed, the Section shall memorialize its decision in a No Further Action Determination for a portion of the Facility or an Acknowledgment of Termination and Agreement on Record Preservation and Reservation of Rights. Except as specified below, all of Daikin Applied's obligations under this Order shall be deemed to be satisfied and terminated upon Daikin Applied's execution of the Acknowledgement issued by the Section. This notice shall not terminate Daikin Applied's obligation to comply with any continuing requirements hereunder, including but not limited to record preservation, reservation of rights, other claims, and indemnification of the State. Daikin Applied's execution of the Acknowledgement will affirm their continuing obligation, including the maintenance of institutional controls or other long-term measures that are an integral part of the final remedy.

XV. Change of Ownership or Operational Control

A. Although this Order is explicitly between Daikin Applied and the Section, the Section must be notified in writing ninety (90) calendar days prior to the date of any change in ownership or operational control of the property on which the Facility is located or any proposed change of ownership or operational control of the monitoring and/or remediations systems. Should Daikin Applied become unable or unwilling to comply with this Order to the Section's satisfaction, the Section reserves any and all of its rights against the current property owner, and any other owner or operator.

B. This Order cannot be transferred to a new owner or operator. Daikin Applied shall notify the proposed new owner or operator about this Order, the termination of the Order upon ownership change, and the new owner or operator's responsibility to file a RCRA Part A permit application. Daikin Applied shall provide evidence to the Section of the notification to the proposed new owner or operator pursuant to this Paragraph. This evidence shall describe how Daikin Applied has assured that, despite the transfer in ownership or operation, all institutional controls required for the Facility, now or in the future, will be implemented and maintained. Additionally, Daikin Applied shall (1) assure the instrument effecting the conveyance or transfer of real or personal property interest contains a copy of this Order; and (2) use its best efforts to obtain access agreements to meet the requirements of Paragraph VII.A. from the party obtaining control of the real or personal property.

C. In the event of change in ownership of the Facility, whether or not pursuant to a Brownfields Agreement, the Section shall retain all its applicable enforcement rights against Daikin Applied and the property owner, including calling for submission of a RCRA permit application and financial assurance for a post-closure permit and corrective action.

D. No change in corporate ownership or corporate status will alter the Daikin Applied's or the property owner's obligations under this Order or excuse either Parties' noncompliance with this Order or any requirement established pursuant thereto.

E. No conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, or the monitoring or remediation system will affect Daikin Applied's or the property owner's obligations under this Order. This paragraph will not apply if the Parties in conjunction with the Section agree pursuant to Paragraph XIV.C. that this Order has been terminated as to the Facility. This Paragraph will not apply to any portion of the Facility for which the Section has issued a no further action determination (e.g., clean-closed areas).

XVI. Decisions/Notification

A. All approvals by and decisions of the Section shall be communicated in writing to Daikin Applied by the Chief of the Hazardous Waste Section or her designee. No informal advice, guidance, suggestions, or comments by the Section regarding reports, plans, specifications, schedules or any other matter will relieve Daikin Applied of their obligation to obtain formal approvals as required by this Order.

B. All documents and notices required to be submitted by Daikin Applied to the Section pursuant to this Order shall be sent to:

Julie S. Woosley, Section Chief
Hazardous Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
Phone: 919-707-8203
Email: julie.woosley@ncdenr.gov

C. Unless otherwise agreed to by Daikin Applied and the property owner, the Section shall direct all correspondence related to this Order to:

Mr. William Mateikis
Senior Vice President, Legal
Daikin Applied Americas Inc.
13600 Industrial Park Blvd.
Plymouth, Minnesota 55441

with copy to:

Mr. Paul Heim
Senior Vice President, Legal
Daikin Applied Americas Inc.
13600 Industrial Park Boulevard
Plymouth, Minnesota 55441

Mr. James Rice
Port City Distribution, LLC
6618 Providence Road
Wilmington, North Carolina 28411

XVII. Notice of Non-Liability of the State

A. The State, its agencies, employees and other representatives shall not be deemed a party to any contract involving Daikin Applied and relating to activities at the Facility and shall not be liable for any claim or cause of action arising from or on account of any act or omission of Daikin Applied, their officers, employees, contractors, receivers, trustees, agents, assigns, or other representatives in carrying out the activities required by this Order.

B. The State, its agencies, employees and other representatives shall not be liable for any injuries or damages to persons or property resulting from the acts or omissions of Daikin Applied, their officers, employees, contractors, receivers, trustees, agents, assigns, or other representatives caused by implementation of this Order or otherwise.

XVIII. Reservation of Rights

A. The Section hereby reserves all of its statutory and regulatory powers, authorities, rights and remedies, both legal and equitable, including any which may pertain to Daikin Applied's failure to comply with any of the requirements of this Order. Although this Order is explicitly between Daikin Applied and the Section, in the event that Daikin Applied becomes unable or unwilling to comply with this Order to the Section's satisfaction, the Section reserves any and all of its rights against any other owner or operator.

B. This Order shall not be construed as a covenant not to sue, or as a release, waiver or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which the Section has under RCRA or any other statutory, regulatory, or common law authority.

C. Daikin Applied's compliance with the terms of this Order shall not relieve Daikin Applied of any obligation to comply with any other applicable local, State, or federal laws and regulations. Similarly, this Order does not relieve Daikin Applied of any obligation to obtain and comply with any applicable local, State, or federal permit or approval.

D. The issuance of this Order and Daikin Applied's stipulation to comply shall not limit or otherwise preclude the Section from taking additional enforcement action pursuant to RCRA, the North Carolina General Statutes, or any other authority should the Section determine that such action is warranted.

E. The Section expressly reserves all rights and defenses that it may have, including the right to disapprove of work performed by Daikin Applied pursuant to this Order, to require that Daikin Applied correct any work performed despite disapproval by the Section, and to require that Daikin Applied perform tasks in addition to those specifically stated in this Order.

F. Notwithstanding compliance with the terms of this Order, Daikin Applied is not released from liability, if any, for the costs of any response actions taken by the Section. The Section reserves the right to seek reimbursement from Daikin Applied for costs incurred by the Section in connection with any response action the Section undertakes or any costs incurred by the Section in overseeing implementation of this Order, including enforcement costs.

G. Daikin Applied stipulates that pursuant to N.C.G.S. § 130A-18, and irrespective of all other remedies at law, the Section may file an action for injunctive relief in the Superior Court of New Hanover County to enjoin any threatened or continuing violation of the requirements of this Order or the statutes or rules cited therein, including but not limited to the requirements for corrective action, or to impose any emergency response measures deemed necessary to protect human health and the environment.

H. The Section may impose an administrative penalty on Daikin Applied for violating the requirements of this Order or the statutes or rules cited therein. The assessment of an administrative penalty pursuant to N.C.G.S. § 130A-22 will confer on Daikin Applied all rights under Chapter 150B of the North Carolina General Statutes to contest the Section's decision to impose an administrative penalty, but not to contest the validity or enforceability of this Order, in so far as Daikin Applied has stipulated to the Section's jurisdiction and have waived their rights to contest the Section's enforcement of the Order pursuant to Paragraph II.B.

I. The Chief of the Hazardous Waste Section may determine that acts or circumstances, whether or not directly related to this Order, may endanger human health, welfare, or the environment and may order Daikin Applied to stop further implementation of this Order, either temporarily or permanently, until the endangerment is abated. The State may also, for any other reason permitted by law, order Daikin Applied to cease activities at the Facility.

J. Nothing in this Order shall be construed as limiting the Section in performing its duty to protect the public health and the environment of the State as required by law. The State may order or independently initiate any response action it deems necessary to protect public health, welfare, or the environment.

XIX. Other Claims

A. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, corporation, or other entity for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous wastes or hazardous constituents found at, taken to, or taken from the Facility.

B. Nothing herein shall constitute a satisfaction of, or release from, liability for any claim arising as a result of operation, ownership or use of the Facility by Daikin Applied, their agent(s), contractors, lessees, successors, or assigns.

XX. Indemnification of the State of North Carolina

Daikin Applied stipulates that they will indemnify, save and hold harmless the State, its agencies, departments, agents, and employees, from all claims or causes of action arising from or on account of acts or omissions of Daikin Applied or their officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. This indemnification will not affect or limit the rights or obligations of Daikin Applied or the State under their various contracts. This indemnification will not create any obligation on the part of Daikin Applied to indemnify the State from claims arising from the acts or omissions of the State.

XXI. Additional Provisions

A. This Order may only be modified in writing. The existing Order shall remain in effect as written until such time as Daikin Applied has executed a written amendment to the Order or until such time as the Section deems the Order satisfied pursuant to the provisions of Paragraph XIV.C.

B. The signatory for each Party certifies that he or she is fully authorized to execute, and legally bind such Party to, this document.

C. The annual activity fee specified in N.C.G.S. 130A-294.1 shall be paid to the Division by Daikin Applied.

D. If any judicial authority holds any provision of this Order to be invalid, the remaining provisions shall remain in force and shall not be affected.

E. Except as otherwise provided in this Order, Daikin Applied shall bear their own costs and attorneys fees.

F. A table summarizing the Work required by this Order can be found in Attachment 2.

G. This Order is effective on the date that the Section signs the Order.

FOR THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY

_____ _____
Julie S. Woosley, Chief date signed
Hazardous Waste Section
Division of Waste Management

FOR DAIKIN APPLIED AMERICAS INC.

_____ _____
Mr. William Mateikis date signed
Senior Vice President, Legal

Attachment 1
Figure

SURVEY REFERENCE:
DEED BOOK 1421 AT PAGE 1252 – TOTAL TRACT
DEED BOOK 1534 AT PAGE 207 – REMEDIATION EASEMENT
DEED BOOK 1383 AT PAGE 1539 – 40' UTILITY EASEMENT
NEW HANOVER COUNTY REGISTRY

NOTES:
1. FEMA FLOOD MAP INFORMATION:
   FEMA FIRM PANEL: 3720312500J
   FLOOD ZONE: "X"
   MAP PANEL EFFECTIVE DATE: APRIL 2, 2006
2. CORNERS ARE MARKED AS NOTED ON MAP.
3. ALL BEARINGS ARE NC GRID BEARINGS (NAD 83)
4. ALL DISTANCES ARE HORIZ. FIELD MEASUREMENTS.
5. AREA COMPUTED BY THE COORDINATE METHOD.

LEGEND:

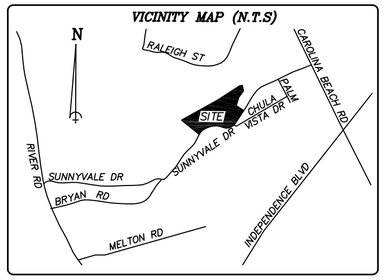
- EIP (EXISTING IRON PIPE)
- EIR (EXISTING IRON ROD)
- IRS (IRON ROD SET)
- ECM (EXISTING CONCRETE MONUMENT)
- NO POINT FOUND OR SET
- PK\MAG (PK OR MAG NAIL SET)
- PROPERTY LINE
- NON–SURVEYED LINE
- ROAD RIGHT OF WAY LINE
- EASEMENT LINE

Certificate of Ownership and Dedication:
I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon and that I (we) hereby adopt this plan of a subdivision with my (our) own free consent, establish minimum setback lines, and dedicate all streets, alleys, walks, parks and other sites to public or private use as noted. Further, I (we) certify the land as shown hereon is within the platting jurisdiction of the City of Wilmington, North Carolina.

Name of Owner _____ Date _____

Signature of Owner _____ Date _____

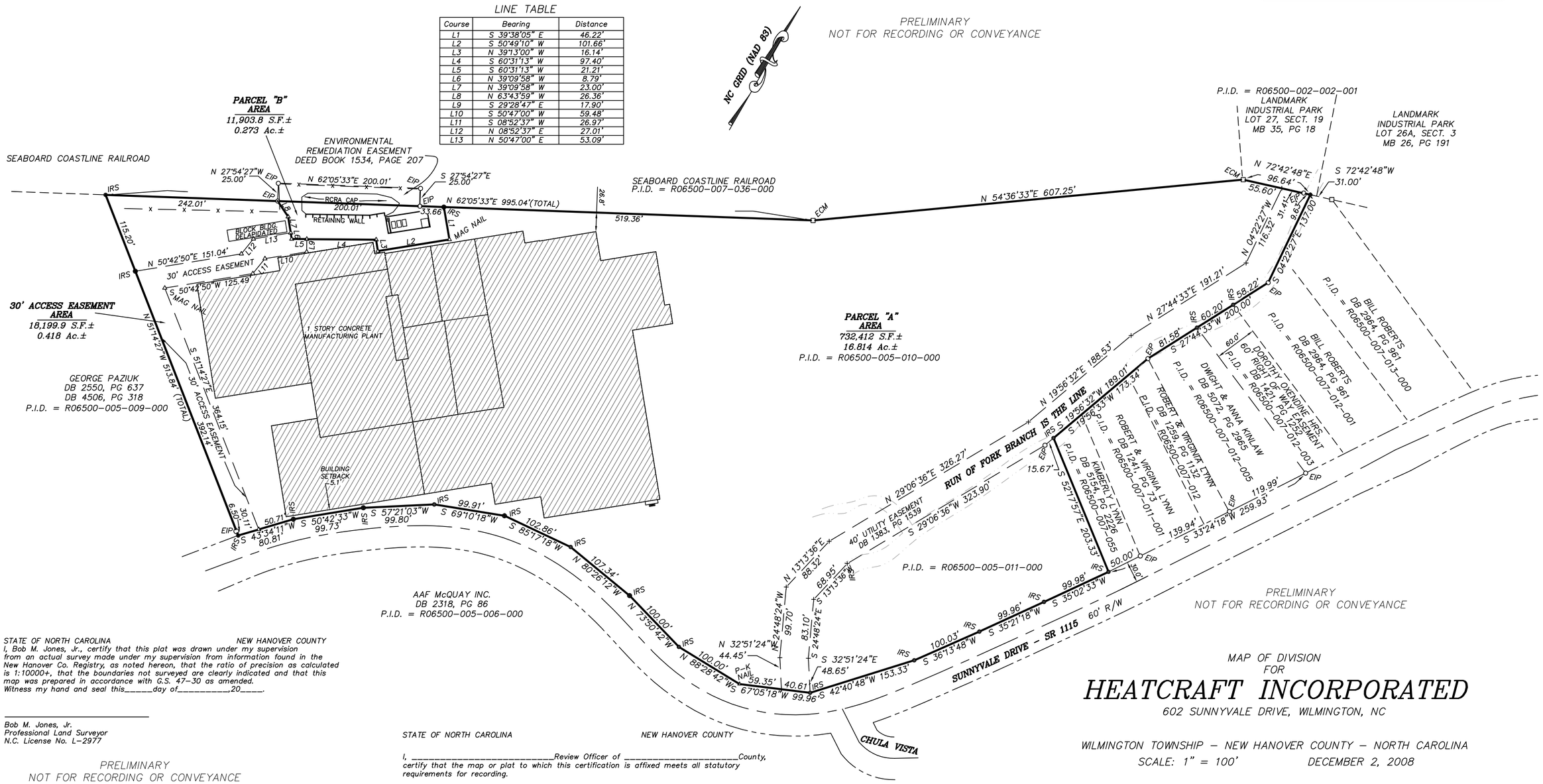
VICINITY MAP (N.T.S)



LINE TABLE

Course	Bearing	Distance
L1	S 39°38'05" E	46.22'
L2	S 50°49'10" W	101.66'
L3	N 39°13'00" W	16.14'
L4	S 60°31'13" W	97.40'
L5	S 60°31'13" W	21.21'
L6	N 39°09'58" W	8.79'
L7	N 39°09'58" W	23.00'
L8	N 63°43'59" W	26.36'
L9	S 29°28'47" E	17.90'
L10	S 50°47'00" W	59.48'
L11	S 08°52'37" W	26.97'
L12	N 08°52'37" E	27.01'
L13	N 50°47'00" E	53.09'

PRELIMINARY
NOT FOR RECORDING OR CONVEYANCE



PRELIMINARY
NOT FOR RECORDING OR CONVEYANCE

STATE OF NORTH CAROLINA NEW HANOVER COUNTY
I, Bob M. Jones, Jr., certify that this plat was drawn under my supervision from an actual survey made under my supervision from information found in the New Hanover Co. Registry, as noted hereon, that the ratio of precision as calculated is 1:10000+, that the boundaries not surveyed are clearly indicated and that this map was prepared in accordance with G.S. 47–30 as amended.
Witness my hand and seal this_____day of_____,20_____.

_____
Bob M. Jones, Jr.
Professional Land Surveyor
N.C. License No. L–2977

PRELIMINARY
NOT FOR RECORDING OR CONVEYANCE

I, Bob M. Jones, Jr. certify that this survey is of another category, such as the recombination of existing parcels, a court–ordered survey, or other exception to the definition of subdivision.
The City Attorney for the City of Wilmington has determined that the City does not have any jurisdiction over this proposed subdivision based on 42 USC Section 9621 (e).

_____
Bob M. Jones, Jr.
Professional Land Surveyor
N. C. License No. L–2977

STATE OF NORTH CAROLINA NEW HANOVER COUNTY
I, _____Review Officer of _____County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

_____ _____
Review Officer Date

STATE OF NORTH CAROLINA NEW HANOVER COUNTY
Filed for registration on the _____day of _____, 20_____, at _____(A.M./P.M.)
and duly recorded in Map Book _____, Page _____ .

_____
Register of Deeds

_____
BY

MAP OF DIVISION
FOR

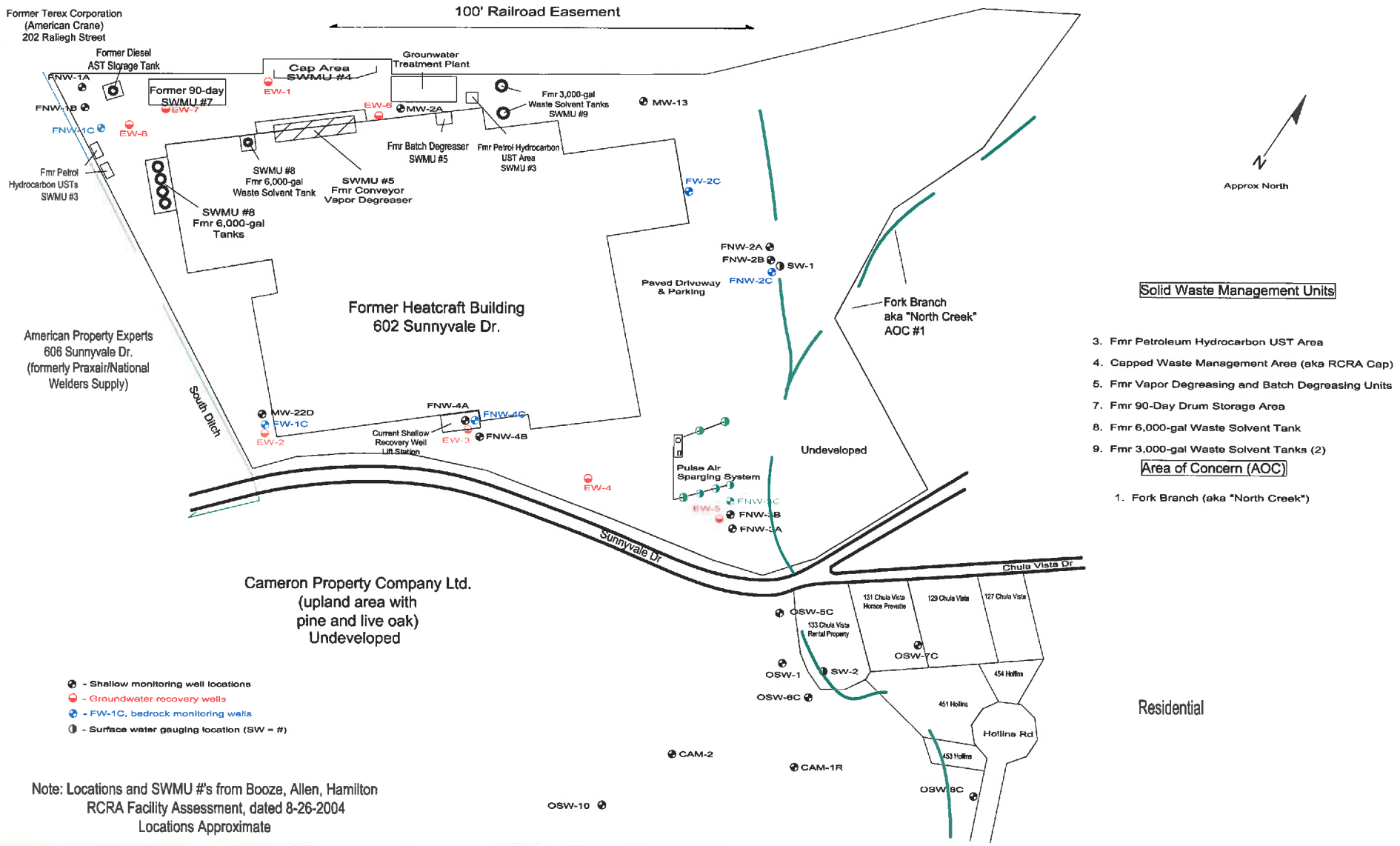
HEATCRAFT INCORPORATED

602 SUNNYVALE DRIVE, WILMINGTON, NC

WILMINGTON TOWNSHIP – NEW HANOVER COUNTY – NORTH CAROLINA
SCALE: 1" = 100' DECEMBER 2, 2008

100 0 100 200 300
GRAPHIC SCALE – FEET

ROBERT H. GOSLEE & ASSOCIATES, PA
LAND SURVEYORS – LAND PLANNERS
513 CHESTNUT STREET
WILMINGTON, NORTH CAROLINA 28401
910–763–1941
rhgilm@bellsouth.net
FILE No.: 65000710DIV



Note: Locations and SWMU #'s from Booze, Allen, Hamilton
RCRA Facility Assessment, dated 8-26-2004
Locations Approximate

CORR ENVIRONMENTAL RESOURCES, INC.

4609 Candlestick, Garland, Tx 75043

APPROVED BY: RAYMOND W ROBLIN, PG

DATE: June 1, 2016
DESIGNED BY: RWR
CHECKED BY: RWR
DRAWING NO.: Gen Site Plan, SWMU
PROJECT: PN 3079

REV. NO	DATE	COMMENT
0	4-20-16	Initial drawing with OSW-7 and OSW-8
1	6-1-16	Revise SWMU's and AOC locations per NCDEQ request.

NO SCALE INTENDED

General Site Plan
Location of Former
Solid Waste Management Units

Former HeatCraft Facility
Wilmington, North Carolina

FILE: C:\CORR\DAA\WILM\16CADD\GenSiteSWMUs

Attachment 2
Schedule of Compliance

SCHEDULE OF COMPLIANCE

Schedule of Compliance	Due Date
Submit a modified or updated Site Conceptual Model Paragraph V.F.2	To be submitted when either Daikin Applied or the Section determine there is a need for a modified or updated Site Conceptual Model.
Submit Workplans to address identified investigative/characterization activities Paragraph V.G.1	To be submitted as appropriate. The need for additional characterization at the Facility can be instigated by either Daikin Applied or the Section.
Submit a Facility Characterization Workplan Paragraph V.H.1	Within sixty (60) calendar days after notification from the Hazardous Waste Section that additional characterization is warranted.
Submit information and/or materials sufficient to address deficiencies identified by the Section in Facility Characterization Workplan Paragraph V.H.2	Within thirty (30) calendar days of receiving notice from the Section of any deficiency in the Facility Characterization Workplan, Daikin Applied shall submit to the Section information or material sufficient to correct deficiencies.
Implement the actions described in the Facility Characterization Workplan Paragraph V.H.2	Within thirty (30) calendar days of receiving approval from the Section.
Submit Semi-Annual Progress Reports Paragraph V.H.4	If deemed necessary by the Section.
Submit Final Facility Characterization Report Paragraph V.I.1	In accordance to the agreed upon schedule set out in Section comments.
Submit an amended Facility-Wide Monitoring Program Paragraph V.J.2	Within thirty (30) calendar days after having received written notification from the Section.
Submit information and/or materials sufficient to address deficiencies in the Facility-Wide Monitoring Program Paragraph V.J.4	Within thirty (30) calendar days of receiving notice from the Section of any deficiency in a proposed modification to the monitoring program.
Implement the modified Facility-Wide Monitoring Program Paragraph V.J.4	Within thirty (30) calendar days of receiving approval from the Section.
Submit Interim Measures Workplan Paragraph V.K.1	Within thirty (30) calendar days if deemed necessary by the Section.
Submit Interim Measures progress reports if the time required for the completion of any modification to or addition of an interim measure is more than one (1) year Paragraph V.K.5	At intervals specified in the approved Interim Measures Workplan.
Submit Final Interim Measures Report Paragraph V.K.6	Within ninety (90) calendar days of completion of any interim measures.
Submit a Corrective Measures Study (CMS) Paragraph V.M.1	Upon completion of Facility characterization activities and evaluation of current and/or future interim remedial measures.
Submit information and/or material sufficient to correct deficiencies in the Corrective Measures Study Paragraph V.M.2	Within thirty (30) calendar days of receiving written notice from the Section of any deficiency.

Schedule of Compliance	Due Date
Submit information necessary for the Section to commence public participation process Paragraph V.M.4	Within thirty (30) calendar days after receipt of Section's approval of the Final Remediation Program.
Submit Remediation System Specifications Paragraph V.M.5	Within ninety (90) calendar days following Section approval of the Final Remediation Program.
Begin implementation of the Final Remediation Program Paragraph V.M.5	Within ninety (90) calendar days following Section approval of the Final Remediation Program.
Obtain approval from the owners of the property subject to the Land Use Restrictions Paragraph V.M.6	If the approved final remedy includes institutional controls or other land use restrictions, Daikin Applied agrees obtain approval from the owners of the property subject to the Restrictions.
Report to the Section any situations that may endanger human health and/or the environment Paragraph VIII.E	Communicate orally within twenty-four (24) hours and follow up with written submittal within five (5) days
Notify the Section of any newly discovered SWMUs or AOCs Paragraph VIII.H.1	Within fifteen (15) calendar days of discovery
Submit a SWMU Assessment Report for each newly identified SWMU or AOC Paragraph VIII.H.2	Within ninety (90) calendar days following notification
Submit revised cost estimates based on the most recently approved Remedial Strategy or Remediation Program. Paragraph X.C	Within sixty (60) calendar days following receipt of an approved Remedial Strategy.