



BY EMAIL: Randy.Chapman@deq.virginia.gov

March 2, 2016

Virginia Department of Environmental Quality
Northern Regional Office
Attn: Randy Chapman
13901 Crown Court
Woodbridge, Virginia 22193

**RE: Dominion Crystal Substation; Initial Abatement Measures Report
DEQ Pollution Complaint Tracking #2016-3142**

Dear Mr. Chapman:

We received your February 2, 2016 and February 23, 2016 letters regarding the January 24, 2016 mineral oil spill at the Crystal Substation. Attached is the requested Initial Abatement Measures Report for the incident.

If you have any questions, please call me at 804-273-2929 or Jason Ericson at (804) 317-9464.

Sincerely,

A handwritten signature in black ink that reads "Cathy Taylor". The signature is written in a cursive, flowing style.

Cathy Taylor
Director, Electric Environmental Services

Cc:
Northern Regional Office Remediation: nroremediation@deq.virginia.gov
Joseph Glassman; Joseph.Glassman@deq.virginia.gov

INITIAL ABATEMENT REPORT

Site Name:

Dominion Virginia Power – Crystal Substation

Site Address:

S 18th Street & S Fern Street
Arlington, Virginia 22202

PC #:

2016-3142

Report Date:

February 26, 2016

Mailing Address:

Dominion Virginia Power
2400 Grayland Avenue
Richmond, Virginia 23220

Telephone:

(804) 257-4933

Prepared By:



John M. Black

DVP Environmental Compliance Program Manager
Dominion Substation Operations Support

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Photographs

- Exhibit A – Damaged Transformer
- Exhibit B – Initial Containment Activities
- Exhibit C – Roaches Run Outfall
- Exhibit D – Initial Clean-Up Activities
- Exhibit E - Site Restored to Pre-spill Condition

APPENDIX A	Topographic Map and Aerial Photographs
APPENDIX B	Safety Data Sheet (SDS)
APPENDIX C	Disposal Manifests
APPENDIX D	Lab Analysis
APPENDIX E	Bioremediation Application

1.0 GENERAL SITE INFORMATION

Crystal Substation is an electrical distribution facility owned and operated by Dominion Virginia Power (Dominion). The facility was placed in service in 1970. The enclosed site covers approximately 0.44 acres and is located at S 18th Street and S Fern Street, Arlington, Virginia. The site contains various types and sizes of mineral oil-filled electrical equipment located on concrete foundations. Soil underlying the facility is primarily clay. The nearest surface water is Roaches Run, a tributary of the Potomac River. Included in Appendix A is a topographic map showing the location of the substation and locations of stormwater drop inlets between the Substation and Roaches Run.

2.0 SOURCE OF SPILL AND INITIAL CONTAINMENT ACTIVITIES

- On Sunday, January 24, 2016, at approximately 0754 hrs, Transformer #1 at Crystal Substation experienced an internal electrical failure causing an excessive build-up of pressure inside the unit. The excessive pressure caused the casing to rupture near the top and pump piping to break near the bottom (See Exhibit A).
- Mineral oil is used as a coolant and insulator for the internal electrical components of the transformer. The transformer's main compartment oil capacity, as listed on the nameplate, was 13,075 gallons. The transformer's Load Tap Changer (LTC) and Selector compartments capacities, as listed on the nameplate, were 375 gallons and 520 gallons, respectively, bringing the estimated total quantity of mineral oil in the unit to 13,970 gallons. The LTC compartment was intact and the Selector compartment was partially intact. The estimated amount of oil spilled is approximately 13,500 gallons. The Material Safety Data Sheet for the oil can be found in Appendix B. The cause of the failure is currently under investigation.
- Due to the instantaneous release of pressure from the transformer main compartment, some oil sprayed into the driveway area of the Station. The bulk of the oil spilled entered a concrete walled area around the transformer. Initial containment activities by Dominion personnel included the deployment of sorbents to contain free product and inspection of the concrete walled area around the transformer. Oil had moved out of the walled area via various electrical conduits and cable ways into two immediately adjacent electrical cable vaults and, subsequently, migrated through the electrical cable ducts into 3 in-ground electrical vaults located just outside of the Station. These vaults do not contain drains. Additionally, electrical vaults and a stormwater drop inlet downgrade of the Substation were inspected and no additional oil in these vaults was observed, nor was there any oil observed in the stormwater drop inlet. The oil appeared to be confined to the 2 vaults inside and 3 vaults immediately adjacent to the Substation. Oil spill response contractors arrived on-site and began recovering free product from the vaults. These activities were conducted the day of the spill. (Exhibit B)

3.0 INITIAL ABATEMENT, REMEDIAL ACTIONS, AND WASTE DISPOSAL

- Mr. Mark Miller, Virginia Department of Environmental Quality (VDEQ) PREP Coordinator, was notified via voicemail at approximately 1300 hrs on 1/24/16. Phone contact was made with Mr. Miller shortly thereafter. Dominion's Regional Operations Center notified Arlington County.
- HEPACO, Inc., Fredericksburg, VA and Woodward Inc., Manakin-Sabot, VA were notified to respond to the spill. HEPACO, Inc. arrived at the site at approximately 1330 hrs on 1/24/16. Woodward Inc. arrived at the site at approximately 0900 hrs on 1/25/16. HEPACO, Inc. and Woodward Inc. performed the remainder of the abatement and remedial activities on behalf of Dominion. Dominion personnel remained on-site to provide continued environmental and safety oversight throughout the entire clean-up process.

Free Product Removal

- Impacted electrical vaults were initially pumped empty of oil and water. Inspection of the vaults and pumping, when necessary, is ongoing. The accumulation of oily water in the vaults has significantly diminished. As of 2/26, only a light sheen has been visible in standing water in the vaults. These vaults and associated cable ducts will be cleaned in conjunction with a project to replace the oil impacted electrical cables. This project will run concurrently with returning the Substation to normal operation over the next several months.
- Stormwater flow within the Substation infiltrates a drain tile system connected to a 12" discharge pipe. This buried pipe carries stormwater from inside the Station to an Arlington County stormdrain drop inlet located in the sidewalk in front of the Facility. Access to this drop inlet was accomplished on 1/25 after removing snow that had been piled on top during the City's recent snow removal efforts prior to the spill. No oil was observed in this drop inlet. Sorbent materials were placed in the drop inlet to provide containment should any snow melt from inside the Station carry oil into the Station drainage system. Subsequent inspections on 1/26 and the morning of 1/27 showed no visible signs of oil. EPA (Charlie Fitzsimmons) and DEQ (Joe Glassman) representatives attended these inspections. On 1/25 EPA (Charlie Fitzsimmons, On Scene Coordinator) suggested the National Response Center be notified due to the potential for oil to enter the stormwater system. This notification was made at approximately 1300 hrs on 1/25.

- In the afternoon of 1/27, DEQ (Mark Miller) visited the site and inspection of the drop inlet in front of Station found a small amount of oily emulsion contained by the sorbent materials. This emulsion was removed by vacuum truck. Arlington County was contacted to assist with the inspection of downgrade stormdrain drop inlets and to help determine the location of the area stormwater system discharge point. No oil was observed in the downgrade drop inlets. The system discharge point was indicated to be at Roaches Run. Due to the snow, we were unable to access the Roaches Run outfall until 1/28. No visible signs of oil were observed. The stormwater drainage system for the Substation, along with the oil containment systems for the transformers, are being redesigned to remove the potential for oil to enter the stormwater drainage discharge pathway. Construction efforts are underway to make these changes.
- No oil has been observed during the daily inspections of the Roaches Run stormwater outfalls, subsequent to the observation of the small oil emulsion in the stormdrain drop inlet in front of the Station (Exhibit C).
- Inspection and recovery of observed oily water from the vaults will continue until the electrical cable vaults and duct systems are cleaned in conjunction with electrical cable replacements.
- Inspection and recovery of any observed oily water from the stormwater drop inlet in front of the Substation will continue until the above mentioned construction of the stormwater drainage and transformer containment re-designs are completed.
- Based on daily estimates, approximately 11,120 gallons of free product was collected from the damaged transformer, the electrical vault system and other areas inside the Substation. In total, approximately 32,770 gallons of oil, oil/water mixture and approximately 250 pounds of spent absorbents were collected for disposal. Collected liquids and drums of spent sorbents were transported to HEPACO's facility in Fredericksburg, VA to await proper disposal. Disposal manifests are included in Appendix C.

Soil Removal

- Between 1/24/16 and 2/2/16, visibly impacted gravel/soil was excavated from multiple areas within the Substation (Exhibit D). Based on visual observations, no impacted soil outside the confines of the Substation were encountered. On 2/1/16, prior to backfilling the area in preparation for the transformer removal, confirmatory soil samples were collected to determine if the excavated areas of the substation were satisfactorily clean. Confirmatory sample results ranged from <10 ppm Diesel Range Organics (DRO) to 718 ppm DRO. Excavated areas were backfilled with clean stone. (Exhibit E). The analytical results can be found in Appendix D.

- Approximately 229 tons of impacted soil and stone were removed for proper disposal. Disposal Manifest can be found in Appendix C.

Summary

Estimated quantity of oil spilled –	-13,500 G
Free product recovered (includes oil removed from unit) -	-11,120 G
Oil entrained in removed soil\gravel and walled area #3 stone fill -	-1,967 G

4.0 REMEDIATION ASSESSMENT/ADDITIONAL ACTIONS

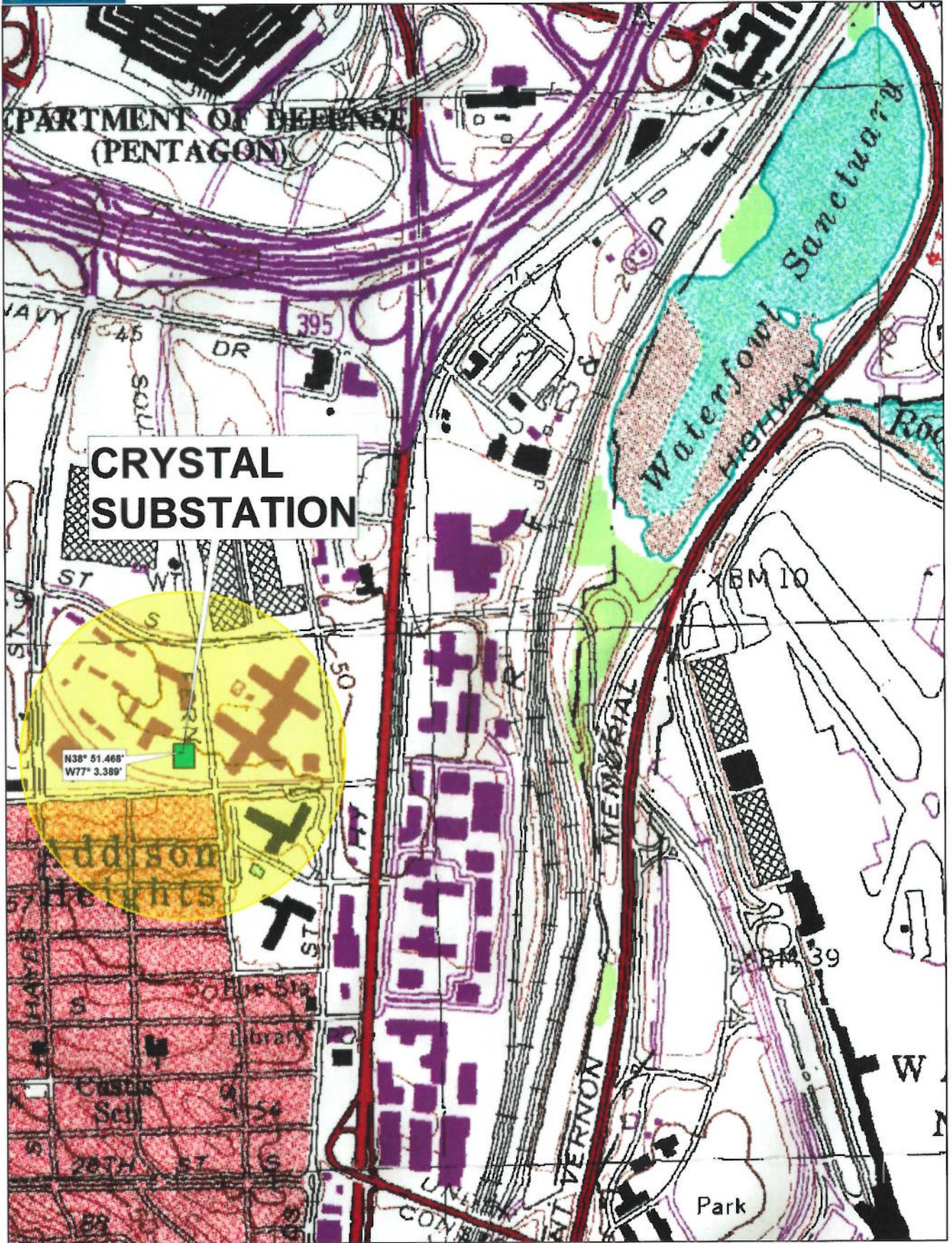
- Visual indications of the spill impact were evident in the gravel and on the surface of the underlying clay. The removal of this contaminated media by excavation, to a depth that ranged from a few inches to over 3 ½ feet, appeared to be sufficient to achieve a clean-up down to visibly clean soil. Visual and olfactory senses, along with DRO lab analysis, were used to confirm that adequate clean-up had been achieved. While the actual depth to groundwater at this location is unknown, no groundwater was encountered during the excavation of any impacted areas. Based on the initial abatement and remedial activities undertaken to remove impacted soil from the Substation, this portion of the spill has been satisfactorily cleaned up and no long term adverse environmental effect is believed to remain that would require additional removal actions.

- During the spill event, oil migrated into a cable trough that contains control wiring for the electrical equipment within the Substation. This trough consists of concrete panel sides embedded in underlying clay soil. The bottom of the trough consists of a layer of 6-8 inches of coarse sand\gravel mixture spread over the clay bottom between the panels to support the control cables. Insulated cables and wire that control all aspects of the operation and monitoring of the electrical functions of the substation are laid on top of the supporting media. The configuration of the cable trough is such that during the initial release of oil, this trough acted as a pathway that backed up the flow and allowed oil to infiltrate the sand mixture through gaps in the concrete outside panels. Removal of contaminated sand mixture was accomplished with a vacuum truck. The logistical and safety problems associated with relocating the control wiring to effect complete removal of the sand media without damaging the cables is prohibitive. While mineral oil dielectric fluid will degrade naturally over time, Dominion proposes the use of a petrophillic microorganism solution, Micro-Blaze® (or similar), be applied to the remaining sand media (~450 sq. feet) in the cable trough to enhance and speed up the natural degradation process of the mineral oil. The Micro-Blaze® will be mixed with clean water per the manufacturer's instructions and applied to the impacted areas of the cable trough utilizing a small hand held pump sprayer. A similar process was successfully used at another Dominion substation with the approval of the Northern Region VDEQ Office. This approach would be the most effective, non-destructive method, to remediate the cable trough media. Pre-treatment samples of the media will be collected to determine starting contamination levels. Post-treatment sampling will be periodically conducted to monitor the status of degradation. Product information and the Material Safety Data Sheet (MSDS) for Micro-Blaze® is included in Appendix E.

- Oil from the spill migrated into the electrical underground cable distribution system associated with the Substation. This system consist of a series of underground concrete vaults of varying sizes through which insulated electrical cables pass to distribute electrical service to the surrounding area. These vaults contain no drains and are interconnected by a series of concrete encased duct (conduit) banks which provide a pathway for the cables from vault to vault. The impacted vaults include the two large vaults within the Substation and three additional vaults located immediately adjacent to the north, south and east outside walls of the Substation. Inspections of downgrade connecting vaults have found no evidence of oil intrusions. Oil from the spill remains in this closed system from the coating of interior portions of the vaults and duct bank piping, as well as the coating of the insulated cable inside the duct banks. Reliability concerns will require that the impacted cable be replaced. During this process the impacted vaults and associated duct bank piping will be cleaned. A contractor will be utilized to perform the cleaning and will collect for proper disposal all rinse water and sorbents. This project will be worked in conjunction with returning the Substation to normal operation over the next few months. Vaults associated with this system will continue to be periodically inspected, and accumulated impacted water removed, until final cleaning has been completed.

Appendix A

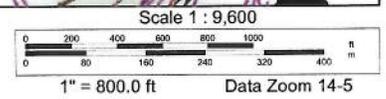
Topographic Map and Aerial Photograph

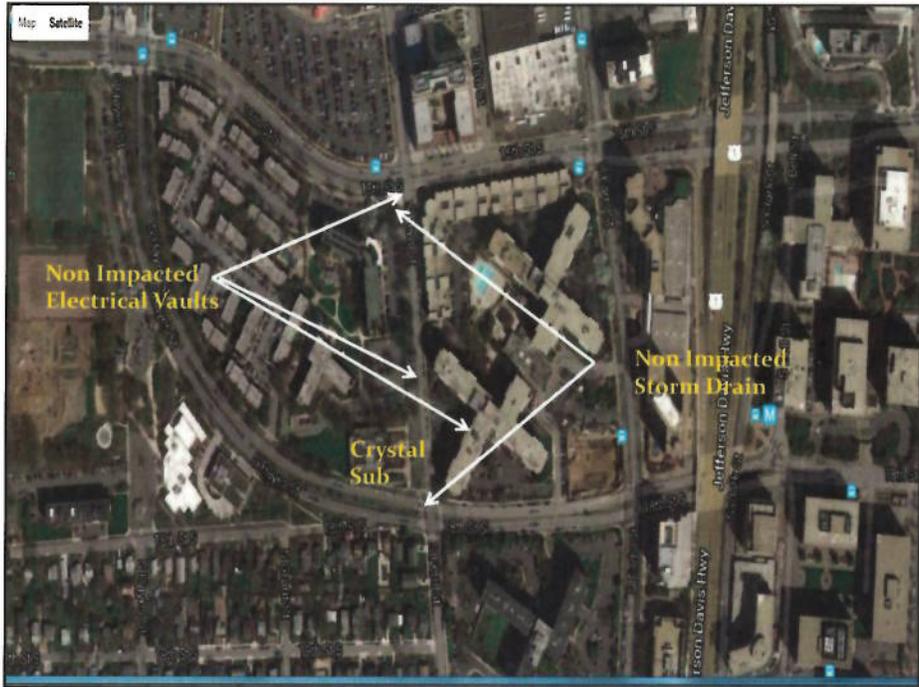
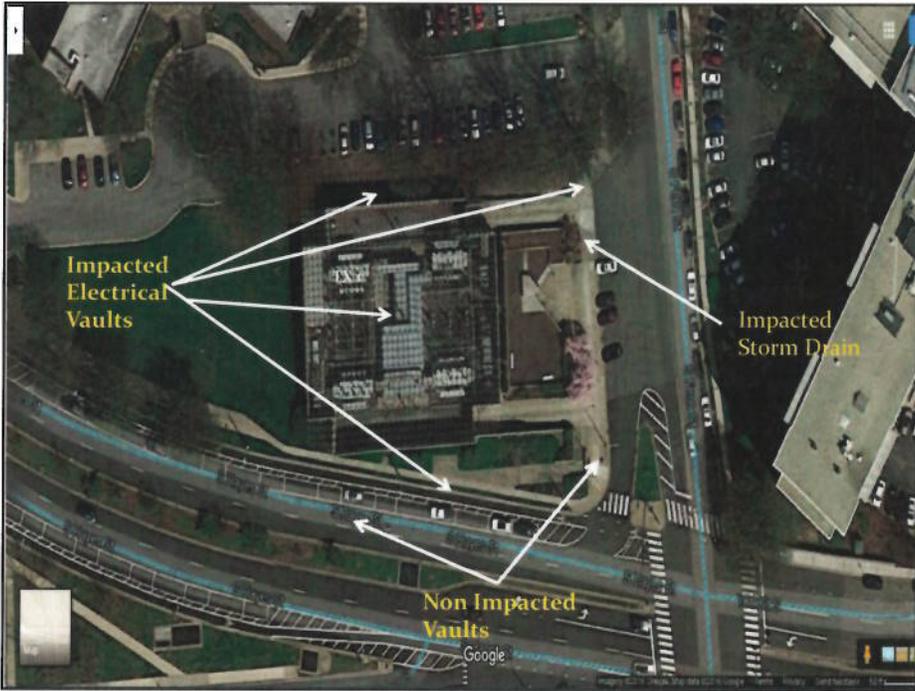


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Appendix B

Material Safety Data Sheet

MSDS Document

Product Caltran 60-15

1. Chemical Product and Company Identification

Product Caltran 60-15

Synonyms: 3010-00

MSDS ID 3010-00

Manufacturer

Calumet Lubricants Company
2780 Waterfront Pkwy E. Suite 200
Indianapolis, IN 46214

Contact Name

Anne Goldsmith

Phone Number

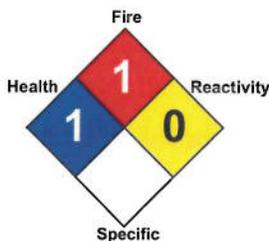
(317) 328-5660

Emergency Phone

CHEMTREC (800) 424-9300

CHEMTREC International (703) 527-3887

Revision Date 02/13/09



Health:	1
Fire:	1
Reactivity:	0
Specific	

2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
Light Naphthenic Hydrotreated Distillates (petroleum)	64742-53-6	>98.0 %	5 mg/m ³	5 mg/m ³	
BHT Blend Package Additive	Trade Additive	>1.0 %			

3. Hazard Identification

Hazards

This product is a clear, pale-straw to water-white, viscous liquid. It has a light petroleum odor.

This product is slightly combustible (Flammability Class IIIB) but will burn. Heated product will produce colorless vapors. Heated vapors in the presence of an ignition source can be explosive if confined. When burned, the product will produce carbon monoxide and other asphyxiants during combustion.

Prolong unprotected exposure to this product will cause skin irritation. Material splashed in eyes will irritate tissues. Gently flush material from eyes with clean water. Remove product soaked clothing and wash with mild soap.

As with any petroleum product, avoid mixing this product with strong oxidizers.

Carcinogen listed by: National Toxicology Program (NO)

I. A. R. C. (NO)

OSHA (NO)

ACGIH (NO)

This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Personnel with pre-existing skin disorders should avoid contact with this product.

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

4. First Aid Information

First Aid Measures

EYES

If splashed into eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, seek medical attention.

SKIN

In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry-clean clothing before reuse. If irritation or redness develops and persists, seek medical attention.

INGESTION

Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

INHALATION

If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek medical attention.

5. Fire Fighting Measures

Flash Point >293 F

FP Method

ASTM D92

Fire Fighting

FIRE AND EXPLOSION HAZARDS

Slightly combustible. OSHA/NFPA Class IIIB Combustible Liquid. If heated above its flash point will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oils normal flash point. Keep away from extreme heat or open flame.

EXTINGUISHING MEDIA

Foam, water spray (fog), dry chemical, carbon dioxide, and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", 13th Edition (2001):

Use water spray, dry chemical, foam or carbon dioxide to extinguish the fire. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

FLAMMABLE PROPERTIES

FLASH POINT: >293°F >145°C COC ASTM D92

AUTO IGNITION: 577°F 302°C

FLAMMABILITY CLASS: IIIB

6. Accidental Release Measures

Release Measures

Extinguish any open flames and remove heat sources.

This material will float on water and will be transported by stormwater runoff. Spills to the ground should be immobilized and removed immediately. Spills to watercourses such as stormdrains, sewers, ditches, streams, ponds, etc. must be contained with dikes, dams, floating booms, pads, etc. as appropriate. Remove trapped product immediately.

Spills that enter a waterbody must be immediately reported to the USEPA's National Response Center at (800)546-2972.

Check with your local and state regulators regarding their reporting requirements.

Cleanup personnel should wear appropriate personnel protective equipment including impervious clothing, rubber boots, gloves, and splash goggles.

7. Handling and Storage

Handling and Storage

HANDLING AND STORAGE PRECAUTIONS

Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. Wash thoroughly after handling.

WORK/HYGIENIC PRACTICES

Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and laundry before reuse. Launder or discard contaminated shoes and leather gloves.

"EMPTY" CONTAINER WARNING

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Do not attempt to refill or clean containers since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

8. Exposure Controls and Personal Protection

Exposure

VENTILATION

Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive vapors in air. No smoking, use of flame, or other ignition sources.

EYE/FACE PROTECTION

Use safety glasses or splash goggles when eye contact may occur. Have suitable eyewash water available.

SKIN PROTECTION

Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious clothing. Acceptable materials for gloves are polyvinyl chloride, neoprene, nitrile, polyvinyl alcohol, and viton.

RESPIRATORY PROTECTION

Normally not required if adequate ventilation. If occupational exposure limits are exceeded, wear NIOSH/MSHA approved apparatus.

OTHER/GENERAL PROTECTION

If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

CONCENTRATION

INGREDIENT NAME	EXPOSURE LIMITS
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PERCENT BY VOLUME

Light Hydrotreated Naphthenic Distillate (petroleum)	>98.
--	------

0

CAS NUMBER: 64742-53-6 Exposure Limits: OIL MIST
OSHA PEL MIST 5 MG/M3 8 HRS
ACGIH TLV MIST 5 MG/M3 8 HRS

BHT Blend Package >1.0

CAS NUMBER: Mixture Exposure Limits: N/A

9. Physical and Chemical Properties

Physical State	liquid
Specific Gravity	0.8883
Density lbs/Gal.	7.41
Color/Appearance	L0.5/pale straw to water white non-viscous liquid
Odor	light bland petroleum
pH	neutral
Melting/Freezing Point	-40 F -40 C
Solubility	negligible
Viscosity	2.24 cSt @ 100 C

APPEARANCE: Clear, pale straw to water white, non-viscous liquid

ODOR: Light bland petroleum

PHYSICAL STATE: Liquid

BOILING POINT: IBP >520 (D86)°F IBP >271 (D86)°C

MELTING POINT: -40°F (D97) -40°C (D97)

VAPOR PRESSURE: N/A

VAPOR DENSITY (AIR=1): N/A

SPECIFIC GRAVITY: 0.8883

MOLECULAR WEIGHT: N/A

SOLUBILITY (H2O): negligible

PERCENT VOLATILES: nil

VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: N/A

EVAPORATION RATE: 1000X slower than ethyl ether

pH: essentially neutral

VISCOSITY: 2.24 CST at 100°C

Physical data may vary slightly to meet specifications.

10. Stability and Reactivity

Stability/Reactivity

STABILITY: Stable. Will not react violently with water.

CONDITIONS TO AVOID

Sources of ignition.

INCOMPATIBLE MATERIALS

Strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS

Combustion may produce carbon monoxide and other asphyxiants.

HAZARDOUS POLYMERIZATION: will not occur

11. Toxicological Information

Toxicological

ACUTE STUDIES

Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

EYE EFFECTS

Product contacting the eyes may cause eye irritation.

SKIN EFFECTS

Prolonged or repeated skin contact with this product tends to remove skin oils, possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

ACUTE ORAL EFFECTS

Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

ACUTE INHALATION EFFECTS

Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and/or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospheric distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

12. Ecological Information

Ecological Info

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures

resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environments at temperatures above 70°F (21°C).

13. Disposal Considerations

Disposal

Product, as supplied, does not meet the characteristics of a hazardous waste as defined in 40 CFR 261.21-24. If mixed with other products, waste mixture must be characterized. DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Waste product should be recycled. Consider waste brokering.

14. Transportation Information

Transport Info

PROPER SHIPPING NAME: Not regulated by DOT

HAZARD CLASS: Not applicable

DOT IDENTIFICATION NUMBER: N/A

DOT SHIPPING LABEL: Not regulated by DOT

15. Regulatory Information

U.S. FEDERAL REGULATORY INFORMATION

SARA 302 Threshold Planning Quantity: NOT APPLICABLE

SARA 304 Reportable Quantity : NOT APPLICABLE

SARA 311 Categories: Immediate (Acute) Health Effects --N

Delayed (Chronic) Health Effects --Y

Fire Hazard --N

Sudden Release of Pressure Hazard--N

Reactivity Hazard --N

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

EPA Hazard Classification Code: NOT APPLICABLE

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Phenol - CAS No. 108-95-2 CERCLA RQ = 1000 lbs.

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION

No chemicals in this product exceed the De Minimus reporting level established by SARA Title III, Section 313 and 40 CFR 372.

CANADIAN REGULATORY INFORMATION

This product is listed on the Canadian (DSL) Domestic Substances List.

WHMIS Classification: NOT CONTROLLED

16. Other Information

Disclaimer

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of the information for his/her particular purpose(s).

Supersedes MSDS dated: 05/04/2004

Revisions: 05/04/2004 - revised formula, total revision to reflect new format
12/16/2005 - updated autoignition temperature, pour point, and viscosity
02/13/2009 - updated product typicals

Appendix C

Disposal Manifests

MANIFEST NUMBER 0029

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

800-229-4671

1683-3011

5. Generator's Name and Mailing Address

Dominion Power

Generator's Site Address (if different than mailing address)

South 18th St Fern ST
Washington DC

Generator's Phone:

6. Transporter 1 Company Name

HEPACO LLC

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

1301 MANSH ST.
NONPOLK VA 23523
Facility's Phone: 252-543-5718

U.S. EPA ID Number

9. Waste Shipping Name and Description

1. NON REGULATED NON HAZARDOUS LIQUID
Non PCB mineral oil

10. Containers

No. Type

1 TT

11. Total Quantity

2500

12. Unit Wt/Vol.

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Officer's Printed/Typed Name

John D. Carl

Signature

John D. Carl

Month Day Year
1 29 16

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Carry Eggleston

Signature

Carry Eggleston

Month Day Year
2 24 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Sam Doble

Signature

Sam Doble

Month Day Year
2 16 16

GENERATOR

TRANSPORTER INTL

DESIGNATED FACILITY

MANIFEST NUMBER 0030 D/S

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone 800-224-4671	4. Waste Tracking Number 1693-3011		
5. Generator's Name and Mailing Address 518TH ST + S PERRY ST CRYSTAL CITY, VA		Generator's Site Address (if different than mailing address)				
6. Transporter 1 Company Name HERACO LLC		U.S. EPA ID Number				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address HERACO LLC 1301 MANBY ST NONPOLK, VA 23523		U.S. EPA ID Number				
Facility's Phone: 257-543-5718						
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	1. NON REGULATED / NON HAZARDOUS LIQUID NON PCB MANIFEST OIL		No.	Type		
			1	TT	2977	6
	2.					
	3.					
4.						
13. Special Handling Instructions and Additional Information						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offoror's Printed/Typed Name John D. Carl		Signature 		Month 1	Day 24	Year 16
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials					
	Transporter 1 Printed/Typed Name Kelvin Jackson		Signature 		Month 1	Day 24
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
DESIGNATED FACILITY	17. Discrepancy					
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	Manifest Reference Number: _____					
17b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)		Signature		Month	Day	Year
18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in Item 17a		Printed/Typed Name		Signature		
						
				Month	Day	Year
				2	12	16

MANIFEST NUMBER 0032

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

800-229-4671

1683-3011

5. Generator's Name and Mailing Address

Dominion Power
South Hayes 18th St Crystal City Va

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name

HRPACO LLC

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

HRPACO LLC

1301 MANASSAS ST
NONAUCK, VA 23523

U.S. EPA ID Number

Facility's Phone:

757-543-5718

9. Waste Shipping Name and Description

1. NON REGULATED / NON HAZARDOUS LEAKED
NON PCB MINERAL OIL

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

1 TT 1200 G

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations

Generator's/Officer's Printed/Typed Name

John DiCarlo

Signature

[Signature]

Month Day Year

01 26 16

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Darryl Esleston

Signature

[Signature]

Month Day Year

1 26 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

[Signature]

Signature

[Signature]

Month Day Year

2 12 16

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

413
 MANIFEST
 NUMBER #0031

NON-HAZARDOUS WASTE MANIFEST 1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone 800 229-4671 4. Waste Tracking Number 1683-3011

5. Generator's Name and Mailing Address DOMANZON POWER 518TH ST + S FEAN ST CRYSTAL CITY, VA
 Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name HEPACO LLC U.S. EPA ID Number

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address HEPACO LLC 1301 MARSH ST. NORFOLK, VA 257-543-5718
 Facility's Phone: U.S. EPA ID Number

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. NON REGULATED / NON HAZARDOUS NON PCB MINERAL OIL & WATER	1	TT	3,000	G
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name John DiCarlo Signature John DiCarlo Month 1 Day 25 Year 16

15. International Shipments Import to U.S. Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name Signature Kelvin Jackson Month 1 Day 25 Year 16
 Transporter 2 Printed/Typed Name Signature Month Day Year

17. Discrepancy
 17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection
 Manifest Reference Number:
 17b. Alternate Facility (or Generator) U.S. EPA ID Number
 Facility's Phone:
 17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of material's covered by the manifest except as noted in Item 17a
 Printed/Typed Name Signature Month Day Year 2/19/16

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

MANIFEST NUMBER 0033 L/S

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone 800-229-4671	4. Waste Tracking Number
5. Generator Name and Mailing Address DOMINION VA POWER S. LEAN ST + 18TH ST ARLINGTON VA		Generator's Site Address (if different than mailing address)			
Generator's Phone: 804-305-6437					
6. Transporter 1 Company Name HEPACO LLC		U.S. EPA ID Number			
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address HEPACO LLC 1301 MARSH ST NORFOLK VA		U.S. EPA ID Number			
Facility's Phone: 1-757-543-5718					
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
1. NON REGULATED / NON HAZARDOUS MINERAL OIL NON-PLC / WATER		No.	Type	4,800	5
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information TRUCK # 20-0093 TRAILER # 82-0022					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offoror's Printed/Typed Name John DiCarlo		Signature John DiCarlo		Month Day Year 01 25 16	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Sherry Hoffman		Signature Sherry Hoffman		Month Day Year 01 25 16	
Transporter 2 Printed/Typed Name		Signature		Month Day Year	
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
17b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____					
Facility's Phone: _____					
17c. Signature of Alternate Facility (or Generator) Month Day Year					
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name S. J. [Signature]		Signature S. J. [Signature]		Month Day Year 1 25 16	

MANIFEST NUMBER 0034 L13

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
 2. Page 1 of 1
 3. Emergency Response Phone 800-229-4671
 4. Waste Tracking Number 1683-3011

5. Generator's Name and Mailing Address
 DOMINION VA POWER
 SPERN ST + 18TH ST
 ARLINGTON VA
 Generator's Phone: 804-305-6437
 Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: HEPALO LLC
 U.S. EPA ID Number

7. Transporter 2 Company Name
 U.S. EPA ID Number

8. Designated Facility Name and Site Address
 HEPALO, LLC
 1301 MARSH ST
 NORFOLK VA
 Facility's Phone: 1-757-543-5718
 U.S. EPA ID Number

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. NON REGULATED / NON HAZARDOUS MINERAL OIL / WATER	1	TT	2800G	
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: John DiCarlo
 Signature: [Signature]
 Month Day Year: 01 25 16

15. International Shipments
 Import to U.S. Export from U.S.
 Port of entry/exit:
 Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
 Transporter Signature (for exports only):
 Date leaving U.S.:

Transporter 1 Printed/Typed Name: Darryl Essleston
 Signature: [Signature]
 Month Day Year: 1 25 16
 Transporter 2 Printed/Typed Name:
 Signature:
 Month Day Year:

17. Discrepancy
 17a. Discrepancy Indication Space
 Quantity Type Residue Partial Rejection Full Rejection
 Manifest Reference Number:

17b. Alternate Facility (or Generator)
 U.S. EPA ID Number

Facility's Phone:
 17c. Signature of Alternate Facility (or Generator)
 Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
 Printed/Typed Name: [Signature]
 Signature: [Signature]
 Month Day Year: 2 16 16

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY

MANIFEST
NUMBER 0036

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number 1683-3011	
5. Generator's Name and Mailing Address Dominion Power 5 Fern St + 19th St Arlington, VA Generator's Phone: 804-305-6437			Generator's Site Address (if different than mailing address)			
6. Transporter 1 Company Name HERACO LLC			U.S. EPA ID Number			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address HERACO LLC 1301 Marsh St Norfolk VA 23523 Facility's Phone: 757-			U.S. EPA ID Number			
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	1. non regulated / non hazardous liquid non PCB non halogenated oil + water		No.	Type	1600	G
	2.					
	3.					
	4.					
13. Special Handling Instructions and Additional Information						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's Offeror's Printed/Typed Name John DiCarlo			Signature John DiCarlo		Month Day Year 1 28 16	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry exit: Date leaving U.S.:						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Kevin Jackson			Signature Kevin Jackson		Month Day Year 1 28 16	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number						
17c. Signature of Alternate Facility (or Generator) Month Day Year						
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a.						
Printed/Typed Name Jim [Signature]			Signature [Signature]		Month Day Year 2 12 16	



HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

160178 (L) S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 2-2-16

Site Address: 82ND ST 25 Forest Arlington VA EPA ID#: _____

HEPACO Truck #: 50-0157 Trailer #: _____ Project Manager: C WAYS

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>NON PCB MIXED OIL & WATER</u>)	1	TT	2245	G
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Carby

Print: Kelvin JACKSON

Print: [Signature]

Sign: [Signature]

Sign: [Signature]

Sign: [Signature]

Date: 2/2/16

Date: 2-2-16

Date: 2/12/16

For Accounting Use Only:

Empty rectangular box for accounting use.

HEPACO

Serious experience for serious times.
2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163060 L/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 02-18-2016

Site Address: 18th + 5 Fern St Arlington VA EPA ID#: _____

HEPACO Truck #: 5D-D152 Trailer #: NONE Project Manager: Chris Wayns

Designated Facility Name Reco EPA ID # _____

Address 710 Hospital St Richmond VA Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>NON PCB mineral oil & water</u>)	<u>1</u>	<u>TT</u>	<u>1,900</u>	<u>G</u>
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John DiCarlo

Print: Sherry Hoffmann

Print: Sam Pasbati

Sign: [Signature]

Sign: [Signature]

Sign: [Signature]

Date: 2/18/16

Date: 02-18-2016

Date: 2/19/16

For Accounting Use Only:

HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163059 ^{LYS}

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 02-17-2016

Site Address: 18th + Fern St Arlington VA EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: none Project Manager: Chris Ways

Designated Facility Name BECD EPA ID # _____

Address 710 Hospital St Richmond VA Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (NONPCB mineral oil + water)	1	TT	2550	G
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Carl

Print: Sherry Hoffman

Print: [Signature]

Sign: [Signature]

Sign: [Signature]

Sign: [Signature]

Date: 2/17/16

Date: 02-17-2016

Date: 2/19/16

For Accounting Use Only:

HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163058 L/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Va Power Date: 2-16-2016

Site Address: S. 18th St & S. Fern St Arlington Va EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: _____ Project Manager: Chris Ways

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (Non PCB mineral oil & water)	1	TT	2750	G
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative	HEPACO Driver	Designated Facility
Print: <u>John DiCarlo</u>	Print: <u>Darryl Eggleston</u>	Print: <u>[Signature]</u>
Sign: <u>[Signature]</u>	Sign: <u>[Signature]</u>	Sign: <u>[Signature]</u>
Date: <u>2/16/16</u>	Date: <u>2-16-2016</u>	Date: <u>2/19/16</u>

For Accounting Use Only: _____



HEPACO

Serious experience for serious times.
2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163057 D/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: DOMINION POWER Date: 2-12-11

Site Address: 5600 + 18TH ST ARLINGTON, VA EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: _____ Project Manager: ~~1683-3011~~ CITHAS MARYS

Designated Facility Name REGO PROTECTA WOLFH EPA ID # _____

Address 710 HOSPITAL ST RICHMOND, VA Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (WATER + NON PCB MATERIAL 021)	1	TT	75	6
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Carlo

Print: WALTER HOPKINS

Print: Sam Roberson

Sign: [Signature]

Sign: [Signature]

Sign: [Signature]

Date: 2/12/16

Date: 2-12-16

Date: 2/19/16

For Accounting Use Only:

Empty box for accounting use.



HEPACO

Serious experience for serious times.
2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163056 L/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Va Power Date: 2-10-2016

Site Address: 518th & Fern ST EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: _____ Project Manager: Chris Ways

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. (3, PG III)				
NA1993, Combustible liquid, n.o.s. (Comb, PG III)				
Non Regulated/ Non Hazardous Liquid (<u>Non PCB mineral oil & water</u>)	<u>1</u>	<u>TT</u>	<u>175</u>	<u>G</u>
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John DiCarlo Print: Darryl Essleston Print: [Signature]

Sign: [Signature] Sign: [Signature] Sign: [Signature]

Date: 2/10/16 Date: 2-10-2016 Date: 2/12/16

For Accounting Use Only:

Empty box for accounting use.

HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163055 L/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 2-9-2016

Site Address: 82nd st & S. Fern St Arlington Va EPA ID#: _____

HEPACO Truck #: 50-0150 Trailer #: _____ Project Manager: Chris Wags

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>Non PCB mineral oil & water</u>)	<u>1</u>	<u>TT</u>	<u>170</u>	<u>G</u>
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Carh

Print: Darryl Eggleston

Print: BB

Sign: [Signature]

Sign: [Signature]

Sign: [Signature]

Date: 2/9/16

Date: 2-9-2016

Date: 2/12/16

For Accounting Use Only:



HEPACO

Serious experience for serious times.
2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163054 L S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 2-7-16

Site Address: 89th St & S Fern St Arlington VA EPA ID#: _____

HEPACO Truck #: _____ Trailer #: _____ Project Manager: C. WAYS

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>NON PCB mineral oil & water</u>)	<u>1</u>	<u>TT</u>	<u>102</u>	<u>G</u>
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John DiCarlo

Print: Kevin Jackson

Print: BO

Sign: John DiCarlo

Sign: Kevin Jackson

Sign: BO

Date: 2/7/16

Date: 2-7-16

Date: 2/12/16

For Accounting Use Only:



HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163053 L S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 2-5-16

Site Address: 82 West 5 Fern St Arlington VA EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: _____ Project Manager: C. WAYS

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. (3, PG III)				
NA1993, Combustible liquid, n.o.s. (Comb, PG III)				
Non Regulated/ Non Hazardous Liquid (<u>NON PCB mineral oil & water</u>)	<u>1</u>	<u>TT</u>	<u>169</u>	<u>G</u>
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Carlo

Print: Kelvin Jackson

Print: SG

Sign: John D. Carlo

Sign: Kelvin Jackson

Sign: [Signature]

Date: 2/5/16

Date: 2-5-16

Date: 2/12/16

For Accounting Use Only:



HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

163051 (L) S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 2-3-16

Site Address: 82nd St & Spear St Arlington VA EPA ID#: _____

HEPACO Truck #: 50-0152 Trailer #: _____ Project Manager: C. WAYS

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>NON PCB MINERAL OIL & WATER</u>)	1	TT	2000	G
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: John D. Park

Print: Kelvin Jackson

Print: Sam Jones

Sign: John D. Park

Sign: Kelvin Jackson

Sign: Sam Jones

Date: 2/3/16

Date: 2-3-16

Date: 2/12/16

For Accounting Use Only:

Empty box for accounting use.

HEPACO

Serious experience for serious times.

2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

160182 (L) S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: Dominion Power Date: 1-29-16

Site Address: 84th St - Forest Arlington VA EPA ID#: _____

HEPACO Truck #: 50-0162 Trailer #: _____ Project Manager: C. W. Adams

Designated Facility Name _____ EPA ID # _____

Address _____ Phone # _____

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid (<u>Non PCB mineral oil & water</u>)	1	TT	727	G
Non Regulated/ Non Hazardous Solid ()				

Remarks/ Comments: _____

Shipper Representative	HEPACO Driver	Designated Facility
Print: <u>Michael Bailey</u>	Print: <u>Kelvin Jackson</u>	Print: <u>Sam Adams</u>
Sign: <u>Michael Bailey</u>	Sign: <u>K. Jackson</u>	Sign: <u>Sam Adams</u>
Date: <u>1/29/16</u>	Date: <u>1-29-16</u>	Date: <u>2/12/16</u>

For Accounting Use Only:

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

1683.3011

5. Generator's Name and Mailing Address
 Dominion Power
 18th St + S Fern St
 Arlington VA
 Generator's Phone: 804-305-6437

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
 HEPACOLLG

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
 HEPACOLLG
 1301 Marsh St
 Norfolk VA
 Facility's Phone:

U.S. EPA ID Number

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

1. Non Regulated / Non Hazardous liquid
 Non PCB Mineral oil + water

No. Type

1 TT

1500

G

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/picarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

John DiCarb

John DiCarb

Month Day Year
 1 31 16

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Rikki Hoffman

Rikki Hoffman

Month Day Year
 1 31 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

[Signature]

[Signature]

Month Day Year
 12 12 16

(2) 5

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

1683-3011

5. Generator's Name and Mailing Address
Dominion Power
18th St & S Fern St
Arlington VA
Generator's Phone: 804-305-6437

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name

Hepaco LLC

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Hepaco LLC
1301 Marsh St
Norfolk VA
Facility's Phone:

U.S. EPA ID Number

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

1. Non Regulated / Non Hazardous Liquid
non PCB mineral oil + water

No.

Type

1

TT

230

G

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Officer's Printed/Typed Name

Signature

Month Day Year

Michael Bailey

Michael Bailey

1 30 16

15. International Shipments Import to U.S. Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Kelvin Jackson

Kelvin Jackson

1 30 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantly

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

Sam Wilson

[Signature]

6 12 16

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 1

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Blotechnology Contact Reco Blotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____

NO. of Packages	(* Containr	Shipping Description	Soil Weight (Sub. to Car.)
1	RO	Non-Regulated Material non-regulated None (petroleum-contaminated soil) None (mineral oil)	Duplicate 11.3

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: ~~160~~ 160 *Gross Weight: _____
Tare Weight: 5340 lb TRGross
Net Weight: 30740 lb TRTare
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carlo Senior Environmental Compliance Coordinator John Hooe
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: John Hooe Date: 2/1/16

Discrepancies: _____

RECEIVED BY: Reco Blotechnology

SIGNED BY: Wilson Z.

DATE: 2.1.16

Aqua Clean of Virginia, LLC dba Reco Blotechnology

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 2

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1067
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____

NO. of Packages	(* Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None None (mineral oil contaminated soil)	13.77

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 115

* Gross Weight _____
Tare Weight _____
Net Weight 33 on 02/01/16
* May attach weight tickets
35220 lb TR Tare

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb Senior Environmental Compliance Coordinator [Signature]
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-1-16

Discrepancies: 0

RECEIVED BY: Reco Biotechnology

SIGNED BY: [Signature]

DATE: 2-1-16

57100

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest#012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 3

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hone
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route:

Duplicate
Weigh-In:
ID#: 140
09:50 am 02/02/16
57100 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Car.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (polynuclear aromatic soil)	Duplicate Weigh-Out 12.2v ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

*Gross Weight: 57100 lb on 02/02/16
Tare Weight: 32580 lb TRGross
Net Weight: 24520 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Arb Senior Environmental Compliance Coordinator
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-2-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2/2/16 Aqua Clean of Virginia, LLC dba Reco Biotechnology

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 4

Generator: Name: Dominion VA Power Contact Name: Chris Ways
Address: 2400 Grayland Ave Telephone: 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name: Woodward Env. Contact Name: Jill Hooe
or Carrier Address: 910 Threechopt Rd Telephone: 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact: Reco Biotechnology
Delivery Address 710 Hospital Street Telephone: (804) 644-2800
Richmond, VA 23219

Route: _____ **Weigh-Out:** _____
ID#: 140
09:03 am 02/01/16

6540 lb TRGross
3440 lb TRTare
2900 lb TRNet

NO. of Packages	(* Contalner	Shipping Description	Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	1453 Weigh-In: 10:14 am 02/01/16 08:38 am 02/01/16 63540 lb

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Contalner
- RC = Rail Car

Truck #: 140

*Gross Weight: _____
Tare Weight: _____
Net Weight: _____
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb Senior Environmental Compliance Coordinator John D'Carb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-1-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology
SIGNED BY: [Signature]
DATE: 2-1-16

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 5

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate
Weigh-In: _____
ID#: 140
12:15 pm 02/02/16
52600 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out: <u>10.27</u> ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

* Gross Weight: 12:27 pm 02/02/16
52600 lb TRGross
Tare Weight: 32060 lb TRTare
Net Weight: 20540 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Arb Senior Environmental Compliance Coordinator John Wiland
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-2-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2/2/16

53940

For Facility Use Only
I.D.# 20954**NON-HAZARDOUS MANIFEST**For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800Load # 6

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hoce
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route:

Weigh-In:

ID#: 140

09:24 am 02/04/16

53940 lb

NO. of Packages	(*) Container	Shipping Description	Sell Weight (Sub. to Corp)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	10.73

* - DM = Drum
DT = Dump Truck/Trailer
SC = Steel Container
RC = Rail Car

Truck #: 140

* Gross Weight: 53940 lb TRGross
Tare Weight: 32480 lb TRTare
Net Weight: 21460 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DiCarlo Senior Environmental Compliance Coordinator

SIGNATURE

DATE

Truck Driver's Signature: [Signature] Date: 2-4-16

Discrepancies:

RECEIVED BY: Reco BiotechnologySIGNED BY: Alfred WilliamsDATE: 2/5/16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

56525

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 7

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threchopt Rd Telephone 804-784-3327
Manakin-Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____
Weigh-In: _____
ID#: 141
11:04 am 02/04/16
56500 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum contaminated soil)	Duplicate Weigh-Out ID#: 141 11.84

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

01:25 pm 02/04/16
* Gross Weight: 56500 lb TRGross
Tare Weight: 32820 lb TRTare
23680 lb TRNet
Net Weight: _____

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb Senior Environmental Compliance Coordinator John Wilcox
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: _____ Date: 2-2-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2/4/16

Agua Clean of Virginia, LLC dba Reco Biotechnology

61820

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 8

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route:

Duplicate
Wash-In:
ID#: 140
02:46 PM 02/04/16
61820 10

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum contaminated soil)	13.78

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 1412 *Gross Weight: 61820
Tare Weight: 34260 (AW)
Net Weight: 27560
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carb Senior Environmental Compliance Coordinator John D. Carb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-4-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2-4-16 Aqua Clean of Virginia, LLC dba Reco Biotechnology

52160

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 9

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hope
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate Weigh-In ID#: 140
09:34 am 02/05/16
52160 Ib

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out: 9.99 ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

*Gross Weight: 52160 lb TRGross
Tare Weight: 32180 lb TRTare
Net Weight: 19980 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb Senior Environmental Compliance Coordinator [Signature]
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-5-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2-5-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

54620

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 10

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hope
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate Weigh-In: _____
ID#: 140
11:24 am 02/05/16
54640 lb

NO. of Packages	(* Containner	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out: <u>10.75</u> ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

* Gross Weight: 33 am 02/05/16
54640 lb TRGross
Tare Weight: 33140 lb TRTare
Net Weight: 21500 lb TRNet
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb ^{Senior Environmental} Compliance Coordinator John D'Carb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-5-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 2-5-16

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 11

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hope
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate _____
Weigh-In: _____
ID#: 140

01:11 PM 02/05/16
56680 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	11.18 Weigh-Out: ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Roll Car

Truck #: 140

*Gross Weight: 56680 lb TRGross
Tare Weight: 34320 lb TRTare
Net Weight: 22360 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DiCarb Senior Environmental Compliance Coordinator John DiCarb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: _____ Date: 2-5-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: M. Brown

DATE: 2-5-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

55800

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 12

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hope
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate Weigh-In: _____
ID#: 140
02:49 PM 02/05/16
55800 1b

NO. of Packages	(* Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out: <u>10.72</u>

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140 *Gross Weight: 55800 lb TR
Tare Weight: 34360 lb TR
Net Weight: 21440 lb TR

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DiCarlo Senior Environmental Compliance Coordinator John DiCarlo
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: _____ Date: 2-5-16
Discrepancies: _____

RECEIVED BY: Reco Biotechnology
SIGNED BY: Alfred Williams
DATE: 02-5-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

55660

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 13

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hoag
or Carrier Address 910 Threchopt Rd Telephone 804-784-3327
Manakin-Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____
Weigh-In: _____
ID#: 140
11:09 am 02/08/16
55620 lb

NO. of Packages	(*) Container	Shipping Description	Net Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum contaminated soil)	9.48 Weigh-Out ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 1417

12:01 pm 02/08/16
* Gross Weight: 55620 lb TRGross
Tare Weight: 36660 lb TRTare
Net Weight: 18960 lb TRNet
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DeCarb Senior Environmental Compliance Coordinator John DeCarb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-8-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02-08-16 Aqua Clean of Virginia, LLC dba Reco Biotechnology

Washed out @ Reco

56120

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 14

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	14.77

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

Recalled ID#: 158
 * Gross Weight: 56120 lb TR Gross
02/15/16 02/08/16
 Tare Weight: 18580 lb TR Tare
 Net Weight: 29540 lb TR Net
 * May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DeCarb Senior Environmental Compliance Coordinator John DeCarb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-8-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02-08-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

Worked out @ Reco

52160

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 15

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hoop
or Carrier Address 810 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate
Weigh-In: _____
ID#: 140
02-17 am 02/09/16
52180 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Car.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum contaminated soil)	Duplicate Weigh-Out: <u>7.43</u> ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

* Gross Weight: 52180 lb TRGross
Tare Weight: 37320 lb TRTare
Net Weight: 14860 lb TRNet
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb ^{Senior Environmental} Compliance Coordinator John Hilal
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-9-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02-09-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

Washed out @ Reco

58840

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 16

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate
Weigh-In _____
ID#: 140
10:35 am 02/09/16
59840 1b

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

* Gross Weight: 59840 lb TRGross
Tare Weight: 34460 lb TRTare
Net Weight: 25380 lb TRNet
* May attach weight tickets

Certification:
I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carlo Senior Environmental Compliance Coordinator John D. Carlo
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-9-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02-09-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

Washed out @ Reco

279365

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 17

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hone
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route:

Duplicate
Weish-Ins

ID#: 151

10:30 am 02/08/16

57760 lb

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Weish-Out: <u>9.81</u> ID#: 151

10:57 am 02/08/16

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 151

* Gross Weight: 57760 lb TRGross

Tare Weight: 38140 lb TRTare

Net Weight: 19620 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D'Carb Senior Environmental Compliance Coordinator John Hiland
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-8-15

Discrepancies: 0

RECEIVED BY: Reco Biotechnology

SIGNED BY: [Signature]

DATE: 2-8-15

Aqua Clean of Virginia, LLC dba Reco Biotechnology

49340

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 18

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threchopt Rd Telephone 804-784-3327
Manakin-Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate
Weigh-In: _____
ID#: 151
12:33 PM 02/08/16
49340 ID

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Car.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out <u>5.38</u> ID#: 151

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 151

*Gross Weight: 2:46 PM 02/08/16
48340 lb TRGross
Tare Weight: 37580 lb TRTare
Net Weight: 10760 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John DeLoe Senior Environmental Compliance Coordinator John Wilcox
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-8-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02-08-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

57540

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest#012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 19

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hooe
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate Weigh-In: _____
ID#: 140
11:59 am 02/09/16
57560 16

NO. of Packages	(* Containr	Shipping Description	Soll Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Duplicate Weigh-Out: <u>10.15</u> ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140

* Gross Weight: 2:54 pm 02/09/16
57560 lb TRGross
Tare Weight: 37260 lb TRTare
Net Weight: 20300 lb TRNet
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carls Senior Environmental Compliance Coordinator John Milne
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-9-16

Discrepancies: _____
RECEIVED BY: Reco Biotechnology
SIGNED BY: Alfred Williams
DATE: 02-09-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

Washed out @ Reco

53500

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date: _____

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 20

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hope
or Carrier Address 910 Threechopt Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____ Duplicate Weigh-In: ID#: 140 02:18 PM 02/09/16 53500 lb

NO. of Packages	(*) Container	Shipping Description	Soll Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum contaminated soil)	Duplicate Weigh-Out: <u>9.61</u> ID#: 140

- * - DM = Drum
- DT = Dump Truck/Trailer
- SC = Steel Container
- RC = Rail Car

Truck #: 140 *Gross Weight: 2:43 PM 02/09/16
Tare Weight: 53500 lb TRGross
34200 lb TRTare
Net Weight: 19220 lb TRNet
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carlo Senior Environmental Compliance Coordinator John Wilcox
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-9-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: [Signature]

DATE: 02-09-16

Aqua Clean of Virginia, LLC dba Reco Biotechnology

Washed out @ Reco

51220

For Facility Use Only
I.D.# 20954

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 012920954

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Load # 21

Generator: Name Dominion VA Power Contact Name Chris Ways
Address 2400 Grayland Ave Telephone 804-400-1057
Richmond, VA
Site: Substation - S. 18th & Fern St, Arlington VA

Transporter: Name Woodward Env. Contact Name Jill Hone
or Carrier Address 910 Threecroft Rd Telephone 804-784-3327
Manakin Sabot, VA

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route:

Weight-In:
ID#: 140
08:19 am 02/10/16
51200 lb

NO. of Packages	(*) Container	Shipping Description	Soll Weight (Sub. to Cor.)
1	RO	Non-Regulated Material non-regulated None mineral oil None (petroleum-contaminated soil)	Weight-Out: <u>8.46</u> ID#: 140

* - DM = Drum
DT = Dump Truck/Trailer
SC = Steel Container
RC = Rail Car

Truck #: 140

* Gross Weight: 51200 lb TRGross
Tare Weight: 34280 lb TRTare
Net Weight: 16920 lb TRNet

* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

John D. Carb Senior Environmental Compliance Coordinator John H. Carb
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2-10-16

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: Alfred Williams

DATE: 02.10.16 Aqua Clean of Virginia, LLC dba Reco Biotechnology

Williams et al Reco



HEPACO

Serious experience for serious times.
2711 Burch Drive
Charlotte, NC 28269
Phone: 704-598-9782
Emergency: 800-888-7689

Shipping Number

160177 L/S

Recyclable Material

EPA ID Number: NCD986194306

Job # 1683-3011

Customer Name: DONALDSON PARK Date: 2-2-16

Site Address: SIGT# ST + SFRAN ANGLTON, VA EPA ID#: _____

HEPACO Truck #: 10-0167 Trailer #: _____ Project Manager: CHRIS WAYS

Designated Facility Name HEPACO LLC EPA ID # _____

Address 1301 MANSH ST NORFOLK VA 23523 Phone # 757-543-5218

Shipping Name (Material) Hazard Class, UN/NA Number, Packing Group	# of Containers	Container Type	Total Quantity	Units
UN1993, Flammable liquid, n.o.s. () 3, PG III				
NA1993, Combustible liquid, n.o.s. () Comb, PG III				
Non Regulated/ Non Hazardous Liquid ()				
Non Regulated/ Non Hazardous Solid (<u>NON PCB NEWBATH OIL IMPACTED SONBRMS</u>)	<u>2</u>	<u>DM</u>	<u>250</u>	<u>P</u>

Remarks/ Comments: _____

Shipper Representative

HEPACO Driver

Designated Facility

Print: [Signature]
Sign: [Signature]
Date: 2-1-16

Print: Josh McLaughlin
Sign: [Signature]
Date: 2-1-16

Print: [Signature]
Sign: [Signature]
Date: 2/2/16

For Accounting Use Only: _____

Appendix D

Lab Analysis



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 16B0005

Client Name: Dominion Virginia Power-Richmond (3)
2400 Grayland Ave.
Richmond, VA 23220

Date Received: February 1, 2016 11:15
Date Issued: February 2, 2016 17:23
Project Number: [none]
Purchase Order:

Submitted To: Michael Bailey

Client Site I.D.: Crystal

Enclosed are the results of analyses for samples received by the laboratory on 02/01/2016 11:15. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

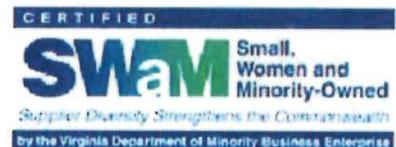
End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: Dominion Virginia Power-Richmond (3) Date Issued: 2/2/2016 17:23
2400 Grayland Ave.
Richmond VA, 23220

Submitted To: Michael Bailey Project Number: [none]
Client Site I.D.: Crystal Purchase Order:

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 16B0005

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS #1	16B0005-01	Soil	02/01/2016 08:45	02/01/2016 11:15
SS #2	16B0005-02	Soil	02/01/2016 08:50	02/01/2016 11:15
SS #3	16B0005-03	Soil	02/01/2016 08:55	02/01/2016 11:15
SS #4	16B0005-04	Soil	02/01/2016 09:00	02/01/2016 11:15
SS #5	16B0005-05	Soil	02/01/2016 09:05	02/01/2016 11:15
SS #6	16B0005-06	Soil	02/01/2016 09:10	02/01/2016 11:15



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Certificate of Analysis

Final Report

Client Name:	Dominion Virginia Power-Richmond (3) 2400 Grayland Ave. Richmond VA, 23220	Date Issued:	2/2/2016 17:23
Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results

Sample I.D. SS #1	Laboratory Sample ID: 16B0005-01
Date/Time Sampled: 02/01/2016 08:45	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	125 mg/kg		10.0	1	02/01/16 09:10	02/02/16 10:47	JHV
Surr: Pentacosane	01	SW8015C	72.4 %		40-160		02/01/16 09:10	02/02/16 10:47	JHV



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Dominion Virginia Power-Richmond (3) 2400 Grayland Ave. Richmond VA, 23220	Date Issued:	2/2/2016 17:23
Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results

Sample I.D.	SS #2	Laboratory Sample ID:	16B0005-02
Date/Time Sampled:	02/01/2016 08:50		

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02RE1	SW8015C	718 mg/kg		100	10	02/01/16 09:10	02/02/16 13:24	JHV
<i>Surr: Pentacosane</i>	02RE1	SW8015C	65.6 %		40-160		02/01/16 09:10	02/02/16 13:24	JHV



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Dominion Virginia Power-Richmond (3) 2400 Grayland Ave. Richmond VA, 23220	Date Issued:	2/2/2016 17:23
Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results

Sample I.D. SS #3	Laboratory Sample ID: 16B0005-03
Date/Time Sampled: 02/01/2016 08:55	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	123 mg/kg		10.0	1	02/01/16 09:10	02/02/16 11:38	JHV
<i>Surr: Pentacosane</i>	03	SW8015C	65.7 %		40-160		02/01/16 09:10	02/02/16 11:38	JHV



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Certificate of Analysis

Final Report

Client Name:	Dominion Virginia Power-Richmond (3) 2400 Grayland Ave. Richmond VA, 23220	Date Issued:	2/2/2016 17:23
Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results

Sample I.D. SS #4	Laboratory Sample ID: 16B0005-04
Date/Time Sampled: 02/01/2016 09:00	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	31.9 mg/kg		10.0	1	02/01/16 09:10	02/02/16 12:03	JHV
Surr: Pentacosane	04	SW8015C	60.1 %		40-160		02/01/16 09:10	02/02/16 12:03	JHV



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Certificate of Analysis

Final Report

Client Name:	Dominion Virginia Power-Richmond (3) 2400 Grayland Ave. Richmond VA, 23220	Date Issued:	2/2/2016 17:23
Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results	
Sample I.D. SS #5	Laboratory Sample ID: 16B0005-05
Date/Time Sampled: 02/01/2016 09:05	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<10.0 mg/kg		10.0	1	02/01/16 09:10	02/02/16 12:28	JHV
<i>Surr: Pentacosane</i>	05	SW8015C	53.9 %		40-160		02/01/16 09:10	02/02/16 12:28	JHV



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Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Laboratory Order ID: 16B0005

Analytical Results

Sample I.D. SS #6	Laboratory Sample ID: 16B0005-06
Date/Time Sampled: 02/01/2016 09:10	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	121 mg/kg		10.0	1	02/01/16 09:10	02/02/16 12:53	JHV
<i>Surr: Pentacosane</i>	06	SW8015C	64.8 %		40-160		02/01/16 09:10	02/02/16 12:53	JHV

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Callbration ID
Semivolatile Hydrocarbons by GC					
			Preparation Method: SW8100		
16B0005-01	50.0 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-02	50.0 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-02RE1	50.0 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-03	50.7 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-04	50.1 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-05	50.0 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090
16B0005-06	50.0 g / 1.00 mL	SW8015C	BZB0007	SZB0058	AA60090



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Client Name: Dominion Virginia Power-Richmond (3) Date Issued: 2/2/2016 17:23
 2400 Grayland Ave.
 Richmond VA, 23220

Submitted To: Michael Bailey Project Number: [none]
 Client Site I.D.: Crystal Purchase Order:

Semivolatile Hydrocarbons by GC - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
Batch BZB0007 - SW8100										
Blank (BZB0007-BLK1) Prepared & Analyzed: 02/01/2016										
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg							
Surr: Pentacosane	4.49		mg/kg	4.95		90.7	40-160			
LCS (BZB0007-BS1) Prepared & Analyzed: 02/01/2016										
TPH-Semi-Volatiles (DRO)	65.2 mg/kg	10.0	mg/kg	99.0	mg/kg	65.9	40-160			
Surr: Pentacosane	4.54		mg/kg	4.95	mg/kg	91.7	40-160			
Matrix Spike (BZB0007-MS1) Source: 16A0530-01RE1 Prepared & Analyzed: 02/01/2016										
TPH-Semi-Volatiles (DRO)	2700 mg/kg	199	mg/kg	99.6	1640 mg/kg	1060	40-160			M2
Surr: Pentacosane	5.53		mg/kg	4.98	mg/kg	111	40-160			
Matrix Spike Dup (BZB0007-MSD1) Source: 16A0530-01RE1 Prepared & Analyzed: 02/01/2016										
TPH-Semi-Volatiles (DRO)	2550 mg/kg	200	mg/kg	99.8	1640 mg/kg	910	40-160	5.63	20	M2
Surr: Pentacosane	4.95		mg/kg	4.99	mg/kg	99.3	40-160			



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Certificate of Analysis

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Submitted To:	Michael Bailey	Project Number:	[none]
Client Site I.D.:	Crystal	Purchase Order:	

Certified Analyses included in this Report

Analyte		Certifications	
<i>SW8015C in Solids</i>			
TPH-Semi-Volatiles (DRO)		VELAP,NC,WVDEP	
Code	Description	Lab Number	Expires
VELAP	NELAC-Virginia Certificate #8177	460021	06/15/2016



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Client Name: Dominion Virginia Power-Richmond (3) Date Issued: 2/2/2016 17:23
2400 Grayland Ave.
Richmond VA, 23220

Submitted To: Michael Bailey Project Number: [none]

Client Site I.D.: Crystal Purchase Order:

Summary of Data Qualifiers

M2 Sample was diluted due to matrix interference.

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.



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Sample Conditions Checklist

Opened by: (Initials) BA

Lab ID No.: 16B0005

Date Cooler Opened: 02/01/16

- | | | YES | NO | N/A |
|-----|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. | How were samples received?
Fed Ex <input type="checkbox"/>
UPS <input type="checkbox"/>
Courier <input type="checkbox"/>
Walk In <input checked="" type="checkbox"/> | | | |
| 2. | Were custody seals used? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. | If yes, are custody seals unbroken and intact at the date and time of arrival? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. | Are the custody papers filled out completely and correctly? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Do all bottle labels agree with custody papers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. | Is the temperature blank or representative sample within acceptable limits?
(above freezing to 6°C) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. | If NO, are the samples just taken and received on ice? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. | Are all samples within holding time for requested laboratory tests? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | Is a sufficient amount of sample provided to perform the tests indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. | Are all samples in proper containers for the analyses requested? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. | Are all samples appropriately preserved for the analyses requested? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. | Are all volatile organic containers free of headspace? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 14. | Are all TOX containers free of headspace? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. | Is Trip blank provided with each VOC sample set? Circle applicable method:
(Document if trip blank is not received with the sample set) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

EPA 8011 EPA 504 EPA 8260 EPA 824
 RSK-175 EPA 8015 (GRO) EPA 8021
 EPA 524 *GRO Wisconsin DNR (water and/or methanol trip blank must be provided)

* See preservation log for Wisconsin soil DRD.

COMMENTS

FOR LAB USE ONLY:

CrVI preserved date/time: _____

Buffer Sol'n ID: _____

Analyst Initials: _____

1N NaOH ID: _____ or

5N NaOH ID: _____

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED
 F1302 Sample Condition 6_0.xls

Appendix E

Bioremediation Application Information

VERDE ENVIRONMENTAL, INC.

HOME OF

Micro-Blaze[®]

MICROBIAL PRODUCTS



Micro-Blaze[®]
Emergency Liquid Spill Control

Verde Environmental, Inc.
9223 Eastex Freeway
Houston, TX 77093

Office: 713.691.6468
Toll Free: 800.626.6598
Fax: 713.691.2331
www.micro-blaze.com

"PARTNERING WITH NATURE FOR A CLEANER TOMORROW"

Table of Contents

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Emergency 1st Response / Spil & Leaks.....	3
Soil Remediation.....	4
Tank Cleaning.....	5
Users.....	6
Customer Feedback.....	7

Product Details

Appearance:

Cream to tan, opaque liquid, perfumed

pH:

7.0 - 8.0

Shelf Life:

10 Years

Storage:

Avoid temperatures over 48°C for long periods of time. Avoid prolonged freezing.

Packaging:

5-Gallon Pail
55-Gallon Drum
275-Gallon Tote

Micro-Blaze® Emergency Liquid Spill Control is on the US EPA NCP Product Schedule as a bioremediation agent

This listing does not mean the EPA approves, recommends, licenses, certifies or authorizes the use of Micro-Blaze® Emergency Liquid Spill Control or any other product on an oil discharge. This listing only means that data has been submitted to EPA as required by subpart J of the NCP § 300.915

Micro-Blaze®

Emergency Liquid Spill Control

A safe, non-toxic, microbial formulation used for bioremediation of hydrocarbons and other organic compounds. It is used in emergency spill situations to eliminate LEL's, supressing vapors, and thereby creating a safe working environment for emergency personel. It is used in tank and vessel cleaning of hydrocarbons and other organic compounds. It's usage is virtually unlimited because it breaks down, degrades, and digests hydrocarbons and other compounds, waste and eliminates flammability. The residue and run-off can be safely sent to the facility wastewater treatment plant. The numerous strains of microbes in **Micro-Blaze® Emergency Liquid Spill Control** provide a synergistic degradation of the organic and hydrocarbon pollutants. Its proprietary combination of wetting agents, nutrients, and microbes make it an ideal formulation for use on many pollutants found in spills and contaminated sites.

Remediates

- Acetone
- Acrylonitrile
- AFFF Waste
- Anti-Freeze
- Aviation Fuels
- Benzene & Benzene Compounds
- Crude Oil
- Diesel Fuel
- Dimethylformamide
- Fats
- Gasoline
- Grease
- Glycols
- Hydrocarbon Waste
- Kerosene
- Methanol
- Methyle Tertiary Butyl Ether (MTBE)
- Motor Oil
- Odor
- Organic Chemical Waste
- Organic Waste
- Paint Sludge
- Pipeline Condensation
- Polyurethane Resin Waste
- Sludge
- Toluene

World-Wide Users

Micro-Blaze® Emergency Liquid Spill Control is used all over the world by users in the field of emergency and first response, spills and leak cleanup, and in soil bioremediation. In addition, other major users and usages of **Micro-Blaze® Emergency Liquid Spill Control** include areas such as:

Military

For over 20 years, various branches of the military have used **Micro-Blaze® Emergency Liquid Spill Control** for hydrocarbon leaks; soil remediation; equipment cleaning; ship cleaning; tank cleaning; and various other applications. Both the U.S. and Canadian militaries have featured its use in articles in their publications.

Railroads

Micro-Blaze® Emergency Liquid Spill Control is effective at cleaning and remediating the leaking of diesel hydraulic fluids on the tracks and right of way, in addition to the occasional major hydrocarbon spill and/or accident. Many of the largest operators Standard Operating Procedures (SOP) require the use of **Micro-Blaze® Emergency Liquid Spill Control** to clean up spills and leaks along their right of way. (See Pages 4 & 5)

Power & Utility Plants

Micro-Blaze® Emergency Liquid Spill Control is effective in cleaning up leaking mineral oil from transformers as well as in the general cleaning of equipment. (See Pages 4 & 5)

Municipalities & Fire Departments

(See Page 4)

Refineries & Chemical Plants

Micro-Blaze® Emergency Liquid Spill Control is effective in cleaning up everyday spills in the plants and leaking equipment, as well as, tower and tank cleaning. (See Page 6)

Institutional & Commercial Use

Any industrial, commercial, and restaurant establishment will benefit in cleaning up equipment leaks and large spills.

Residential & Other Use

Micro-Blaze® Emergency Liquid Spill Control works well cleaning up a variety of organic spills that are soluble in water at a 3% - 6% solution.

The Possibilities are Endless...

Emergency & First Response / Spills & Leaks

Micro-Blaze® Emergency Liquid Spill Control is used all over the world by emergency and first response companies to safely and effectively remediate hydrocarbon spills. Emergency personnel keep **Micro-Blaze® Emergency Liquid Spill Control** on their trucks so that it can be applied at a moments notice.

Spills and leaks are a fact of life. From small leaks on your shop floor, to thousands of gallons of spilled hydrocarbons which create an emergency situation, and everything in between, **Micro-Blaze® Emergency Liquid Spill Control**, will safely and effectively eliminate the volatility and also clean and bioremediate the contaminant while protecting the environment.

Benefits

- Eliminates volatile vapors and LEL's (Lower Explosive Limit), creating a safe working environment
- Immediately reduces odor
- Biodegrades the hydrocarbons into harmless byproducts - CO₂ and water
- Reduces or eliminates "dig and haul" charges and "cradle to grave" liabilities
- Leaves no slippery residue
- Ships concentrated, ready-to-dilute and use – no "mix and wait"

Application

- **Micro-Blaze® Emergency Liquid Spill Control** can be applied through any delivery system, such as pump-up sprayers, fire extinguishers, and CAFS systems. Do not apply full strength, always dilute with water before applying.
- Determine the amount of contamination by volume. 10% of the volume of the contaminant is the amount of **Micro-Blaze® Emergency Liquid Spill Control** concentrate to apply. (i.e. for 350 gallons of pure product contaminant – use 35 gallons of concentrate and dilute with water as determined below)
- Dilution: For heavier weight oils (crude, motor oil, hydraulic fluid) use a 3% solution of **Micro-Blaze® Emergency Liquid Spill Control** mixed with water (3 parts concentrate, 97 parts water). More is not better – 3% allows the water to help cut the hydrocarbon molecules. For volatile fluids and lighter weight oils (gasoline) use a 6% solution (6 parts concentrate, 94 parts water) to knock down the LEL's.
- Apply the **Micro-Blaze® Emergency Liquid Spill Control** solution forcefully with agitation so that it will be thoroughly mixed with the hydrocarbon contaminant. This action will allow the **Micro-Blaze® Emergency Liquid Spill Control** to eliminate the vapors and create the safe working environment. The microbes will then begin the bioremediation process.



Soil Remediation

For soil remediation projects, there is nothing better than **Micro-Blaze® Emergency Liquid Spill Control**. It quickly penetrates the soil surface and quickly begins digesting the contaminant.

Benefits

- Immediately reduces odors and inerts volatile vapors, providing a safe working environment and reducing worker exposure to volatile hazards
- Biodegrades the hydrocarbons into harmless byproducts - CO₂ and water
- Remediates hydrocarbons in place and minimizes "cradle to grave" disposal liability
- Works aerobically and anaerobically
- Non-toxic, non pathogenic microbial blend is completely safe for the environment
- Can be used "in-situ" or "ex-situ"

Application

There are many variables to consider when remediating soil, including the type/amount/depth/concentration of the contaminant, soil porosity, available moisture, oxygen supply, and temperature. All of these factors play a role in determining the length of time necessary to remediate the hydrocarbon. Depending on these and other factors, remediation time may range from just a couple weeks to several months. For optimal results, contact us for helpful techniques and guidance on any specific job.

A general "rule of thumb" calculation is that 1 gallon of **Micro-Blaze® Emergency Liquid Spill Control** concentrate is required for every 10 cubic yards of contaminated soil. The concentrate is then diluted with water down to a 3% to 6% solution (3-6 parts concentrate, 94-97 parts water).

- Example: For 500 cubic yards of contamination, you will need 50 gallons of concentrate. For a 3% concentration level, you will add approximately 1,666 gallons of water ($50 \div .03 = 1,666$).

The diluted solution can be applied to the contaminated soil using any type of delivery system, from hand held pump-up sprayers (for small areas) to water a truck or a fire truck with foam educator setups (for large areas).

For optimal results, upon completion of application, till the soil to thoroughly mix the microbes with the contaminant. **Micro-Blaze® Emergency Liquid Spill Control** can also be effectively used in situations where the contamination is deep. Contact us for details on how to make those applications.

Reminder: The microbes need moisture to work effectively. Be sure to check the moisture level of the soil, watering the soil weekly if necessary.



Tank Cleaning

Tank cleanup using **Micro-Blaze® Emergency Liquid Spill Control** has been performed on a variety of tanks ranging in size (20 - 300 ft. in diameter) and type (atmospheric storage tanks, internal floating roof tanks, external floating roof tanks, and pressure bullets and spheres). Conventional methods such as steaming, purging using natural or inert gas such as nitrogen, air stripping, or the use of harsh or toxic chemicals can be eliminated by using **Micro-Blaze® Emergency Liquid Spill Control** to decontaminate and prepare tanks for maintenance.

Some benefits include:

- Reduced down time of equipment/unit turnarounds & time from feed-out to feed-in
- Non-hazardous material to dispose of compared to hazardous and toxic chemical cleaning methods
- Adding to and enhancing the "bug population" of the wastewater treatment plant with the same type of compatible bacteria when the cleaned and circulated **Micro-Blaze® Emergency Liquid Spill Control** solution is released
- Decreased environmental impact
- Decreased off-site (neighborhood) concerns, leading to a better standing with community, state, and federal agencies
- Safer and healthier workplace for employees

Decontamination of Tanks

Micro-Blaze® Emergency Liquid Spill Control works well on a variety of substances that are normally found in typical refinery or chemical plant settings. Chemicals that have an extremely low pH (<3.5) or very high pH (above 10.5) have an adverse affect on the microbial population and should be neutralized before proceeding with any attempt to clean. The preferred pH level is between 6 and 8. Although **Micro-Blaze® Emergency Liquid Spill Control** will work in both aerobic and anaerobic settings, it is preferable to work in an aerobic setting, which allows the microbial population to double 3-4 times each hour or until the food source is consumed.

General guidelines to follow are:

1. Pump out as much of the free liquid as possible that is in the bottom of the tank
2. Ensure that no chemical will enter into the tank while performing cleanup operations by blinding related piping to and from the tank
3. Purge the vapor space to a flare or compressor if available
4. Reduce the temperature to below 140° F before introducing **Micro-Blaze® Emergency Liquid Spill Control** into the system
5. Set up a circulation loop by using the existing piping and pumps on the tank. It is preferable to take suction from the bottom of the tank and discharge back into the tank at the uppermost point.
6. Open a high-point bleeder on the tank, if possible, during cleaning operations. There will be enough oxygen in the water/**Micro-Blaze® Emergency Liquid Spill Control** solution to activate the microbes, but it will advantageous if you can give them an extra supply of oxygen.
7. Circulation! This is the key to a successful cleanup operation.
8. Use typical fire-fighting equipment such as in-line eductors to get the **Micro-Blaze® Emergency Liquid Spill Control** into the tank.

Application

Determine the total volume of contamination. 10% of this volume is the amount of **Micro-Blaze® Emergency Liquid Spill Control** to apply. Dilute to a 1% to 3% solution, taking into consideration the present volume of water already in the contaminant slurry. Circulate the entire solution until the LEL's and/or PPM levels reach the desired levels.

*Example: A tank with 2,500 gallons of slurry to remediate. Approximately 500 gallons is contaminant and 1,200 gallons is water, with the remainder 800 gallons consisting of dirt or inorganic material. You will dilute 50 gallons of **Micro-Blaze® Emergency Liquid Spill Control** to a 3% solution. Since you already have 1,200 gallons of water, you will need to add 465 additional gallons of water to create a 3% solution.*

*Alternative Calculation: That same tank containing 2,500 gallons of slurry can be diluted with a like amount of water, creating 5,000 gallons of liquids. Add **Micro-Blaze® Emergency Liquid Spill Control** concentrate to create a 1% solution, which would be 50 gallons.*

When dealing with pressure bullets and spheres it is preferable to fill the entire vessel with water/**Micro-Blaze® Emergency Liquid Spill Control** solution and circulate. During circulation, liquid samples are periodically taken to test TOC/BOD levels.

When dealing with internal and external floating roof tanks, it is preferable to fill the tank with enough water/**Micro-Blaze® Emergency Liquid Spill Control** solution to raise the tank off of its internal legs. It is preferable to make sure that there is no vapor space in this area. You may expect longer cleanup times due to the fact that it will take longer for the unfilled vapor space to come into contact with the water/**Micro-Blaze® Emergency Liquid Spill Control** solution. There is some initial foaming that is produced when the solution is introduced, which helps to clean the vapor space.

A "cellar nozzle" or a "pineapple" can also be used. These devices will allow the water/**Micro-Blaze® Emergency Liquid Spill Control** solution to be sprayed on the sides of the tank for a complete coating.

Savings

The cost savings by reducing the unit down time could easily be in the tens or hundreds of thousands of dollars. Additional savings can come from being able to clean tanks that normally were not able to use conventional methods. Cleaning times can vary from 12 to 72 hours depending on the chemicals being eliminated, the level of contamination, and how clean you were able to get the vessel prior to the introduction of the water/**Micro-Blaze® Emergency Liquid Spill Control** solution. How your facility operates will determine how much money you will save.



"PARTNERING WITH NATURE FOR A CLEANER TOMORROW"

Verde Environmental, Inc.
9223 Eastex Freeway
Houston, TX 77093

Office: 713.691.6468
Toll Free: 800.626.6598
Fax: 713.691.2331
www.micro-blaze.com



Find us on:
facebook®

To receive more information:



Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY) **Micro-Blaze® Emergency Liquid Spill Control**

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name	Verde Environmental, Inc.	Emergency Telephone Number	800 / 626-6598
Address	9223 Eastex Freeway	Telephone Number for Information	713 / 691-6468
	Houston, Texas 77093-7001	Date Prepared	01 / 01 / 13
		Signature of Preparer	<i>William L. Scogin</i>
		William L. Scogin, President	

Section II--Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS Number:	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
---	-------------	----------	-----------	--------------------------	--------------

**** NO HAZARDOUS COMPONENTS OR INGREDIENTS ****

Per OSHA -29 CFR 1910.1200 -- All ingredients are organic and completely biodegradable.

Components not listed are either proprietary, or non-hazardous.

Section III--Physical/Chemical Characteristics

Boiling Point	100°C	Specific Gravity (H ₂ O = 1)	1.0
Vapor Pressure (mm Hg)	Equiv. water	Melting Point	N / A
Vapor Density (AIR = 1)	Equiv. water	Evaporation Rate (Butyl Acetate = 1)	N / A
Solubility in Water	99%		
Appearance and Odor	Cream to tan, opaque liquid, perfumed		

Section IV--Fire and Explosion Hazard Data

Flash Point (Method Used)	N / A	Flammable Limits	LEL	UEL
		Non-flammable	---	---
Extinguishing Media	Non-flammable			
Special Fire Fighting Procedures	None			

Unusual Fire and Explosion Hazards None - NON-FLAMMABLE

Section V—Reactivity Data			
Stability	Unstable		Conditions to Avoid
	Stable XXXX		
Incompatibility (Materials to Avoid) Strong acids or alkali compounds may inactivate biological cultures.			
Hazardous Decomposition or Byproducts			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	XXXX	
Section VI—Health Hazard Data			
Route(s) of Entry	Inhalation?	Skin?	Ingestion?
Health Hazards (Acute and Chronic) May cause diarrhea if ingested in large amounts. NON-TOXIC			
Organisms used are non-pathogenic. These organisms are susceptible to commonly used antibiotics.			
Carcinogenicity	N/A	NTP? N/A	IARC Monographs? N/A OSHA Regulated? N/A
Signs and Symptoms of Exposure Skin: slight redness on hands and forearms if individual has a history of dermal allergic reaction.			
Medical Conditions			
Generally Aggravated by Exposure Dermal allergic reaction on skin if susceptible person has continual exposure.			
Emergency and First Aid Procedures Ingestion: Drink water or milk to dilute. Induce vomiting only if advised by physician or poison control center.			
Section VII—Precautions for Safe Handling and Use			
Steps to Be Taken in Case Material is Released or Spilled May mop up spills; may flush down sanitary drain into waste water treatment lines.			
Waste Disposal Method Disposal of this product or its residue must be done in accordance with all local, state and federal requirements.			
Precautions to Be Taken in Handling and Storing Avoid eye contact.			
Other Precautions To maintain shelf life, avoid temperatures under 32° F or over 120° F for long periods of time. Microbes are viable up to 180° F. KEEP FROM PROLONGED FREEZING.			
Section VII—Control Measures			
Respiratory Protection (Specify Type) Avoid breathing mists; mask advised if spraying in enclosed, unventilated spaces.			
Ventilation	Local Exhaust		Special
	Mechanical (General)		Other Normal room ventilation.
Protective Gloves Use if prolonged exposure or dermal sensitivity to surfactants.		Eye Protection Avoid splashing in eyes; may irritate.	
Other Protective Clothing or Equipment None required, rubber or latex recommended.			
Work/Hygiene Practices Minimize exposure in accordance with good hygiene practices.			

We believe the statements, technical information and recommendations herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

Exhibit A

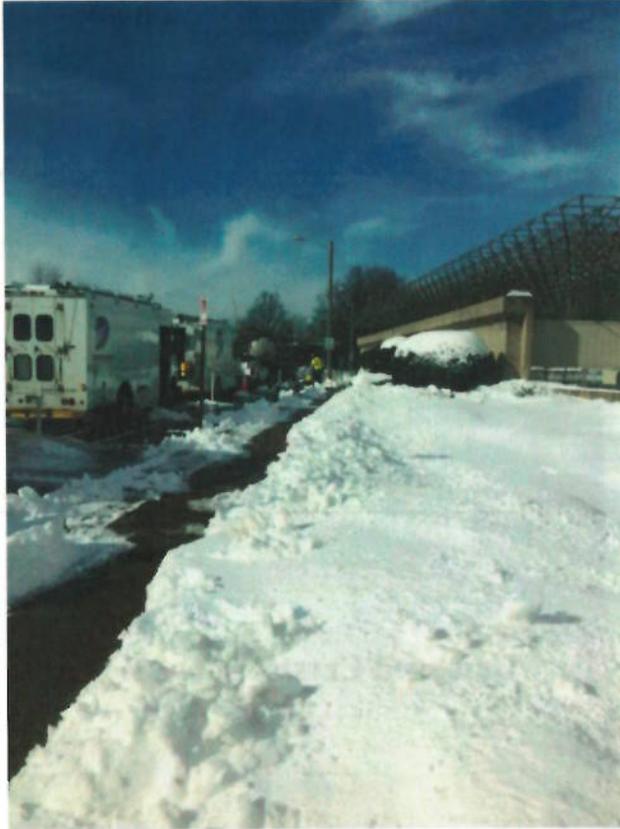


Damaged Crystal Substation Transformer 1



Crystal Substation Transformer 1 – Broken Cooling Pump Piping

Exhibit B



Vault inspection/pumping



Uncovered Stormdrain drop inlet
In front of Station



Inspection of walled area around Transformer

Exhibit C



Roaches Run outfall discharge pipes



Headwall downstream of outfall discharge pipes

Exhibit D



Crystal Substation driveway area adjacent to Transformer 1



Removing impacted media from cable Trough



Removal of impacted stone from walled area

Exhibit E



Restoration of Driveway – North side of Transformer 1



Restored area – South side of Transformer 1

