1. Please provide a diagram of tertiary containment system for fueling area. What is the total volume / capacity of the tertiary containment system?

   A: See attached oil water separator information sheet.

2. Please provide Boiling Liquid Expanding Vapor Explosion (BLEVE) statistics for the tanks proposed for this installation.

   A: THE UL2085 TANK WAS BASICALLY DESIGNED TO ADDRESS THIS PROBLEM
   - TANK IS NEVER PRESSURIZED
   - TANK IS EQUIPPED WITH SEVERAL EMERGENCY VENTS APPROPRIATE IN NUMBER AND SIZE FOR TANK IN QUESTION
   - UL2085 EXCEEDS 2 – HOUR FIRE TEST
   - UL2085 MEETS 4 – HOUR FIRE TEST

3. Please provide the chemical composition (more specific than MSDS) of any fire suppression devices, fluids, materials.

   A: This is not pertain to the permit. Fire suppression is dictated by the NFPA and the local fire Marshal. We do not have control over which product we are required to install.

4. Chemical composition of DEF and where any DEF spills or discharge goes, and any tertiary containment.

   A: DEF will go into the catch basin and then into the oil water separator and into the sanitary sewer

5. Why was this fueling not included in the 2019 O.D. Project Application?

   A: Our market share has grown in the area, it is more cost effective to fuel onsite than it is to drive to a facility that can handle our equipment.

6. Why is the fueling required at this site now?

   A: Same answer as question 5

7. How many places to purchase Diesel fuel are within 0.5 miles of this location?

   A: See provided map. No service stations that are set up for truck diesel sales within .5 miles.

8. USGS Watershed map of area, showing where the watershed goes.

   A: See provided map.

9. Does runoff end up in Arm Brook reservoir?

   A: No it does not. Topography shows Arm Brook on the higher side of the site

10. Where does the precipitation that falls on the site end up? How much water can the stormwater management system handle, where does it go, and where does any overflow go? Please provide diagrams.

    A: See the attached approved utility layout.

11. Please provide diagrams that show where any fluid discharge from any fluid stored on the OD property would go.

12. Please provide all chemical information for any chemical stored or used on the premises.

A: See attached MSDS Sheets

13. OD mentioned this is a cost saving strategy. How much are they saving by having this fueling tank on OD property: per 15,000 gallon tank full? per month?

A: ODFL declines to provide this information. Not relevant to the application

14. Please provide MSDS sheets for all chemicals used and stored on the site, and those involved in the Fire Suppression system.

A: Duplicate question same as question 13

15. Please provide diagrams and specific details of the proposed fire suppression system.

A: This is dictated by the NFPA and the Fire Marshal

16. Please provide diagrams of Stormwater Management system including paving and sloping, Oil/water separator, etc. including an explanation of where and how the oil/water separator contents get discharged.

A: This is already approved and is not applicable for this permit

17. Map of New England & New York with Old Dominion properties and those properties w this type of refueling tank indicated.

A: This does not pertain to this permit due to the fact that different states and cities have different regulations.

18. OD mentioned the >1million gallon sub surface retention. What is that for?

A: This was already approved with the original application. It is for the general site storm water

19. Where / how does that get treated and or discharged / emptied?

A: There are oil hood on catch basins 5,6,12, and 13. Water eventually empties in to the ditch along Medeiros Way. This was already approved.

20. Will they be washing trucks here? (Again, chemical composition of fluids, please)

A: No truck Washing

21. What water from this property gets put directly into the aquifer, and what becomes the problem of Westfield's waste water treatment plant? Please provide estimates (and justification) of potential pollutants in final discharges to each.

A: This site is not on the aquafer per the attached GIS map

22. What are the statistics on fires w this type of fueling station? What are the causes: flash point, impact, natural disaster, other? What are the consequences? If an explosion, what is the estimated radius?

A: STATISTICS ARE NOT READILY AVAILABLE FOR FLEET FUELING. THE NFPA RELEASED A REPORT IN 2020 THAT COMBINED THEM WITH RETAIL FUELING LOCATIONS

- FROM 2014 – 2018 THERE WERE AN AVERAGE OF 4,150 FIRES IN OR ON SERVICE OR GAS STATION PROPERTIES

- ONLY 2% WERE STARTED AT THE FUEL TANK OR LINE
    - COMBINES KEROSENE, No. 1 and No. 2 Fuel Oil, and Diesel
- MUCH HIGHER INCIDENCE IS FROM BUILDING ELECTRICAL FIRES AND FOOD PREP AREA FIRES

flash point:

- DIESEL FUEL IS APPROXIMATELY 140 DEGREES
- IGNITION POINT OF DIESEL IS CLOSE TO 400 DEGREES
- GASOLINE IS -30 DEGREES

impact,

- THE UL2085 FIREGUARD ABOVE GROUND STORAGE TANK IS BALLISTIC AND IMPACT RESISTENT.
- IN ADDITION, THE TANK PAD AREA WILL BE RAISED AS WELL AS SURROUNDED BY 8" STEEL, CONCRETE FILLED BOLLARDS TO FURTHER PROTECT THE TANK BEING DAMAGED FROM VEHICLE COLLISION

natural disaster, other?
What are the consequences?
If an explosion, what is the estimated radius?
DIESEL IS NOT EXPLOSIVE BY NATURE
IT DOES NOT HAVE A HIGH VAPOR PRESSURE
IT WILL FLAME UP LIKE A CANDLE, BUT NOT EXPLODE

23. What is Old Dominion's response time (time between notification and arrival on site) in an emergency?

A: The local fire department will respond to any emergencies onsite.

24. What is the OD response time in the event of a catastrophic failure? How long could the safety monitors be down in the event of a power outage? What is OD's response time then? How long would the project go both un-monitored and unprotected?

A: Again this the response time of the local fire department. The tank cannot operate without power.

Councilman Morganelli Questions

1. Is this in addition to the original fuel tank on the plans submitted in 2019?
   A: Our market share has grown in the area, it is more cost effective to fuel onsite than it is to drive to a facility that can handle our equipment.

2. If not, why was the location of the fuel area changed?
   A: Location changed for better traffic flow around the terminal

3. What plan is put in place in case there is a leak while pumping?
   A: There is an Oil water separator that will catch the leak

4. What plan is put in place if there is a fire?
   A: Fire suppression is provided per the NFPA and the local fire Marshall

5. Are there overhead sprinklers? What happens with run off from the sprinklers if this occurs?
   A: A hazmat remediation company will clean up any fire extinguishing product.

6. If Old Dominion closes their warehouse what happens with this fueling area?
   A: ODFL will decommission the fuel island is they close their facility

7. Are there any regulations on how close a fueling station can be to a school?
   A: There are not additional state or local regulations that dictate who close you can be to a school

8. Has the new location been reviewed for impacts to surface and groundwater sources, including times of excessive flooding?
   A: We have provided all information required per the permit, local and state codes.

9. Is this fuel used for yard vehicles or roadgoing trucks?
   A: Used for both yard and road trucks

10. How often do they plan on having fuel delivered?
   A: About once a week

11. What is an average fuel consumption per week or per month?
   A: Unknown at this time

SAFETY DATA SHEET

1. Identification

Product identifier **ES COMPLEAT EG PREMIX (Ethylene glycol based coolant)**

Other means of identification

SDS number LT16587

Product code CC2825, CC2826, CC2827, CC2834, CC2848, CC2863

Recommended use Premixed, extended life coolant, especially for use in heavy-duty diesel engines.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Cummins Filtration

Address 1200 Fleetguard Road
Cookeville, TN 38506
United States

Telephone 24 Hours per day 1-800-22FILTER
(1-800-223-4583)

E-mail Not available.

Emergency phone number Within Continental U.S. Chemtrec 1-800-424-9300
Outside U.S. Chemtrec 703-527-3887

Supplier Not available.

2. Hazard(s) identification

Physical hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Health hazards

Acute toxicity, oral	Category 4
Reproductive toxicity	Category 2
Specific target organ toxicity, single exposure	Category 2
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Specific target organ toxicity, single exposure	Category 3 narcotic effects

Environmental hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

OSHA defined hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Label elements

Signal word Warning

Hazard statement May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Call a poison center/doctor.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	May cause mild skin and eye irritation. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms of poisoning may include cyanosis (bluish discolouration of the skin), nausea, dizziness, rapid heartbeat, irregular breathing, coma and death. Initially, the central nervous system is stimulated, followed by depression. Prolonged or repeated ingestion may cause bladder or kidney stones. May potentially result in lethal kidney damage. Prolonged or repeated overexposure may cause liver effects.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ETHYLENE GLYCOL	Glycol alcohol 1,2-ETHANDIOL	107-21-1	40.0 - 60.0
Diethylene Glycol	2-(2-HYDROXYETHOXY)ETHANOL BIS(2-HYDROXYETHYL) ETHER	111-46-6	0.1 - 1.0
Sodium Nitrite	Nitrous acid, sodium salt	7632-00-0	0.1 - 0.3
Sodium Molybdate	Molybdic acid, Disodium salt	7631-95-0	0.158
Other components below reportable levels			1.628

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Get medical attention if symptoms persist.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation persists after washing.
Ingestion	Call a physician or poison control center immediately. Do NOT induce vomiting, unless directed to do so by qualified medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Most important symptoms/effects, acute and delayed	May cause mild skin and eye irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging and tearing. May cause respiratory irritation. If mists are inhaled, may cause tearing, general anesthesia, headache, coughing, respiratory stimulation, nausea, vomiting, pulmonary, kidney and liver damage. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms of poisoning may include cyanosis (bluish discolouration of the skin), nausea, dizziness, rapid heartbeat, irregular breathing, coma and death. Initially, the central nervous system is stimulated, followed by depression.
Indication of immediate medical attention and special treatment needed	Immediate medical attention is required. Symptoms may be delayed. Use of ethanol may be helpful to counter the toxic effects of ethylene glycol by interfering with the absorption rate in the stomach and intestine.
General information	If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water spray. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Vapors are heavier than air and may spread along floors.

Hazardous combustion products Carbon oxides. Formaldehyde. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Evacuate the area promptly. Wear appropriate protective equipment and clothing during clean-up. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up Remove sources of ignition. Ventilate the area. Stop leak if you can do so without risk. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. For waste disposal, see section 13 of the SDS. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Wear personal protective equipment. Use only with adequate ventilation. Do not ingest. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Wash hands after handling and before eating. Keep away from heat and sources of ignition. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep away from heat and flame. Keep locked up or in an area accessible only to qualified or authorized persons.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium Molybdate (CAS 7631-95-0)	PEL	5 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.
Sodium Molybdate (CAS 7631-95-0)	TWA	0.5 mg/m3	Respirable fraction.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Diethylene Glycol (CAS 111-46-6)	TWA	10 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls If exposure limits have not been established, maintain airborne levels to an acceptable level. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other Wear appropriate chemical-resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Seek advice from respiratory protection specialists.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Blue.
Odor	Odorless.
Odor threshold	25 ppm (Ethylene glycol)
pH	10.2 - 10.8
Melting point/freezing point	Not available.
Initial boiling point and boiling range	224.6 °F (107 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	completely miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	1.056 - 1.088

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong acids. Strong oxidizing agents. Alkali metals. Halogenated materials. Strong alkalis. Ketones.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Irritating to respiratory system.

Skin contact	May cause mild skin irritation. May be absorbed and cause symptoms similar to those listed for ingestion.
Eye contact	May cause mild eye irritation.
Ingestion	May be harmful or fatal if swallowed. May cause irritation of the gastrointestinal tract. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL).
Most important symptoms/effects, acute and delayed	May cause mild skin and eye irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging and tearing. May cause respiratory irritation. If mists are inhaled, may cause tearing, general anesthesia, headache, coughing, respiratory stimulation, nausea, vomiting, pulmonary, kidney and liver damage. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms of poisoning may include cyanosis (bluish discolouration of the skin), nausea, dizziness, rapid heartbeat, irregular breathing, coma and death. Initially, the central nervous system is stimulated, followed by depression.

Information on toxicological effects

Acute toxicity May cause respiratory irritation. The below product data is the calculated ATE values for this mixture. Individual ingredient component data appears below the product mixture ATE values.

Components	Species	Test Results
Diethylene Glycol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	13300 mg/kg
Inhalation		
LC50	Rat	> 5.08 mg/l
Oral		
LD50	Rat	25300 mg/kg
ETHYLENE GLYCOL (CAS 107-21-1)		
Acute		
Dermal		
LD50	Rabbit	9530 mg/kg
Inhalation		
LC50	Rat	10.92 mg/l, 4 hours
Oral		
LD50	Human	1110 - 1665 mg/kg
	Rat	4000 mg/kg
Sodium Molybdate (CAS 7631-95-0)		
Acute		
Dermal		
LD50	Rabbit	No data in literature
Inhalation		
LC50	Rat	> 2.08 mg/l, 4 Hours
Oral		
LD50	Rat	4040 mg/kg
Sodium Nitrite (CAS 7632-00-0)		
Acute		
Dermal		
LD50	Rabbit	No data in literature
Inhalation		
LC50	Rat	No data in literature
Oral		
LD50	Rat	85 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation May be irritating to the skin.

Serious eye damage/eye irritation May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitizer This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Specific Target Organ Toxicity (STOT), Single Exposure: Category 2; Category 3
May cause damage to organs (Kidney) by ingestion. May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Not classified as a specific target organ toxicity -repeated exposure.

Aspiration toxicity Not available.

Chronic effects Prolonged inhalation may be harmful. Prolonged or repeated overexposure may cause liver and kidney effects. Prolonged or repeated ingestion may cause bladder or kidney stones.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Diethylene Glycol (CAS 111-46-6)			
Aquatic			
Acute			
Algae	EC10	Green plankton algae (Chlorococcales)	1000 mg/l, 24 Hours
Crustacea	EC50	Water flea (Daphnia magna)	48900 mg/l, 48 Hours
Fish	LC50	Fathead minnow (Pimephales promelas)	77900 mg/l, 96 hours
ETHYLENE GLYCOL (CAS 107-21-1)			
Acute			
	LC50	Rainbow trout (Oncorhynchus mykiss)	22810 mg/l, 96 Hours
Aquatic			
Crustacea	LC50	Water flea (Daphnia magna)	46300 - 57000 mg/l, 48 hours
Acute			
Algae	IC50	Green algae (Selenastrum capricornutum)	10940 mg/l, 96 Hours
	NOEC	Green algae (Selenastrum capricornutum)	10000 mg/l, 96 Hours
Sodium Molybdate (CAS 7631-95-0)			
Aquatic			
Acute			
Crustacea	LC50	Water flea (Daphnia magna)	3220 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2911 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Water flea (Daphnia magna)	50 mg/l, 21 days
Fish	NOEC	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	200 mg/l, 32 days
Sodium Nitrite (CAS 7632-00-0)			
Acute			
	LC50	Rainbow trout (Oncorhynchus mykiss)	0.54 mg/l, 96 hours

Components		Species	Test Results
Aquatic			
Acute			
Algae	EC50	Green Algae (Scenedesmus subspicatus)	> 100 mg/l, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	15.4 mg/l, 48 hours
Chronic			
Algae	NOEC	Green Algae (Scenedesmus subspicatus)	100 mg/l, 72 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Diethylene Glycol	-1.5
ETHYLENE GLYCOL	-1.36

Bioconcentration factor (BCF)

Diethylene Glycol	3
ETHYLENE GLYCOL	10

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Sodium Nitrite (CAS 7632-00-0) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

ETHYLENE GLYCOL (CAS 107-21-1) Listed.
Sodium Nitrite (CAS 7632-00-0) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
ETHYLENE GLYCOL	107-21-1	40.0 - 60.0
Sodium Nitrite	7632-00-0	0.1 - 0.3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

ETHYLENE GLYCOL (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

ETHYLENE GLYCOL (CAS 107-21-1)
Sodium Nitrite (CAS 7632-00-0)

US. New Jersey Worker and Community Right-to-Know Act

ETHYLENE GLYCOL (CAS 107-21-1)
Sodium Nitrite (CAS 7632-00-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Diethylene Glycol (CAS 111-46-6)
ETHYLENE GLYCOL (CAS 107-21-1)
Sodium Nitrite (CAS 7632-00-0)

US. Rhode Island RTK

ETHYLENE GLYCOL (CAS 107-21-1)
Sodium Nitrite (CAS 7632-00-0)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-27-2015

Version # 01

Disclaimer

Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
http://www.thecompliancecenter.com

Disclaimer
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This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Cummins Filtration The information in the sheet was written based on the best knowledge and experience currently available.

Revision Information

Product and Company Identification: Product Codes
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Material Transportation Information
Regulatory Information: Canada
GHS: Classification

Bibliography Not available.

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	**DEF 32.5% DIESEL EXHAUST FLUID**
Other means of identification	None.
Recommended use	ALL PROPER AND LEGAL PURPOSES
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Brenntag Northeast, Inc.	
Address	81 West Huller Lane Reading, PA 19605	
Telephone	610-926-4151	
E-mail	Not available.	
Emergency phone number	800-424-9300	Chemtrec

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
UREA		57-13-6	32.5
Other components below reportable levels			67.5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
UREA (CAS 57-13-6)	TWA	10 mg/m3	Total particulate.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Colorless
Odor	AMMONIACAL
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	12 °F (-11.11 °C)
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	9.08 lbs/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	67.5 % estimated
Specific gravity	1.09
VOC (Weight %)	16.25 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not available.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
UREA (CAS 57-13-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	3910 mg/l, 48 hours
Fish	LC50	Giant gourami (Colisa fasciata)	5 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

UREA	-2.11

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT information on packaging may be different from that listed.

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-09-2015
Revision date	11-10-2015
Version #	10
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 0 Flammability: 0 Instability: 0
Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.
Revision information	Accidental release measures: Personal precautions, protective equipment and emergency procedures Toxicological information: Further information Regulatory information: US federal regulations

STREAMLINE SUPPLY
Service, Supplies, Satisfaction, Simplified, Guaranteed

SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Product name: Window Wash RTU
Product Code: 4300
Chemical Use: Automotive Windshield Wash Antifreeze

Date Prepared: 4/15/15
Supersedes: New

Restrictions on use: Use in accordance with all Federal, State and local regulations.

Company Identification: Streamline Supply Inc.
460 N. 1000 W.
Centerville, Utah 84014

Manufactured by: Streamline Supply Inc.
460 N. 1000 W.
Centerville, Utah 84014

Emergency Telephone Numbers: **For Transportation Emergency:** PERS (800) 633-8253
For Medical Emergency: PERS (800) 633-8253 or (877) 350-5426
For SDS or other information: (877) 350-5426 or (801) 294-2980
Email: info@streamlinesupply.com
Fax: (801) 294-2626

Section 2: Hazard(s) Identification

GHS Classification:

Flammable Liquid: Category 3

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 3

Acute toxicity (Inhalation): Category 4

Specific target organ toxicity: Category 1
single exposure

GHS Label Element

Hazard pictograms:

Signal Word: DANGER

Hazard Statements:
H225 - Highly flammable liquid and vapor
H302+H332 - Harmful if swallowed or if inhaled
H311 - Toxic in contact with skin
H370 - Causes damage to organs (May cause blindness if swallowed)

Section 2: Hazard(s) Identification **(continued)**

PRECAUTIONARY STATEMENTS:

Prevention:
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe mist, spray, vapors
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear personal protective equipment as required

Response:
P301+P310 - If swallowed: Immediately call doctor/physician or poison center. Rinse Mouth
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P314 - Get medical advice/attention if you feel unwell
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use Foam, Sand, Dry powder, Carbon dioxide to extinguish

Storage:
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up

Disposal:
P501 - Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

Other Hazards:
No additional information available

Unknown Acute toxicity:
No data available

Section 3: Composition/Information on Ingredients

Substance: Not Applicable

Mixture:

CHEMICAL NAME	CAS NUMBER	% BY WEIGHT
Methanol	67-56-1	<35%

Section 4: First Aid Measures

First Aid Procedures:

First-aid measures general:
Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation:
If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Section 4: First Aid Measures (continued)

First-aid measures after skin contact:
Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Consult a doctor/medical service.

First-aid measures after eye contact:
Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting upper and lower eye lids. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion:
Obtain emergency medical attention. Rinse mouth. Never give anything by mouth to an unconscious person.

Most Important Symptoms and Effects- acute and delayed

Symptoms/injuries after inhalation:
May cause irritation of the nose and throat. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea and confusion.

Symptoms/injuries after skin contact:
Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.

Symptoms/injuries after eye contact:
May cause severe irritation.

Symptoms/injuries after ingestion:
May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.

Chronic symptoms:
ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Feeling of weakness. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

Indication of any immediate medical attention and special treatment needed:
This product contains methanol which can cause intoxication and depression of the central nervous system. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion.

Section 5: Fire-Fighting Measures

Suitable extinguishing media: ABC Powder. Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

Specific hazards arising from chemical

Fire hazard: Flammable liquid and vapor. Vapors are heavier than air and may travel along the ground or may be moved by ventilation.

Explosion hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Special protective equipment for fire fighters: Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves.

Section 6: Accidental Release Measures

Steps to Take in Case Material Is Released or Spilled:

Personal precautions, protective equipment and emergency procedures:

General measures: Remove ignition sources. Use special care to avoid static electric charges. Do not breathe vapor or mist. Wear appropriate respirator when ventilation is inadequate.

For non-emergency personnel:
Evacuate unnecessary personnel. Always use proper personal protective equipment as described in section 8. Avoid run-off into storm sewers and ditches that lead to waterways. Use inert material such as clay or diatomaceous earth to contain spill. Use these products to soak up material or mop up spill and rinse with water.

For emergency responders:
Wear proper protection during cleanup. PVC, nitrile or rubber. Ventilate area.

Avoid run-off into storm sewers and ditches that lead to waterways. Use inert material such as clay or diatomaceous earth to contain spill.

Contain spilled material for disposal according to Federal, State, and local regulations.

Section 7: Handling and Storage

Precautions for safe handling: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Do not ingest. Use with adequate ventilation. Avoid breathing vapor or mist. Do not reuse container. Observe label precautions and direction for use.

Condition for safe storage, including any incompatibilities: Use explosion-proof electrical, lighting, ventilating equipment. Ground/bond container and receiving equipment. Use proper grounding procedures to avoid static electricity. Store in original container protected from heat sources, hot surfaces, open flames, sparks, and direct sunlight in a dry, cool and well-ventilated area. Keep away from food and drinks. Keep out of reach of children and pets. Keep in a tightly closed container when not in use. Store away from strong acids, strong bases, and oxidizing materials.

No additional information available.

Section 8: Exposure Controls/Personal Protection

Exposure Limits

Product Name: Methanol **CAS #:** 67-56-1

USA ACGIH	ACGIH TWA (ppm)	200.00 ppm (Skin)
USA ACGIH	ACGIH STEL (ppm)	250.00 ppm (Skin)
USA ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
USA OSHA	OSHA PEL (TWA) (mg/m³)	260.00 mg/m³ (Skin)
USA OSHA	OSHA PEL (TWA) (ppm)	200.00 ppm (Skin)

Personal Protective Equipment: Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation, wear respiratory protection. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Other Information: Do not eat, drink or smoke, during use. Wash with soap and water after handling.

Section 9: Physical Data

Appearance: Blue, clear liquid
Odour: Alcohol
Odor Threshold: No data available
Relative evaporation rate: Greater than n-butyl acetate **(butyl acetate=1)**
Freeze point: No data available
Boiling point: 80 – 83 °C (177 – 181 °F)
Flash point: 34 °C (94 °F)
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: 43 mm Hg @ 20 °C
Relative vapor density at 20 °C: Heavier than air
Specific Gravity: .96 @ 20 °C
Solubility in water: Complete
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosive limits: 6 – 36%
VOC content: <35%

Section 10: Stability and Reactivity

Reactivity: No additional information available.

Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Sources of ignition.

Incompatibility With Various Substances: Strong oxidizing agents, strong bases and acids

Hazardous decomposition products: Fume. Carbon monoxide. Carbon dioxide.

Section 11: Toxicological Information

Acute Toxicity: Oral: Harmful if swallowed. Dermal: Toxic in contact with skin. Inhalation:dust,mist: Harmful if inhaled.

Product Name: Methanol **CAS #:** 67-56-1

LD50 oral rat : >5000 mg/kg (1187-2769 mg/kg bodyweight; Rat; Rat)
LD50 dermal rabbit: 15,800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l): 85 mg/l - 4 hours (Rat)
LC50 inhalation rat (ppm): 64,000 ppm – 4 hours (Rat)
ATE US (oral): 100 mg/kg bodyweight
ATE US (dermal): 300 mg/kg bodyweight
ATE US (gases): 700 ppmv – 4 hours
ATE US (vapors): 3 mg/l – 4 hours
ATE US (dust, mist): 1 mg/l – 4 hours

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Section 11: Toxicological Information (continued)

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity – single exposure: Causes damage to organs (May cause blindness if swallowed).

Specific target organ toxicity – repeated exposure: No data available

Aspiration hazard: Not classified

Symptoms/injuries after inhalation: May cause irritation of the nose and throat. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea and confusion.

Symptoms/injuries after skin contact: Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.

Symptoms/injuries after eye contact: May cause severe irritation.

Symptoms/injuries after ingestion: May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.

Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Feeling of weakness. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

Section 12: Ecological Information

Toxicity

Product Name: Methanol **CAS #:** 67-56-1
LC50 fish 1: 15,400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1: > 10,000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2: 10,800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2: 24,500 mg/l (48 h; Daphnia magna)
Threshold limit other aquatic organisms 1: 6,600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1: 530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2: 8,000 mg/l (168 h; Scenedesmus quadricauda)

Persistence and degradability

Product Name: Methanol **CAS #:** 67-56-1

Persistence and degradability: Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD): 0.6 - 1.12 g O2/g substance
Chemical oxygen demand (COD): 1.42 g O2/g substance
ThOD: 1.5 g O2/g substance
BOD (% of ThOD): 0.8 % ThOD

Bioaccumulative potential

Product Name: Methanol **CAS #:** 67.56-1

BCF fish 1: < 10 (Leuciscus idus)
Log Pow: -0.77 (Experimental value; Other,Experimental value; Other)
Bioaccumulative potential: Low potential for bioaccumulation (BCF < 500).

Section 12: Ecological Information (continued)

Mobility in soil

Product Name: Methanol **CAS #:** 67-56-1

Surface tension: 0.023 N/m (20 °C)

Other adverse effects

Effect on ozone layer: No known effect on the ozone layer

Effect on global warming: No known ecological damage caused by this product.

Other information: Avoid release to the environment.

Section 13: Disposal Information

Disposal Considerations: Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

Ecology – Waste material: Avoid release into the environment.

Section 14: Transportation Information

In accordance with DOT Transportation document description: UN1993, Flammable Liquid, N.O.S. (Contains Methanol), 3, PGII

UN-No. (DOT): 1993

DOT NA no.: UN1993

Proper Shipping Name (DOT): Flammable liquids, N.O.S. (Contains Methanol)

Department of Transportation (DOT) Hazard Classes: 3 – Class 3 – Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT): 3 – Flammable liquid

DOT Symbols: G - Identifies PSN requiring a technical name
Packing group (DOT): III – Minor Danger
DOT Packaging Exceptions (49 CFR 173.xxx): 150
DOT Packaging Non Bulk (49 CFR 173.xxx): 203
DOT Packaging Bulk (49 CFR 173.xxx): 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 220 L
DOT Vessel Stowage Location: A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

ADR

No additional information available

Section 14: Transportation Information (continued)

Transport by sea

UN-No. (IMDG): 1993

Proper Shipping Name (IMDG): FLAMMABLE LIQUID, N.O.S. (Methanol)

Class (IMDG): 3 – Flammable liquids

Packing group (IMDG): II

Limited quantities (IMDG): In Non-Bulk quantities with inner packaging no more than 5.0L: Proper Shipping Name: Dangerous Goods in Limited Class 3 (Windshield Wash Containing Methanol) Packages or pallets must be marked "Dangerous Goods in Limited Quantities of Class 3" Outer Package cannot weigh more than 30 kg.

Section 15: Regulatory Information

Product Name: Window Wash RTU **Product #:** 4300

EPA TSCA Regulatory Flag: Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

SARA Section 302 Threshold Planning Quantity (TPQ): None

SARA Section 311/312 Hazard Classes: Delayed (chronic) health hazard
Fire Hazard
Immediate (acute) health hazard

SARA Section 313 - Emission Reporting: 35 % (Methanol CAS # 67-56-1)

Product Name: Methanol **CAS#:** 67-56-1
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313
RQ (Reportable quantity, section 304 of EPA's List of Lists): 5000 lbs.

International Regulations

Canada

WHMIS Classification: Class B Division 2 - Flammable Liquid
Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects

WHMIS CLASSIFICATION

	
Class B Division 2 – Flammable Liquid	**Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects**

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

Section 15: Regulatory Information (continued)

National Regulation

Product Name: Window Wash RTU **Product #:** 4300
DSL (Canada): The intentional ingredients of this product are listed
ECL (South Korea): The intentional ingredients of this product are listed.
EINECS (Europe): The intentional ingredients of this product are listed
ENCS (Japan): The intentional ingredients of this product are listed

US State Regulation

Product Name: Methanol **CAS #: 67-56-1**
U.S. – California Proposition 65 Carcinogens List: No
U.S. – California Proposition 65 Developmental Toxicity: Yes
U.S. – California Proposition 65 Developmental Toxicity Female: No
U.S. – California Proposition 65 Developmental Toxicity Male: No
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Section 16: Other Information

Hazardous Materials Identification System (HMIS)

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

National Fire Protective Association (NFPA)

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

Section 16: Other Information (continued)

OVERVIEW

This information was compiled from current manufacturer's SDS's of the component parts of the product.

Disclaimer: The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

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SAFETY DATA SHEET

SDS ID NO.: 0290MAR019
Revision Date 06/01/2016

1. IDENTIFICATION

Product Name: Marathon Petroleum No. 2 Ultra Low Sulfur Diesel

Synonym: #2 Diesel; No. 2 Ultra Low Sulfur Diesel 15 ppm Sulfur Max; Ultra Low Sulfur Diesel No. 2 15 ppm Sulfur Max; Ultra Low Sulfur Diesel No. 2 15 ppm Sulfur Max with Polar Plus; No. 2 Diesel, Motor Vehicle Use, Undyed; No. 2 Diesel, Motor Vehicle Use, Undyed, with Polar Plus; ULSD No. 2 Diesel 15 ppm Sulfur Max; ULSD No. 2 Diesel 15 ppm Sulfur Max with Polar Plus; No. 2 NR 15 Diesel; No. 2 NR 15 Diesel with Polar Plus; No. 2 Ultra Low Sulfur Diesel Dyed 15 ppm Sulfur Max; Ultra Low Sulfur Diesel No. 2 Dyed 15 ppm Sulfur Max; Ultra Low Sulfur Diesel No. 2 Dyed 15 ppm Sulfur Max with Polar Plus; No. 2 Diesel, Tax Exempt-Motor Vehicle Use, Dyed; No. 2 Diesel, Tax Exempt-Motor Vehicle Use, Dyed, with Polar Plus; ULSD No. 2 Diesel Dyed 15 ppm Sulfur Max; ULSD No. 2 Diesel Dyed 15 ppm Sulfur Max, with Polar Plus; No. 2 NR 15 Diesel Dyed; #2 NR 15 CFI Diesel; #2 NR 15 CFI Diesel Dyed; No. 2 Low Sulfur Diesel (TxLED); No. 2 NR 15 Diesel Dyed, with Polar Plus; No. 2 NRLM 15 Diesel Dyed; No.2 NRLM Diesel Dyed; No. 2 NR 500 ppm TxLED; No.2 Low Emission Low Sulfur Diesel; No. 2 Low Sulfur Diesel (TxLED) 500 ppm Sulfur Max; No. 2 Heating Oil 5000 NMA Unmarked; NEMA No. 2 Heating Oil; Heating Oil, No. 2 Low Sulfur 5000 ppm; No. 2 Ultra Low Sulfur Diesel Dyed with <6% Renewable Diesel Fuel; Ultra Low Sulfur No. 2 Diesel Dyed with <6% Renewable Diesel Fuel; No. 2 Diesel Dyed with <6% Renewable Diesel Fuel 15 ppm Sulfur Max; No. 2 Ultra Low Sulfur Diesel with <6% Renewable Diesel Fuel; Ultra Low Sulfur No. 2 Diesel with <6% Renewable Diesel Fuel; No. 2 Diesel with <6% Renewable Diesel Fuel 15 ppm Sulfur Max; Garyville Export Diesel; Export Diesel, Garyville; Diesel Fuel, Export Garyville; #2 Motor Vehicle ULSD 15 ppm with 0-5% Renewable Diesel; Marathon No. 2 ULSD with 0-5% Renewable Fuel with R100; Marathon No. 2 ULSD with 0-5% Renewable Fuel with R99; No. 2 Heating Oil 2000 ppm Sulfur Max, Clear (Undyed) Unmarked;Ultra Low Sulfur Heating Oil 15 ppm Sulfur Max, Clear (Undyed) Unmarked; ULS Heating Oil 15 ppm Clear (Undyed) Unmarked; ULS HO 15 ppm CLR; Ultra-Low Sulfur Heating Oil (<= 15ppm, Undyed); No. 2 Heating Oil 2000 ppm Sulfur Max, Dyed Unmarked; No. 2 Heating Oil 2000 ppm Sulfur Max, Dyed Marked; Ultra Low Sulfur Heating Oil 15 ppm Sulfur Max, Dyed Unmarked; Ultra Low Sulfur Heating Oil 15 ppm Sulfur Max, Dyed Marked;15 ppm Sulfur Heating Oil Grade 67; 15 PPM Heating Oil; 15 PPM Dyed Heating Oil; 0291MAR019; 0306MAR019; 0308MAR019; 0334MAR019; 0335MAR019; 0336MAR019; 0337MAR019; 0340MAR019;

Product Code: 0290MAR019
Chemical Family: Complex Hydrocarbon Substance

Recommended Use: Fuel.
Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information: 1-419-421-3070

Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)
Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

FLAMMABLE LIQUID AND VAPOR
May accumulate electrostatic charge and ignite or explode
May be fatal if swallowed and enters airways
Harmful if inhaled
Causes skin irritation
May cause respiratory irritation
May cause drowsiness or dizziness
Suspected of causing cancer
May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure
Toxic to aquatic life with long lasting effects

Appearance Yellow to Red Liquid **Physical State** Liquid **Odor** Hydrocarbon

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools.
Use explosion-proof electrical/ventilating/lighting/equipment
Take precautionary measures against static discharge
Do not breathe mist/vapors/spray
Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection
Wash hands and any possibly exposed skin thoroughly after handling
Avoid release to the environment

Precautionary Statements - Response
IF exposed or concerned: Get medical attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
In case of fire: Use water spray, fog or regular foam for extinction
Collect spillage

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

No. 2 Ultra Low Sulfur Diesel is a complex mixture of paraffins, cycloparaffins, olefins and aromatic hydrocarbon chain lengths predominantly in the range of eleven to twenty carbons. May contain up to 5% Renewable Diesel. May contain small amounts of dye and other additives (<0.15%) which are not considered hazardous at the concentration(s) used. May contain a trace amount of benzene (<0.01%). Contains a trace amount of sulfur (<0.0015%)

Composition Information:

Name	CAS Number	% Concentration
No. 2 Diesel Fuel	68476-34-6	50-100
Kerosine (petroleum)	8008-20-6	0-50
Alkanes, C10-C20 branched and linear	928771-01-1	0-5
Naphthalene	91-20-3	0.3-2.6

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Skin Contact: Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous

properties. Destroy contaminated, non-chemical resistant footwear.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking. Prolonged or repeated exposure may cause adverse effects to the thymus, liver, and bone marrow.

Indication of any immediate medical attention and special treatment needed

Notes To Physician: INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media
Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical
This product has been determined to be a flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.

Hazardous combustion products
Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters
Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Additional firefighting tactics
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles: if this is impossible, withdraw from area and let fire burn.

EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

NFPA	Health 1	Flammability 2	Instability 0	Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. All contaminated surfaces will be slippery.

Protective equipment: Use personal protection measures as recommended in Section 8.

Emergency procedures: Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions: Avoid release to the environment. Avoid subsoil penetration.

Methods and materials for containment: Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.

Methods and materials for cleaning up: Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe Handling Precautions: NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite

the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions: Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Do not store near an open flame, heat or other sources of ignition.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
No. 2 Diesel Fuel 68476-34-6	100 mg/m³ TWA Skin - potential significant contribution to overall exposure by the cutaneous route	-	-	-
Kerosine (petroleum) 8008-20-6	200 mg/m³ TWA Skin - potential significant contribution to overall exposure by the cutaneous route	-	-	-
Alkanes, C10-C20 branched and linear 928771-01-1	-	-	-	-
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m³	10 ppm TWA 50 mg/m³ TWA 15 ppm STEL 75 mg/m³ STEL	250 ppm

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or with inadequate ventilation. Use

mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Yellow to Red Liquid
Color	Yellow to Red
Odor	Hydrocarbon
Odor Threshold	No data available.

Property	**Values (Method)**
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	154-366 °C / 310-691 °F (ASTM D86)
Flash Point	58-76 °C / 136-168 °F (ASTM D93)
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion limits:	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.
Specific Gravity / Relative Density	0.82-0.86
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	No data available.
Decomposition temperature	No data available.
pH:	Not applicable
Autoignition Temperature	No data available.
Kinematic Viscosity	1.90-3.32 cSt @ 40°C (ASTM D445)
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	No data available.
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability The material is stable at 70°F (21°C), 760 mmHg pressure.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Excessive heat, sources of ignition, open flame.

Incompatible Materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Harmful if inhaled. May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death.

Eye contact Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.

Skin contact Irritating to skin. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts.

Ingestion May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
No. 2 Diesel Fuel 68476-34-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	>1 - <5 mg/L (Rat) 4 h
Kerosine (petroleum) 8008-20-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.28 mg/L (Rat) 4 h
Alkanes, C10-C20 branched and linear 928771-01-1	-	-	>1 - <5 mg/l (Rat) 4 h
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m^3 (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

MIDDLE DISTILLATES, PETROLEUM: Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

MIDDLE DISTILLATES WITH CRACKED STOCKS: Light cracked distillates have been shown to be carcinogenic in animal tests and have tested positive with in vitro genotoxicity tests. Repeated dermal exposures to high concentrations in test animals resulted in reduced litter size and litter weight, and increased fetal resorptions at maternally toxic doses. Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality. Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation, and reduction in lung function.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

DIESEL EXHAUST: The combustion of diesel fuels produces gases including carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur, and hydrocarbons that can be irritating and hazardous with overexposure. Long-term occupational overexposure to diesel exhaust and diesel exhaust particulate matter has been associated with an increased risk of respiratory disease, including lung cancer, and is characterized as a “known human carcinogen” by the International Agency for Research on Cancer (IARC), as “a reasonably anticipated human carcinogen” by the National Toxicology Program, and as “likely to be carcinogenic to humans” by the EPA, based upon animal and occupational exposure studies. However, uncertainty exists with these classifications because of deficiencies in the supporting occupational exposure/epidemiology studies, including reliable exposure estimates. Lifetime animal inhalation studies with pulmonary overloading exposure concentrations of diesel exhaust emissions have produced tumors and other adverse health effects. However, in more recent long-term animal inhalation studies of diesel exhaust emissions, no increase in tumor incidence and in fact a substantial reduction in adverse health effects along with significant reductions in the levels of hazardous material emissions were observed and are associated with fuel composition alterations coupled with new technology diesel engines.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms

Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking. Prolonged or repeated exposure may cause damage to organs.

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/eye irritation None known.
Sensitization None known.

Mutagenic effects None known.

Carcinogenicity Suspected of causing cancer.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
No. 2 Diesel Fuel 68476-34-6	Confirmed animal carcinogen (A3)	Not Classifiable (3)	Not Listed	Not Listed
Kerosine (petroleum) 8008-20-6	Confirmed animal carcinogen (A3)	Not Classifiable (3)	Not Listed	Not Listed
Alkanes, C10-C20 branched and linear	Not Listed	Not Listed	Not Listed	Not Listed

928771-01-1				
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure Respiratory system. Central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure Thymus. Liver. Bone marrow.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
No. 2 Diesel Fuel 68476-34-6	-	96-hr LC50 = 35 mg/l Fathead minnow (flow-through)	-	48-hr EL50 = 6.4 mg/l Daphnia magna
Kerosine (petroleum) 8008-20-6	72-hr EL50 = 5.0-11 mg/l Algae	96-hr LL50 = 18-25 mg/l Fish	-	48-hr EL50 = 1.4-21 mg/l Invertebrates
Alkanes, C10-C20 branched and linear 928771-01-1	-	-	-	-
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna

Persistence and degradability Expected to be inherently biodegradable.

Bioaccumulation Has the potential to bioaccumulate.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
This material may be a flammable liquid waste.

Safe Handling of Wastes
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Class:	3
Packing Group:	III

TDG (Canada):

UN Proper Shipping Name:	Diesel Fuel
UN/Identification No:	UN 1202
Transport Hazard Class(es):	3
Packing Group:	III

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
No. 2 Diesel Fuel	NA
Kerosine (petroleum)	NA
Alkanes, C10-C20 branched and linear	NA
Naphthalene	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
No. 2 Diesel Fuel	NA
Kerosine (petroleum)	NA
Alkanes, C10-C20 branched and linear	NA
Naphthalene	100 lb final RQ 45.4 kg final RQ

SARA Section 311/312: The following EPA hazard categories apply to this product:

Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
No. 2 Diesel Fuel	None
Kerosine (petroleum)	None
Alkanes, C10-C20 branched and linear	None
Naphthalene	0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

No. 2 Diesel Fuel

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 2444
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	SN 2444 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Kerosine (petroleum)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1091
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	SN 1091 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Alkanes, C10-C20 branched and linear

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Naphthalene

Louisiana Right-To-Know:	Not Listed

California Proposition 65:	Carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	SN 1322 SN 3758
Pennsylvania Right-To-Know:	Environmental hazard Present (particulate)
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	100 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
No. 2 Diesel Fuel	B3,D2A,D2B	0.1%
Kerosine (petroleum)	B3,D2B	1%
Alkanes, C10-C20 branched and linear	B3,D2A,D2B	0.1%
Naphthalene	B4,D2A	0.1%

Note: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Issue Date 10/31/2016

Revision Notes

Revision Date 06/01/2016

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL DELVAC MX 15W-40
Product Description: Base Oil and Additives
Product Code: 201520402010, 441048-85
Intended Use: Engine oil

COMPANY IDENTIFICATION

Supplier: **East Coast Lubes Pty Ltd (Queensland and Northern Territory)**
A.B.N. 37 117 203 611
Cnr North and Mort Streets
Toowoomba, Queensland 4350 Australia

24 Hour Emergency Telephone 1300 131 001
Supplier General Contact 1800 069 019

Supplier: **Southern Cross Lubes (Victoria and Tasmania)**
58-66 Ajax Road
Altona, Victoria 3018, Australia

24 Hour Emergency Telephone 1300 131 001
Product Technical Information
Supplier General Contact 1300 466 245
1300 552 861

Supplier: **Perkal Pty Ltd Trading as Statewide Oil (Western Australia)**
A.B.N. 43 009 283 363
14 Beete Street
Welshpool, Western Australia 6106 Australia

24 Hour Emergency Telephone (8:00am to 4:30pm Mon to Fri) 1300 919 904
Product Technical Information
Supplier General Contact (08) 9350 6777
(08) 9350 6777

Supplier: **Perkal Pty Ltd Trading as Statewide Oil (South Australia)**
A.B.N. 43 009 283 363
6-10 Streiff Rd
Wingfield, South Australia 5013 Australia

24 Hour Emergency Telephone (8:00am to 4:30pm Mon to Fri) 1300 919 904
Product Technical Information
Supplier General Contact (08) 8359 8995
(08) 8359 8995

SECTION 2 HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15).

Contains: ORGANO MOLY-SULFUR COMPLEX May produce an allergic reaction.

Other hazard information:

Physical / Chemical Hazards:
No significant hazards.

Health Hazards:
High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

Environmental Hazards:
No significant hazards.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*	GHS Hazard Codes
ORGANO MOLY-SULFUR COMPLEX	CONFIDENTIAL	0.1 - < 1%	H315, H317, H402, H412
ZINC ALKYL DITHIOPHOSPHATE	113706-15-3	1 - 2.5%	H303, H315, H318, H401, H411

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous up to 100%.

SECTION 4 FIRST AID MEASURES

INHALATION
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT
Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the

body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

NOTE TO PHYSICIAN

None

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulphur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >225°C (437°F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special

cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator.

STORAGE

The type of container used to store the material may affect static accumulation and dissipation. Do not store in open or unlabelled containers.

Material is defined under the National Standard [NOHSC:1015] Storage and Handling of Workplace Dangerous Goods.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard	Note	Source

ORGANO MOLY-SULFUR COMPLEX	Inhalable fraction.	TWA	10 mg/m3			ACGIH
ORGANO MOLY-SULFUR COMPLEX	Respirable fraction.	TWA	3 mg/m3			ACGIH

Exposure limits/standards for materials that can be formed when handling this product:

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological limits

No biological limits allocated.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Particulate
No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Nitrile,Viton
No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practise good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Colour: Brown
Odour: Characteristic
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 60 °F): 0.884
Flammability (Solid, Gas): N/A
Flash Point [Method]: >225°C (437°F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D
Boiling Point / Range: > 316°C (600°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): > 2 at 101 kPa
Vapour Pressure: < 0.013 kPa (0.1 mm Hg) at 20 °C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 109 cSt (109 mm2/sec) at 40 °C | 14.5 cSt (14.5 mm2/sec) at 100°C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: -27°C (-17°F)
DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

INCOMPATIBLE MATERIALS: Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

OTHER INFORMATION

For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the

components, this formulation, or similar formulations.
Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies. Oils that are used in gasoline engines may become hazardous and display the following properties: Carcinogenic in animal tests. Caused mutations in vitro. Possible allergen and photoallergen. Contains polycyclic aromatic compounds (PAC) from combustion products of gasoline and/or thermal degradation products.
Contains:
Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitising in test animals.

IARC Classification:
The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--
1 = IARC 1 2 = IARC 2A 3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY
Material -- Not expected to be harmful to aquatic organisms.

MOBILITY
Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY
Biodegradation:
Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL
Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.

SECTION 14 TRANSPORT INFORMATION

LAND (ADG) : Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

This material is not considered hazardous according to Australia Model Work Health and Safety Regulations.

Product is not regulated according to Australian Dangerous Goods Code.

No Poison Schedule number allocated by the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act.

AS1940 COMBUSTIBLE CLASS: C2

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

SECTION 16 OTHER INFORMATION

KEY TO ABBREVIATIONS AND ACRONYMS:

N/D = Not determined, N/A = Not applicable, STEL = Short-Term Exposure Limit, TWA = Time-Weighted Average

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):
H303: May be harmful if swallowed; Acute Tox Oral, Cat 5
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
H317: May cause allergic skin reaction; Skin Sensitization, Cat 1
H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1
H401: Toxic to aquatic life; Acute Env Tox, Cat 2
H402: Harmful to aquatic life; Acute Env Tox, Cat 3
H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Perkal Pty Ltd Trading as Roto Oil (South Australia): Section 01: Supplier Mailing Address information was deleted.
Perkal Pty Ltd Trading as Statewide Oil (South Australia): Section 01: Supplier Mailing Address information was added.
Perkal Pty Ltd Trading as Statewide Oil (Western Australia): Section 01: Supplier Mailing Address information was modified.
Southern Cross Lubes (Victoria and Tasmania): Section 01: Supplier Mailing Address information was modified.
Section 01: Company Contact Methods information was modified.
Section 11: Other Health Effects information was modified.
Section 13: Disposal Considerations - Disposal Recommendations information was modified.

DGN: 2003512DAU (1021970)

Prepared by: Exxon Mobil Corporation
EMBSI, Clinton NJ USA
Contact Point: See Section 1 for Local Contact number

End of (M)SDS

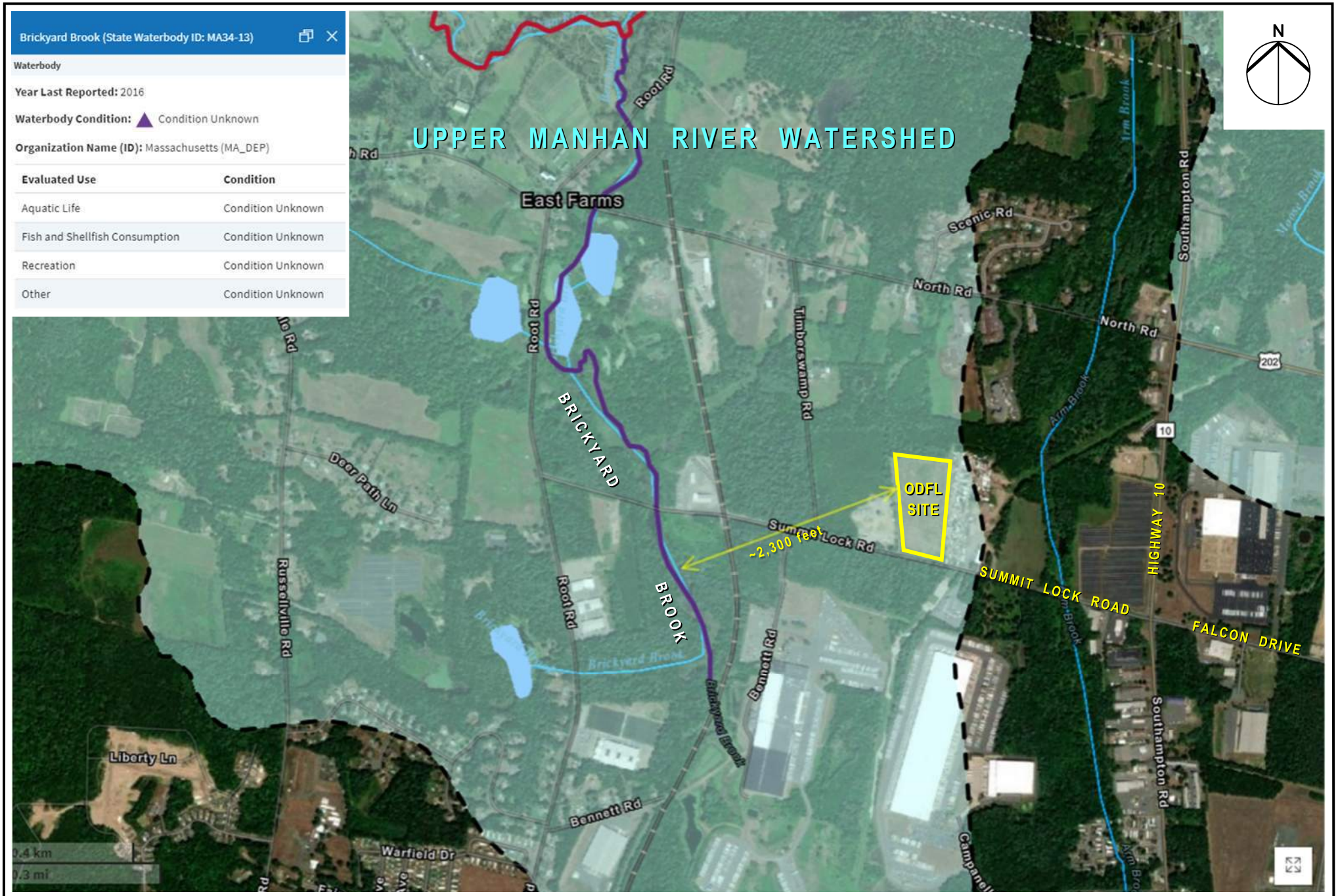


IMAGE COURTESY OF

EPA United States Environmental Protection Agency

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

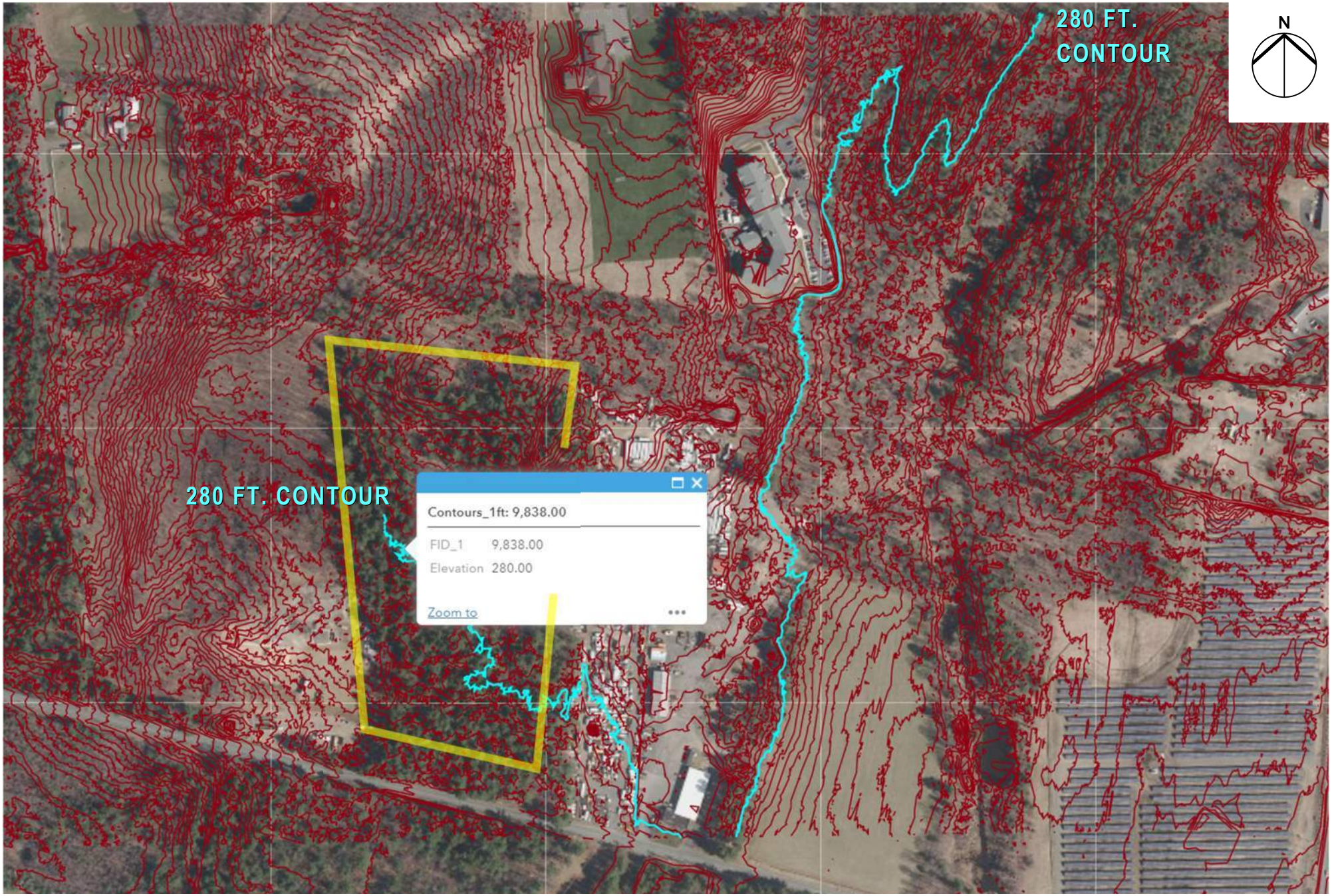
Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

Terracon Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

UPPER MANHAN RIVER WATERSHED

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure: **1**



BASE IMAGE COURTESY OF Westfield

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

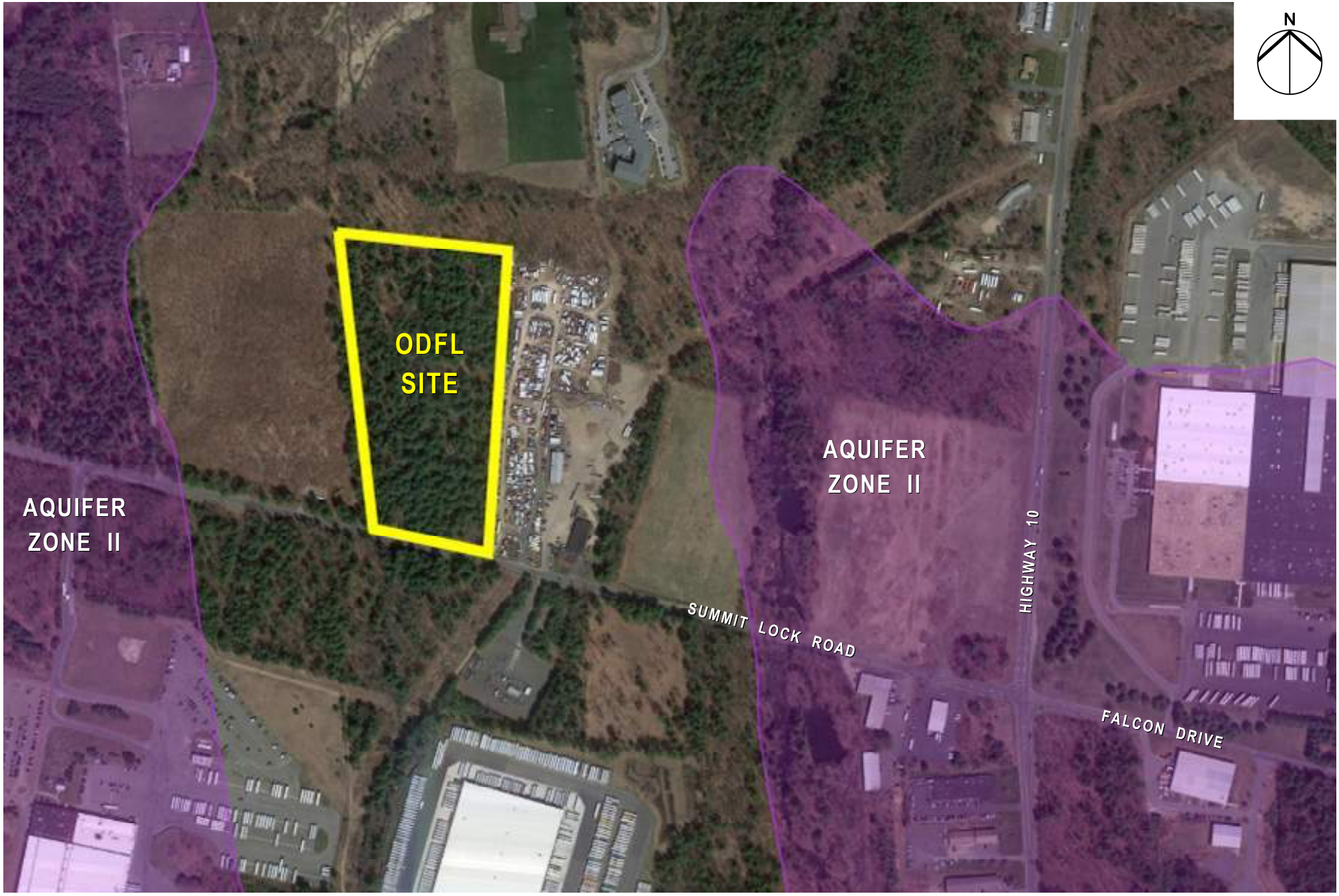
Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

TOPOGRAPHIC MAP

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure: **2**



BASE IMAGE COURTESY OF Westfield

ZONE II AQUIFER PROTECTION AREA

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

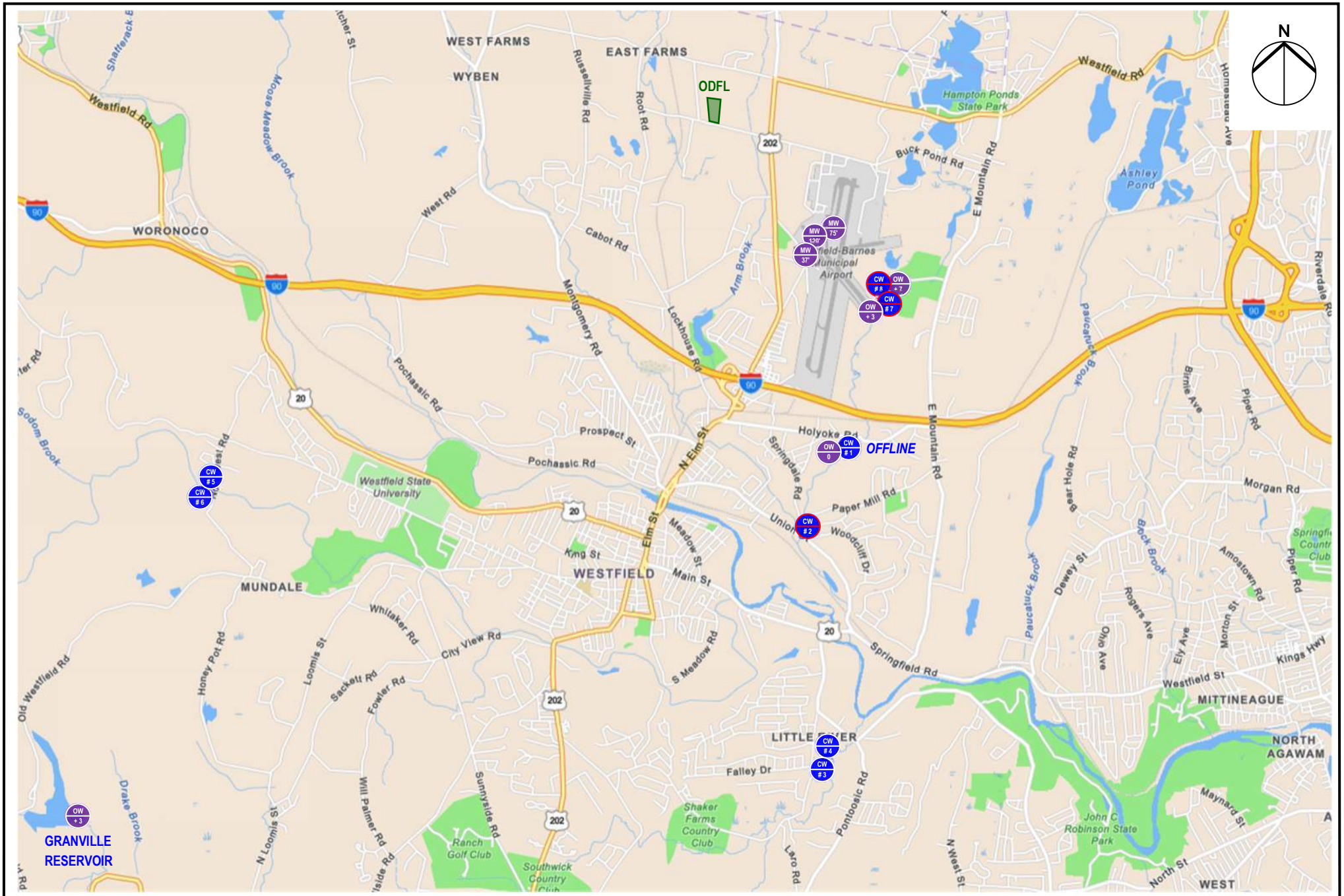
Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

ZONE II AQUIFER PROTECTION AREA

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure: 3



BASE IMAGE COURTESY OF Westfield Community Development

OW 0 — OBSERVATION / MON. WELL WELL ID

CW #3 — CITY WELL WELL ID

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

Project No.:	ODFL WFMA
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Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

AREA WELLS

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure: 4

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

Terracon
Consulting Engineers & Scientists
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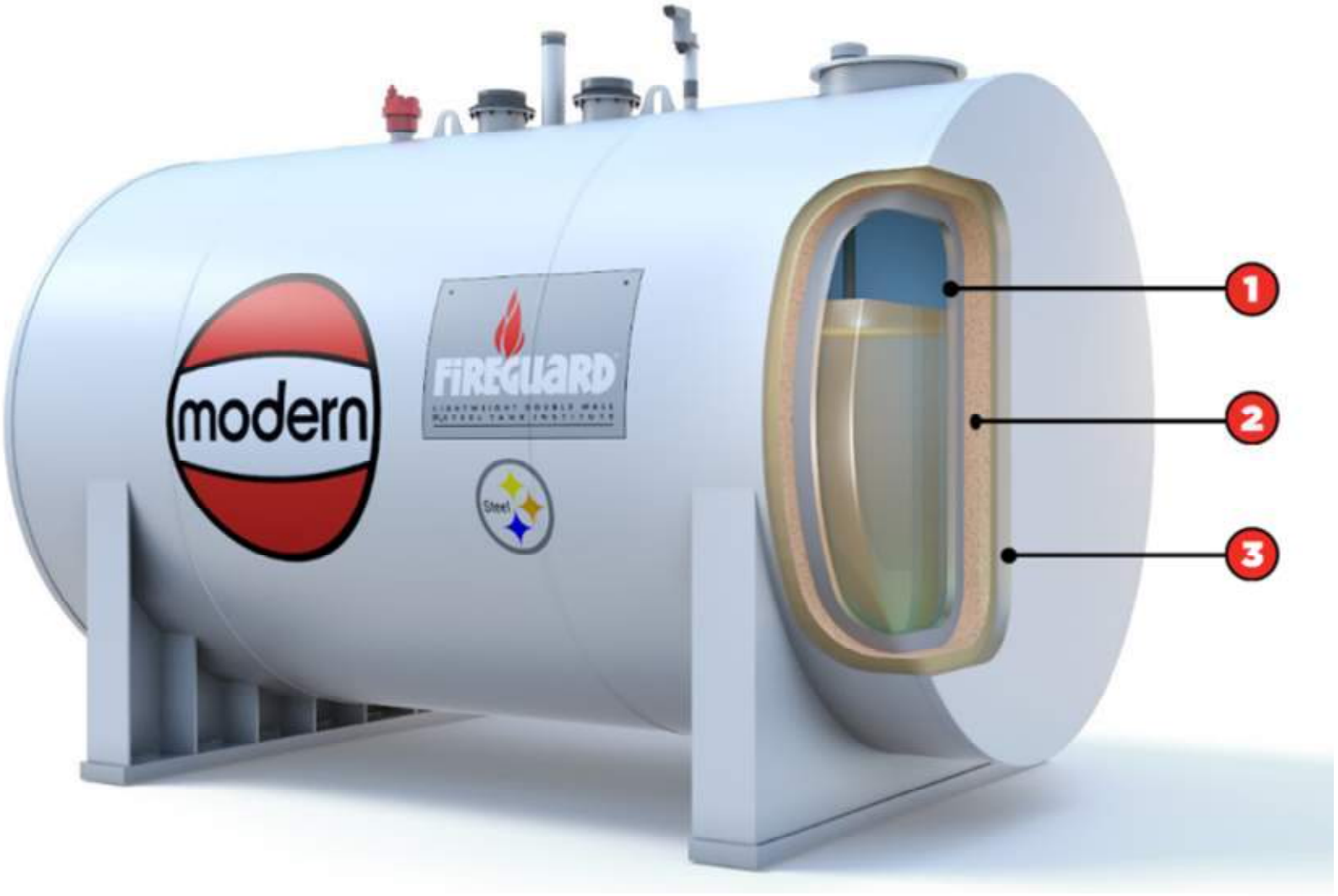
Phone (912) 629 4000 Fax (912) 629 4001

AST FUELING SYSTEM

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure:

5



1 **Steel Primary Tank Built to UL Standards**

2 **Lightweight Thermal Insulation**

- Unique feature that helped Fireguard® exceed the UL 2-hour fire test
- Sufficiently porous to facilitate quick emergency venting and/or leak detection

3 **Steel Secondary Tank Built to UL Standards**

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

Project No.:	ODFL WFMA
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Date:	8-16-2021

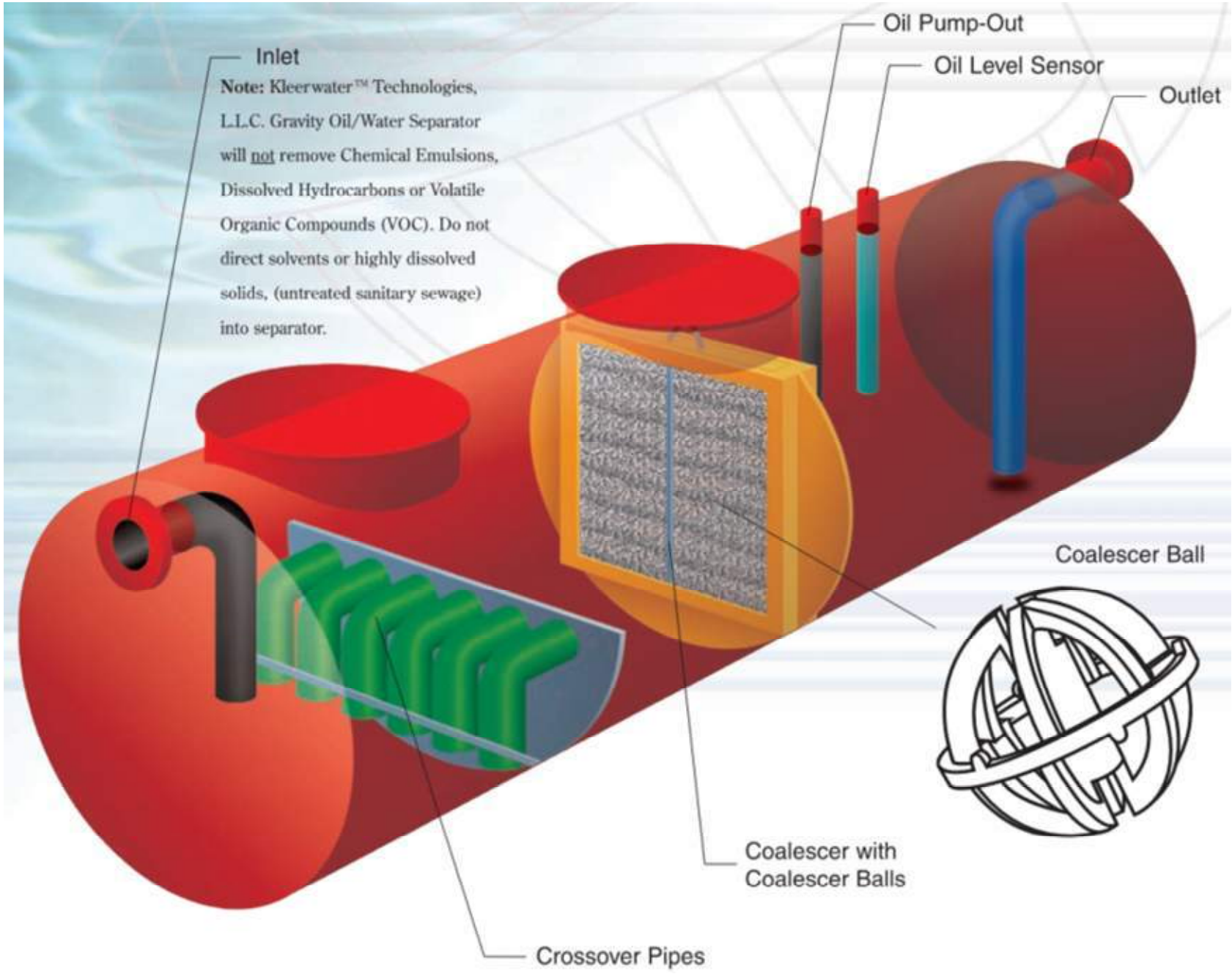
Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

AST

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure:

6



Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

OIL / WATER SEPARATOR

ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure:

7

ARTICLE III
Section 3-170

WATER RESOURCE PROTECTION DISTRICT

Section 3-170.1 Intent. The intent and purposes of this Water Resource Protection District are: to promote the health, safety and general welfare of the community; to protect, preserve and maintain the public water supply and the lands that contribute to it; to conserve the natural water resources within the City; and to prevent the pollution of the public water supply of the City and surrounding areas.

Section 3-170.2 Delineation of the District

1. The Water Resource Protection District is hereby established as overlaying and superimposed upon other existing zoning districts. Such district shall be inclusive of those areas approved by the Massachusetts Department of Environmental Protection (hereinafter MassDEP) and defined under the Massachusetts Drinking Water regulations 310 CMR 22.00 as Zones I & II aquifer recharge areas for the Barnes, Southampton, Great Brooks and Northwest Road aquifers, duly adopted and shown on the zoning map.

2. Any petition to amend the location of the district boundary established above shall include evidence of a scientific and professional investigation, and/or the City may, at the petitioner's expense, engage a qualified professional engineer, hydrologist, geologist, or soil scientist to verify or more accurately determine the boundaries of this district with respect to the subject property.

Project Manager: RR	Project No.: ODFL WFMA	Terracon Consulting Engineers & Scientists	WATER RESOURCE PROTECTION DISTRICT	Figure:
Drawn by:	Scale: AS SHOWN	2201 Rowland Avenue Savannah, Georgia 31404	ODFL SERVICE CENTER 74 Medeiros Way Westfield, Massachusetts	8
Checked by: RR	File Name: ODFL WFMA	Phone (912) 629 4000 Fax (912) 629 4001		
Approved by: RR	Date: 8-16-2021			

3-170.4 Definitions

13. Zone I. The protective radius, typically 400 feet, required around a municipal water supply well or wellfield as approved by MassDEP and defined under the Massachusetts Drinking Water regulations 310 CMR 22.00.

14. Zone II. That recharge area of an aquifer which contributes water to a public drinking water well under the most severe pumping and recharge conditions that can be realistically anticipated; further defined under the Massachusetts Drinking Water regulations 310 CMR 22.00, and the delineation of which is approved by MassDEP.

Project Manager:	RR
Drawn by:	
Checked by:	RR
Approved by:	RR

Project No.:	ODFL WFMA
Scale:	AS SHOWN
File Name:	ODFL WFMA
Date:	8-16-2021

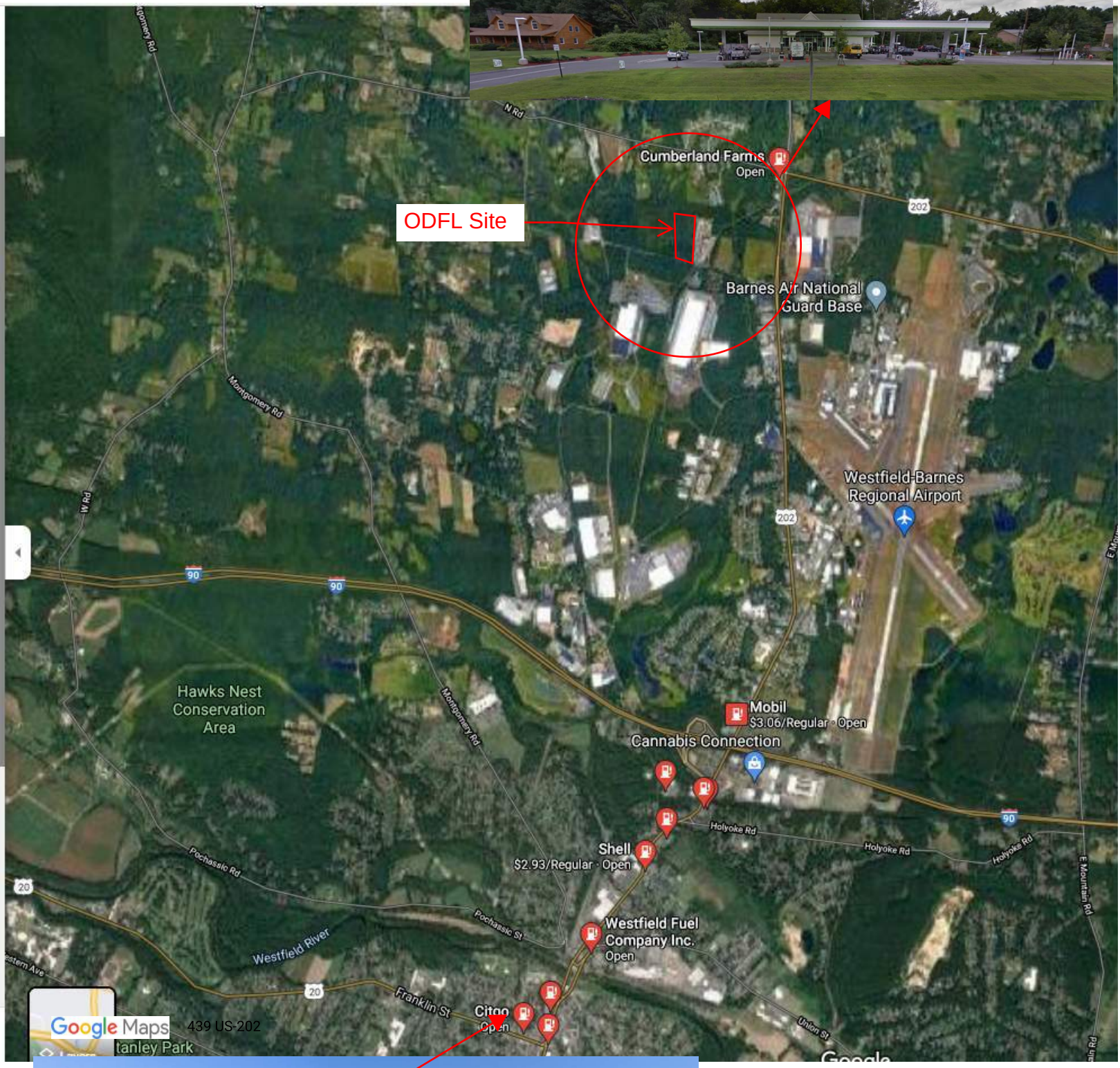
Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

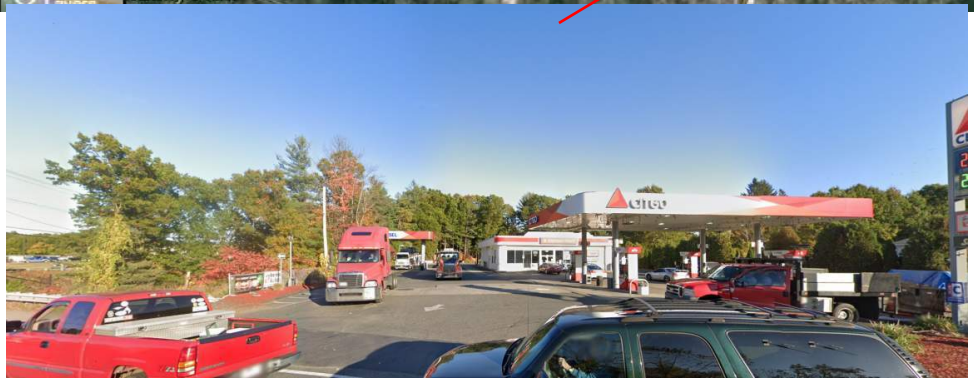
DEFINITIONS

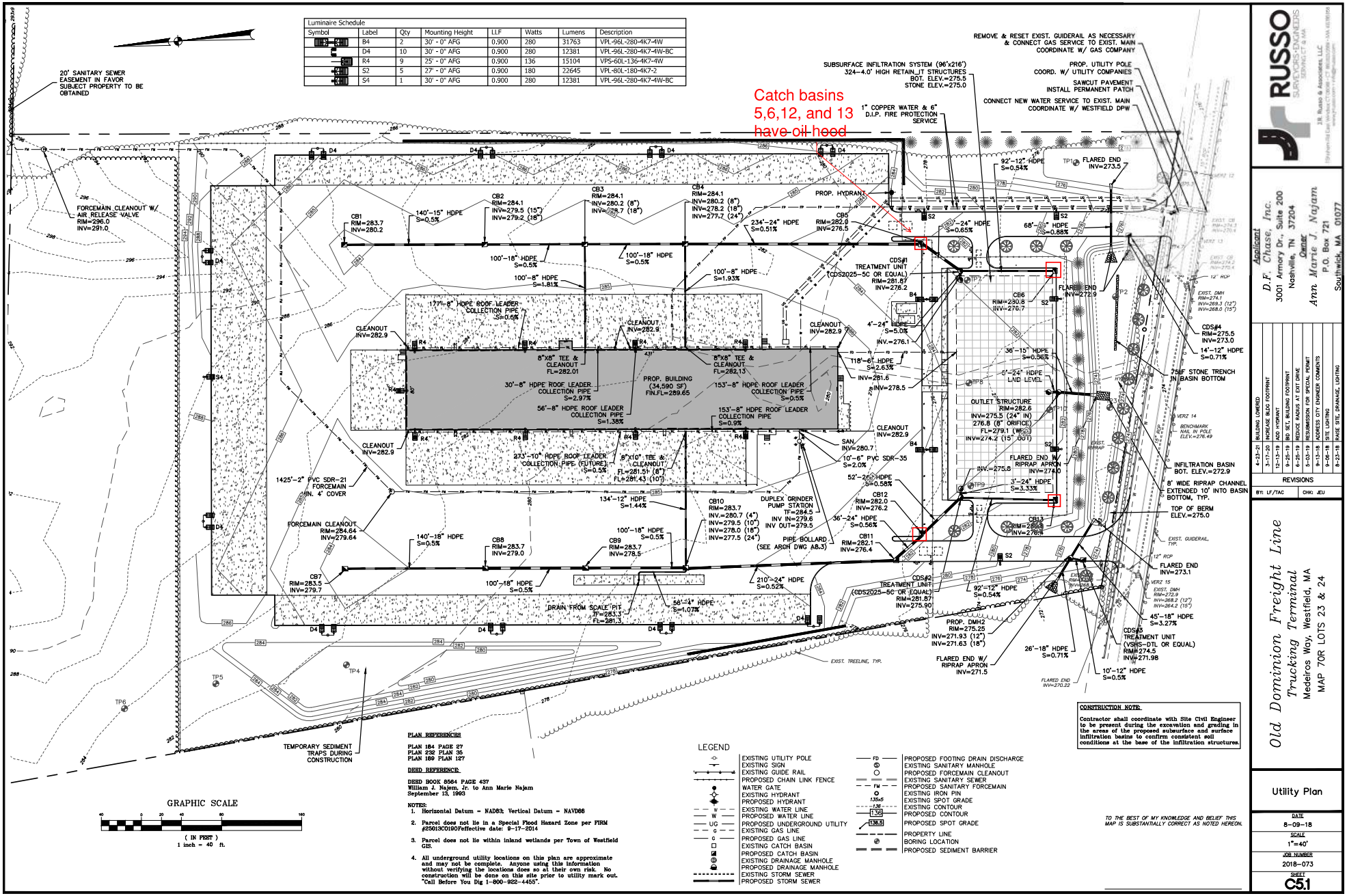
ODFL SERVICE CENTER
74 Medeiros Way
Westfield, Massachusetts

Figure: 9

Google Maps 1134 Southampton Rd






Luminaire Schedule
Symbol | Label | Qty | Mounting Height | LLF | Watts | Lumens | Description
B4 | 2 | 30' - 0" AFG | 0.900 | 280 | 31763 | VPL-96L-280-4K7-4W
D4 | 10 | 30' - 0" AFG | 0.900 | 280 | 12381 | VPL-96L-280-4K7-4W-BC
R4 | 9 | 25' - 0" AFG | 0.900 | 136 | 15104 | VPS-60L-136-4K7-4W
S2 | 5 | 27' - 0" AFG | 0.900 | 180 | 22645 | VPL-80L-180-4K7-2
S4 | 1 | 30' - 0" AFG | 0.900 | 280 | 12381 | VPL-96L-280-4K7-4W-BC
Catch basins 5,6,12, and 13 have oil hood
20' SANITARY SEWER EASEMENT IN FAVOR SUBJECT PROPERTY TO BE OBTAINED
FORCEMAIN CLEANOUT W/ AIR RELEASE VALVE RIM=296.0 INV=291.0
CB1 RIM=283.7 INV=280.2
CB2 RIM=284.1 INV=279.5 (15") INV=279.2 (18")
CB3 RIM=284.1 INV=280.2 (8") INV=279.7 (18")
CB4 RIM=284.1 INV=280.2 (8") INV=278.2 (18") INV=277.7 (24")
CB5 RIM=282.0 INV=276.5
CB6 RIM=280.6 INV=276.7
CB7 RIM=283.5 INV=279.7
CB8 RIM=283.7 INV=279.0
CB9 RIM=283.7 INV=278.5
CB10 RIM=283.7 INV=280.7 (4") INV=279.5 (10") INV=278.0 (18") INV=277.5 (24")
CB11 RIM=282.1 INV=276.4
CB12 RIM=282.0 INV=276.2
CB13 RIM=280.6 INV=276.4
140'-15" HDPE S=0.5%
100'-18" HDPE S=0.5%
100'-8" HDPE S=1.81%
100'-8" HDPE S=1.93%
234'-24" HDPE S=0.51%
177'-8" HDPE ROOF LEADER COLLECTION PIPE S=0.6%
30'-8" HDPE ROOF LEADER COLLECTION PIPE S=2.97%
56'-8" HDPE ROOF LEADER COLLECTION PIPE S=1.38%
153'-8" HDPE ROOF LEADER COLLECTION PIPE S=0.5%
153'-8" HDPE ROOF LEADER COLLECTION PIPE S=0.9%
273'-10" HDPE ROOF LEADER COLLECTION PIPE (FUTURE) S=0.5%
8"X8" TEE & CLEANOUT FL=282.01
8"X8" TEE & CLEANOUT FL=282.13
8"X10" TEE & CLEANOUT FL=281.5+ (8") FL=281.43 (10")
PROP. BUILDING (34,590 SF) FIN.FL=289.65
CLEANOUT INV=282.9
1425'-2" PVC SDR-21 FORCEMAIN MIN. 4' COVER
134'-12" HDPE S=1.44%
DUPLEX GRINDER PUMP STATION TF=284.5 INV IN=279.6 INV OUT=279.5
PIPE BOLLARD (SEE ARCH DWG A8.3)
210'-24" HDPE S=0.52%
56'-24" HDPE S=1.07%
DRAIN FROM SCALE PIT TF=283.3 FL=281.3
PROP. HYDRANT
SUBSURFACE INFILTRATION SYSTEM (96'x216') 324-4.0' HIGH RETAIN_IT STRUCTURES BOT. ELEV.=275.5 STONE ELEV.=275.0
1" COPPER WATER & 6" D.I.P. FIRE PROTECTION SERVICE
REMOVE & RESET EXIST. GUIDERAIL AS NECESSARY & CONNECT GAS SERVICE TO EXIST. MAIN COORDINATE W/ GAS COMPANY
PROP. UTILITY POLE COORD. W/ UTILITY COMPANIES
SAWCUT PAVEMENT INSTALL PERMANENT PATCH
CONNECT NEW WATER SERVICE TO EXIST. MAIN COORDINATE W/ WESTFIELD DPW
92'-12" HDPE S=0.54%
68'-8" HDPE S=0.88%
4'-24" HDPE S=5.0%
36'-15" HDPE S=0.56%
118'-6" HDPE S=2.63%
5'-24" HDPE LAID LEVEL
CDS#1 TREATMENT UNIT (CDS2025-5C OR EQUAL) RIM=281.87 INV=278.2
CDS#2 TREATMENT UNIT (CDS2025-5C OR EQUAL) RIM=281.87 INV=275.90
CDS#3 TREATMENT UNIT (VSHS-DTL OR EQUAL) RIM=274.5 INV=271.98
CDS#4 RIM=275.5 INV=273.0
OUTLET STRUCTURE RIM=282.6 INV=275.5 (24" IN) 276.8 (8" ORIFICE) FL=279.1 (WQ) INV=274.2 (15" OUT)
10'-6" PVC SDR-35 S=2.0%
52'-24" HDPE S=0.58%
3'-24" HDPE S=3.33%
36'-24" HDPE S=0.56%
26'-18" HDPE S=0.71%
45'-18" HDPE S=3.27%
10'-12" HDPE S=0.5%
14'-12" HDPE S=0.71%
75SF STONE TRENCH IN BASIN BOTTOM
FLARED END INV=273.5
FLARED END INV=272.9
FLARED END INV=273.1
FLARED END W/ RIPRAP APRON INV=271.5
FLARED END INV=270.22
PROP. DMH2 RIM=275.25 INV=271.93 (12") INV=271.63 (18")
SAN INV=280.7
INFILTRATION BASIN BOT. ELEV.=272.9
8' WIDE RIPRAP CHANNEL EXTENDED 10' INTO BASIN BOTTOM, TYP.
TOP OF BERM ELEV.=275.0
EXIST. GUIDERAIL, TYP.
EXIST. TREELINE, TYP.
TEMPORARY SEDIMENT TRAPS DURING CONSTRUCTION
TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
PLAN REFERENCES
PLAN 184 PAGE 27
PLAN 232 PLAN 35
PLAN 189 PLAN 127
DEED REFERENCE:
DEED BOOK 8504 PAGE 437
William J. Najem, Jr. to Ann Marie Najam
September 13, 1993
NOTES:
1. Horizontal Datum = NAD83; Vertical Datum = NAVD88
2. Parcel does not lie in a Special Flood Hazard Zone per FIRM #25013C0190F effective date: 9-17-2014
3. Parcel does not lie within inland wetlands per Town of Westfield GIS.
4. All underground utility locations on this plan are approximate and may not be complete. Anyone using this information without verifying the locations does so at their own risk. No construction will be done on this site prior to utility mark out. "Call Before You Dig 1-800-922-4455".
LEGEND
EXISTING UTILITY POLE
EXISTING SIGN
EXISTING GUIDE RAIL
EXISTING CHAIN LINK FENCE
WATER GATE
EXISTING HYDRANT
PROPOSED HYDRANT
EXISTING WATER LINE
PROPOSED WATER LINE
PROPOSED UNDERGROUND UTILITY
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING DRAINAGE MANHOLE
PROPOSED DRAINAGE MANHOLE
EXISTING STORM SEWER
PROPOSED STORM SEWER
PROPOSED FOOTING DRAIN DISCHARGE
EXISTING SANITARY MANHOLE
PROPOSED FORCEMAIN CLEANOUT
EXISTING SANITARY SEWER
PROPOSED SANITARY FORCEMAIN
EXISTING IRON PIN
EXISTING SPOT GRADE
EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED SPOT GRADE
PROPERTY LINE
BORING LOCATION
PROPOSED SEDIMENT BARRIER
CONSTRUCTION NOTE:
Contractor shall coordinate with Site Civil Engineer to be present during the excavation and grading in the areas of the proposed subsurface and surface infiltration basins to confirm consistent soil conditions at the base of the infiltration structures.
TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.
RUSSO SURVEYORS-ENGINEERS SERVING CT & MA
35 Russo & Associates, LLC
Applicant
D.F. Chase, Inc.
3001 Armory Dr., Suite 200
Nashville, TN 37204
Owner
Ann Marie J. Najam
P.O. Box 721
Southwick, MA 01077
4-23-21 BUILDING LOWERED
3-17-20 INCREASE BLDG FOOTPRINT
12-13-19 ADD HYDRANT
9-25-19 BID SET, BUILDING FOOTPRINT
6-25-19 REDUCE RADIUS AT ENT DRIVE
5-03-19 RESUBMISSION FOR SPECIAL PERMIT
9-13-18 ADDRESS CITY ENGINEER COMMENTS
9-06-18 SITE LIGHTING
8-23-18 RAISE SITE, DRAINAGE, LIGHTING
REVISIONS
BY: LF/TAC CHK: JEU
Old Dominion Freight Line
Trucking Terminal
Medeiros Way, Westfield, MA
MAP 70R LOTS 23 & 24
Utility Plan
DATE 8-09-18
SCALE 1"=40'
JOB NUMBER 2018-073
SHEET C5.1
S:\Acad\2018 Civil 3D\2018-073 DF Chase Westfield\Russo Drawings\2018-073.dwg

SITE GENERAL NOTES

THE INFORMATION SHOWN HERE IS FOR REFERENCE ONLY. VERIFY ALL DIMENSIONS, TURNING RADII, ETC. WITH THE CIVIL DRAWINGS. FOR DESIGN OF NEW PAVING, AS WELL AS PERVIOUS COVER CALCULATIONS, REFER TO CIVIL PLANS.

DO NOT PLACE ANY CONDUITS, POLE LIGHTS, OR OTHER SITE APPURTENANCES WITHIN THE FIRST 2' OF THE INTERIOR SIDE OF THE FENCE WITHOUT COORDINATING THE LOCATIONS WITH THE OWNER'S GUARD DOG ELECTRIC FENCE INSTALLER.

PROVIDE CONDUITS WITH WIRING AND PULL STRING AT EACH MAN GATE. SEE ELECTRICAL DRAWINGS.

PROVIDE SEPARATE CONDUITS FOR POWER & DATA WITH WIRING AND PULL STRING FROM BUILDING TO AT EACH GATE CONTROL. SEE ELECTRICAL.

PROVIDE CONDUITS WITH WIRING AND PULL STRING AT CALL BOX AT EMPLOYEE GATE AND TRUCK GATE. SEE ELECTRICAL DRAWINGS.

PROVIDE CONDUITS WITH WIRING AND PULL STRING FOR FUTURE SECURITY CAMERAS TO EACH CORNER OF THE SITE. COORDINATE LOCATION WITH OWNER. SEE ELECTRICAL.

ALL BOLLARDS ON THE SITE SHALL BE 8" OUTER DIAMETER FILL WITH CONCRETE. SEE ARCHITECTURAL DETAILS 5/A8.2 & 8/A8.2.

PROVIDE LOCKABLE KEY BOX AT EXTERIOR ENTRANCE TO DRIVER CHECK-IN FOR USE BY OWNER.

REFER TO CIVIL DRAWINGS FOR LOCATIONS OF ADA ACCESSIBLE PARKING AND ACCESSIBILITY ROUTE.

ALL SIDEWALKS, ACCESSIBLE ROUTES, AND ACCESSIBLE PARKING SHALL BE SLOPED AT A MAXIMUM SLOPE OF 1:50. NO SLOPES IN ANY DIRECTION SHALL EXCEED 1:50. SEE CIVIL DRAWINGS.

GATES SHALL BE ALUMINUM (COORD. SIZE W/ DRIVE OPENING) TO MATCH FENCE, ELECTRIC ROLLING GATES WITH SAFETY LOOPS FOR EXIT. PROVIDE CALL BOXES AND KEYPADS AT ALL GATES ON A GOOSE NECK MOUNT. MAIN GATE FOR TRUCK ENTRANCE SHALL HAVE A CALL BOX MOUNTED AT 42" AND 72". SEE DETAIL 6 / A1.2

COORDINATE WITH THE LOCAL FIRE CHIEF (MARSHAL) FOR REQUIREMENTS ON EMERGENCY GATE ACCESS.(KNOX BOX FOR KEY OR SIREN ACTIVATION).

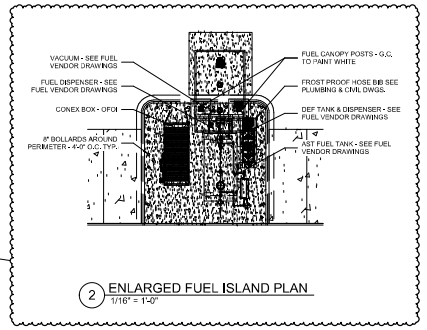
SITE FENCE SHALL BE 8'-0" GALVANIZED CHAIN LINK FENCE WITH THREE STRANDS OF BARBED WIRE FOR FULL HEIGHT OF 9'-0". SEE FENCE DETAILS 4 / A1.2

ALL LIGHT POLES SHALL BE PLACED MINIMUM 8' CLEAR FROM EDGE OF PAVING TO ALLOW FOR TRAILER PARKING.

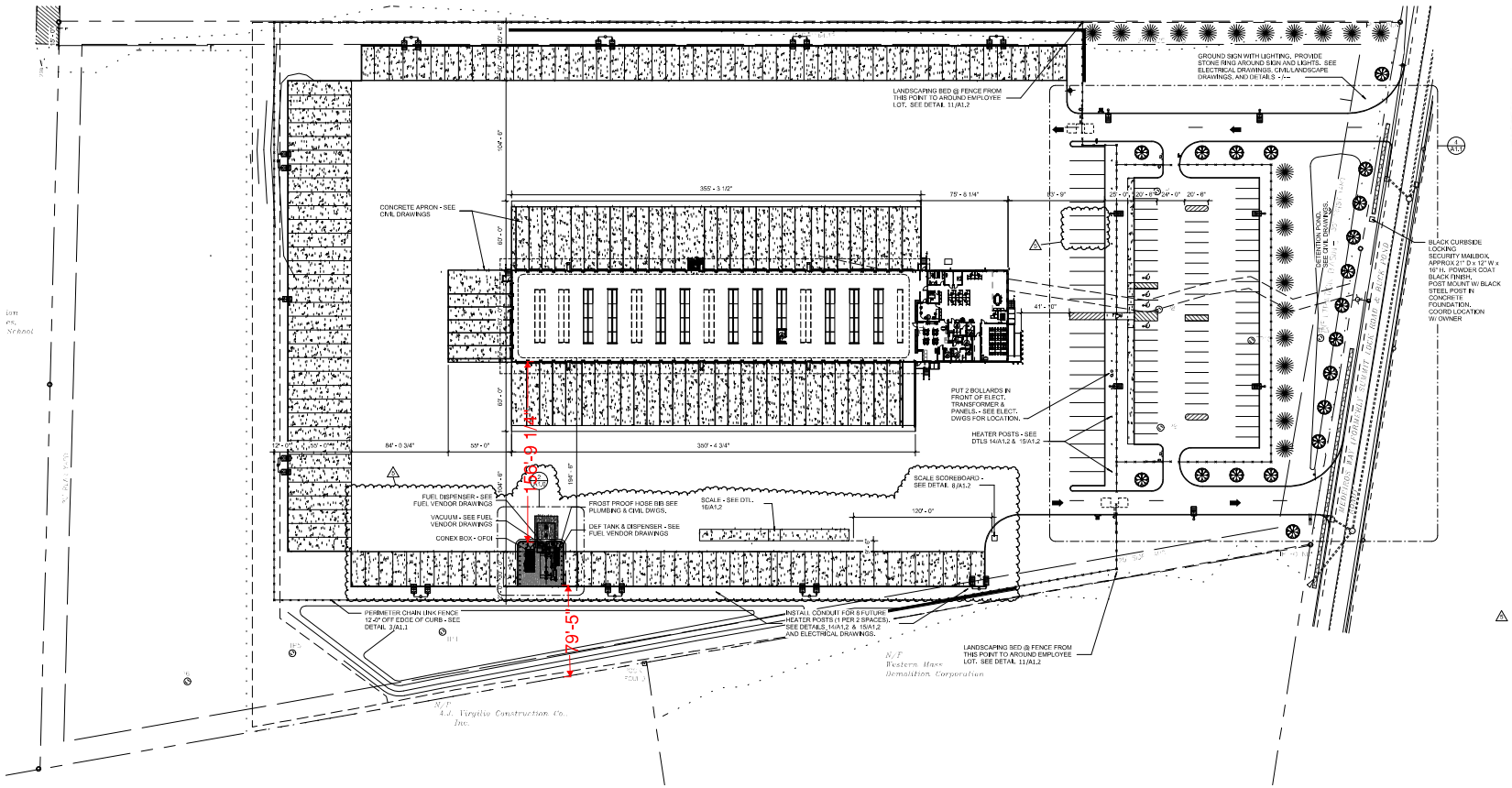
PAINT ALL PARKING STRIPING YELLOW AT DOCK.

ALL YARD PARKING SPACES (TRUCK/TRAILER) TO BE 12' WIDE (EXCEPT AT DOCK DOORS)

PROPANE TANKS AND CONNECTION TO BUILDING TO BE FIELD LOCATED. COORDINATE WITH OWNER & CIVIL DRAWINGS.



2 ENLARGED FUEL ISLAND PLAN
1/16" = 1'-0"



1 ARCHITECTURAL SITE LAYOUT
1" = 40'-0"

NORTH

DMA
DAVID MOLLENKOPF ARCHITECT
49 Music Square W-Suite 600
Nashville, Tennessee 37203
615.296.9146
www.theMDGllc.com
MA LICENSE #951591-AR-R - EXP 08/31/2021

Contractor:
DF CHASE
3001 Armory Dr #200
Nashville, TN 37204

A New Service Center for:
OLD DOMINION FREIGHT LINE
WESTFIELD, MA
74 Medeiros Way
Westfield, MA 01085

Permit Issue	11.05.19
REV 1	03.25.20
REV 3	06.22.20
Construction Issue	02.05.21
⚠ REV 5	06.11.21

Project No. 18061.00

Sheet Name:
ARCHITECTURAL SITE LAYOUT

Sheet Number:
A1.0

6/11/2021 8:16:24 AM

Kleerwater™

Oil/Water Separator

UL LISTED UL-2215

COALESCER "BALL"

Three Major Advantages of Kleerwater:

- Highest quality effluent 5PPM per UL2215
- Approximately twice as efficient as parallel plate separators
- Simple routine maintenance with no confined space entry

Designed for the following businesses:

- PETROLEUM MARKETING FACILITIES (Service Stations & Convenience Stores)
- PARKING LOTS / STRUCTURES
- VEHICLE REPAIR AND MAINTENANCE SHOPS
- BULK OIL TERMINALS & LOADING RACKS
- MATERIAL HANDLING FACILITIES
- AIRPORTS
- BUS TERMINALS
- MARITIME
- RAILROAD YARDS
- REFINERIES, STEEL MILLS
- UTILITIES
- TRUCK STOPS
- PETRO CHEMICAL PLANTS
- MILITARY INSTALLATIONS
- TANK FARMS

Manufacturers Located Nationwide

modern®

MODERN WELDING CO., INC.

A Kleerwater™ Certified Licensed Manufacturer

www.modweldco.com

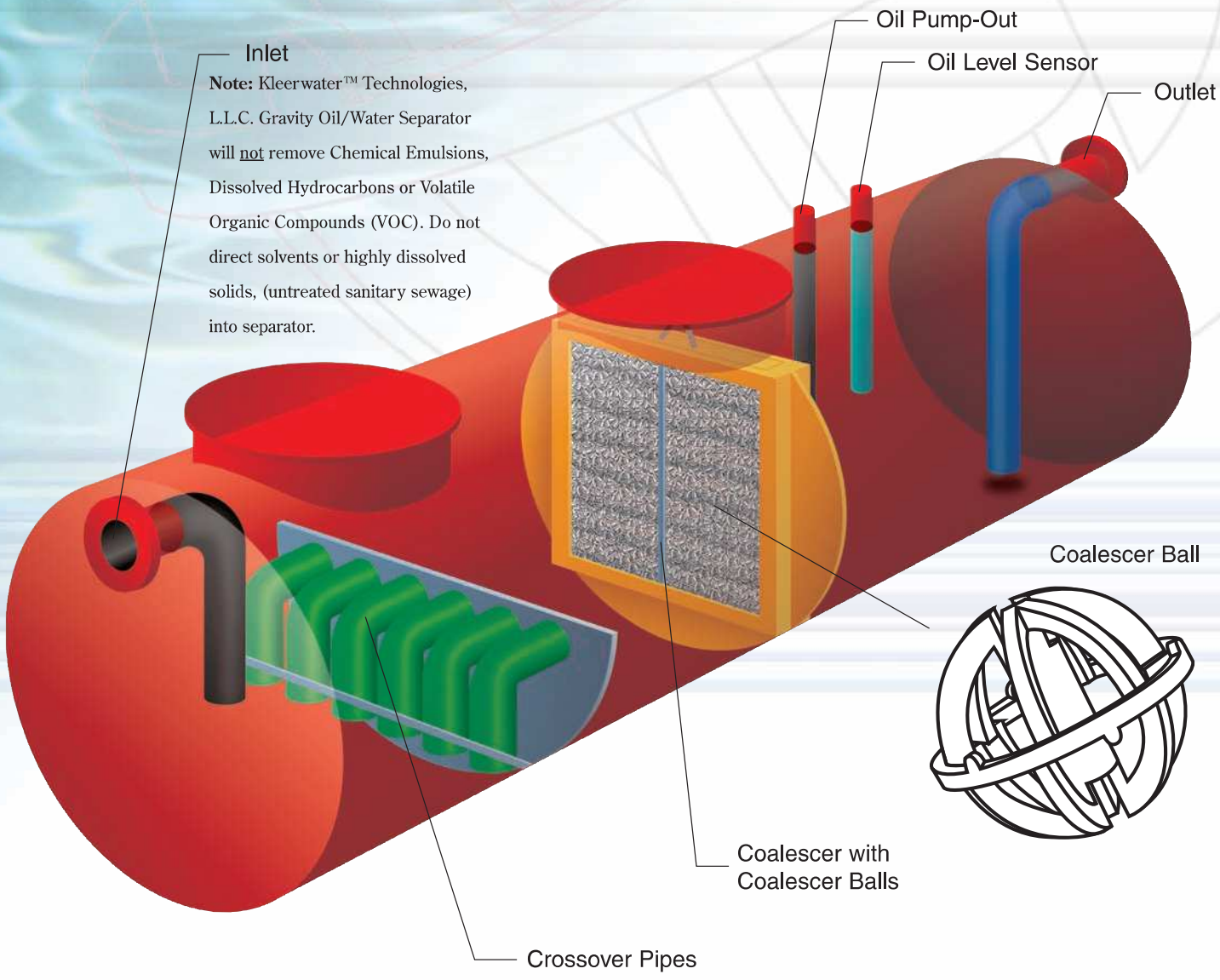
Oil & Water Separation at its Best!

New Technology (U.S. Patent No. 5,229,015 and 5,500,132), by Kleerwater,™ Sets Increased Performance Levels and Produces Cost Savings.

EASY MAINTENANCE – NO ENTRY REQUIRED

Coalescer "Ball" by Kleerwater™

The Kleerwater™ Gravity Oil/Water Separator separates free-floating oils and greases from water mixtures. Its design is based on Stokes' law, which defines the terminal velocity of oil spheres in a liquid medium.



The development of the patented Coalescer "Ball" (U.S. Patent No. 5,229,015) by Kleerwater ™ is a technological breakthrough in the Oil/Water Separator industry. Its increased performance results in benefits and cost savings for you.

- Kleerwater's Coalescer Ball produces higher efficiency performance flow rates, which results in smaller size separators, thereby reducing installation costs.
- Kleerwater's patented single coalescer design provides superior oil/water separation at flow rates necessary to meet storm water run off amounts throughout the United States.
- The separator chamber is designed for optimum separation of oil mixtures as a function of surface area and retention times The separation chamber has a maximum oil storage capacity of 40%.
- Coalescer is accessible from grade level through manways.
- Ball design promotes efficient ease of cleaning for more cost-effective maintenance and less down time. Personnel do NOT need to enter separator for routine cleaning.
- Separators may be single or double wall construction and rigidly adhere to Underwriters Laboratories UL-58, UL-142, UL-1746, and UL-2215 standards and specifications. Effluent output concentrations can meet the strictest of requirements with regard to State and Federal mandates under the Resource Conservation and Recovery Act and Clean Water Act.

Kleerwater
Oil Water Separator Sizes ‡

Separator Size Gallons	Tank Diameter Inches	Tank Length Inches*	Maximum Flowrate GPM	Inlet Pipe Size Inches	Outlet Pipe Size Inches	Oil Storage Capacity Gallons
150	30	65	30	2	2	60
285	38	72	57	3	3	114
550	42	115	110	4	4	220
1000	48	154	200	4	4	400
2000	64	173	400	6	6	800
3000	64	259	600	6	6	1200
4000	64	346	800	8	8	1600
5000	72	346	1000	8	8	2000
6000	72	410	1200	8	8	2400
8000	84	403	1600	10	10	3200
9000	96	346	1800	10	10	3600
10000	96	389	2000	10	10	4000
12000	96	461	2400	12	12	4800
15000	96	576	3000	12	12	6000
20000	120	490	4000	14	14	8000

*Overall length includes grit chamber and separator. ‡ Separators available in both cylindrical and rectangular configurations.

For more information call: **877.826.5872**
800.922.1932
www.modweldco.com

COALESCER "BALL"

U.S. PATENT NO. 5,229,015 and 5,500,132 New Technological Breakthrough for the Oil/Water Separator Industry

YOUR MODERN WELDING REPRESENTATIVE CAN HELP

Modern Welding Company offers regional delivery that will save you money and time. Visit our website at www.modweldco.com to see a list of our fabrication facilities and view our complete product line. Call Modern Welding Company for details.

Kleerwater™ oil/water separators are a licensed product of Kleerwater™ Technologies.

U.S. Patent No. 5,229,015 and 5,500,132

PERFORMANCE / WARRANTY

Modern Welding Company's Kleerwater™ Gravity Oil/Water Separator will remove "free floating" oils from oil/water mixtures and attain an effluent-free hydrocarbon concentration as low as 5 ppm when specified.

A UL Listed external corrosion protection system is included on separators.

The internal separator components, i.e. coalescer, supports, baffles, internal coatings and piping are installed by Modern Welding Company.

MODERN WELDING CO., INC.

Corporate Office
2880 New Hartford Road • Owensboro, KY 42303
Phone: 270-685-4400 • Fax: 270-684-6972
877 826 5872 • 800 922 1932
www.modweldco.com
E-mail: modern@modweldco.com
www.modweldco.com

Manufacturing Subsidiaries

Modern Welding Co. of Owensboro, Inc.
1450 E. Parrish Ave.
Owensboro, Kentucky 42303
Phone: 270-683-5323
Fax: 270-684-5245
modern1@modweldco.com

Modern Welding Co. of Ohio, Inc.
One Modern Way
Newark, Ohio 43055
Phone: 740-344-9425
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