

June 23, 2016

Via Federal Express/Electronic Mail

Todd Anthony Bianco, EFSB Coordinator
RI Energy Facilities Siting Board
89 Jefferson Blvd.
Warwick, RI 02888

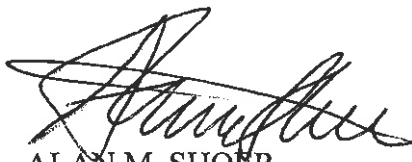
Re: *Invenergy Docket No. SB-2015-06*

Dear Mr. Bianco:

On behalf of Invenergy Thermal Development LLC (“Invenergy”), enclosed please find an original and ten copies of Invenergy’s Responses to the Rhode Island Department of Environmental Management’s 1st Set of Data Requests.

Please let me know if you have any questions.

Very truly yours,



ALAN M. SHOER
ashoer@apslaw.com

Enclosures

cc: Service List

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC'S RESPONSES TO
THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT'S
FIRST SET OF DATA REQUESTS**

1-1

Please explain in detail the aboveground storage tank (AST) construction standards for all tanks that will store oil over 500 gallons and ensure that they meet or exceed one of the following design and manufacturing standards: *See OPC Regulations Section 10(a) and 10(i)(1)*.

- A. UL No. 142;
- B. UL No. 58;
- C. API Standards No. 650;
- D. API Standards No. 620; or
- E. CAN4-S630-M84.

RESPONSE: 1-1:

The Clear River Energy Center ("CREC") facility will have either two (2) aboveground fuel oil storage tanks, each with one million gallon storage capacity, or one aboveground fuel oil storage tank with two million gallon storage capacity. The carbon steel storage tanks will be field fabricated and erected in accordance with API 650 and NFPA 30. The storage tanks will bear an official API nameplate with all required certification information. The fuel oil storage tanks will also be designed to meet local and state regulations, including the referenced OPC Regulations.

Each tank will be a vertical, cylindrical, crowned bottom, aboveground, atmospheric storage tank, designed for field fabrication and erection by welding. The tanks will be designed and fabricated with features and appurtenances in accordance with applicable codes and local jurisdictions including, but not limited to the following:

- Level transmitter(s)
- Ground reading tank level gauge
- Exterior valves and emergency shutoff systems
- Piping connections and bulkheads
- Overflow piping
- Normal and emergency vent systems
- Pressure/vacuum vents (if required by code)

- Water draw-off sump
- Shell plates and support structures
- Roof, either fixed or internal floating type
- Roof and shell manholes
- Exterior ladders, stairs, walkways, handrails, guardrails, and scaffold supports
- Concrete slab foundation
- Grounding pads
- Fire detection and suppression system

Painting and coatings will be in accordance with the applicable codes and local requirements.

The tanks will include a secondary containment system that will meet the requirements of OPC Section 10,c,1.

The storage tank and associated components will be examined and tested in accordance the applicable codes, standards and local requirements.

RESPONDENT: Daniel W. Mitas, HDR, Inc.

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1-2 Please provide a diagram that details any boiler rooms that contain oil pipelines and floor drains. *See OPC Regulations Section 9(a).*

RESPONSE: 1-2: The CREC does not have a boiler room; however, there is oil supply piping from the fuel oil storage tank to the combustion turbine fuel oil combustion systems. A diagram of these piping systems is attached as **Exhibit 1**. The piping will be designed to prevent oil leaks by using double walled pipe where necessary and a leak detection system. The piping is routed to provide easy access to plant operators so that in the unlikely event of an oil leak, repairs can be made quickly preventing oil drips from accumulating in surrounding areas.

The location of floor drains in areas containing fuel oil piping will be routed to the plant oil water separator to capture oily waste.

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1-3 Please provide a diagram for any remote filled ASTs with a capacity of greater than 500 gallons that details the high level alarm warning system. *See OPC Regulations Section 9(b).*

RESPONSE: 1-3: A preliminary conceptual design of the ASTs for the CREC is attached as **Exhibit 1**. The site layout at CREC allows the fuel oil delivery trucks to park in close proximity to the ASTs. A local unloading station will be utilized to pump oil from the delivery trucks to the ASTs.

Detailed engineering of the fuel oil system will not be initiated until late 2016 or early 2017. Consequently, the detailed design of the fuel oil piping, pumping, and storage tank systems is not available at this time. The diagrams included in **Exhibit 1** are preliminary and reflect the general concepts that will be incorporated in the detailed design of the systems. They are intended to convey the intent to comply with applicable codes and regulations.

The ASTs will be furnished with redundant level transmitters that will alarm both locally at the unloading station and remotely at the operations control room if a high oil level in the tank is attained. The high level alarm signal will automatically stop the unloading station pumps.

The ASTs are also furnished with gauges that are mounted at grade level and provide local indication of the oil level at the ASTs.

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1-4 Please provide a diagram that shows all regulated ASTs, fuel gages, piping connections and all appurtenances from the tank to the equipment burning the oil. *See OPC Regulations Section 10(b)(4).*

RESPONSE: 1-4: Detailed design drawings showing all piping and equipment details are not available at this stage of the design process. A Preliminary conceptual design diagram of the ASTs is attached as **Exhibit 1** that illustrates the level of detail available at this time. Detailed engineering of the fuel oil system will not be initiated until late 2016 or early 2017. Consequently, the detailed design of the fuel oil piping, pumping, and storage tank systems is not available at this time. The diagrams included in **Exhibit 1** are preliminary and reflect the general concepts that will be incorporated in the detailed design of the systems. They are intended to convey the intent to comply with applicable codes and regulations.

The fuel oil ASTs will be furnished with a gauge which accurately shows the level of oil in the tank that will be mounted on the tank. The gauge will be located at grade elevation so that it is can be conveniently read by plant operators. The design capacity, working capacity, and tank identification number will be marked on the tank body and at the gauge.

The tanks will also be furnished with level transmitters that provide a high level alarm signal which alerts the operators and automatically trips the fuel oil loading and unloading pumps.

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1-5 Please provide a diagram showing all check valves or equivalent device that provides automatic protection against backflow from the receiving tanks. *See OPC Regulations Section 10(b)(5).*

RESPONSE: 1-5: The fuel oil unloading pumps discharge line will be furnished with a check valve to provide protection against backflow of oil from the fill line and storage tank(s).

A preliminary conceptual design diagram of the AST(s) is attached as **Exhibit 1** and illustrates these features.

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1-6 Please provide a diagram showing all operating valves for each tank connection through which oil can flow. A valve that meets the standards set forth in NFPA No. 30 meets this requirement. *See OPC Regulations Section 10(b)(6).*

RESPONSE: 1-6 At CREC, the above ground fuel oil storage tank gravity lines will be furnished with a valve to control flow out of the tank. The valve will be designed to NFPA 30 (Section 2-2.7.1).

Drawings depicting these valves are attached as **Exhibit 1**.

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1-7 Please provide in detail groundwater monitoring plan for the facility to detect a release of hydrocarbon product from ASTs, pumping facilities, manifolds and other appurtenances. *See OPC Regulations Section 10(h).*

RESPONSE: 1-7 The Rhode Island Department of Environmental Management ("RIDEM") Oil Pollution Control Regulations Section 10(h) requires all facilities with a combined storage capacity greater than or equal to 50,000 gallons to implement a groundwater monitoring program approved by RIDEM. The monitoring program must consist of a sufficient number of wells to detect the release of hydrocarbon product from storage tanks, pumping facilities, manifolds and other appurtenances.

A groundwater monitoring program to be approved by RIDEM will be implemented at the CREC in full compliance with OPC Regulations Section 10(h). A locus map and site plan will be submitted to RIDEM along with the Aboveground Storage Tank (AST) Registration Form with the locations of the monitoring wells, the well casing elevations, and the location of all significant site structures as required. The AST Registration for the CREC ULSD storage tanks will be submitted once the design of the tanks and piping systems have been completed, as a schematic diagram showing the location of all tanks and piping including the location of all shut off valves is required to be submitted with the AST Registration Form.

Each monitoring well will be checked monthly for the presence of hydrocarbon product and the water table elevation. Logs will be maintained of the static water table measurements, the hydrocarbon product elevations and the product thickness for each monitoring well. An annual report of the results of the groundwater monitoring program will be submitted to RIDEM as required.

If free phase product is observed in any monitoring well, RIDEM will be notified verbally within 24 hours and in writing within ten working days. A site assessment plan will be submitted for RIDEM approval within 30

days of observing free phase product in any monitoring well.

RESPONDENT: Michael Feinblatt, ESS Group

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1-8 Please provide a detail description and diagram for ground water monitoring wells including construction standards. *See OPC Regulations Section 10(h)(1)*

RESPONSE: 1-8 The CREC groundwater monitoring wells will be designed to meet the well construction standards of OPC Regulations Section 10(h)(1). All wells will be screened both above and below the water table with screened intervals sufficient to detect free phase product over the full range of expected seasonal water table fluctuations. Each well will be at least 2 inches in diameter and be equipped with a locking tamper proof cover. The CREC groundwater monitoring plan will be submitted to RIDEM along with the Aboveground Storage Tank (AST) Registration Form. The AST Registration for the CREC ULSD storage tanks will be submitted once the design of the tanks and piping systems have been completed.

A schematic showing a typical monitoring well design is attached as **Exhibit 2**. Monitoring wells will be located around the perimeter of the secondary containment system for the ASTs and along the pipeline from the ASTs to the combustion turbine fuel oil combustion systems at intervals acceptable to RIDEM.

RESPONDENT: Michael Feinblatt, ESS Group

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1-9 Please provide a locus map and site plan with locations of the monitoring wells, casing elevations and the location of all significant site structures. *See OPC Regulations Section 10(h).*

RESPONSE: 1-9 A locus map and site plan with locations of the CREC groundwater monitoring wells, casing elevations and the location of all significant site structures will be provided to RIDEM for approval as part of the groundwater monitoring plan for the facility. The CREC groundwater monitoring plan will be submitted to RIDEM along with the Aboveground Storage Tank (AST) Registration Form. The AST Registration for the CREC ULSD storage tanks will be submitted once the design of the tanks and piping systems have been completed.

RESPONDENT: Michael Feinblatt, ESS Group

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1-10 Please provide a diagram for cathodic protection for tank bottoms that rest on or in the ground. If required, the cathodic protection system must be designed to provide a minimum of 30 years of protection and installation must be supervised by a qualified engineer or corrosion specialist. The cathodic protection system also must have a monitor which enables the owner or operator to check on the adequacy of the cathodic protection. *See OPC Regulations Section 10(i)(2).*

RESPONSE: 1-10 The above ground carbon steel fuel oil storage tank will either be installed on top of a reinforced concrete pad or a ring type foundation will be provided for the tanks.

When the tanks are installed on a concrete pad, the tank bottom does not come in contact with the soil and therefore cathodic protection would not be required. If a ring type foundation is designed, the bottom off the tank will come in contact with supporting soil/sand and will require cathodic protection.

Foundation type and engineering, including preparation of engineering drawing, will be performed during the detailed design phase of the project. If cathodic protection is required, it will be designed for 30 year life. Design and installation will be supervised by a qualified engineer or corrosion specialist. The cathodic protection system will include a monitoring system to test the function of the system.

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1-11 Please provide a detail description for the painting of all exterior tank surfaces. *See OPC Regulations Section 10(i)(3)*

RESPONSE: 1-11 The above ground carbon steel fuel oil storage tank will be painted to prevent corrosion and deterioration.

The exterior surface of the steel tanks will be cleaned and prepared in accordance with the guidelines set forth by Society of Protective Coating ("SSPC"). A primer coat will be applied on the surface followed by one or more top coats. The number of top coats and the total thickness of the coating system will depend on the paint system selected and the specific recommendations from the paint supplier.

The standards of the National Association for Corrosion Engineers ("NACE") and all other applicable national and local codes will be followed.

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1-12 Please provide a detail description and diagram for impermeable barriers under tank bottoms for tanks that are designed to rest on the ground and are required to have double bottoms or an impervious barrier such as a concrete pad or cutoff barrier. *See OPC Regulations Section 10(i)(4)*

RESPONSE: 1-12 The above ground carbon steel fuel oil storage tanks could be designed to either sit on a reinforced concrete foundation pad or be designed to be supported by a ring wall foundation. Regardless of the design, the tanks will include some form of secondary containment, either a lined berm or tank ring wall. If the tank is located inside a berm, the bottom of the berm will be lined with a synthetic liner to prevent oil from permeating into the ground. If a ring wall design is used, a concrete floor will be installed between the AST and the ring wall.

For a berm containment, the liner will have water permeability equal to or less than 1×10^{-6} cm/sec. The synthetic liner will be selected so that it does not deteriorate in the underground environment or in the presence of oil.

The design of the secondary containment system (either a berm or ring wall), including details on the synthetic liner placement should a berm system be used, will be develop during the detailed design phase of the project. Engineering drawings will be subsequently prepared to show the construction of the containment system.

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1-13 Please provide a detail description and diagram for secondary containment systems for ASTs at the facility. *See OPC Regulations Section 10(i)(5).*

RESPONSE: 1-13 As discussed in Question 1-12, the fuel oil ASTs will include either a berm/liner or ring wall containment system.

For a berm system, the berm will be a built with soil berm with an oil tolerant membrane (synthetic liner) and covered with minimum of 4 inches of stone ballast. The liner will have water permeability equal to or less than 1×10^{-6} cm/sec.

For a ring wall system, the ring wall will be constructed of welded steel plate around the perimeter of each AST. The ring wall will rest on a concrete foundation installed around the perimeter of the tank to form an impermeable containment. The volume of the space between the AST and the ring wall will be sufficient to hold 110% of the AST volume.

The design of the containment system will be performed during the detailed design phase of the project. Engineering drawings will be subsequently prepared.

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1-14 Please provide a diagram and detailed description for the monitoring system between the tank bottom and the impermeable barrier. *See OPC Regulations Section 10(i)(6).*

RESPONSE: 1-14 The CREC Ultra Low Sulfur Diesel ("ULSD") storage tanks will be equipped with equipment to monitor for the presence of oil between the tank bottom and the impermeable barrier below it in order to satisfy the requirements of OPC Regulations Section 10(i)(6). A diagram and detailed description of the monitoring system will be provided to RIDEM for approval once detailed design of the tanks has been completed.

RESPONDENT: Michael Feinblatt, ESS Group

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1-15 Please provide a detail description to show that the tank is supported on a well-drained stable foundation which prevents movement, rolling or settling of the tank and is designed to minimize corrosion of the tank bottom. *See OPC Regulations Section 10(i)(7).*

RESPONSE: 1-15 The fuel oil storage tank foundation will be designed to provide drainage and minimize movement, rolling and settling.

The concrete foundation will be designed in accordance with the adopted codes by the local or state Authority Having Jurisdiction. Applicable codes, standards, and guidelines include:

- *ACI 318 Building Code Requirements for Structural Concrete*
- *ACI 350 Environmental Engineered Structures*
- *PIP STE03020 Guidelines for Tank Foundation Designs for Steel Storage Tanks*

The tank foundation base will slope from the tank periphery to the center at not less than 1 inch per 10 feet to allow for drainage

A ring type foundation will be founded on well-draining stable native soil as deemed acceptable by the geotechnical engineer or engineered fill having a bearing capacity equal to or greater than required by design.

A reinforced concrete slab foundation may be required over the entire tank bottom to distribute bearing pressures where native soils cannot be improved by compaction, over excavation, soil stabilization or other means as recommended by the referenced codes, standards and guidelines.

The base plate at the tank will be placed above normal surrounding grade level and sloped in accordance with the reference design codes, standards and guidelines.

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1-16 Please provide a detail description or diagram to illustrate that the ASTs are not exposed to traffic hazards. *See OPC Regulations Section 10(i)(8).*

RESPONSE: 1-16 The above ground fuel oil storage tanks will be situated so that they are outside the plant traffic areas. The only roads or pavements leading up to the berm in which the tanks are enclosed is for the fuel oil delivery truck. Bollards will be placed at locations where there is a need to protect the ASTs and associated fuel oil equipment from traffic.

The site layout drawing, including the tanks in relation to all other equipment and roads, will be finalized during the detailed design phase of the project.

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1-17 Please provide a detail description to ensure that ASTs are tested for tightness before placing them in service and inspected in accordance with the requirements outlined in API 650. *See OPC Regulations Section 10(i)(9).*

RESPONSE: 1-17 Before placing in service, the fuel oil ASTs will be inspected and leak tested in accordance with the requirements outlined in API 650.

RESPONDENT: Daniel W. Mitas, HDR, Inc.

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INVENERGY THERMAL DEVELOPMENT LLC
By its Attorneys,

/s/Alan M. Shoer

Alan M. Shoer, Esq. (#3248)
Richard R. Beretta, Jr. Esq. (#4313)
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One Citizens Plaza, 8th Floor
Providence, RI 02903-1345
Tel: 401-274-7200
Fax: 401-751-0604

Dated: June 23, 2016

CERTIFICATE OF SERVICE

I hereby certify that on June 23, 2016, I delivered a true copy of the foregoing responses to the Energy Facilities Siting Board via electronic mail to the parties on the attached service list.

/s/ Alan M. Shoer

SB-2015-06 Invenergy CREC Service List as of 05/02/2016

Name/Address	E-mail	Phone/FAX
<p>File an original and 10 copies with EFSB: Todd Bianco, Coordinator Energy Facility Siting Board 89 Jefferson Boulevard Warwick, RI 02888</p> <p>Margaret Curran, Chairperson Janet Coit, Board Member Assoc. Dir., Div. of Planning Parag Agrawal Patti Lucarelli Esq., Board Counsel Susan Forcier Esq., Counsel Rayna Maguire, Asst. to the Director DEM</p>	Todd.Bianco@puc.ri.gov ;	401-780-2106
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<p>Ms. Bess B. Gorman, Esq. Assistant General Counsel and Director Legal Department, National Grid 40 Sylvan Road Waltham, MA 02451</p>		

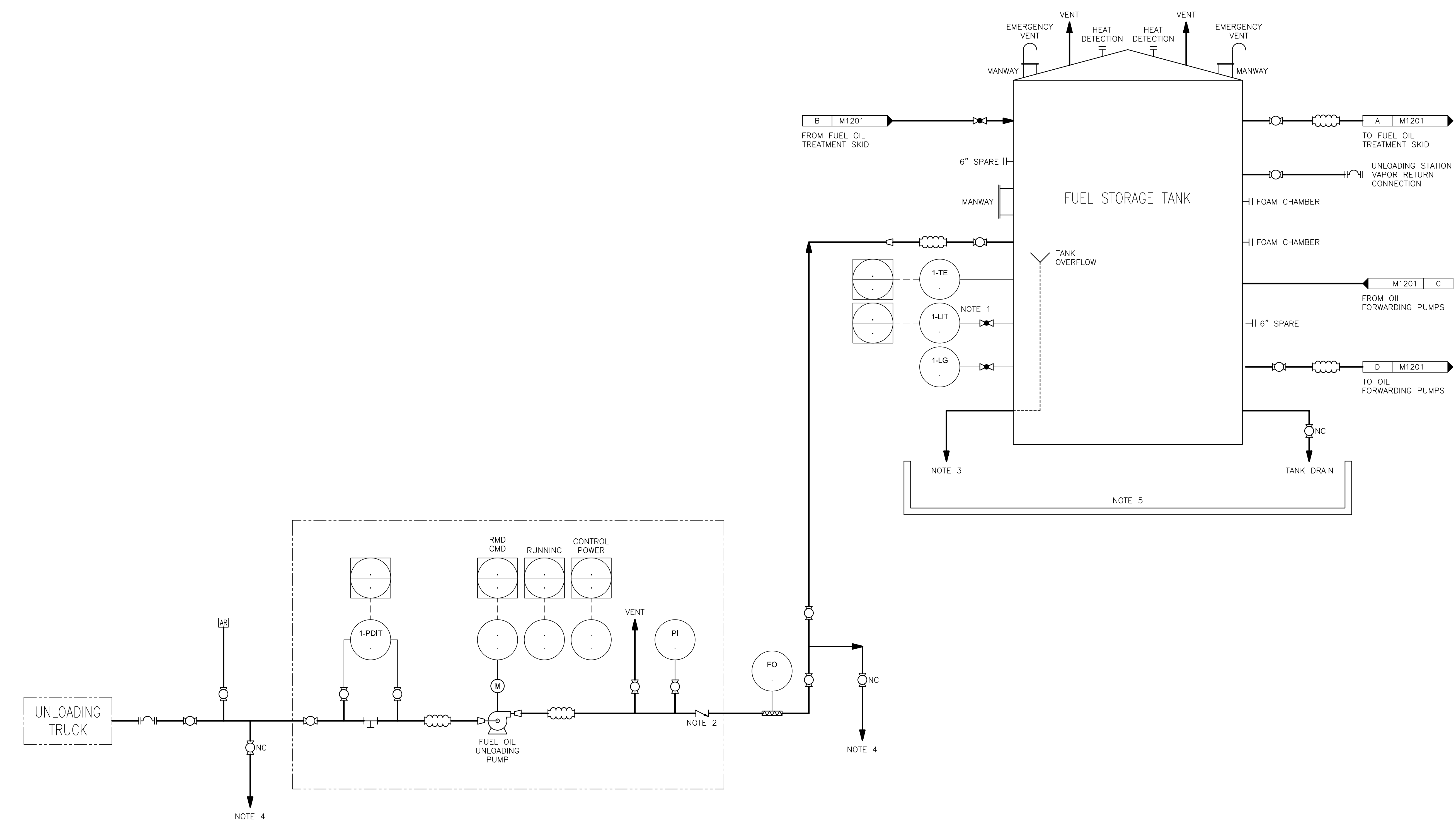
Office of Energy Resources Andrew Marcaccio, Esq. Nick Ucci, Chief of Staff Chris Kearns, Chief Program Development One Capitol Hill Providence, RI 02908	Andrew.Marcaccio@doa.ri.gov ;	401-222-3417
	Nicholas.Ucci@energy.ri.gov ;	401-574-9100
	Christopher.Kearns@energy.ri.gov ;	
Rhode Island Building and Construction Trades Council Gregory Mancini, Esq. Sinapi Law Associates, Ltd. 2374 Post Road, Suite 201 Warwick, RI 02886	gmancinilaw@gmail.com ;	401-739-9690
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	kags8943@gmail.com ;	
Residents of Wallum Lake Road, Pascoag, RI Paul Bolduc and Mary Bolduc Joseph Keough Jr., Esq. 41 Mendon Avenue Pawtucket, RI 02861 Paul and Mary Bolduc 915 Wallum Lake Road Pascoag, RI 02859	jkeoughjr@keoughsweeney.com ;	401-724-3600
	oatyss1@verizon.net ;	401-529-0367
Persons with pending motions to intervene (Electronic Service Only)		
Abutter David B. Harris Michael Sendley, Esq. 600 Putnam Pike, St. 13 Greenville, RI 02828	mSENDLEY@cox.net ;	401-349-4405
Residents of 945 Wallum Lake Road, Pascoag, RI (Walkers) 945 Wallum Lake Road Pascoag, RI 02859	edaigle4@gmail.com ;	401-473-5798
Interested Persons (Electronic Service Only)		
Peter Nightingale, member Fossil Free Rhode Island 52 Nichols Road Kingston, RI 02881	divest@fossilfreeri.org ;	401-789-7649
Sister Mary Pendergast, RSM 99 Fillmore Street Pawtucket, RI 02860	mpendergast@mercyne.org ;	401-724-2237

Patricia J. Fontes, member Occupy Providence 57 Lawton Foster Road South Hopkinton, RI 02833	Patfontes167@gmail.com ;	401-516-7678
Burrillville Land Trust Marc Gertsacov, Esq. Law Offices of Ronald C. Markoff 144 Medway Street Providence, RI 02906	marc@ronmarkoff.com ;	401-272-9330
Paul Roselli, President Burrillville Land Trust PO Box 506 Harrisville, RI 02830	proseli@cox.net ;	401-447-1560
Rhode Island Progressive Democrats of America Andrew Aleman, Esq. 168 Elmgrove Avenue Providence, RI 02906	andrew@andrewaleman.com ;	401-429-6779
Fighting Against Natural Gas and Burrillville Against Spectra Expansion Jillian Dubois, Esq. The Law Office of Jillian Dubois 91 Friendship Street, 4 th Floor Providence, RI 02903	jillian.dubois.esq@gmail.com ;	401-274-4591
Burrillville Town Council c/o Louise Phaneuf, Town Clerk 105 Harrisville Main Street Harrisville, RI 02830	lphaneuf@burrillville.org ;	401-568-4300
Thomas J. Kravitz, Town Planner Town of Burrillville 144 Harrisville Main Street Harrisville, RI 02830	tkravitz@burrillville.org ;	401-568-4300
Joseph Raymond, Building Official	jraymond@burrillville.org ;	
Michael C. Wood, Town Manager Town of Burrillville 105 Harrisville Main Street Harrisville, RI 02830	mcwood@burrillville.org ;	401-568-4300 ext. 115
Mr. Leo Wold, Esq. Department of Attorney General 150 South Main Street Providence, RI 02903	LWold@riag.ri.gov ;	401-274-4400
Public Utilities Commission Cynthia Wilson Frias, Esq., Dep. Chief of Legal Alan Nault, Rate Analyst	Cynthia.Wilsonfrias@puc.ri.gov ;	401-941-4500
	Alan.nault@puc.ri.gov ;	
Division of Public Utilities and Carriers	john.spirito@dpuc.ri.gov ;	401-941-4500

John J. Spirito, Esq., Chief of Legal Steve Scialabba, Chief Accountant Tom Kogut, Chief of Information	steve.scialabba@dpuc.ri.gov ; thomas.kogut@dpuc.ri.gov ;	
Matthew Jerzyk, Deputy Legal Counsel Office of the Speaker of the House State House, Room 302 Providence RI, 02903	mjerzyk@rilin.state.ri.us ;	401-222-2466
Hon. Cale Keable, Esq., Representative of Burrillville and Glocester	Cale.keable@gmail.com ;	401-222-2258
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Ambar Espinoza	aespinoza@ripr.org ;	
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Jennifer Sternick Chief of Legal Services RI Department of Administration	Jennifer.sternick@doa.ri.gov ;	
Doug Gablinske, Executive Director TEC-RI	doug@tecri.org ;	
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Keep Burrillville Beautiful Paul LeFebvre	paul@acumenriskgroup.com ;	401-714-4493
Mark Baumer	everydayyeah@gmail.com ;	
Nisha Swinton Food & Water Watch New England	nswinton@fwwatch.org ;	
Kaitlin Kelliher	Kaitlin.kelliher@yahoo.com ;	
Joe Piconi, Jr.	jiggzy@hotmail.com ;	
Hon. Aaron Regunberg Representative of Providence, District 4	Aaron.regunberg@gmail.com ;	

EXHIBIT 1

- NOTES:**
1. PROVIDES HIGH LEVEL ALARM.
 2. PROVIDES AUTOMATIC PROTECTION AGAINST BACKFLOW.
 3. TANK OVERFLOW CONTAINED WITHIN SECONDARY CONTAINMENT.
 4. OILY DRAINS COLLECTED IN CONTAINERS.
 5. SECONDARY CONTAINMENT DETAILS NOT SHOWN FOR CLARITY.



LEGEND

	NEW
	SUPPLIED BY VENDOR
	SIGNAL LINE
	DIRECTION OF FLOW
	DRAIN
	EXPANSION JOINT
	FLANGE CONNECTION
	INLINE MIXER
	REDUCER
	BALL VALVE
	GLOBE VALVE
	CHECK VALVE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
FO	FLOW ELEMENT
LG	LEVEL GAUGE
LIT	LEVEL INDICATOR TRANSMITTER
PDIT	DIFFERENTIAL PRESSURE TRANSMITTER
PI	PRESSURE INDICATOR
TE	TEMPERATURE ELEMENT



ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	22 JUN 16	FOR INFORMATION	MJR	ASH	XXX	XXX

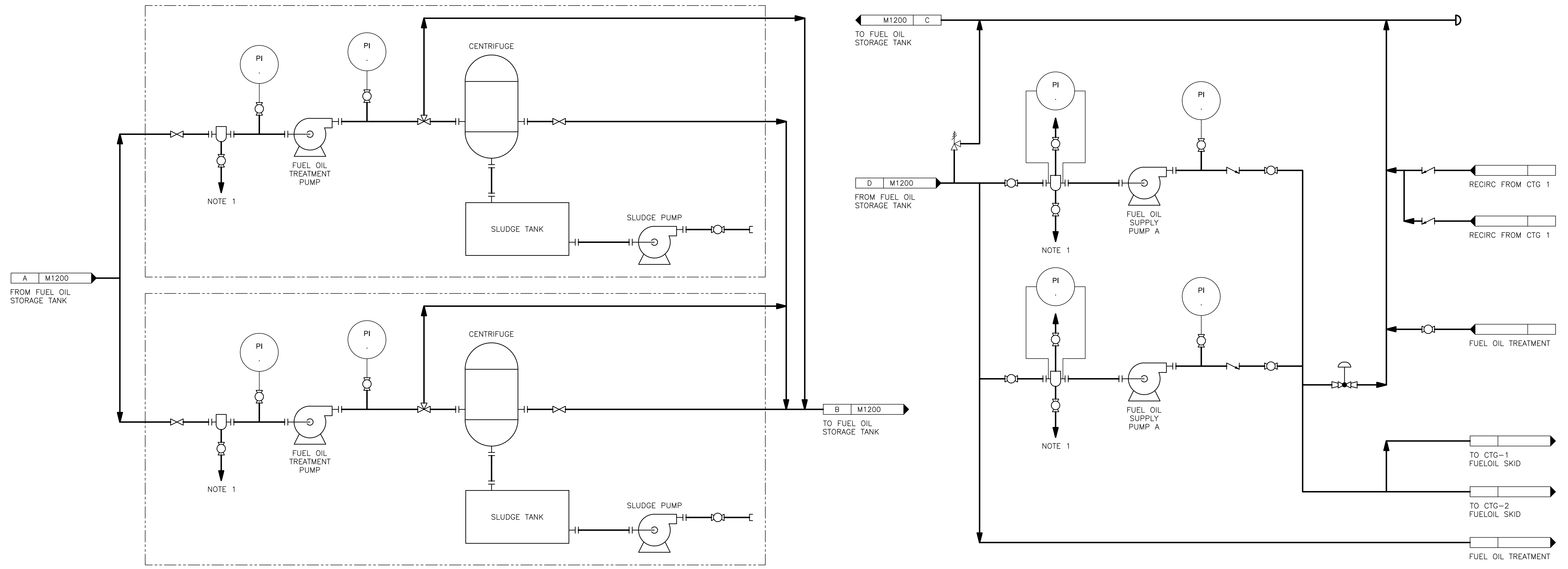
**PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING**

**INVENERGY, LLC
CLEAR RIVER ENERGY CENTER**

CLEAR RIVER ENERGY CENTER FUEL OIL UNLOADING AND STORAGE PRELIMINARY CONCEPTUAL DIAGRAM	
FILENAME	M1200-0FO-238926.dwg
SCALE	NONE
238926-0FO-M1200	

NOTES:
1. OILY DRAINS COLLECTED IN CONTAINERS.

- LEGEND
- NEW
 - - - SUPPLIED BY VENDOR
 - · - · - SIGNAL LINE
 - DIRECTION OF FLOW
 - Y DRAIN
 - II EXPANSION JOINT
 - II FLANGE CONNECTION
 - ▭ INLINE MIXER
 - ▽ REDUCER
 - BALL VALVE
 - GLOBE VALVE
 - Z CHECK VALVE
 - NC NORMALLY CLOSED
 - NO NORMALLY OPEN
 - FO FLOW ELEMENT
 - LG LEVEL GAUGE
 - LIT LEVEL INDICATOR TRANSMITTER
 - PDIT DIFFERENTIAL PRESSURE TRANSMITTER
 - PI PRESSURE INDICATOR
 - TE TEMPERATURE ELEMENT



ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	22 JUN 16	FOR INFORMATION	MJR	ASH	XXX	XXX

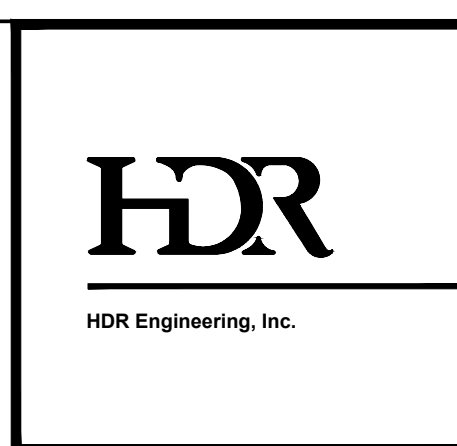
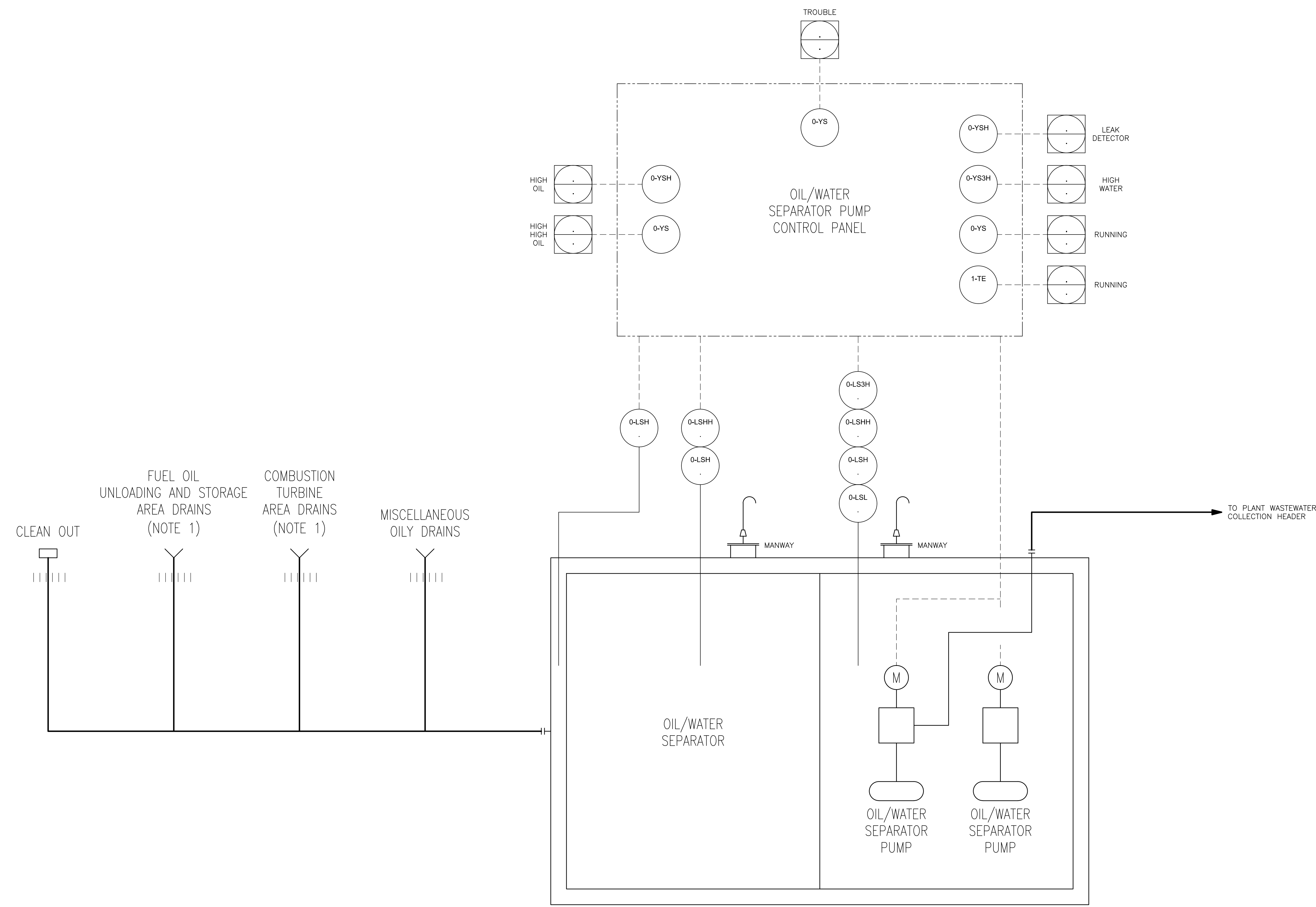
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NOT FOR
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OR
RECORDING**

**INVENERGY, LLC
CLEAR RIVER ENERGY CENTER**

**CLEAR RIVER ENERGY CENTER
FUEL OIL SUPPLY PUMPS AND TREATMENT SKIDS
PRELIMINARY CONCEPTUAL DIAGRAM**

FILENAME	M1201-0FO-238926.dwg	SHEET	
SCALE	NONE		238926-0FO-M1201

NOTES:
 1. WASTEWATER FROM THESE AREAS WILL FIRST BE COLLECTED IN SUMPS. COLLECTED WATER WILL BE TESTED FOR OIL. ONLY OILY WASTEWATER WILL BE ROUTED TO OIL/WATER SEPARATOR.

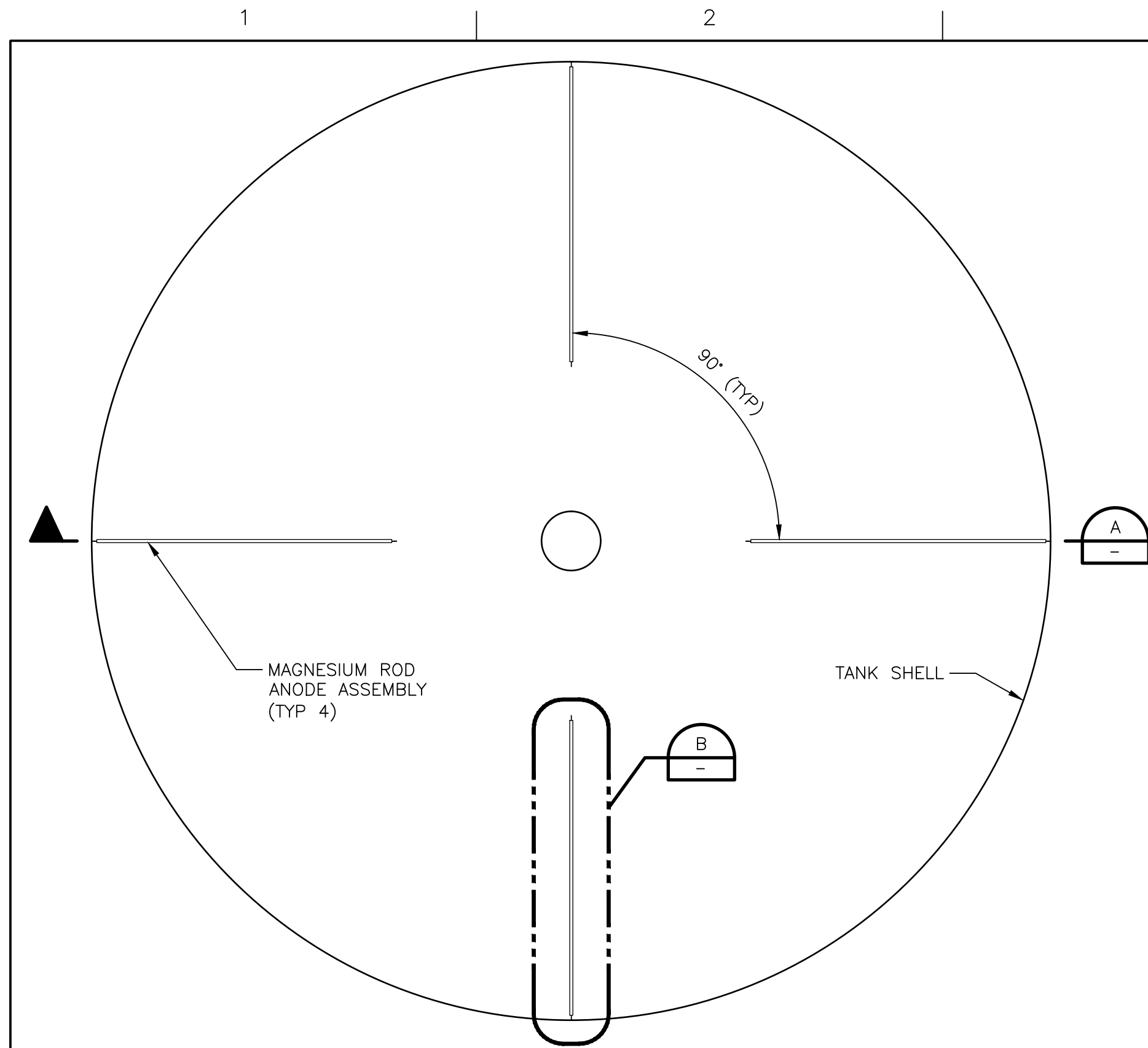


ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	22 JUN 16	FOR INFORMATION	MJR	ASH	XXX	XXX

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 CONSTRUCTION
 OR
 RECORDING**

**INVENERGY, LLC
 CLEAR RIVER ENERGY CENTER**

CLEAR RIVER ENERGY CENTER PLANT DRAINS PRELIMINARY CONCEPTUAL DIAGRAM		
FILENAME	M1202-ODM-238926.dwg	SHEET
SCALE	NONE	238926-ODM-M1202

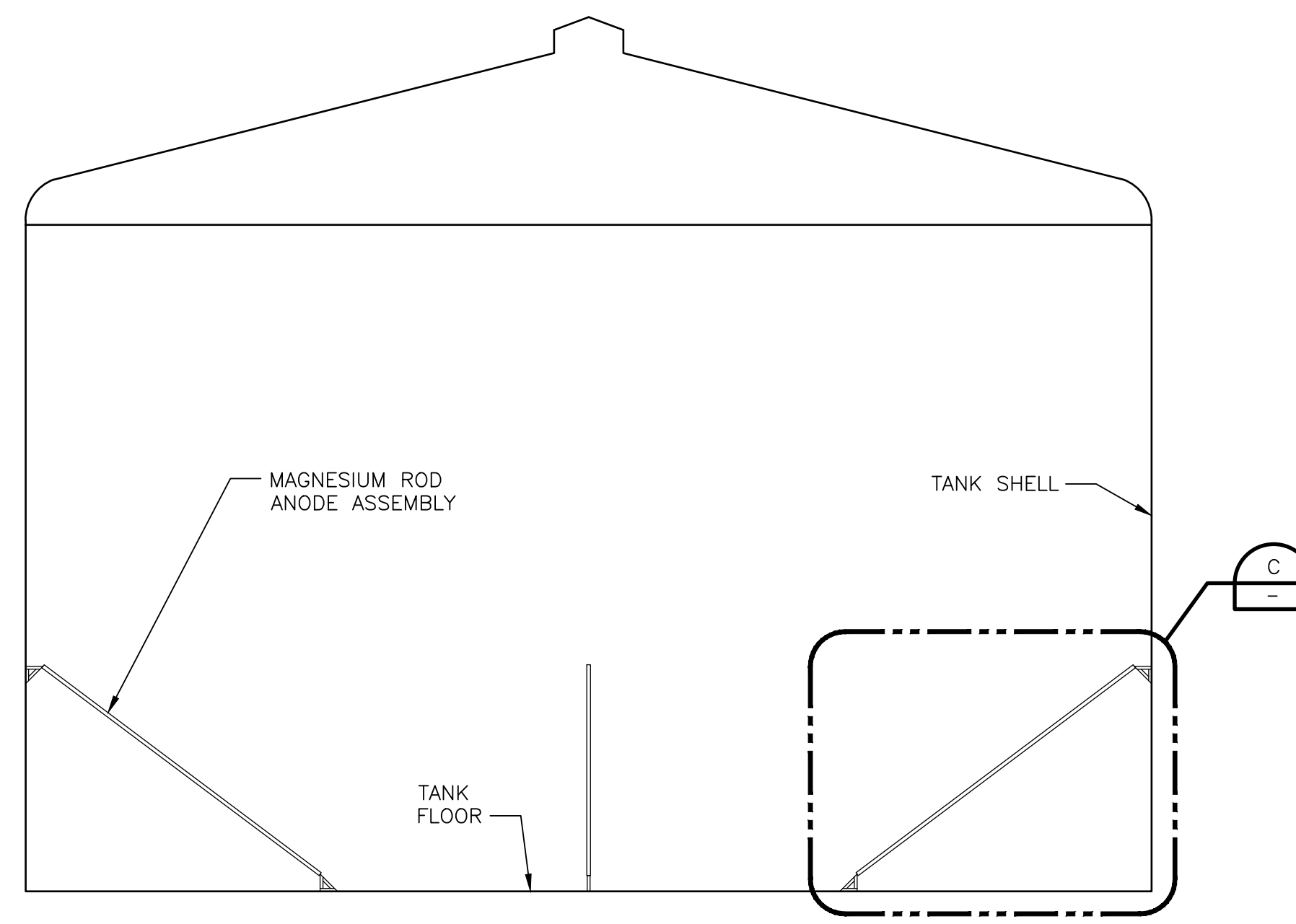


PLAN — FUEL OIL STORAGE TANK

SCALE = NONE

NOTE:

1. THE LOCATION OF THE INTERNAL PIPING, STAND PIPES AND INTERIOR LADDER ARE NOT SHOWN. THE POSITION OF EACH ANODE SHALL BE ADJUSTED TO MAINTAIN A MINIMUM OF 3 FOOT DISTANCE FROM THE INTERIOR LADDER OR OVERFLOW OR ANY OTHER PIPING INSIDE OF THE TANK.

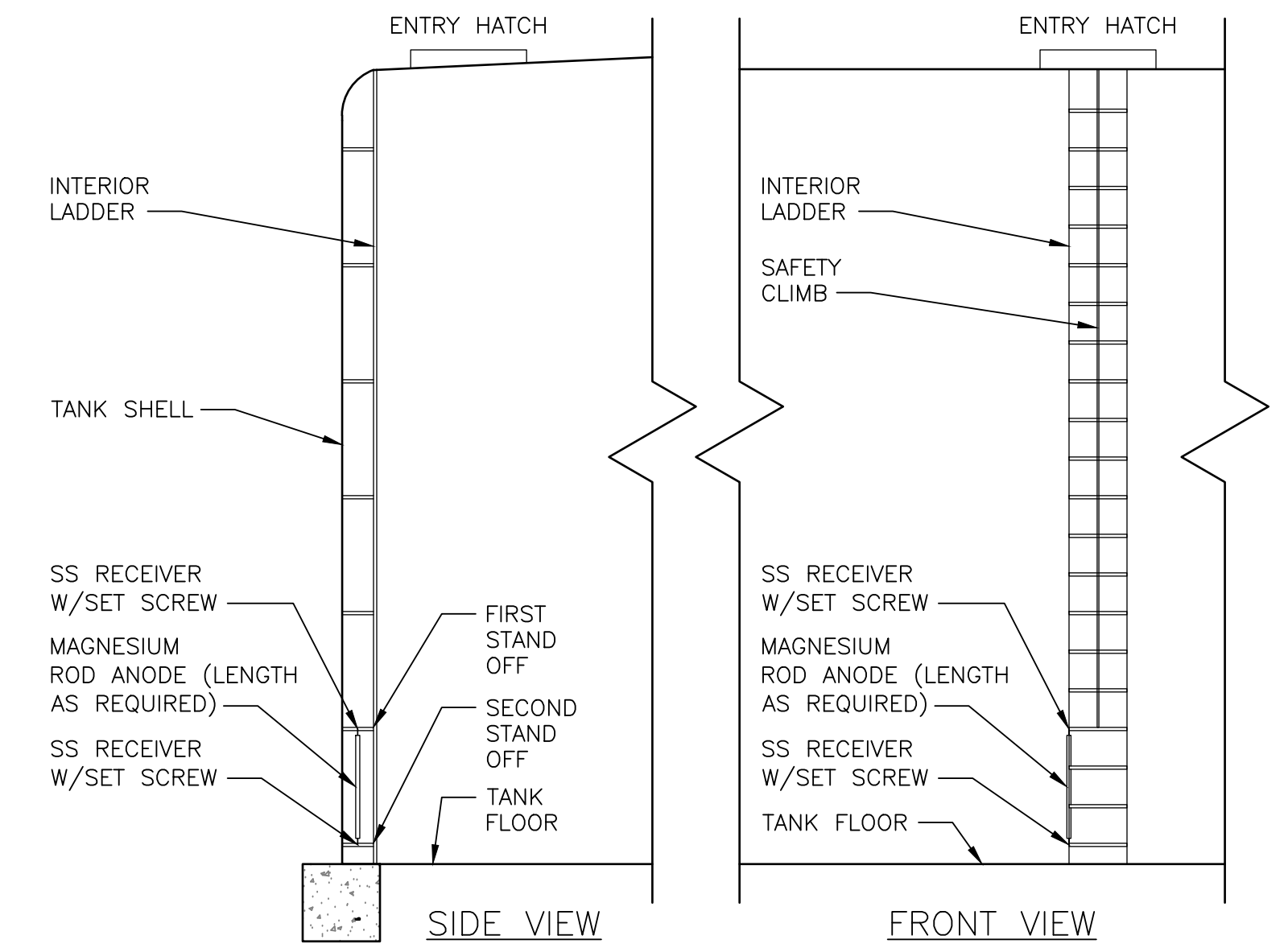


SECTION — FUEL OIL STORAGE TANK

SCALE = NONE

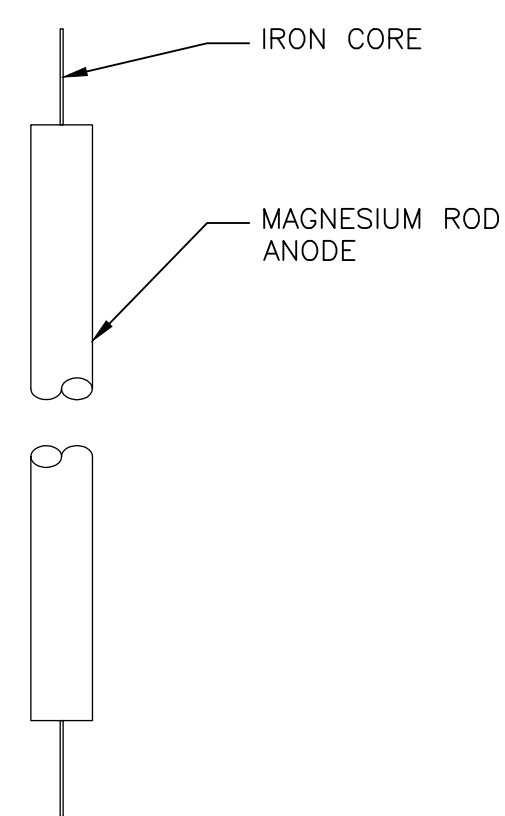
NOTE:

1. INSTALL ANODE ON INTERIOR LADDER.



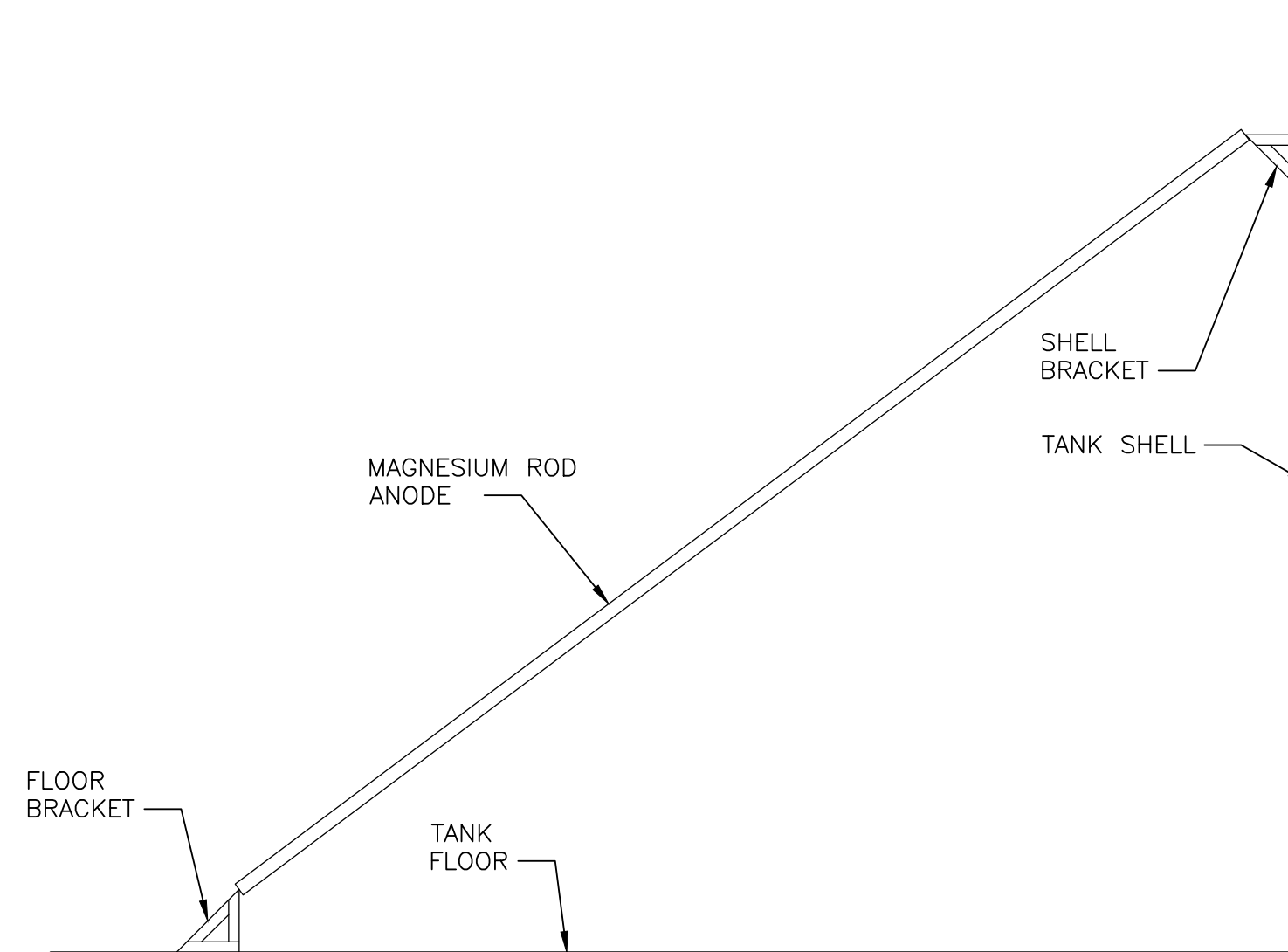
INTERIOR LADDER — ANODE INSTALLATION

SCALE = NONE



DETAIL — MAGNESIUM ROD ANODE

SCALE = NONE



DETAIL — MAGNESIUM ROD ANODE ASSEMBLY

SCALE = NONE

NOTES:

1. CATHODIC PROTECTION WITH SACRIFICIAL ANODE.



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	22 JUN 16	FOR INFORMATION	MJR	ASH	XXX	XXX

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OR
RECORDING**

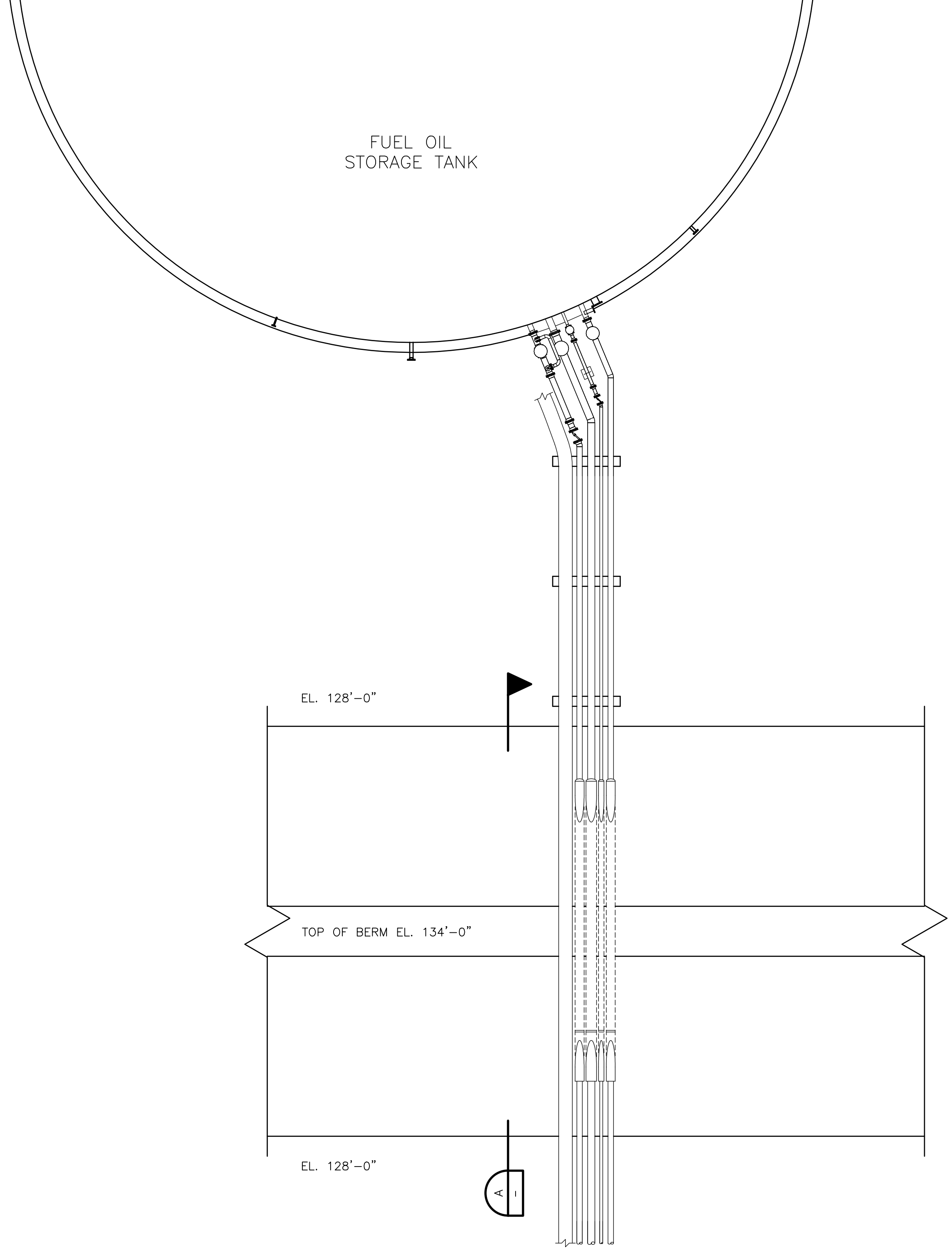
**INVENERGY, LLC
CLEAR RIVER ENERGY CENTER**

**CLEAR RIVER ENERGY CENTER
FUEL OIL STORAGE TANK
PRELIMINARY CONCEPTUAL CATHODIC PROTECTION
PLAN, SECTION AND DETAILS**

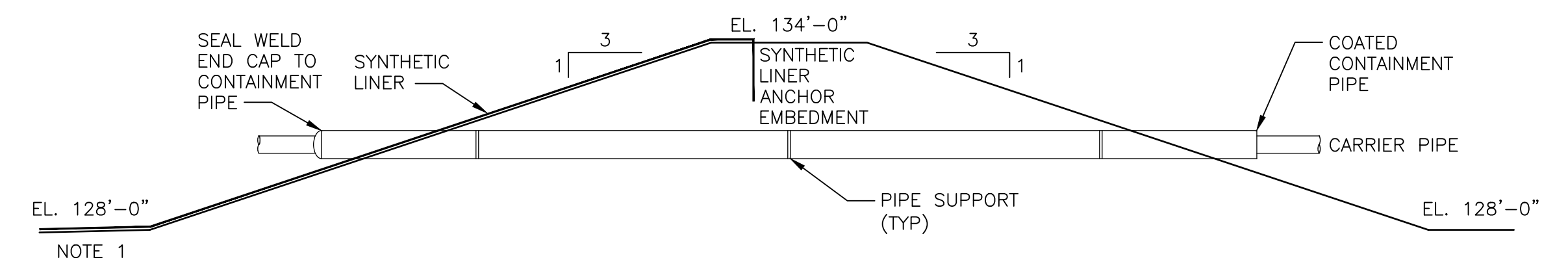
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SHEET	238926-0FO-M2000
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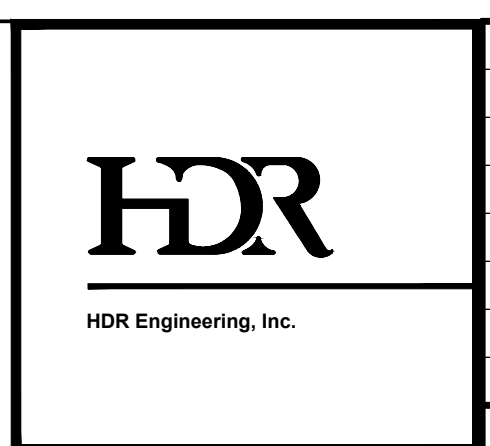
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PLAN – FUEL OIL SECONDARY CONTAINMENT
SCALE = NONE



SECTION – SYNTHETIC BARRIER FOR FUEL OIL STORAGE TANK BERM
SCALE = NONE
NOTE:
1. BARRIER EXTENDS TO OPPOSITE PERIMETER OF BERM



ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	22 JUN 16	FOR INFORMATION	MJR	ASH	XXX	XXX

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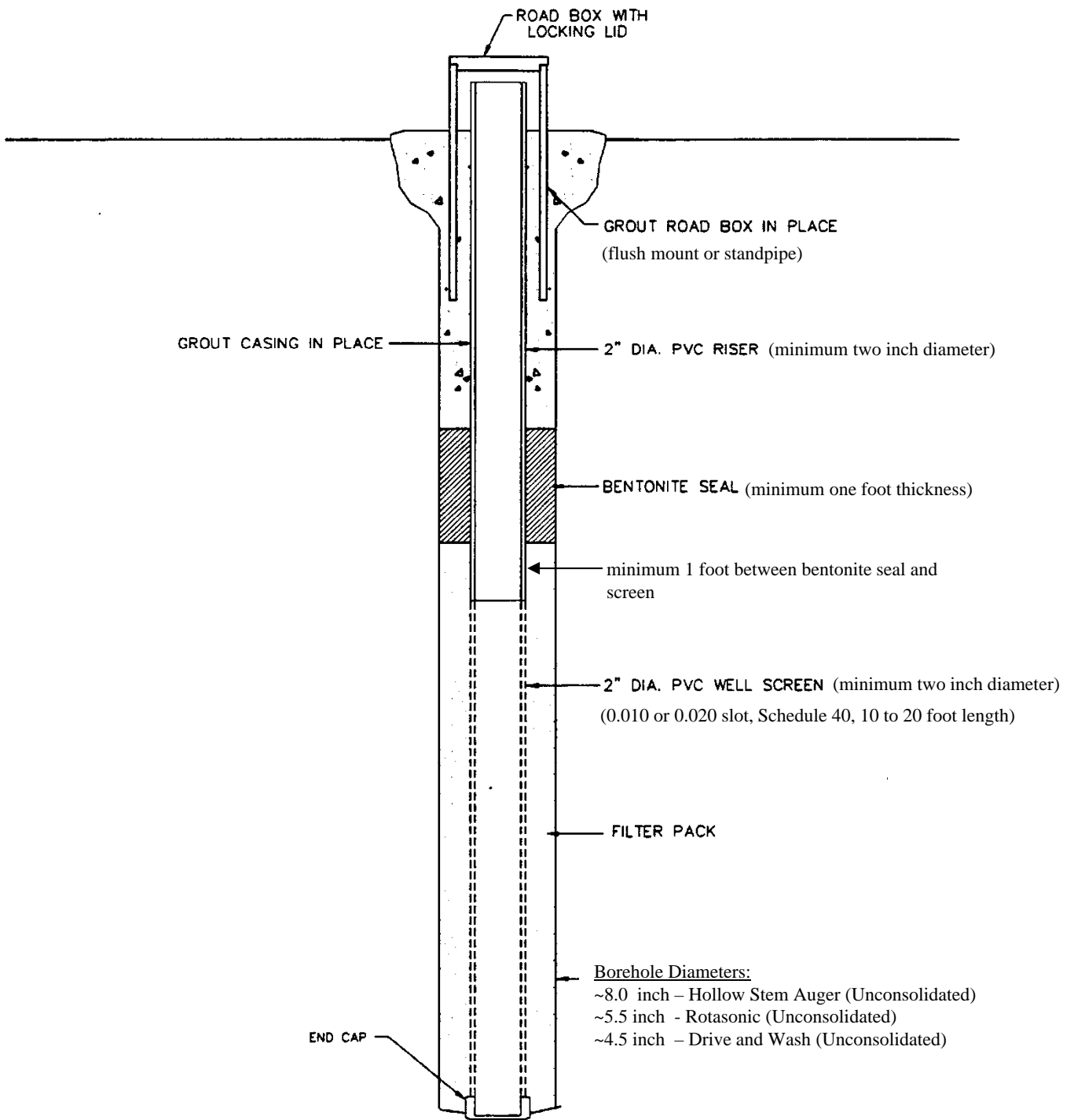
**INVENERGY, LLC
CLEAR RIVER ENERGY CENTER**

**CLEAR RIVER ENERGY CENTER
FUEL OIL SECONDARY CONTAINMENT
PRELIMINARY CONCEPTUAL
PLAN AND SECTION**

FILENAME	M2001-0FO-238926.dwg	SHEET	
SCALE	NONE		238926-0FO-M2001

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EXHIBIT 2



NOT TO SCALE



**Monitoring Well Schematic (typ.)
(Unconsolidated Deposits)**

**Exhibit No.
4**

PROJECT NO.
1108