District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-147
Revised April 3, 2017

Recycling Facility and/or Recycling Containment

Type of Facility: ☐ Recycling Facility ☑ Recycling Containment*

Type of action: ☐ Permit ☑ Registration ☐ Modification ☐ Extension ☐ Closure ☐ Other (explain) _____

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Hilcorp Energy Company (For multiple operators attach page with information) OGRID #: 372171
Address: PO Box 4700, Farmington, NM 87499
Facility or well name (include API# if associated with a well): Palluche HZMC 1H API# 3003931138
OCD Permit Number: _____ (For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr B (NWNE) Section 35 Township 26N Range 7W County: Rio Arriba
Surface Owner: ☑ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Recycling Facility:**
Location of recycling facility (if applicable): Latitude _____ NAD83
Proposed Use: ☐ Drilling* ☐ Completion* ☐ Proc

DENIED
CS 8/28/18 Administratively Incomplete Resubmit.

*The re-use of produced water may NOT be used un

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☐ Fluid Storage
☐ Above ground tanks ☐ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type _____
☐ Activity permitted under 19.15.36 NMAC explain type: _____ ☐ Other explain _____
☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date: _____

3.
☑ **Recycling Containment:**
☑ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)
Center of Recycling Containment (if applicable): Latitude 36.44661 Longitude -107.54456 NAD83
☑ For multiple or additional recycling containments, attach design and location information of each containment
☐ Lined ☑ Liner type: Thickness 45 mil ☑ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☑ String-Reinforced
Liner Seams: ☑ Welded ☑ Factory ☐ Other _____ Volume: 40,280 bbl Dimensions: L _____ x W 12'H x D 160'
☐ Recycling Containment Closure Completion Date: _____

NMOCD
JUN 22 2018
DISTRICT III

25

4.

Bonding:

☑ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☐ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $_____ **(work on these facilities cannot commence until bonding amounts are approved)**

☐ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☑ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify_____

6.

Signs:

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☑ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☑ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting

Ground water is less than 50 feet below the bottom of the Recycling Containment. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☑ No ☐ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; written approval obtained from the municipality	☐ Yes ☑ No ☐ NA
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	☐ Yes ☑ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map	☐ Yes ☑ No
Within a 100-year floodplain. FEMA map	☐ Yes ☑ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; visual inspection (certification) of the proposed site	☐ Yes ☑ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; aerial photo; satellite image	☐ Yes ☑ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	☐ Yes ☑ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	☐ Yes ☑ No

9.
Recycling Facility and/or Containment Checklist:
Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☑ Design Plan - based upon the appropriate requirements.
- ☑ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☑ Closure Plan - based upon the appropriate requirements.
- ☑ Site Specific Groundwater Data -
- ☑ Siting Criteria Compliance Demonstrations –
- ☑ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): Christine Brock Title: Operation / Reg Tech

Signature: Christine Brock Date: 6/21/18

e-mail address: cbrock@hilcorp.com Telephone: 505-324-5155

11.
OCD Representat _____ **Approval Date:** _____

Title: _____ **OCD Permit Number:** _____

☐ OCD Conc
☐ Additional

DENIED

BY: Cory Smith * Administrative Incomplete.
DATE: ~~6/26/18~~ (505) 334-6178 Ext. 115

Variance Explanation for Recycling Containment

All requested variance will provide equal or better protection of fresh water, public health, and the environment.

C-147 #3. Recycling Containment

19.15.34.12.A(2) NMAC states *"The operator shall construct the containment in a levee with an inside grade no steeper than two horizontal feet to one vertical foot (2H:1V). The levee shall have an outside grade no steeper than three horizontal feet to one vertical foot (3H:1V). The top of the levee shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance."*

Hilcorp Energy Company proposes to install four above ground storage containments using metal walls to create a steel tank to contain the primary and secondary liners. Thus Hilcorp Energy Company will not be constructing a levee. The steel walls will be vertical and there will not be an anchor trench.

C-147 #3. Recycling Containment

19.15.34.12.E NMAC states "Netting. The operator shall ensure that a recycling containment is screened, netter or otherwise protective of wildlife, including migratory birds..."

Hilcorp Energy Company proposes to utilize decoys or flagging to deter migratory birds from the recycling containment.

C-147 #5 Fencing.

19.15.34.12.D (1) NMAC states "Recycling containments shall be fenced with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level."

Hilcorp Energy Company proposes to install gates and/or barriers to the entrance of tank ladders to protect the recycling containments.

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 25, 26, 27, 34, 35, 36 **Township:** 26N **Range:** 07W

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 1, 2, 3 **Township:** 25N **Range:** 07W

GROUND WATER TEST REPORT

DATE 12/7/2012

DRILLING

WELL NAME	COMPANY & RIG	DEPTH DRILLED
Pallache HZMC #1H	Corrpro	165'

LEGAL COORDINATES

UNIT	SECTION	TOWNSHIP	RANGE
	2	26 N	7W

BIT SIZE	WATER DEPTH	SAMPLE TAKEN	CONDUCTVITY (micro-Siemens/CM)	PH / TEMP
7 7/8	101'	YES ___ NO_X__		

WATER (Dreager Tube)	CO2	H2S	CL

GAS ENCOUNTERED	GAS DEPTH	PLUG TYPE & AMOUNT (LBS)
YES_____ NO__X___		

Test Hole Location

Latitude_N36.25.873' Longitude___W107.32.920'

ELEVATION

6874'

NOTES

The ground water test hole was drilled on the Canyo Largo #473 location, with a NMOCD rep on site, Jonathon Kelly.

Dwayne Horton

SIGNATURE

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
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DISTRICT III
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DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-29579	71599	Basin Dakota

[4] Property Code	[5] Property Name	[6] Well Number
32660	CANYON LARGO UNIT	473

[7] OGRID No.	[8] Operator Name	[9] Elevation
208706	HUNTINGTON ENERGY, LLC	6874'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	2	25-N	7-W		1625'	NORTH	1285'	WEST	RIO ARRIBA

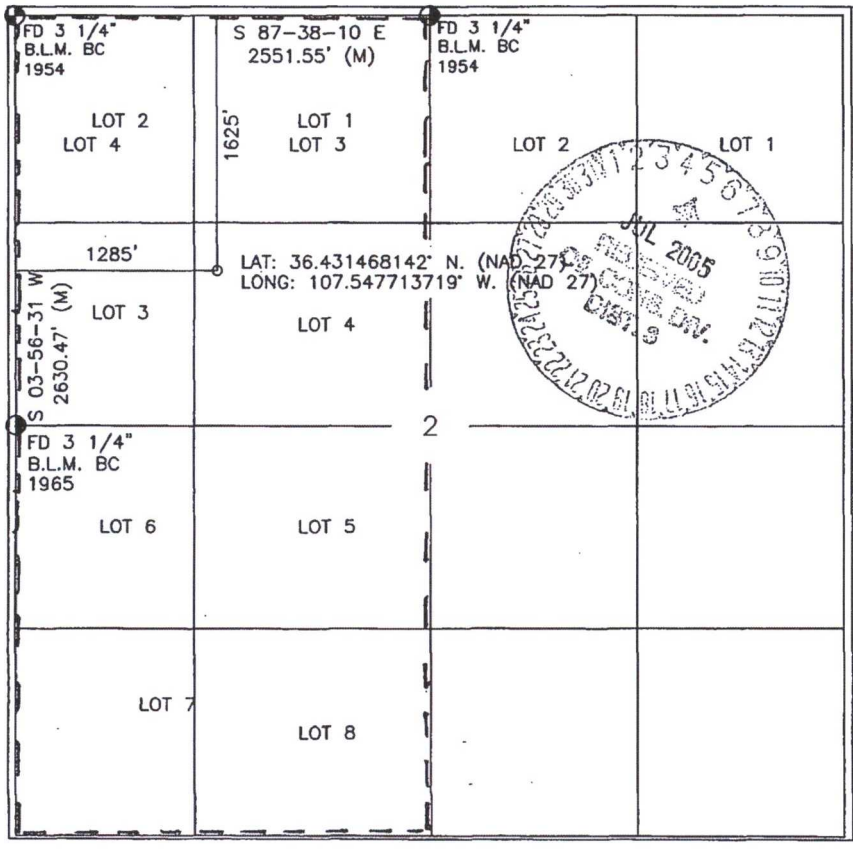
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
DK-W/320.56			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Catherine Smith
Signature

Catherine Smith
Printed Name

Land Associate
Title

2-3-2005
Date

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

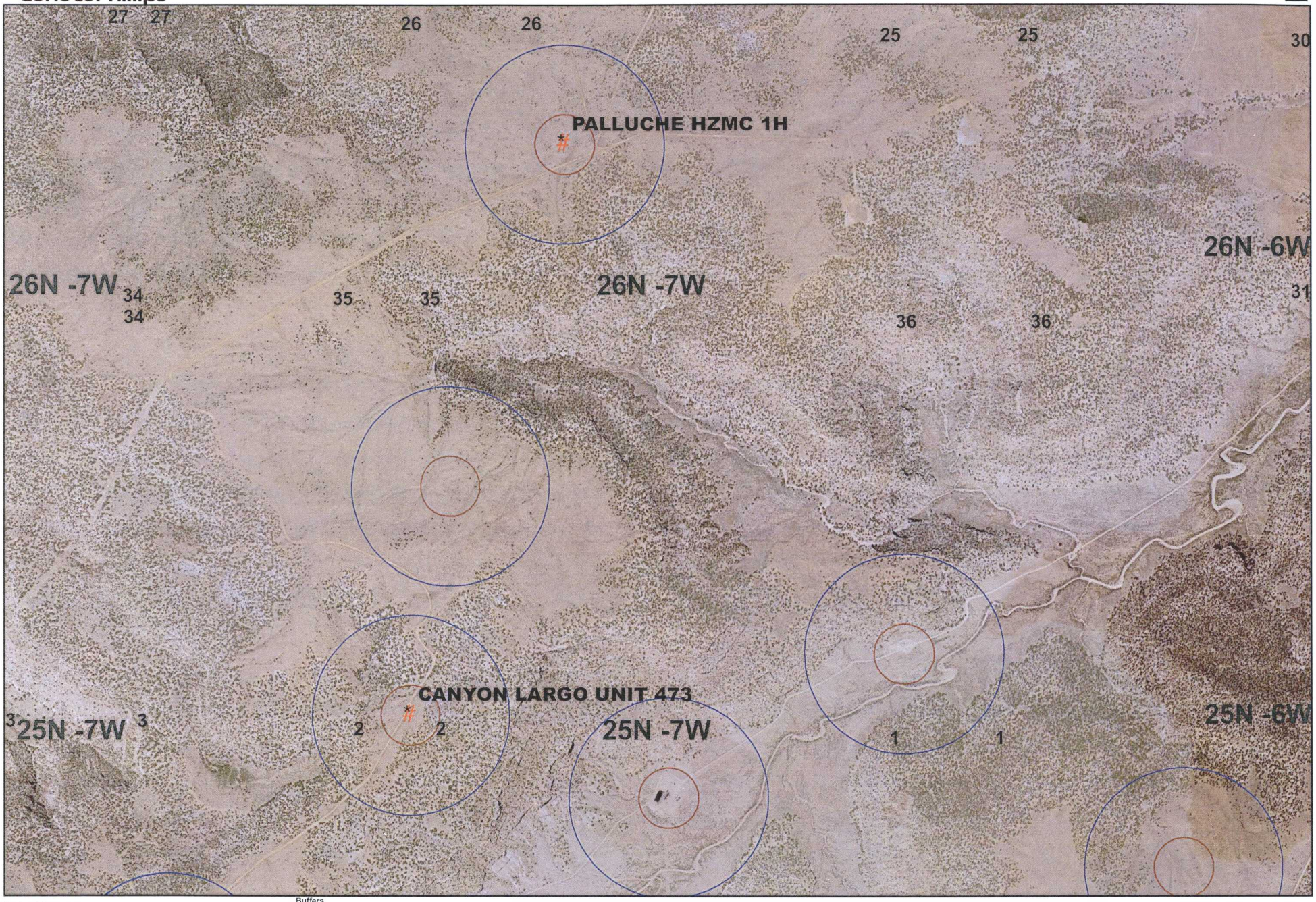
JANUARY 17, 2005
Date of Survey

Signature and Seal of Professional Surveyor:

14831
Certificate Number

ConocoPhillips

AERIAL_PALLUCHE HZMC 1H



Data Source
Aerial flown locally Sedgewick in 2005.
Wetlands Data Aquired from U.S. Fish and Wildlife Http://wetlandswms.er.usgs.gov
USGS Topo

Buffers
COPCathodic
iWaters
300
1000

0 600 1,200
Feet

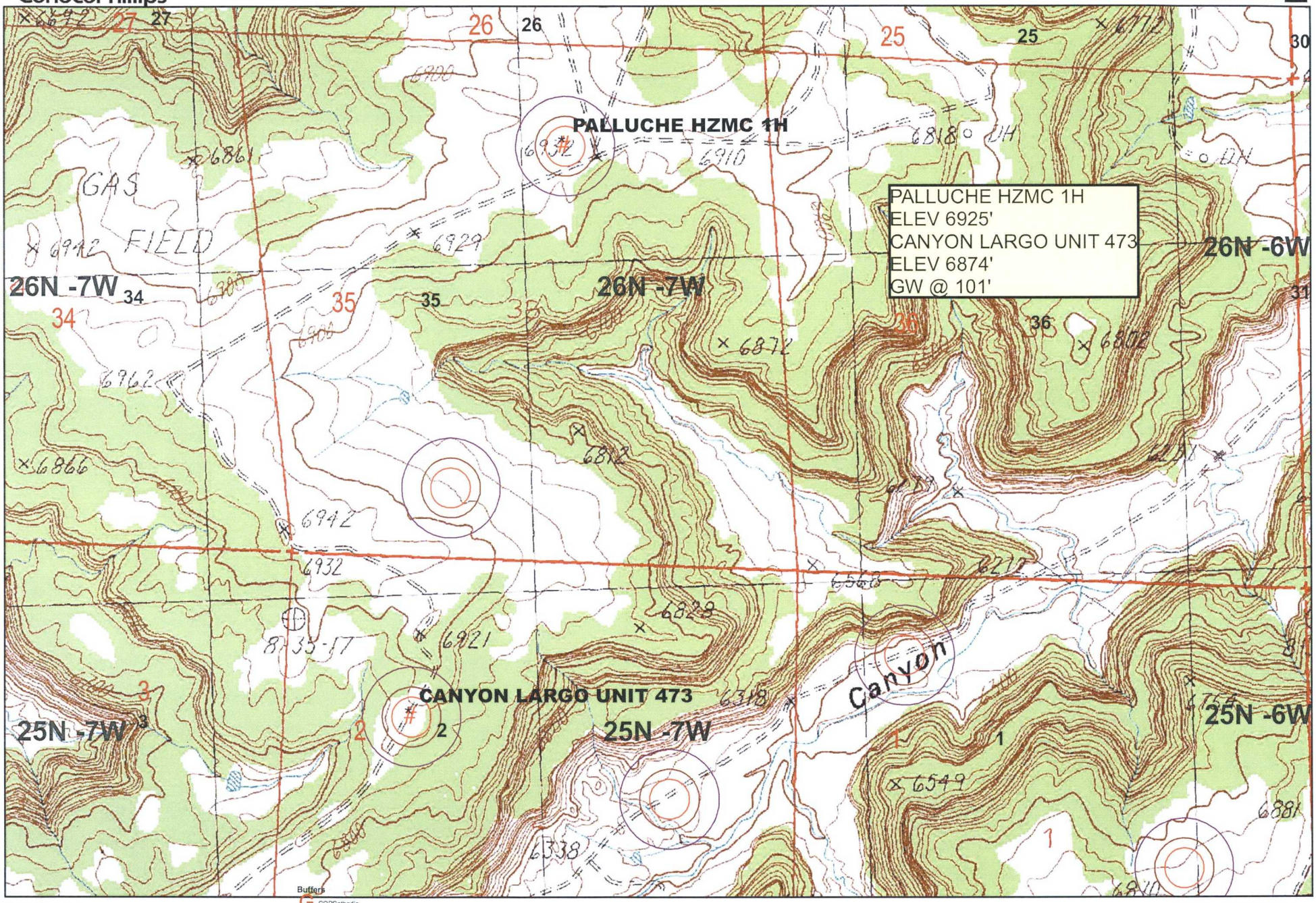
1:15,000

NAD_1983_SP_
NM West_FIPS_
3003

DECEMBER 28, 2012

ConocoPhillips

TOPO_PALLUCHE HZMC 1H



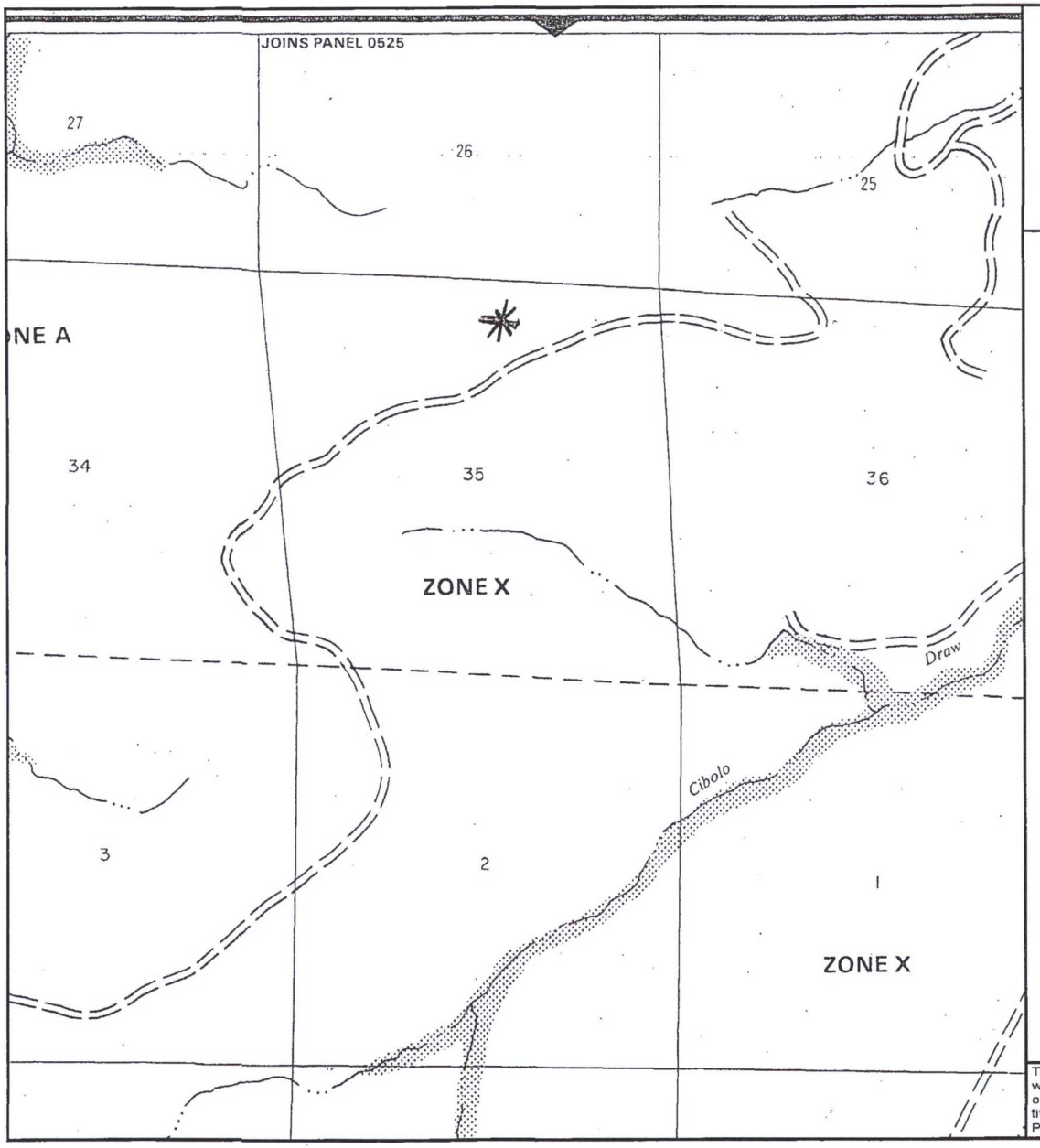
Data Source
Aerial flown locally Sedgewick in 2005.
Wetlands Data Aquired from U.S. Fish and Wildlife Http://wetlandswms.er.usgs.gov
USGS Topo

0 600 1,200 Feet

1:15,000

NAD_1983_SP_ NM West_FIPS_ 3003

DECEMBER 28, 2012



N

APPROXIMATE SCALE

2000 0 2000 FEET

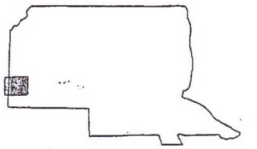
NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

RIO ARRIBA COUNTY,
NEW MEXICO
UNINCORPORATED AREAS

PANEL 725 OF 1325
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
350049 0725 B

EFFECTIVE DATE:
JANUARY 5, 1989

Federal Emergency Management Agency

Hydrogeological report for PALLUCHE HZMC 1H

Regional Hydrogeological context:

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin).

Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

Palluche HZMC 1 Recycling Facility Siting Criteria

1. The NM State Engineers Office iWaters Database does not show any know water well within a 9 section areas of the proposed facility. The iWaters Database information is attached.

   A water well was drilled on the Canyon Largo Unit 473 on 12/7/2012 with NMOCD as a witness. The elevation of the Canyon Largo Unit 473 is 6874' and had a water depth of 101'. The Palluche HZMC 1H has an elevation of 6925' which is an increase of 51' establishing the estimated groundwater depth for the Palluche HZMC 1H to be approximately 152'. Therefore, the groundwater depth is greater than 50 feet below the bottom of the recycling containment.

2. There are not continuously flowing watercourses within 300' nor any other significant watercourse or lakebed or playa lake within 200' of the recycling containment as shown on the Aerial and Topo maps provided.

3. There are no permanent residence, school, hospital, institution or church at the time of initial registration within 1000' of the recycling containment as shown on the Aerial and Topo maps provided.

4. There are no spring or fresh water well used for domestic or stock water purposes within 500' in existence at the time of initial registration as shown on the Aerial and Topo maps provided.

5. The recycling facility is not within any incorporated municipal boundaries within a defined municipal fresh water well field covered by a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978, as amended.

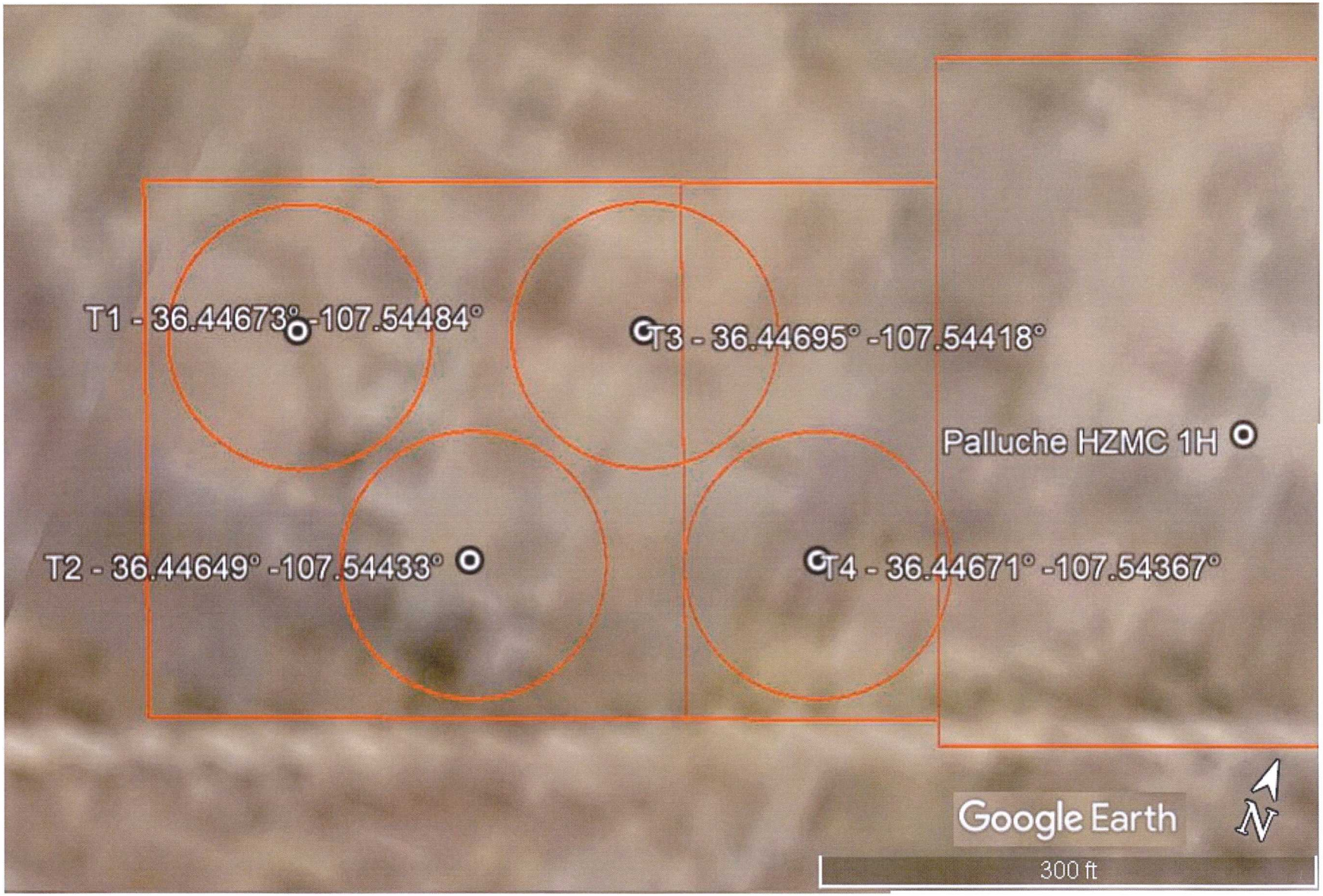
6. As shown on the attached Google Earth aerial photos and USGS database search, there are no wetlands within 500'.

7. According to the NM EMNRD Mining and Mineral Division database there are no subsurface mines in Section 35, Township 26N, Range 7W of Rio Arriba County.

8. The recycling containment is not located in an "unstable" area. The location is not over a mine and is not on the side of a hill. The location of the excavated surface material will not be located within 100 feet of a continuously flowing or significant watercourse.

9. As shown on the FEMA Map, the recycling containment is not located within a 100-year floodplain.

10. The top soil impact will be minimally displaced and used for berms around the location due to the containments being above grade tanks.


T1 - 36.44673° -107.54484°
T3 - 36.44695° -107.54418°
Palluche HZMC 1H
T2 - 36.44649° -107.54433°
T4 - 36.44671° -107.54367°
Google Earth
N
300 ft

Hilcorp Energy Company
Recycling Containment
Design and Construction Plan

In accordance with Rule 19.15.34 the following information describes the design and construction of recycling facilities on Hilcorp Energy Company (Hilcorp) locations.

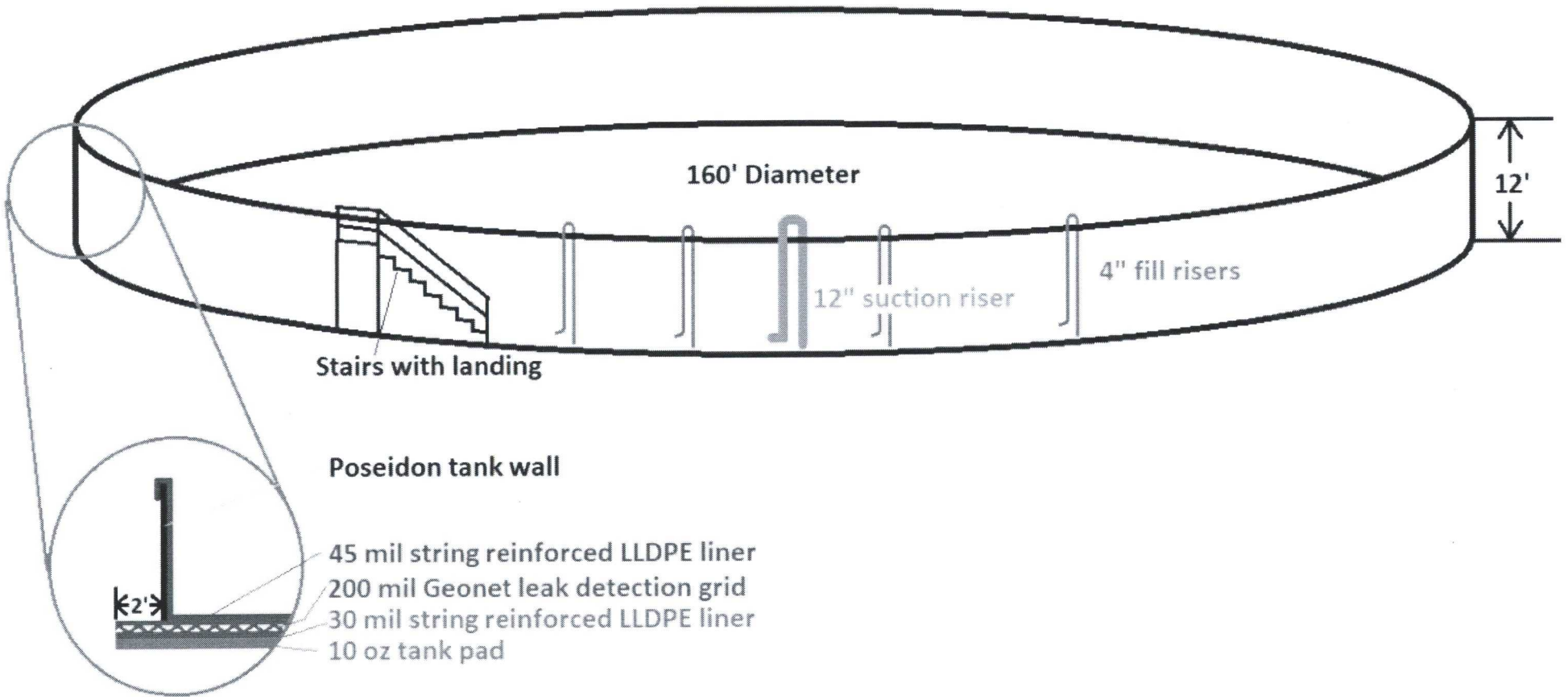
The Hilcorp Energy Company Design and Construction Plan assists Hilcorp personnel in ensuring compliance with the minimum design and construction requirements for recycling containments as defined by the NMOCD outlined in 19.15.34.12 NMAC. The plan applies to any Hilcorp Employee(s) and subcontractor(s) whose job requires them to assist with the design and construction of the recycling facility. The plan is designed to ensure compliance with the minimum design and construction requirements for recycling facilities as defined by the NMOCD outlined in 19.15.34.12 NMAC.

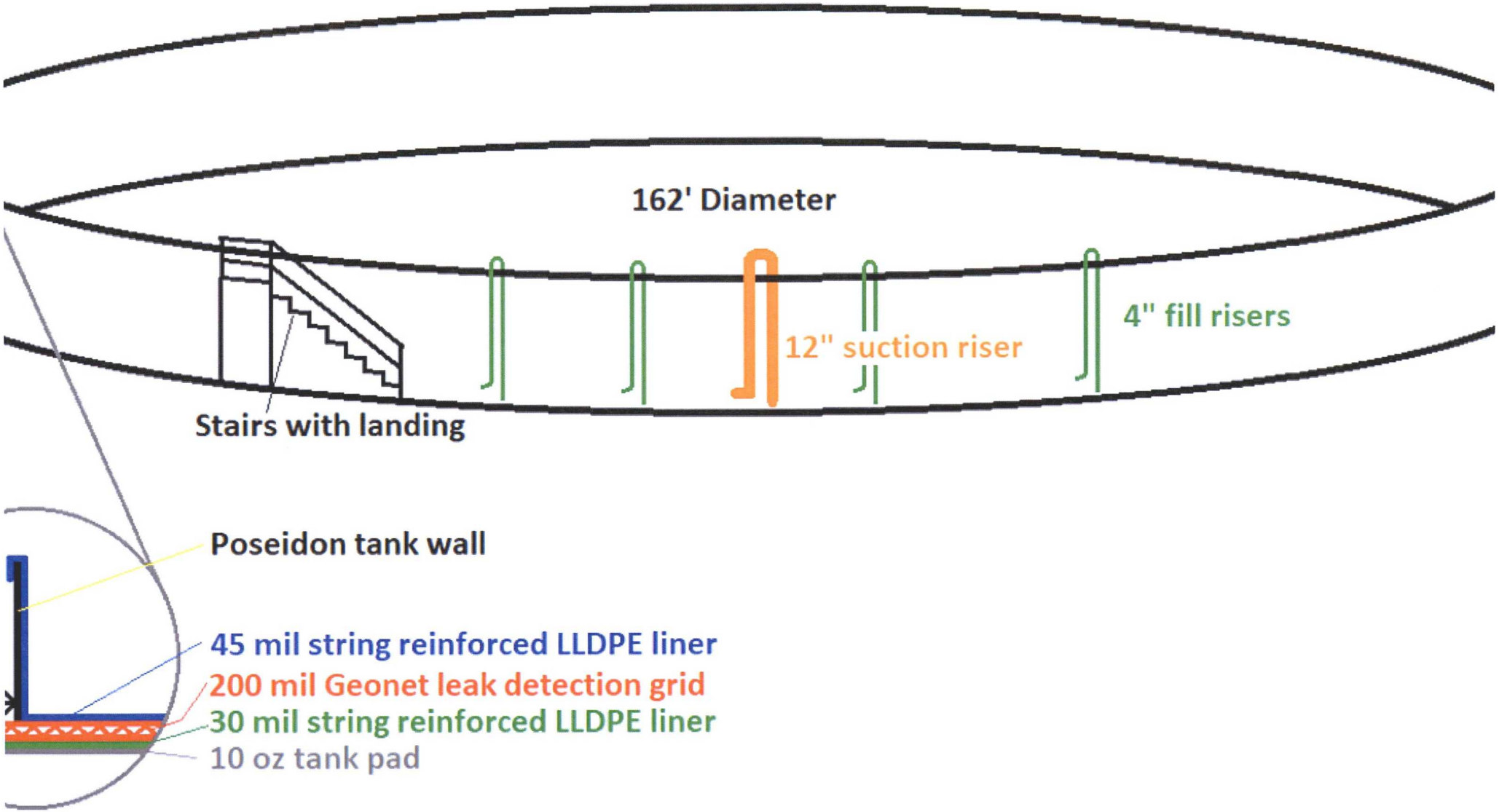
Hilcorp shall design and construct a recycling containment in accordance with the following specifications.

1. The recycling containment will have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The containment will ensure confinement of produced water, to prevent releases and to prevent overtopping due to wave action or rainfall. A geotextile under the liner will be used, if needed, to reduce the localized stress-strain or protuberances that otherwise may compromise the liner's integrity.
2. Hilcorp's recycling containment shall incorporate, a primary (upper) liner and a secondary (lower) liner with a leak detection system. The primary (upper) liner will be a geomembrane liner composed of an impervious, synthetic material that is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. The primary liner will be a 45-mill LLDPE string reinforced liner. The secondary liner will be a 30-mill LLDPE string reinforced liner.
3. Hilcorp shall ensure the subcontractor installing the recycling containment minimized liner seams and orient them up and down, not across, a slope of the levee. Hilcorp shall ensure that factory welded seams shall be used where possible. Hilcorp shall ensure the subcontractor installing the recycling containment ensures field seems in the geosynthetic material are thermally seamed and that prior to any field seaming, the installer overlaps the liners four to six inches. The subcontractor installing the liner shall minimized the number of field seams and corners and irregularly shaped areas. Hilcorp will only hire qualified personnel to perform field welding and testing.
4. Hilcorp shall ensure that the liner is protected from excessive hydrostatic force and mechanical damage at the points of discharge into or suction from the recycling containment. Additionally, Hilcorp shall ensure external discharge or suction lines shall not penetrate the liner. Hilcorp shall accomplish both of these by the installation of an up and

over "candy cane" shaped ridged piping that has a steel diverter plate to distribute the water minimizing hydrostatic forces.

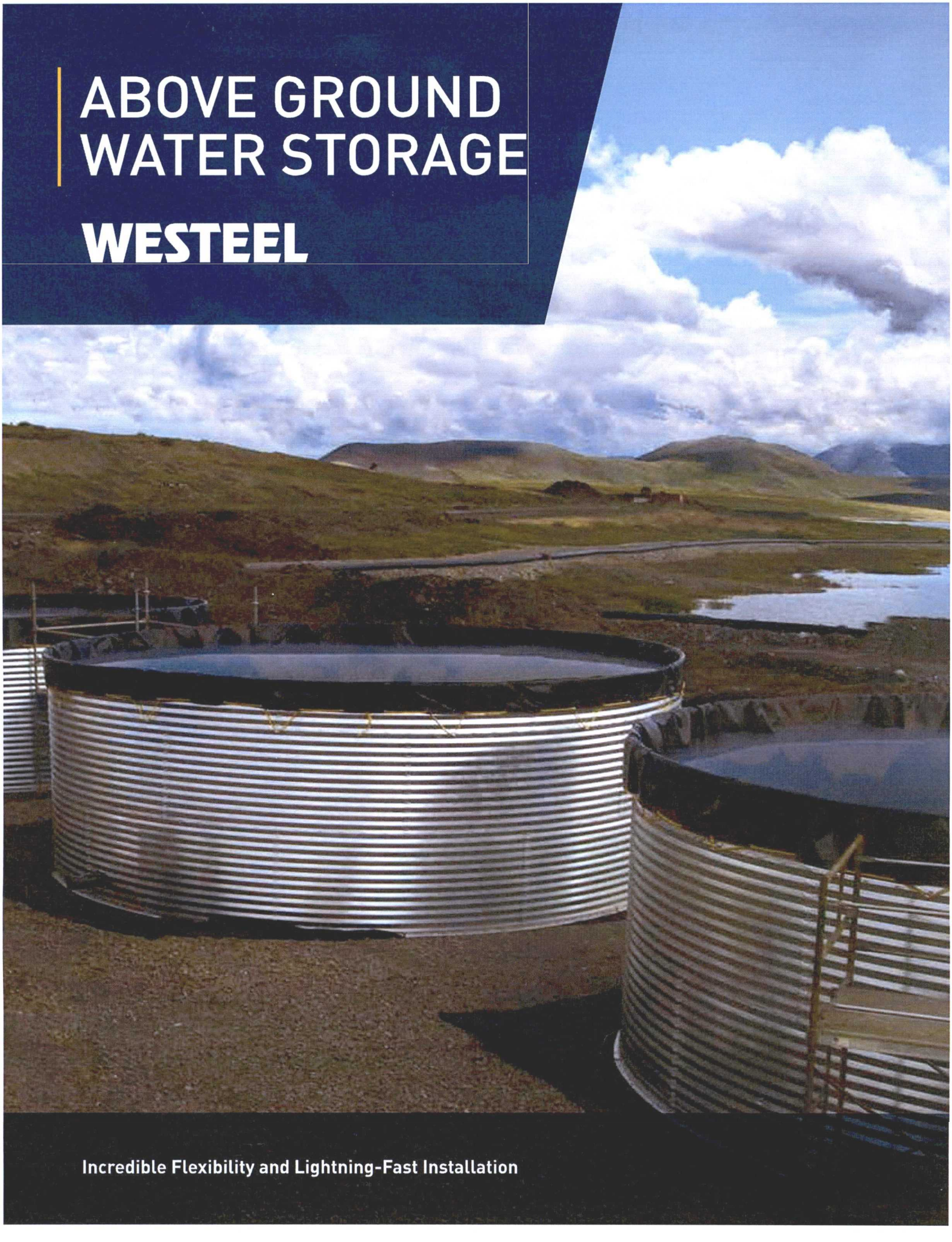
5. Hilcorp shall place a leak detection system between the upper and lower geomembrane liners that shall consist of a 200-mil geonet to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. A 3 foot wide by 3 foot long by 2 foot deep depression will be contracted to allow for collection of any leaking liquid. A 2 inch pvc liner will be installed in between the primary and secondary liners from the top of the tank to the depression to allow for detection and removal of liquid.
6. The containment will consist of 12' high walls and shall prevent the run-on of surface water. The containment will be placed on a flat surface to prevent possible integrity damage to the tanks from surface run-on and water accumulation will be diverted around the tanks with the wall construction.
7. Prior to the constructing the containment, topsoil will be stockpiled for later use as the final cover or fill at the time of closure.
8. Hilcorp will sign the containment facility with an upright sign no less than 12" by 24" with lettering not less than 2" in height in a conspicuous place near the containment. Hilcorp will provide the operator's name, location of the containment by quarter-quarter or unit letter, section, township, range and emergency telephone numbers. Each containment will be identified separately for reporting purposes as proposed in the attached diagram.
9. Hilcorp shall gate the entrance ladders to the containment to deter unauthorized wildlife and human access and shall maintain the gates in good working order. Hilcorp shall ensure that all gates are closed and locked when responsible personnel are not onsite.
10. Hilcorp shall ensure that the containment is screened, netted or otherwise protective of wildlife, including migratory birds. Hilcorp shall install decoys or flagging to deter wildlife and migratory birds. Hilcorp personnel shall on a monthly basis inspect for and, within 30 days of discovery, report any dead migratory birds or other wildlife to the appropriate agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.


160' Diameter
12'
12" suction riser
4" fill risers
Stairs with landing
Poseidon tank wall
45 mil string reinforced LLDPE liner
200 mil Geonet leak detection grid
30 mil string reinforced LLDPE liner
10 oz tank pad
2'


162' Diameter
12" suction riser
4" fill risers
Stairs with landing
Poseidon tank wall
45 mil string reinforced LLDPE liner
200 mil Geonet leak detection grid
30 mil string reinforced LLDPE liner
10 oz tank pad

ABOVE GROUND WATER STORAGE

WESTEEL



Incredible Flexibility and Lightning-Fast Installation

A GLOBAL LEADER IN LIQUID PROTECTION

UNPRECEDENTED FLEXIBILITY, CAPACITY AND VALUE. ABOVE GROUND FLUID MANAGEMENT REDEFINED.

Perfect for water, wastewater, contaminated water or brine, Westeel Above Ground Water Storage Systems represent the lowest acquisition cost, simplest to transport and easiest to install modular pond on the market.

With incremental capacities running from 13,000 to 132,000 barrels, the pond and Internal Liner System are completely customizable to fit your specifications. And, as your needs change, Westeel ponds are easy to pack up, move and reassemble. No other above ground water storage system offers this flexibility, range of capacity and long-term value.

KEY BENEFITS

- Economical to transport over land or sea
- Cost-effective and easy to install
- Flexible range of sizes
- Internal Liner System tailored for specific uses
- Easily maintained and serviced
- Professionally engineered
- Diverse range of applications
- Expandable designs
- Minimal ground disturbance
- Completely reusable and re-locatable (steel only, liner in some applications)
- Steel and liner fully recyclable

LIGHTNING-FAST INSTALLATION

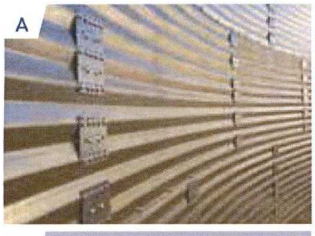
Westeel's Speed Plate™ system (patent pending) dramatically reduces assembly and disassembly time. Panels are locked together securely using a series of five bolted plates along all vertical seams. This system allows a six-person install crew to safely erect or disassemble a pond in similar times to heavy welded-panel systems, without the use of anything larger than a five-ton picker truck.

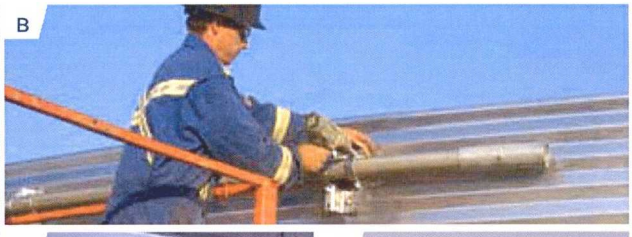
ECONOMICAL RIGHT FROM THE START

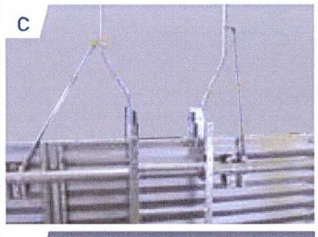
Smart engineering and better use of materials deliver a significantly lower cost of ownership when compared to competitive systems. Most installs can fit onto a single truck, and there are reduced site preparation costs as perfect levelling isn't required. Finally, smaller crews are required and machinery expenses are lower as crane rentals aren't necessary.

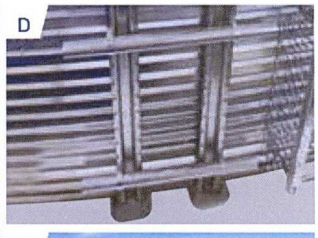
SUPER-STRONG LIGHTWEIGHT PANELS

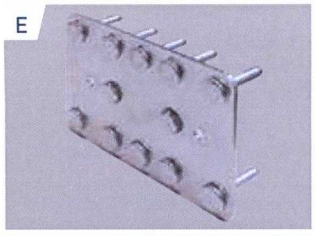
Made from 50 ksi high-grade steel with extra heavy-duty G115 galvanizing, the pond's side panels are engineered to provide superior structural integrity, yet remain light enough to allow installation without a crane. This is accomplished by using a tiered design that features heavier gauges at the bottom – where the strength is needed – rather than at the top. Compare this to competitive systems that use the same gauge throughout, needlessly increasing both weight and cost.

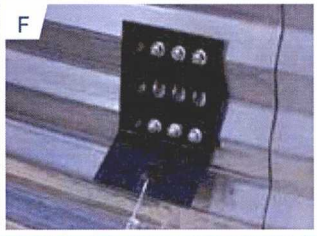


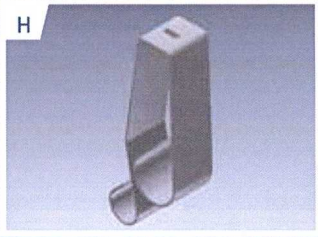












A Speed Plate™ System (patent pending)
B Installing wind ring
C Ladder with pass-through rails
D Piping supports for inflow piping
E Speed Plate™
F Standard wall anchor bracket with optional tie-down cable
G Steel liner clamps are ideal for long-term storage
H Steel liner clamp
I Truck-mounted picking crane used for assembly

SMART MODULAR DESIGN

Westeel ponds are available in both standard models as well as custom configurations, with tank diameters from 51' to 510', moving up in 3' increments. The modular design also allows for easy expansion or panel replacement.

BUILT WITH SAFETY IN MIND

Developed for safety and maximum flexibility, Westeel's Above Ground Water Storage System is highly visible, significantly reducing the likelihood of accidents for humans and wildlife as compared to traditional pit systems.

RAPID ORDER TURNAROUNDS

Westeel Above Ground Storage ponds are produced in a state-of-the-art Westeel facility using computerized manufacturing techniques. This not only ensures a quality product that fits together perfectly in the field, it also allows for rapid turnaround on most orders.

EXCEEDS AMERICAN WATER WORKS ASSOCIATION STANDARD D103-09

Design safety margins for Westeel's Above Ground Water Storage System are in excess of 2.5 times the amounts required by the AWWA Standard D103-09. Additionally, they can be manufactured to meet the specific seismic requirements of any location. Don't risk your business by using lesser products. Trust Westeel.

OPTIONS

NON-SPEED PLATE™ SYSTEMS

For long-term storage applications and where rapid setup time is not an issue, our original bolt and nut fasteners on vertical seams may provide a more cost effective solution to your storage needs.

PIPING SUPPORTS

Piping supports for inflow piping on the ponds' outside wall can be used to help secure inflow piping to the tank.

EGRESS DOORS

An emergency exit designed for install crews while the storage system is being assembled or disassembled.

Above Ground Water Storage System Specifications

MODEL NUMBER	DIAMETER		HEIGHT			CAPACITY	
	m	*ft*	*tiers*	*m*	*ft*	m^3	*U.S. gallons*
246-02	74.98	246	2	2.23	7.3	9,765.78	2,579,845
168-03	51.20	168	3	3.35	11.0	6,831.98	1,804,817
138-03	42.06	138	3	3.35	11.0	4,609.84	1,217,791
138-02	42.06	138	2	2.23	7.3	3,073.23	811,861
126-04	38.40	126	4	4.48	14.7	5,123.98	1,353,613
114-03	34.75	114	3	3.35	11.0	3,145.85	831,045
114-02	34.75	114	2	2.23	7.3	2,097.23	554,030
96-03	29.26	96	3	3.35	11.0	2,230.85	589,328
96-02	29.26	96	2	2.23	7.3	1,487.23	392,885

Above specifications are popular configurations – custom sizes are available from Westeel.

Above Ground Water Storage Maximums

MAXIMUM DIAMETER		MAXIMUM HEIGHT			MAXIMUM CAPACITY	
m	*ft*	*tiers*[1]	*m*	*ft*	m^3	*U.S. gallons*
155.45	510	1	1.12	3.67	20,987	5,544,134
77.72	255	2	2.24	7.33	10,493	2,772,067
51.21	168	3	3.35	11.00	6,832	1,804,817
38.40	126	4	4.47	14.67	5,124	1,353,613
31.09	102	5	5.59	18.33	4,197	1,108,827
25.60	84	6	6.71	22.00	3,416	902,408
21.95	72	7	7.82	25.67	2,928	773,493
19.20	63	8	8.94	29.33	2,562	676,806
17.37	57	9	10.06	33.00	2,359	623,283
15.54	51	10	11.18	36.67	2,099	554,413

Speed Plate models only available in 90' diameter or greater. Below 90' traditional bolt and nut fasteners are used on vertical seams.

1. For ponds higher than four tiers, a larger picker truck or small crane may be required due to wall height.

LADDERS

Ladders make getting in and out of the pond during installs much easier and safer.

LINER CLAMP

Steel liner clamps are used to secure the liner to the pond and protect the liner edge from damage.

GROUND ANCHOR CABLE

An optional ground anchor cable for pond tie-down can be attached to the external wall bracket (standard). Pond support plates along the base are supplied as standard equipment.

ADDITIONAL OPTIONAL ACCESSORIES

- Pond configurations with diameters from 51' to 510'
- Platforms
- Can be manufactured to meet location's seismic requirements
- Fluid indicators
- Pass-through rails

NOTE: Geomembrane Liner Required

Westeel Above Ground Water Storage ponds require geomembrane liners for completion, which are available from a number of independent suppliers. Westeel recommends the use of engineered liner systems such as the Layfield Enviro Liner.® Please consult your Westeel sales representative for more information.

QUALITY IN STEEL SINCE 1905

Westeel has offered quality steel storage solutions to multiple industries for over a century. Our comprehensive catalogue of products includes storage and containment solutions for the petroleum, water and industrial sectors as well as a wide range of on-farm and commercial grain handling and storage solutions for today's agriculture industry. With sales and engineering offices in Canada, the United States, Spain, Italy and India, and manufacturing facilities in Italy and Canada, Westeel exports its products across all continents of the world.

800-665-2099 • lcs@westeel.com
westeel.com @westeel_1905 /Westeel1905

Westeel Head Office Box 792, Winnipeg, Canada R3C 2N5
204-233-7133

Consistent with Westeel policy of continued research and development of our products, we reserve the right to modify or change information contained in this publication without notice.
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PRODUCTS MAY NOT APPEAR EXACTLY AS PICTURED

Hilcorp Energy Company
Recycling Containment
Maintenance and Operating Plan

In accordance with Rule 19.15.34 the following information describes the operation and maintenance of recycling containments on Hilcorp Energy Company (Hilcorp) locations.

1. Hilcorp shall inspect the recycling containment and associated leak detection systems weekly while it contains fluids. A current log of inspections will be maintained and the log will be made available for review upon division request.
2. Hilcorp shall maintain and operate the recycling containment as follows:
    a. Will not discharge or store hazardous waste
    b. Removing any visible layer of oil from the surface of the containment
    c. Maintaining at least 3' of freeboard at each containment
    d. The injection or withdrawl of fluids from the containment shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets, or impact from installation and removal of hoses or pipes
    e. If the containment's primary liner is compromised above the fluid's surface, Hilcorp will repair the damage or initiate replacement of the primary liner within 48 hours of discovery or seek an extension from the division district office.
    f. If the primary liner is compromised below the fluid's surface, Hilcorp will remove all fluid above the damage or leak within 48 hours of discovery, notify the division district office and repair the damage or replace the primary liner.
    g. The containment will be operated to prevent the collection of surface water run-on with containment walls of 12' height.
    h. Hilcorp will install, or maintain on site, an oil absorbent boom or other device to contain an unanticipated release
3. Hilcorp will report the cessation of operations if/when less than 20% of the total fluid capacity is used every six months following the first withdrawl of produced water for use to the appropriate division district office.

Hilcorp Energy Company
Recycling Containment
Closure Plan

In accordance with Rule 19.15.34 the following information describes the closure requirements of recycling containments on Hilcorp Energy Company (Hilcorp) locations.

All closure activities will include proper documentation and be available for review upon request and will be submitted to the OCD within 60 days of closure. Closure report will be filed on C-147 and incorporate the following:

- Details on capping and covering, where applicable
- Inspection Reports
- Sampling Results

1. Once Hilcorp has ceased operations, all fluids will be removed within 60 days and the containment shall be closed within six months.
2. The containment will be closed by first removing all fluids, contents and synthetic liners and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
3. Hilcorp will test the soils beneath each containment for contamination with a five-point composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed in Table I below:

Components	Test Method	51' – 100' GW Depth Limit (mg/kg)	>100' GW Depth Limit (mg/kg)
Chloride	EPA 300.0	10,000	20,000
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500	2,500
GRO+DRO	EPA SW-846 Method 8015M	1,000	1,000
BTEX	EPA SW-846 Method 8021B or 8260B	50	50
Benzene	EPA SW-846 Method 8021B or 8260B	10	10

   a. If any contaminant concentration is higher than the parameters listed in Table I, Hilcorp will receive approval before proceeding with closure as the division may require additional delineation upon review of the results.
   b. If all contaminant concentrations are less than or equal to the parameters listed in Table I the Hilcorp will proceed to backfill with non-waste containing, uncontaminated, earthen material.
4. Hilcorp will reclaim the containment's location once the recycling containment is closed to a safe and stable condition, matches grade and blends with the surrounding undisturbed area. Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface

water flow patterns. Hilcorp shall reseed the disturbed area in the first favorable growing season following the containment closure.

5. Hilcorp will notify the division when reclamation and re-vegetation are completed.
6. Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbed activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus 50% of pre-disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds. The re-vegetation and reclamation obligations imposed by federal, state trust land or tribal agencies on lands managed by those agencies shall supersede these provisions and govern the obligations of Hilcorp subject to those provisions.