TERMO
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2/25/2014

Significant Ecological Areas Technical Advisory Committee
c/o Ms. Iris Chi
Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

RE: Termo / Aliso Canyon Oil Wells – Project No: R2013614-(5)

Dear Committee Members –

The attached materials are being submitted per the request of the Significant Ecological Areas Technical Advisory Committee following The Termo Company's project review by the Committee on January 13, 2014. We appreciate the feedback from the Committee and the opportunity to provide the additional information. We believe the Committee will find it valuable.

The Committee requested further information about the following:

SEAs and Oil and Gas Development: As described by the County, individual SEAs include undisturbed or lightly disturbed habitat supporting valuable and threatened species, linkages and corridors to promote species movement, and are sized to support sustainable populations of its component species. The objective of the SEA Program is to preserve the genetic and physical diversity of the County by designing biological resource areas capable of sustaining themselves into the future. As is shown on the attached map, many of the established as well as the proposed SEAs include oilfields. There are oil and gas wells north, south, east, and west of the proposed Termo project location and throughout the Santa Susana Mountains/Simi Hills SEA. Please see Appendix One for the map showing this overlay.

While oil and gas production is an industrial land use, the actual surface disturbance, human activity level, night lighting, noise impacts, traffic levels, and the introduction of pets and non-native species are generally far lower than other land uses such as residential and commercial development or recreational development (e.g., golf courses and sports fields). In areas with high development pressure, such as Los Angeles County, oilfields provide large areas of contiguous open space conducive to wildlife use and dispersal and generally protective of native botanical resources.

Termo's oilfield operations generate minimal noise, limit human activity in the area, avoid night lighting of open space, provide robust security and fire safety services, and are developed and operated to avoid impacts to wildlife and native botanical resources. Completion of the project is not expected to limit native habitat areas for foraging, breeding, or dispersal of wildlife. As with the numerous SEAs that have been selected and mapped to include oilfields throughout Los Angeles County, the proposed Termo project area will continue to serve the objectives of the SEA program.

Pipeline Construction Plan: The pipeline route for this project has been selected to avoid impact to natural resources while at the same time being accessible for visual inspection and maintenance. At each well site, routes have been chosen to connect the site to the main road while avoiding damaging any trees and shrubs. The pipelines will follow existing roads and

trails. You will find photographs of the proposed route, examples of the pipeline construction, and a narrative outlining our approach to the construction in Appendix Two.

Spill Prevention, Containment, and Control: Termo takes spill prevention very seriously. Spill Prevention and Control in California is regulated by the US Environmental Protection Agency and the California Department of Oil, Gas, and Geothermal Resources. Spills are prevented from occurring through operational and engineering controls. Oil storage tanks and related processing vessels are contained within concrete. Extensive plans procedures have been developed and Termo Staff has undergone special training and is on call 24 hours a day. Please see Appendix Three for more information.

We hope that the above and enclosed properly addresses the Committee's concerns. We will be pleased to answer any further questions when we appear in front of the Committee on April 7th, 2014.

Sincerely

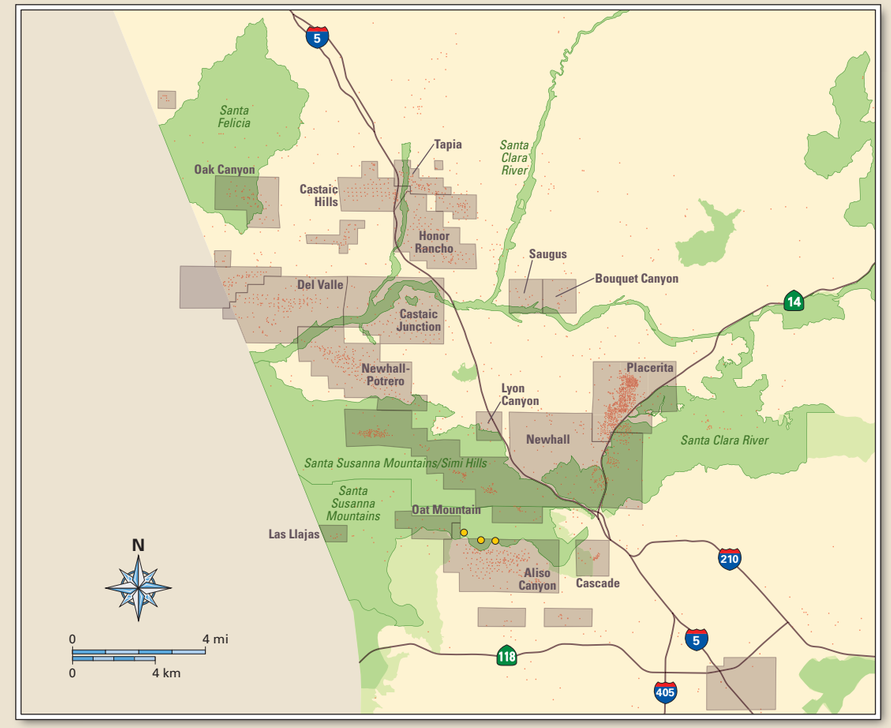
Ralph Combs
Manager, Corporate Development
The Termo Company

Encl:
Appendix One: Spill Prevention Information
Appendix Two: Pipeline Construction Information
Appendix Three: SEA and Oil Field Overlay Information

Appendix One: SEA and Oil Field Overlay Information

SEAs and Oil and Gas Development

- Map of Oil and Gas Wells within LA County Significant Ecological Areas



Oil and Gas Wells within Los Angeles County Significant Ecological Areas

- Significant Ecological Areas[1]
- Proposed Significant Ecological Areas[2]
- Division of Oil and Gas (DOG) Fields[3]
- Well[4]
- Project site

Overlapping SEAs and DOG Fields are labelled.
Data sources:
1. Los Angeles County Data Portal: Significant Ecological Areas (SEA) – Existing/Adopted
egis3.lacounty.gov/dataportal/category/theme/environmental
2. Los Angeles County Data Portal: Significant Ecological Areas (SEA) – Proposed
egis3.lacounty.gov/dataportal/category/theme/environmental
3. Department of Conservation: Field Boundaries
www.conservation.ca.gov/dog/maps/Pages/GISMapping2.aspx
4. Department of Conservation: AllWells
www.conservation.ca.gov/dog/maps/Pages/GISMapping2.aspx
All data accessed January, 2014

Appendix Two: Pipeline Construction Information

Pipeline Construction Plan

- Overview including construction narrative
- Photographs of proposed routes
- Example pipeline layout

Termo – North Aliso Canyon Project – Oil and Gas Pipeline Construction Methods

Overview

Safety Overview

Every morning there will be a safety meeting involving the related work of the day and safety measures mentioned on the correct way to do the job planned, whether on flat ground, steep slopes or uneven terrain.

Onsite Construction

The construction (welding, assembly, and deployment) portion of the piping will be done on the well site(s), for safety reasons.

- Pipelines along existing roads will be laid out and welded in place
- The manifolds, test vessels, and piping will be built offsite at the C.D. Lyon facility.
- Each pipe segment will be welded on the cleared pads and with winch and cable from the top of the slope will be connected to pipe to hoist the cable up the slope while keeping it elevated above ground surface and then placed on the sleepers.
- On this job there will be two welders working together and one fire watchman working between them.

The sleepers (pipe supports) will be of concrete material with metal strips embedded in them for attachment of the pipe supports and conduit braces. The concrete supports will be held in place by sucker rod and no more than 1 inch by 3 foot lengths hammered into the soil.

Welding Onsite

All welding will be done on the created pads or on existing roads.

- It will be Termo's decision if they would like to sign the hot work permit for the day filled out by the C.D. Lyon personnel.
- Trained fire watchmen will be onsite at all times.
- All welders will be required to have 20 to 30 pound dry chemical fire extinguishers on the welding trucks.
- There will be one 300 gal “water buffalo” for fire protection for the welders run by the fire watchman and a 2,000 gallon water truck with a fire-gun for dust control and extra fire protection.

Post Construction Testing

After installation, all piping in the field will be hydro-tested to the flange ratings on the pipe.

Termo – North Aliso Canyon Project – Oil and Gas Pipeline Construction Methods

Work Details

Daily Traffic and Personnel on Site

Number of Men	Job Description	Equipment	Number of Pieces of Equipment
1	Operator	Backhoe / End-loader	1
2	Welders	Welding Trucks	2
1	Fire Watchman	300 gallon Water Buffalo	1
1	Water Truck operator	2000 gallon Water Truck	1
1	A frame operator	End loader with cable winch	1
1	Superintendent	Truck	1
		Equipment Truck	1
		Transport	1
7 Total			9 Total
Please note that equipment such as the water buffalo and cable winch will be brought in at beginning of job and left on site until completion of work. Estimated daily traffic would be 4 to 5 passenger pickup trucks.			

Fire Prevention Measures

As mentioned above C.D. Lyon's daily Job Safety Analysis (JSA) includes fire prevention related safety. In this JSA a 'hot work permit' is required. All combustibles within 35 feet are removed. A trained fire watchman will be with the welders at all times and will hold over 30 minutes after all hot work related items are completed. A 300 gallon gas fired water buffalo will be with the fire watchman at all times and the 2,000 gallon water truck with fire nozzle will be in the general area.

Each welder will have a 20 to 30 pound dry chemical fire extinguisher on their trucks. C.D. Lyon has a Uniform Fire Code Permit, Job ID# UFC06-02342, issued for Hot Work / Welding for mobile operations which complies with 2000 Uniform Fire Code Article 49. All welders will follow the Article 49 Code and have the required equipment in compliance with this code.

Work Details (Continued)

Work Days per Site

Site Prep & Layout – 5 days per Site

Five days allotted for a Project Manager, Design Welder, and helper to visit the site, lay out the drawings for piping, concrete pad, and manifolds for first phase of the work. Meetings with Termo personnel to go over existing plans on site equipment.

Purchase & Receive Material – 5 days

Five days of purchasing materials, receiving, and laying out work for shop welders to start fabrication of vessels, piping, and manifolds for installation at job site.

Shop Fabrication – 45 days (15 days per Site)

Fabrication will be done at the C.D. Lyon facility in Ventura and delivered to the job site – welding and coating manifolds, 2 inch piping, test separators, gas scrubbers and piping for the manifolds, and constructing the manifolds themselves.

Well Site #1 – 25 days

The 25 days consist of connecting all 2 inch piping to the wells, oil side of the well will have valving to direct flow into a test separator as needed and valving to direct flow into a 4 inch manifold with the manifold having valving to 4 inch line leaving the well site. The gas side of the well will come off the wells with 2 inch pipe. The 2 inch pipe will be connected to a 4 inch manifold, the 4 inch manifold will go to the gas scrubber, and the gas scrubber will be attached to the 4 inch line leaving the well site. As lines leave the pad, they will follow an existing, cleared area to the road. This site has an estimated distance of 2,500 feet to the main trunk line, with 2 each 4 inch lines leaving the well site. These lines leaving the well site will be built as they follow the road going to the main trunk line. The pipe will be laid on concrete sleepers following the contour of the road.

Well Site #2 – 15 days

The 15 days consist of connecting all 2 inch piping to the wells, oil side of the well will have valving to direct flow into a test separator as needed and valving to direct flow into a 4inch manifold with the manifold having valving to 4 inch line leaving the well site. The gas side of the well will come off the wells with 2 inch pipe. The 2 inch pipe will be connected to a 4 inch manifold, the 4 inch manifold will go to the gas scrubber, and the gas scrubber will be attached to the 4 inch line leaving the well site. This site has an estimated distance of 1,700 feet to the main trunk line, with 2 each 4 inch lines leaving the well site. These lines leaving the well site will be built as they follow the road going to the main trunk line. The pipe will be laid on concrete sleepers following the contour of the road.

Well Site #3 – 10 days

The 10 days consist of connecting all 2 inch piping to the wells, oil side of the well will have valving to direct flow into a test separator as needed and valving to direct flow into a 4 inch manifold with the manifold having valving to 4 inch line leaving the well site. The gas side of the well will come off the wells with 2 inch pipe. The 2 inch pipe will be connected to a 4 inch manifold, the 4 inch manifold will go to the gas scrubber, and the gas scrubber will be attached to the 4 inch line leaving the well site. This site will utilize an existing clearing away from the main road, going up the hillside from the pad in existing open areas. The clearing

will be wide enough to lay the concrete sleepers to the contours of the land and where necessary pipe supports will be installed for the piping before it is attached to the main trunk line.

Main Trunk line – 105 days

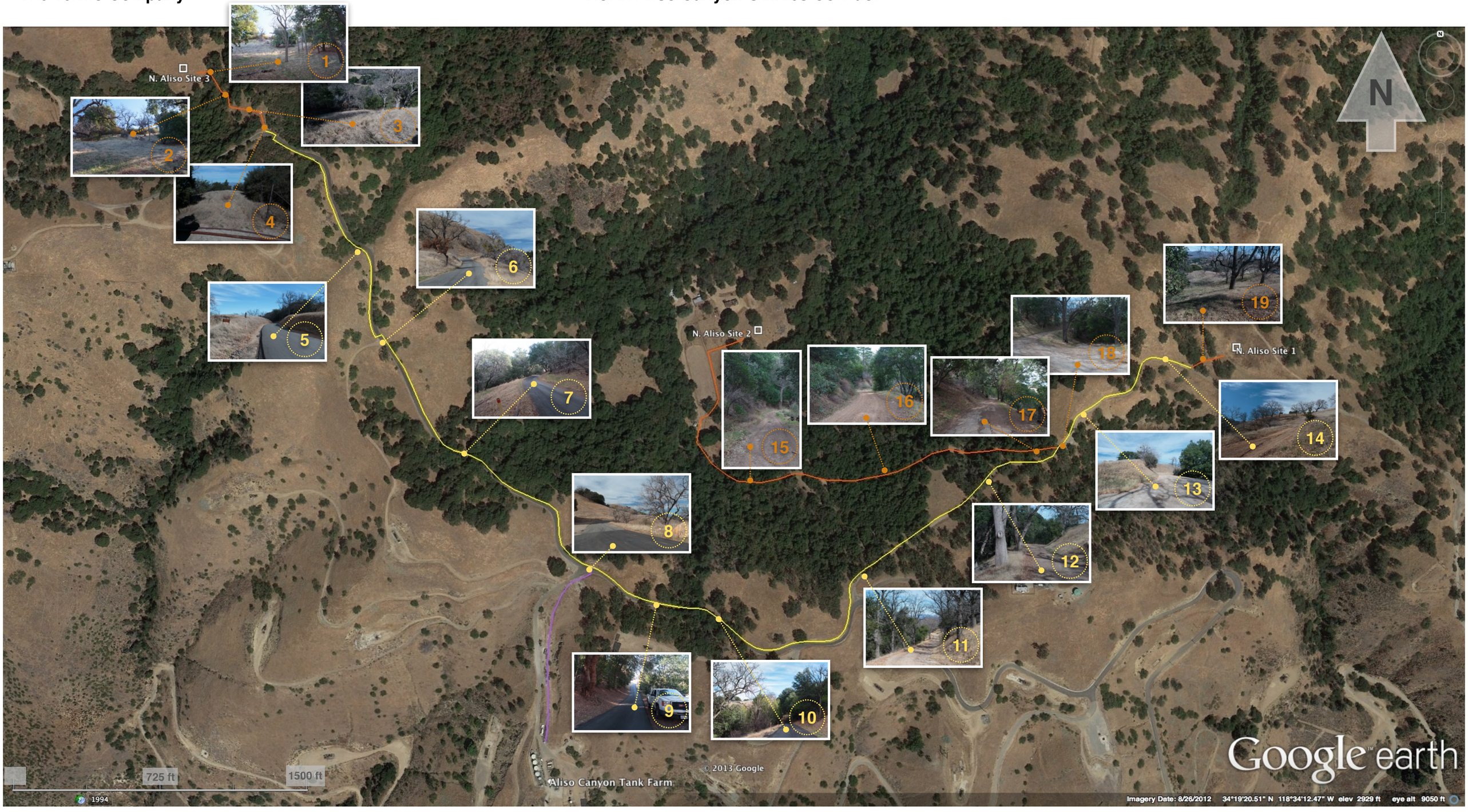
The 105 days consist of starting at the main asphalt road leading off to site 1; this installation will consist of 215 pipe supports. Each well site will have valving to isolate each site. At each road site adjacent to the well site the pipe will be ran under the road, and then brought back to the supports. Once the piping reaches the road to the tank farm the piping will be laid on concrete supports. This run also includes the 4 inch piping going to the field sites.

Hydrotest flowlines – 10 days

The 10 days consist of hydrotesting each line that was built in the field.

This document has be prepared by Kavin DeWitt of C.D. Lyon and reviewed and modified by Ralph Combs of Termo. Outline of work is based on field visits with C.D. Lyon and Termo. While a good faith effort has been made to describe all work procedures and timing, circumstances are subject to change based on factors beyond Contractor or Termo's control.

North Aliso Canyon Utilities Corridor



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Examples of Concrete Style 'Sleepers' for Flow Line Pipe Support

Allows for surface installation and support of pipe with minimal ground disturbance. Possible application for the North Aliso Canyon Project.

Example 1 (above and below) – Concrete formed supports about 5' x 1' x 1' with holes for sucker rod anchors

Example 2 (above) – Smaller concrete parking stop style in different sizes with holes for sucker rod anchors

Example 3 (above) – Concrete with preset metal bracket to allow additional support or brackets to be welded on

Image above shows application on a steep hill. Pipe would have to be anchored at the top.

Spill Prevention, Containment, and Control in the North Aliso Canyon Field

Prevention

- Spills are prevented from occurring through operational and engineering controls.
- Operational controls include daily inspections of the well site and equipment, maintaining equipment in good working order, and conducting routine testing on equipment to ensure possible failure points are identified early and corrected.
- Engineering controls include automated monitoring and control equipment which will shut down a pumping well and cease flow. These may include pressure monitors on pipelines and overflow monitors on tanks and equipment.

Containment

- Storage tanks containing crude oil and produced water are located outside of the SEA and are contained within concrete structures that are designed (in accordance with EPA regulations) to contain the volume of the largest tank plus precipitation from a 25 year, 24 hour storm event.
- Vessels which oil may flow through are placed within concrete containment.
- Drip pans and catch basins are used in loading areas to catch any potential dripping from shipping connections with trucks.

Control

- Staff is on call 24 hours to respond to any unintended releases of crude oil.
- Personal undergo Spill Response Training as mandated by the US EPA and CA DOGGR.
- Containment kits are kept on site for immediate deployment.
- Drainages are identified in advance for control equipment deployment to prevent any oil from leaving the sites.
- Emergency response company under contract.

Regulatory Oversight

- Regulatory oversight of oil field spill control and containment is the purview of the United States Environmental Protection Agency (USEPA) and the California Department of Conservation – Division of Oil, Gas, and Geothermal Resources (DOGGR).
- Plans are prepared for both Agencies – Spill Prevention Control and Countermeasures Plan (SPCC) for the EPA and the Production Facility Spill Contingency Plan for DOGGR.
- Regulations require documented inspection of facilities on a regular basis, regular training, and coordinated response.
- In the case of a release, response oversight may be coordinated by EPA, the company, DOGGR, or another agency depending on the size and potential impact of the release.

Please see the following existing DOGGR Spill Containment Plans prepared for Termo's Aliso Canyon and Oat Mountain Fields (adjacent to the proposed North Aliso Canyon Field) for additional information.

THE TERMO COMPANY
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SPILL CONTROL PLAN

- **Oat Mountain Field (519)**
- **Multiple Leases**

Supervisor – Jeff Muth

QUICK ACTION CHECKLIST FOR INITIAL SPILL RESPONSE

If the Incident involves Fire, Explosions, Medical Emergencies, or other potentially catastrophic incidents, call 911 immediately and then follow the remaining procedures.

Upon discovery or notification of a discharge, the employee or contractor must:

ASSESS, DETERMINE, RESPOND

- ☐ Take appropriate personal protective measures
- ☐ Call for medical assistance if an injury has occurred
- ☐ If safe and possible, shut off or contain the source of the discharge
- ☐ Determine if there is a fire, explosion or location of an ignition source near the leak source or discharge point
- ☐ If safe and possible, eliminate any ignition sources to prevent potentially catastrophic events
- ☐ If safe and possible, prevent the discharge from entering the storm drain or sewer system
- ☐ Restrict access to the spill site and adjacent area as the situation demands
- ☐ Activate Response Team / Notify management and notify Response Contractors as necessary
- ☐ Advise personnel in the area of any potential threat and / or initiate evacuation procedures
- ☐ Take any other steps necessary to minimize any threat to health and safety

REPORT

- ☐ Identify what is being discharged and what approximate rate
- ☐ Determine source of discharge and the estimated amount of the discharge
- ☐ Obtain precise location of discharge in relation to streets, building, landmarks, and addresses
- ☐ Determine waterways, storm drains and sewers, near or entered by the discharge
- ☐ Determine time and date the discharge was discovered and reported
- ☐ Contact Supervisor and describe the location, severity and status of discharge
- ☐ If safe, remain at the discharge site until the Supervisor arrives
- ☐ Notify CEMA at (800) 852-7550 and other government agencies

LISTA DE COMPROBACIÓN DE ACCIÓN RÁPIDA PARA RESPUESTA A DERRAMES INICIAL

Si el incidente involucra fuego, explosiones, emergencias médicas o incidentes potencialmente catastróficos, llame inmediatamente al 911 y siga los procedimientos restantes.

EVALUAR, DETERMINAR, RESPONDER

- ☐ Tomar medidas de protección personales apropiadas
- ☐ Solicite asistencia médica si se ha producido una herida
- ☐ Si seguro y posible, apague o contener la fuente de la descarga
- ☐ Determine si hay un incendio, explosión o ubicación de una fuente de ignición cerca del punto de origen o descarga de fugas
- ☐ Si seguro y posible, elimine cualquier fuente de ignición para prevenir eventos potencialmente catastróficos
- ☐ Si seguro y posible, impedir la descarga del sistema de desagüe o alcantarilla de tormenta
- ☐ Restringir el acceso al sitio del derrame y área adyacente como la situación lo exige
- ☐ Activar Equipo de Respuesta / notificar a la administración y notificar Contratistas de Respuesta según sea necesario
- ☐ Aconseje a personal en el área de cualquier amenaza potencial e iniciar los procedimientos de evacuación
- ☐ Tomar otras medidas necesarias para minimizar cualquier amenaza a la salud y seguridad

REPORTAJE

- ☐ Identificar lo que está siendo descargada y qué tasa aproximada
- ☐ Determinar la fuente de la descarga y la cuantía estimada de la descarga
- ☐ Obtener la ubicación exacta de la descarga en lo referente a las calles, edificio, hitos y direcciones
- ☐ Determinar las vías navegables, desagües pluviales y alcantarillas, cerca o introducidas por la descarga
- ☐ Determinar la fecha y la hora la descarga fue descubierta y reportada
- ☐ Póngase en contacto con el Supervisor y describir la localización, gravedad y estado de la descarga
- ☐ Si es seguro, permanecen en el sitio de descarga hasta que llegue el Supervisor
- ☐ Notificar a CEMA en (800) 852-7550 y otras agencias gubernamentales

PRODUCTION FACILITY SPILL CONTINGENCY PLAN (CCR 1722.9), OAT MOUNTAIN UNIT,
THE TERMO COMPANY, LONG BEACH, CALIFORNIA

Operator Name, Address, Phone, Contact		**Facility Name, Address, Phone, Contact**
Name:	The Termo Company	Oat Mountain Field
Address:	P.O. Box 2767	12801 Tampa Ave.
City, State, Zip:	Long Beach, CA 90801	Northridge, CA 91326
Phone:	562-595-7401	818-341-0523
Contact:	Norbert W. Buss	Jeff Muth
email:	billb@termoco.com	jeffm@termoco.com
Field/Lease:	Oat Mountain Field	**County:** Los Angeles
Sec. 19 **Twn.** 3N **Rge.** 16W		**Offshore:** Y (N)

Additional Facilities, Fields, Leases, Sections, Townships, Ranges, etc.:

The Oat Mountain Field consists of 3 leases located in Township 3N Range 16W: Del Aliso Lease (Section 19), Oat Mountain Lease (Sections 24 and 19) and GardettLease (Section 20).

A 24-Hour Emergency Contact Information [CCR 1722.9(a)]

	Name	Job Title	Telephone/Cell Number
1	Jeff Muth	Supervisor	818-341-0523/805-432-0083
2	Sonny Ordoyne	Senior Operator	818-341-0523/805-432-4777
3	Nathan Smith	Roustabout	818-341-0523/562-537-4257
4	Rae Lynne Black	HSE Manager	562-279-1936/714-293-1991
5	Bill Buss	Vice President Operations	562-279-1938/562-254-0118

B Available Personal Protective/Safety Equipment

	Type	Location	Maintenance Frequency
1	Hard Hats	Operators Truck	Manufacturers guidelines
2	Safety Glasses/Safety Goggles	Operators Truck	Manufacturers guidelines
3	Chemical Protective Boots	Operators Truck	Manufacturers guidelines
4	Chemical Protective Gloves	Operators Truck	Manufacturers guidelines
5	First Aid Kit/Station	Operators Truck	Manufacturers guidelines

C Initial Stage Quick Action Checklist

Discovery of oil releases will be the responsibility of on-site personnel during routine and non-routine daily inspections at the beginning of each day and during facility operations. In the event of a release, TTC will follow the spill response procedures outlined in the Spill Response Procedures included in the site SPCC plan. Personnel safety will be the first priority followed by restricting access to the spill area. The on-site manager will notify the appropriate state and federal agencies listed in the Contacts List in Section D of this document. If the size of the release requires additional personnel for prevention of off-site migration of the released material, TTC will contact a qualified environmental spill response contractor. A flowchart of the oil spill notification procedures has been included as Attachment A.

D Government Agency Notification List

	Agency	Telephone Number
1	Fire Department	911
2	Local Police	911
3	National Response Center (NRC)	800-424-8802
4	Division of Oil, Gas and Geothermal Resources (District 2)	805-654-4761
5	California Emergency Management Agency (CEMA)	800-852-7550
6	Certified Unified Program Agencies (CUPA's)	323-890-4317 (LA County Fire Dept.)
7	Environmental Protection Agency (EPA)	800-300-2193
8	Department of Fish and Game (OSPR) (If Threat to Waterway)	800-852-7550 or 800-OILS-911
9	Dept. Toxic Substances Control (DTSC) (Toxic Spills Only)	800-698-6942
10	Regional Water Quality Control Board (Region 4)	213-576-6600

E Spill Control/Cleanup Equipment Available Either Onsite or in Another Location

	Equipment	Onsite Location or Contact/Requisition Procedures
1	Empty 55-gallon drums	Tank Farm
2	Absorbent socks	Located inside drum
3	Loose absorbent material	Located inside drum
4	2 ft x 3 ft absorbent pads	Located inside drum
5	Nitrile gloves	Located inside drum
6	Neoprene gloves	Located inside drum
7	Vinyl/PVC pull-on overboots	Located inside drum
8	Shovels/Brooms	Located inside drum
9	Sand bags	Located inside drum
10	Combustible Gas Indicator	Located inside drum

F Map of Production Facilities Including the Location and Labeling of:

1. Permanent Tanks
2. Equipment
3. Pipelines
4. Access Roads for Emergency Response
5. All Out-of-Service Equipment
6. Sumps and Catch Basins
7. Tank & Storage Container Volumes with Contents Stored
8. Designated Waterways within 1/4 mile of Facility
9. Secondary Containment with Access Routes
10. Topography or Drainage Flow Direction
11. Storm Drains within 1/4 mile of Site
12. A Fluid Flow Schematic

Note: These Maps are included as Attachment B

G Chemicals that Require a Material Safety Data Sheet and the Location of those Sheets

	Chemical	MSDS Location		Chemical	MSDS Location
1	Crude Oil	Oat Mountain Field and Main Office	11		
2	Produced Gas	Oat Mountain Field and Main Office	12		
3	DMO-8008U-Demulsifier	Oat Mountain Field and Main Office	13		
4	CRW9133-Corrosion Inhibitor	Oat Mountain Field and Main Office	14		
5	HSW-700-Hydrogen Sulfide Scav	Oat Mountain Field and Main Office	15		
6	DFO-91-Defoamer	Oat Mountain Field and Main Office	16		
7	X-Cide-105-Industrial Bactericide	Oat Mountain Field and Main Office	17		
8			18		
9			19		
10			20		

H Procedures for Making Regular Facility Inspections and Maintenance of Inspection Records

1 Description of Inspection Procedures: [reference CCR 1773.3(b)]

Inspections and tests will be performed by personnel trained to operate and maintain oil production equipment. Visual inspections are conducted on containers/tanks for leaks, maintenance needs, and operational status. The bottom section of each container will be inspected to ensure the containers are properly stabilized. Above ground flow lines will be visually inspected with a focus on identifying leaks and corroded pipes. Secondary containment structures will be inspected daily for presence of leaks or breaches in the earthen berms. Drainage ditches will be inspected daily during routine operational examinations. Please see Attachment C for inspection guidelines.

H Procedures for Making Regular Facility Inspections and Maintenance of Inspection Records (continued)

2 Maintenance of Inspection Records: [reference CCR 1777.3]

Facility personnel will document inspections on the Daily Inspection Form included in Attachment C. Administrative records of oil and produced water volumes will be reconciled to detect leaks in piping and/or tanks. Inspections records will be maintained by the facility supervisor and may be made available upon request.

I Produced Fluid Processing Rates

	Facility	Typical Rate	Maximum Rate
1	Del Aliso 1-1	49 bbl/day	86 bbl/day
2	Del Aliso 1-2	27 bbl/day	43 bbl/day
3	Del Aliso 1-3	46 bbl/day	68 bbl/day
4	Del Aliso 1-4	153 bbl/day	209 bbl/day
5	Oat Mountain 1-24	73 bbl/day	110 bbl/day
6	Oat Mountain 2-24	47 bbl/day	86 bbl/day
7	Oat Mountain 3-19	36 bbl/day	59 bbl/day
8	Oat Mountain 4-24	16 bbl/day	41 bbl/day
9	Oat Mountain 5-19	71 bbl/day	97 bbl/day
10	Gardett 2-20	31 bbl/day	45 bbl/day

J Typical Volumes of Liquids Stored at the Facility

	Facility	Typical Volume		Facility	Typical Volume
1	Crude Oil Bulk Storage Tank	1,000 bbl	6		
2	Crude Oil Bulk Storage Tank	1,000 bbl	7		
3	Wastewater Bulk Storage Tank	1,000 bbl	8		
4	Oil/Brine Water Storage Tank	250 bbl	9		
5			10		

K List of additional containment features for production facilities in drainages with direct access to waterways or urban areas as determined by the Supervisor.

1 Facility: Has direct access to waterways [X] Is in an urban area [ ]
Additional Containment Feature(s)

Facility has concrete block walls around applicable facilities to prevent discharge to waterways.

2 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

3 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

4 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

L Corrosion Prevention or Corrosion Monitoring Techniques Utilized

1 Bulk storage tanks are painted to prevent corrosion

2 New and replaced buried flowlines will be wrapped/coated and/or cathodically protected to reduce corrosion

3 New and replacement pipe supports are designed to minimize abrasion and corrosion, and allow for expansion and contraction

4 Existing pipe supports are inspected routinely for signs of abrasion/corrosion

5 When buried flowlines or gathering lines are installed, repaired, or replaced; the pipes will be visually inspected for corrosion

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M Description of All Installed Sensor and Alarm Systems

1 Overpressure and power loss sensor for fluid diversion to spare tank capacity

2 Operational conditions at this faicility do not require additional sensor and alarm systems

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N Description of the Training Provided to Implement the Spill Contingency Plan

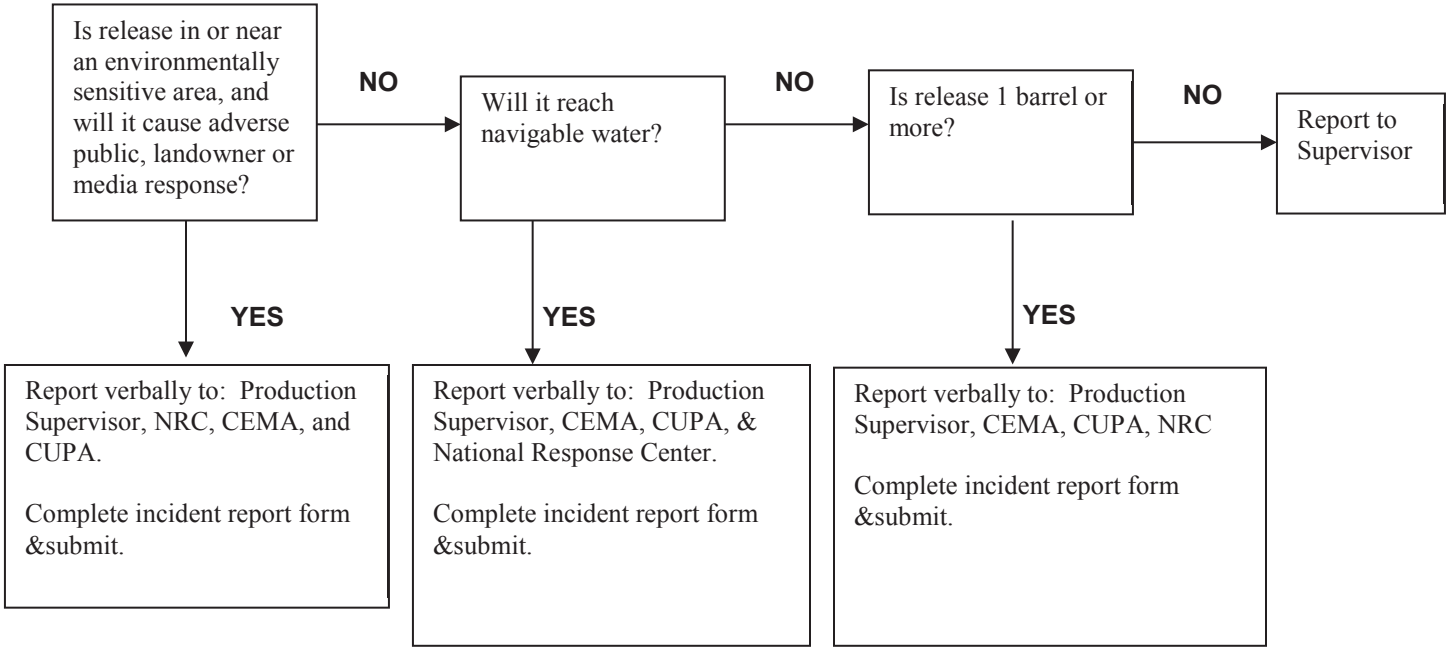
The Termo Company (TTC) has established and maintains an ongoing training program to ensure that TTC personnel responding to oil discharges are properly trained and that all necessary equipment is available to them. The program includes on-the-job training on the proper deployment of response equipment and periodic practice drills during which TTC personnel are asked to deploy equipment and material in response to a simulated discharge. The Production Supervisor is responsible for implementing and evaluating employee preparedness training.

Additions, Additional Comments:

ATTACHMENT A

OIL SPILL NOTIFICATION PROCEDURES

ATTACHMENT A. SPILL REPORTING FLOWCHART
DRILLING, COMPLETION, AND PRODUCTION OPERATIONS
OIL, CONDENSATE, AND PRODUCED WATER SPILL RESPONSE

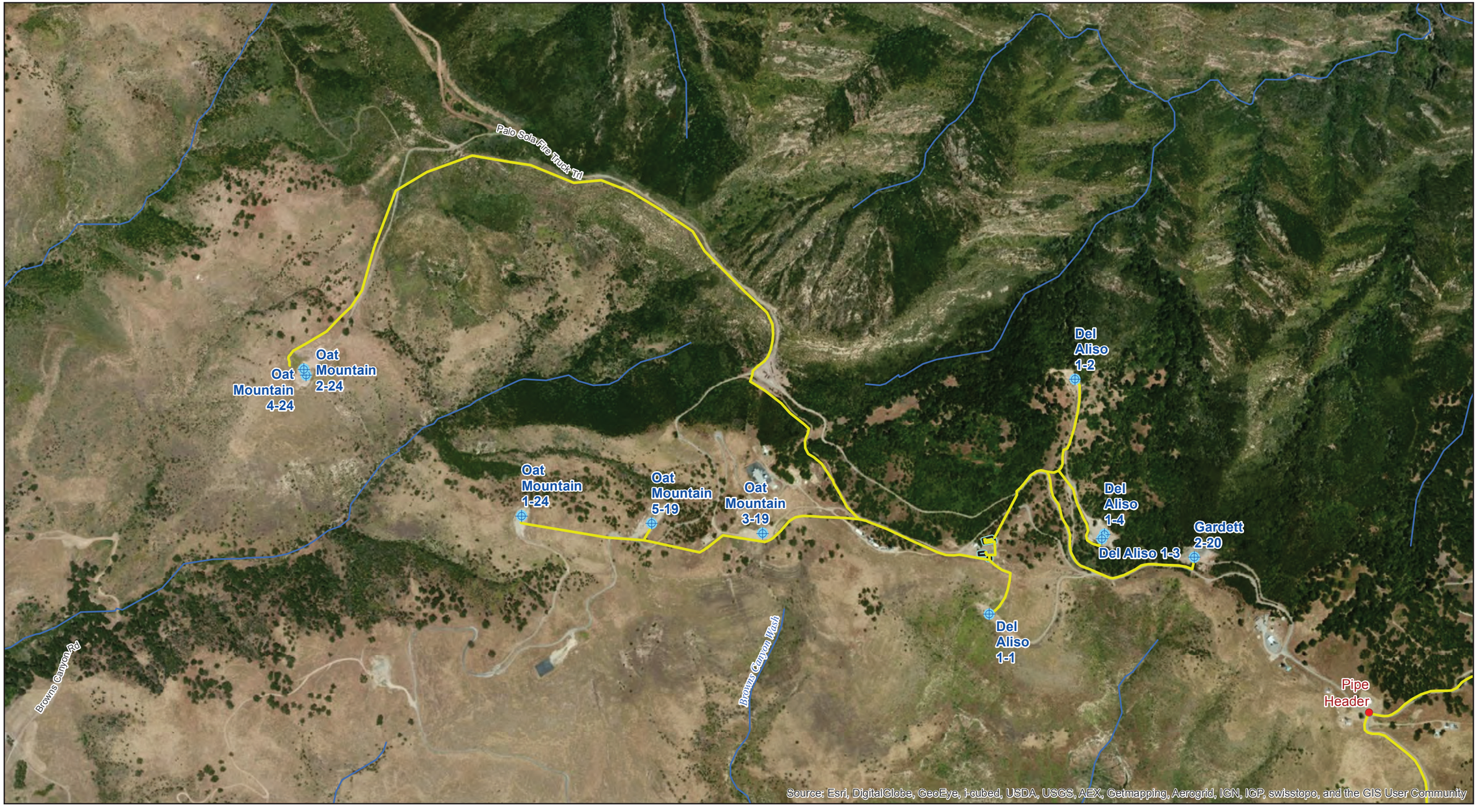


IMPORTANT PHONE NUMBERS

National Response Center (24-Hour)	(800) 424-8802
California Emergency Management Agency	(800) 852-7550
USEPA Region 9	(866) 372-9378
Patriot Environmental Services (24 Hour Spill Response Hotline)	(800) 624-9136

ATTACHMENT B

PRODUCTION FACILITY MAPS



EXPLANATION

- SITE FEATURE
- ACTIVE WELL
- INACTIVE WELL
- STORM DRAIN (SEE NOTE 1)
- CATCH BASIN (SEE NOTE 2)
- SITE ACCESS
- APPROXIMATE PIPELINE ALIGNMENT
- CONTAINMENT

NOTES:
1. Data Sources include SYNERCOM data, Los Angeles Public Works Storm Drain section maps, 3rd party utility company construction drawings.
2. Data Sources include Los Angeles County Flood Control District and the City of Los Angeles.
3. Minor discrepancies and duplication of data may occur due to multiple data sources.

N

0 620'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, WY 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

ATTACHMENT B1

OAT MOUNTAIN LEASE

THE TERMO COMPANY
LOS ANGELES, CALIFORNIA

Drawn By: CF	Checked By: MO	Scale: As Shown	Date: 10/11/13	File: Termo_SiteLocs_LosAngeles.mxd

EXPLANATION

- SITE FEATURE
- ACTIVE WELL
- INACTIVE WELL
- STORM DRAIN (SEE NOTE 1)
- CATCH BASIN (SEE NOTE 2)
- SITE ACCESS
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NOTES:
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N

0 20'

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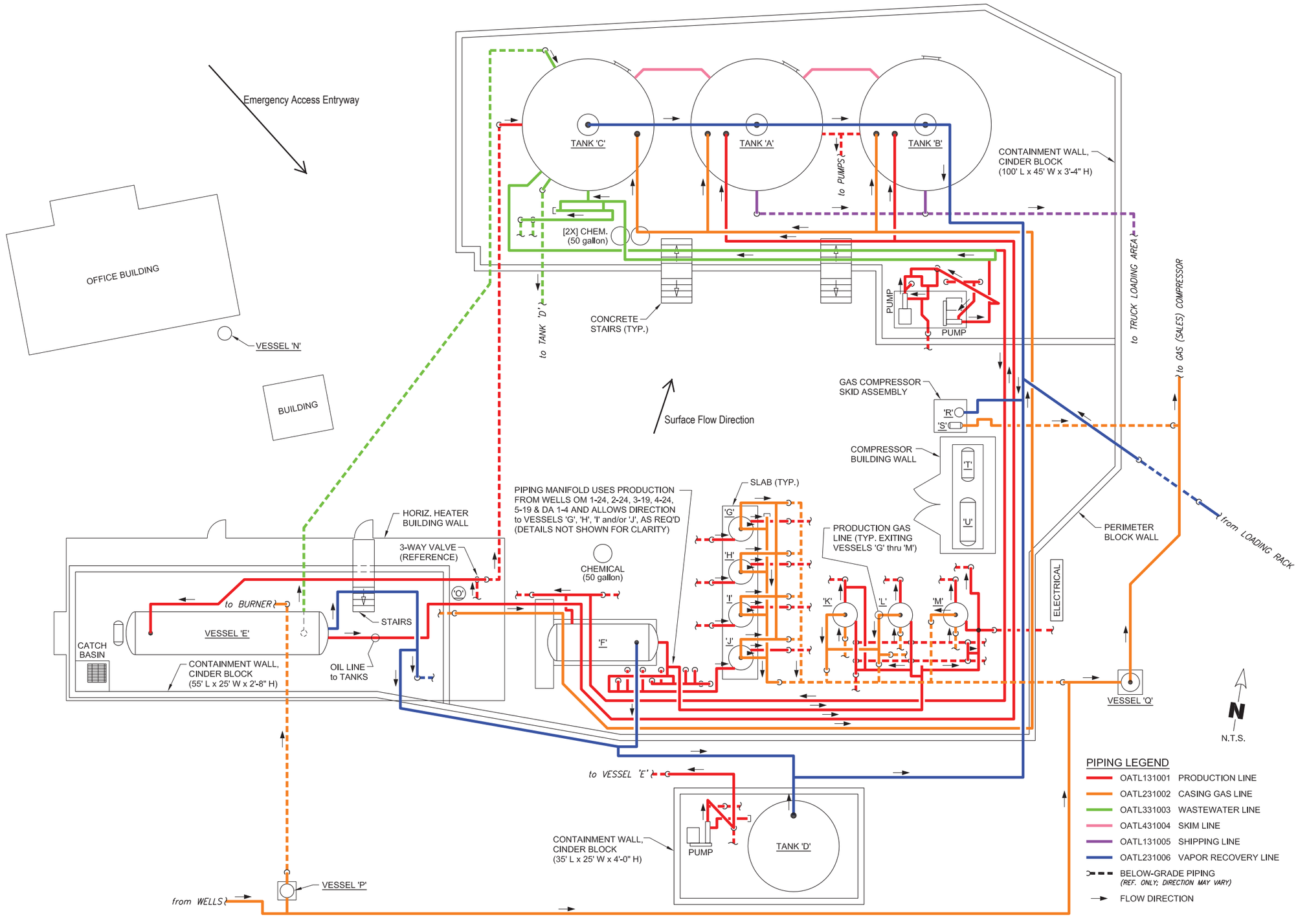
ATTACHMENT B2

OAT MOUNTAIN TANK FARM

THE TERMO COMPANY
LOS ANGELES, CALIFORNIA

Drawn By: CF	Checked By: MO	Scale: As Shown	Date: 10/11/13	File: Termo_SiteLocs_LosAngeles.mxd



ITEM	ASSET ID	DESCRIPTION
'A'	OATT111352	STOCK TANK 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'B'	OATT111353	STOCK TANK 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'C'	OATT311001	WASTEWATER TANK 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'D'	OATT311002	WASTEWATER TANK 16'-0"Ø x 8'-0" H, 250 BBL *(BOLTED-SEAM STEEL)*
'E'	OATE123162	HEATER TREATER VESSEL 7'-0"Ø x 30'-0" L *(WELDED-SEAM STEEL)*
'F'	OATE351858	FREEWATER K.O. VESSEL 6'-0"Ø x 18'-2" L *(WELDED-SEAM STEEL)*
'G'	OATE124570	TEST TRAP (O.M. #1) 4'-0"Ø x 6'-0" H *(WELDED-SEAM STEEL)*
'H'	OATE149502	TEST TRAP (O.M. POOL) 4'-0"Ø x 11'-2" H *(WELDED-SEAM STEEL)*
'I'	OATE148061	TEST TRAP (O.M. #2) 4'-0"Ø x 6'-0" H *(WELDED-SEAM STEEL)*
'J'	OATE128521	TEST TRAP (O.M. #3) 4'-0"Ø x 6'-0" H *(WELDED-SEAM STEEL)*
'K'	OATE124761	TEST TRAP (D.A. 1-3) 4'-0"Ø x 5'-0" H *(WELDED-SEAM STEEL)*
'L'	OATE111487	TEST TRAP (D.A. 1-1/1-2) 4'-0"Ø x 11'-2" H *(WELDED-SEAM STEEL)*
'M'	OATE123054	TEST TRAP (GARDETT 2-20) 4'-0"Ø x 5'-0" H *(WELDED-SEAM STEEL)*
'N'	OATE240095	GAS SCRUBBER VESSEL 10"Ø x 3'-0" H *(WELDED-SEAM STEEL)*
'O'	OATE220064	GAS SCRUBBER VESSEL 1'-4"Ø x 3'-0" H *(WELDED-SEAM STEEL)*
'P'	OATE280241	GAS SCRUBBER VESSEL 1'-4"Ø x 6'-0" H *(WELDED-SEAM STEEL)*
'Q'	OATE225360	SALES GAS SCRUBBER 2'-8"Ø x 11'-6" H *(WELDED-SEAM STEEL)*
'R'	OATE240096	COMPRESSOR VESSEL 1'-6"Ø x 4'-0" H *(WELDED-SEAM STEEL)*
'S'	OATE240097	COMPRESSOR VESSEL 1'-0"Ø x 2'-4" L *(WELDED-SEAM STEEL)*
'T'	OATE215635	COMPRESSOR VESSEL 2'-0"Ø x 5'-6" L *(WELDED-SEAM STEEL)*
'U'	OATE289175	COMPRESSOR VESSEL 2'-6"Ø x 7'-10" L *(WELDED-SEAM STEEL)*

International Energy Services Company
3445 Kashiwa St. Torrance, Ca 90505
Tel: 310 257-8222 Fax: 310 257-8220

LOCATION:	DATE:	TITLE:
OAT MOUNTAIN LEASE	08/08/13	SITE MAP
DRAWN BY: JOHN REJNIAK	SHEET: 1 of 1	CLIENT: THE TERMO COMPANY

TERMO
INDEPENDENTLY FOCUSED. PARTNERED IN DISCOVERY.

c:_projects\termo leases\oat mountain\oat mountain - site map [08-08-13].dwg saved 11/8/2013 9:39:30 AM by John Rejniak

ATTACHMENT C

SITE INSPECTION FORMS

INSPECTION FORM

INSPECTED BY _____ **DATE** _____

1. CONTAINER INSPECTION (TANKS, SEPARATORS, HEATER/TREATERS, DRUMS): Check valves & seams for leaks, cracks, punctures and excessive corrosion. Note any repairs required and any made. Note any tank testing conducted.

Container	Contents	Volume bbls	Tank Condition Poor/Fair/Good	Tanks & Lines Labeled Yes/No	Tanks Anchored Yes/No	Required Action	Date Corrective Action Taken

2. SECONDARY CONTAINMENT: Any trash, oil, weeds, water etc. in secondary containment? Containment in good condition? If stormwater is oily, fluid must be pumped from containment for proper disposal. If berm erodes, repair berm to ensure containment can retain volume of largest tank plus 2.4 inches of precipitation.

Secondary Containment Area	Containment Condition Poor/Fair/Good	Sheen or Oil Present Yes/No	Required Action	Date Corrective Action Taken

3. LOADING/UNLOADING AREAS: Inspect areas for signs of any leaks.

Loading/Unloading Area	Containment Condition Poor/Fair/Good	Stormwater Present? Yes/No	Contaminated? Yes/No

4. PIPELINES: Inspect all accessible areas and line path for leaks, cracks, punctures and excessive corrosion.
Are lines emptied and valved off during extended non use periods?

Pipelines	Status In Service/ Out of Service	Pipeline Condition Poor/Fair/Good	Required Action	Date Corrective Action Taken

5. SECURITY:	Yes	No	Required Action	Date Action Taken
Fence in good condition?				
Gate in good condition?				
Valves on tanks closed?				
Fire extinguishers operational?				
Pumps secured?				

COMMENTS:

THE TERMO COMPANY - SPILL REPORTING FORM

Report all spills to your supervisor or management. Call within 6 hours, written report within 4 days.

Incident Number: _____

Date and Time (YYYYMMDD)

Spill Date: _____ **Spill Time:** _____

Report Date: _____ **Report Time:** _____

Reported By: _____ **Reported To:** _____

Location of Spill

State: _____ **County:** _____

Lease: _____ **Well / Facility:** _____

Legal Location or Address: _____

_____

Additional Location Info: _____

Agency Notification

Agency:	Contact:	Notes:

Spill Information

Substance Spilled:		Volume Spilled (in BBLS): On Land	Volume Spilled (in BBLS): In Water	Volume Recovered:
	Oil			
	Produced Water			
	Condensate			
	Diesel			
	Other			

Media Affected:

Land		Storm Sewer	
Air		Ground Water	
Water		Surface Water	

If water is affected notify supervisors immediately.
Contact all relevant agencies immediately upon control of spill.

Containment:

	Spill contained within primary or secondary containment
	Spill contained on location
	Spill contained with control mechanisms
	Spill uncontained

Weather at time of spill:

Containment Action:

Source and Cause of Spill

Source:		Cause:	
Well Head		Accident	
Heater / Treater		Incident	
Seperator		Equipment	
Tank Farm		Failure	
Pipeline		Human Error	
Loading Rack		Other	
Other			

Notes:

Corrective Action To Prevent Reoccurance

Clean Up Action

Cost Estimates

Containment: _____ Labor: _____

Cleanup: _____ Labor: _____

Corrective Action: _____ Labor: _____

MAP AND PHYSICAL DESCRIPTION OF EVENT LOCATION

THE TERMO COMPANY
P.O. Box 2767, Long Beach, CA 90801
562.595.7401 MAIN | 562.426.2730 FAX
www.TERMOCO.com

SPILL CONTROL PLAN

- **Aliso Canyon Field (010)**
- **Multiple Leases**

Supervisor – Jeff Muth

THE TERMO COMPANY | 3275 Cherry Avenue, Long Beach, CA 90807

Field Code: 010 **Operator Code: T1200**

QUICK ACTION CHECKLIST FOR INITIAL SPILL RESPONSE

If the Incident involves Fire, Explosions, Medical Emergencies, or other potentially catastrophic incidents, call 911 immediately and then follow the remaining procedures.

Upon discovery or notification of a discharge, the employee or contractor must:

ASSESS, DETERMINE, RESPOND

- ☐ Take appropriate personal protective measures
- ☐ Call for medical assistance if an injury has occurred
- ☐ If safe and possible, shut off or contain the source of the discharge
- ☐ Determine if there is a fire, explosion or location of an ignition source near the leak source or discharge point
- ☐ If safe and possible, eliminate any ignition sources to prevent potentially catastrophic events
- ☐ If safe and possible, prevent the discharge from entering the storm drain or sewer system
- ☐ Restrict access to the spill site and adjacent area as the situation demands
- ☐ Activate Response Team / Notify management and notify Response Contractors as necessary
- ☐ Advise personnel in the area of any potential threat and / or initiate evacuation procedures
- ☐ Take any other steps necessary to minimize any threat to health and safety

REPORT

- ☐ Identify what is being discharged and what approximate rate
- ☐ Determine source of discharge and the estimated amount of the discharge
- ☐ Obtain precise location of discharge in relation to streets, building, landmarks, and addresses
- ☐ Determine waterways, storm drains and sewers, near or entered by the discharge
- ☐ Determine time and date the discharge was discovered and reported
- ☐ Contact Supervisor and describe the location, severity and status of discharge
- ☐ If safe, remain at the discharge site until the Supervisor arrives
- ☐ Notify CEMA at (800) 852-7550 and other government agencies

LISTA DE COMPROBACIÓN DE ACCIÓN RÁPIDA PARA RESPUESTA A DERRAMES INICIAL

Si el incidente involucra fuego, explosiones, emergencias médicas o incidentes potencialmente catastróficos, llame inmediatamente al 911 y siga los procedimientos restantes.

EVALUAR, DETERMINAR, RESPONDER

- ☐ Tomar medidas de protección personales apropiadas
- ☐ Solicite asistencia médica si se ha producido una herida
- ☐ Si seguro y posible, apague o contener la fuente de la descarga
- ☐ Determine si hay un incendio, explosión o ubicación de una fuente de ignición cerca del punto de origen o descarga de fugas
- ☐ Si seguro y posible, elimine cualquier fuente de ignición para prevenir eventos potencialmente catastróficos
- ☐ Si seguro y posible, impedir la descarga del sistema de desagüe o alcantarilla de tormenta
- ☐ Restringir el acceso al sitio del derrame y área adyacente como la situación lo exige
- ☐ Activar Equipo de Respuesta / notificar a la administración y notificar Contratistas de Respuesta según sea necesario
- ☐ Aconseje a personal en el área de cualquier amenaza potencial e iniciar los procedimientos de evacuación
- ☐ Tomar otras medidas necesarias para minimizar cualquier amenaza a la salud y seguridad

REPORTAJE

- ☐ Identificar lo que está siendo descargada y qué tasa aproximada
- ☐ Determinar la fuente de la descarga y la cuantía estimada de la descarga
- ☐ Obtener la ubicación exacta de la descarga en lo referente a las calles, edificio, hitos y direcciones
- ☐ Determinar las vías navegables, desagües pluviales y alcantarillas, cerca o introducidas por la descarga
- ☐ Determinar la fecha y la hora la descarga fue descubierta y reportada
- ☐ Póngase en contacto con el Supervisor y describir la localización, gravedad y estado de la descarga
- ☐ Si es seguro, permanecen en el sitio de descarga hasta que llegue el Supervisor
- ☐ Notificar a CEMA en (800) 852-7550 y otras agencias gubernamentales

PRODUCTION FACILITY SPILL CONTINGENCY PLAN (CCR 1722.9), ALISO CANYON UNIT,
THE TERMO COMPANY, LONG BEACH, CALIFORNIA

Operator Name, Address, Phone, Contact		**Facility Name, Address, Phone, Contact**
Name:	The Termo Company	Aliso Canyon Field
Address:	P.O. Box 2767	12801 Tampa Ave
City, State, Zip:	Long Beach, CA 90801	Northridge, CA 91326
Phone:	562-595-7401	818-341-0523
Contact:	Norbert W. Buss	Jeff Muth
email:	billb@termoco.com	jeffm@termoco.com
Field/Lease:	Aliso Canyon	**County:** Los Angeles
Sec. 29 **Twn.** 3N **Rge.** 16W		**Offshore:** Y (N)

Additional Facilities, Fields, Leases, Sections, Townships, Ranges, etc.:

Aliso Canyon consists of three active leases located in Township 3N Range 16W: Del Aliso, Orcutt, and Roosa are located in Section 29

A 24-Hour Emergency Contact Information [CCR 1722.9(a)]

	Name	Job Title	Telephone/Cell Number
1	Jeff Muth	Supervisor	818-341-0523/805-432-0083
2	Sonny Ordoyne	Senior Operator	818-341-0523/805-432-4777
3	Nathan Smith	Roustabout	818-341-0523/562-537-4257
4	Rae Lynne Black	HSE Manager	562-279-1936/714-293-1991
5	Bill Buss	Vice President Operations	562-279-1938/562-254-0118

B Available Personal Protective/Safety Equipment

	Type	Location	Maintenance Frequency
1	Hard Hats	Operators Truck	Manufacturers guidelines
2	Safety Glasses/Safety Goggles	Operators Truck	Manufacturers guidelines
3	Chemical Protective Boots	Operators Truck	Manufacturers guidelines
4	Chemical Protective Gloves	Operators Truck	Manufacturers guidelines
5	First Aid Kit/Station	Operators Truck	Manufacturers guidelines

C Initial Stage Quick Action Checklist

Discovery of oil releases will be the responsibility of on-site personnel during routine and non-routine daily inspections at the beginning of each day and during facility operations. In the event of a release, TTC will follow the spill response procedures outlined in the Spill Response Procedures included in the site SPCC plan. Personnel safety will be the first priority followed by restricting access to the spill area. The on-site manager will notify the appropriate state and federal agencies listed in the Contacts List in Section D of this document. If the size of the release requires additional personnel for prevention of off-site migration of the released material, TTC will contact a qualified environmental spill response contractor. A flowchart of the oil spill notification procedures has been included as Attachment A.

D Government Agency Notification List

	Agency	Telephone Number
1	Fire Department	911
2	Local Police	911
3	National Response Center (NRC)	800-424-8802
4	Division of Oil, Gas and Geothermal Resources (District 2)	805-654-4761
5	California Emergency Management Agency (CEMA)	800-852-7550
6	Certified Unified Program Agencies (CUPA's)	323-890-4317 (LA County Fire Dept.)
7	Environmental Protection Agency (EPA)	800-300-2193
8	Department of Fish and Game (OSPR) (If Threat to Waterway)	800-852-7550 or 800-OILS-911
9	Dept. Toxic Substances Control (DTSC) (Toxic Spills Only)	800-698-6942
10	Regional Water Quality Control Board (Region 4)	213-576-6600

E Spill Control/Cleanup Equipment Available Either Onsite or in Another Location

	Equipment	Onsite Location or Contact/Requisition Procedures
1	Empty 55-gallon drums	Tank Farm
2	Absorbent socks	Located inside drum
3	Loose absorbent material	Located inside drum
4	2 ft x 3 ft absorbent pads	Located inside drum
5	Nitrile gloves	Located inside drum
6	Neoprene gloves	Located inside drum
7	Vinyl/PVC pull-on overboots	Located inside drum
8	Shovels/Brooms	Located inside drum
9	Sand bags	Located inside drum
10	Combustible Gas Indicator	Located inside drum

F Map of Production Facilities Including the Location and Labeling of:

1. Permanent Tanks
2. Equipment
3. Pipelines
4. Access Roads for Emergency Response
5. All Out-of-Service Equipment
6. Sumps and Catch Basins
7. Tank & Storage Container Volumes with Contents Stored
8. Designated Waterways within 1/4 mile of Facility
9. Secondary Containment with Access Routes
10. Topography or Drainage Flow Direction
11. Storm Drains within 1/4 mile of Site
12. A Fluid Flow Schematic

Note: This Map is included as Attachment B

G Chemicals that Require a Material Safety Data Sheet and the Location of those Sheets

	Chemical	MSDS Location		Chemical	MSDS Location
1	Crude Oil	Oat Mountain Field Office	9	CRW-9123-Water Clarifier	Oat Mountain Field Office
2	Produced Gas	Oat Mountain Field Office	10		
3	DMO -2030-Demulsifier	Oat Mountain Field Office	11		
4	X-Cide-402-Bactericide	Oat Mountain Field Office	12		
5	SRW-156-Scale Inhibitor	Oat Mountain Field Office	13		
6	OSW-5200 O_2 Scavenger	Oat Mountain Field Office	14		
7	X-CIDE-105-Bactericide	Oat Mountain Field Office	15		
8	DMO-8008U-Demulsifier	Oat Mountain Field Office	16		

H Procedures for Making Regular Facility Inspections and Maintenance of Inspection Records

1 Description of Inspection Procedures: [reference CCR 1773.3(b)]

Inspections and tests will be performed by personnel trained to operate and maintain oil production equipment. Visual inspections are conducted on containers/tanks for leaks, maintenance needs, and operational status. The bottom section of each container will be inspected to ensure the containers are properly stabilized. Above ground flow lines will be visually inspected with a focus on identifying leaks and corroded pipes. Secondary containment structures will be inspected daily for presence of leaks or breaches in the earthen berms. Drainage ditches will be inspected daily during routine operational examinations. Please see Attachment C for inspection guidelines.

H Procedures for Making Regular Facility Inspections and Maintenance of Inspection Records (continued)

2 Maintenance of Inspection Records: [reference CCR 1777.3]

Facility personnel will document inspections on the Daily Inspection Form included in Attachment C. Administrative records of oil and produced water volumes will be reconciled to detect leaks in piping and/or tanks. Inspections records will be maintained by the facility supervisor and may be made available upon request. Please see Attachment C for inspection guidelines.

I Produced Fluid Processing Rates

	Facility	Typical Rate	Maximum Rate
1	Del Aliso #4	15 bbl/day	61 bbl/day
2	Del Aliso #5	15 bbl/day	71 bb/day
3	Del Aliso #6A	21 bbl/day	35 bbl/day
4	Del Aliso #7A	31 bbl/day	39 bbl/day
5	Del Aliso #8B	71 bbl/day	93 bbl/day
6	Del Aliso #9	26 bbl/day	69 bbl/day
7	Del Aliso #10	6 bbl/day	38 bbl/day
8	Del Aliso #11	22 bbl/day	168 bbl/day
9	Orcutt #1	130 bbl/day	157 bbl/day
10	Roosa #1	18 bbl/day	22 bbl/day
11	Roosa #2	67 bbl/day	75 bbl/day
12	Roosa #3	70 bbl/day	85 bbl/day
13	Roosa #4	148 bbl/day	196 bbl/day

J Typical Volumes of Liquids Stored at the Facility

	Facility	Typical Volume		Facility	Typical Volume
1	Crude Oil Bulk Storage Tank	1,000 bbl	6	Brine Storage Tank	1,000 bbl
2	Crude Oil Bulk Storage Tank	1,000 bbl	7	Oil/Brine Bulk Storage Tank	250 bbl
3	Crude Oil Bulk Storage Tank	1,000 bbl	8		
4	Crude Oil Bulk Storage Tank	400 bbl	9		
5	Crude Oil Bulk Storage Tank	250 bbl	10		

K List of additional containment features for production facilities in drainages with direct access to waterways or urban areas as determined by the Supervisor.

1 Facility: Has direct access to waterways [X] Is in an urban area [ ]
Additional Containment Feature(s)

Facility has concrete block walls around facilities to prevent discharge to waterways.

2 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

3 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

4 Facility: Has direct access to waterways [ ] Is in an urban area [ ]
Additional Containment Feature(s)

L Corrosion Prevention or Corrosion Monitoring Techniques Utilized

1 Bulk storage tanks are painted to prevent corrosion

2 New and replaced buried flow lines will be wrapped/coated and/or cathodically protected to reduce corrosion

3 New and replacement pipe supports are designed to minimize abrasion and corrosion, and allow for expansion and contraction

4 Existing pipe supports are inspected routinely for signs of abrasion/corrosion

5 When buried flow lines or gathering lines are installed, repaired, or replaced; the pipes will be visually inspected for corrosion

6

7

M Description of All Installed Sensor and Alarm Systems

1 Each facility is equipped with an overflow shut off system

2 Operational conditions do not necessitate additional sensor and alarm systems

3

4

5

N Description of the Training Provided to Implement the Spill Contingency Plan

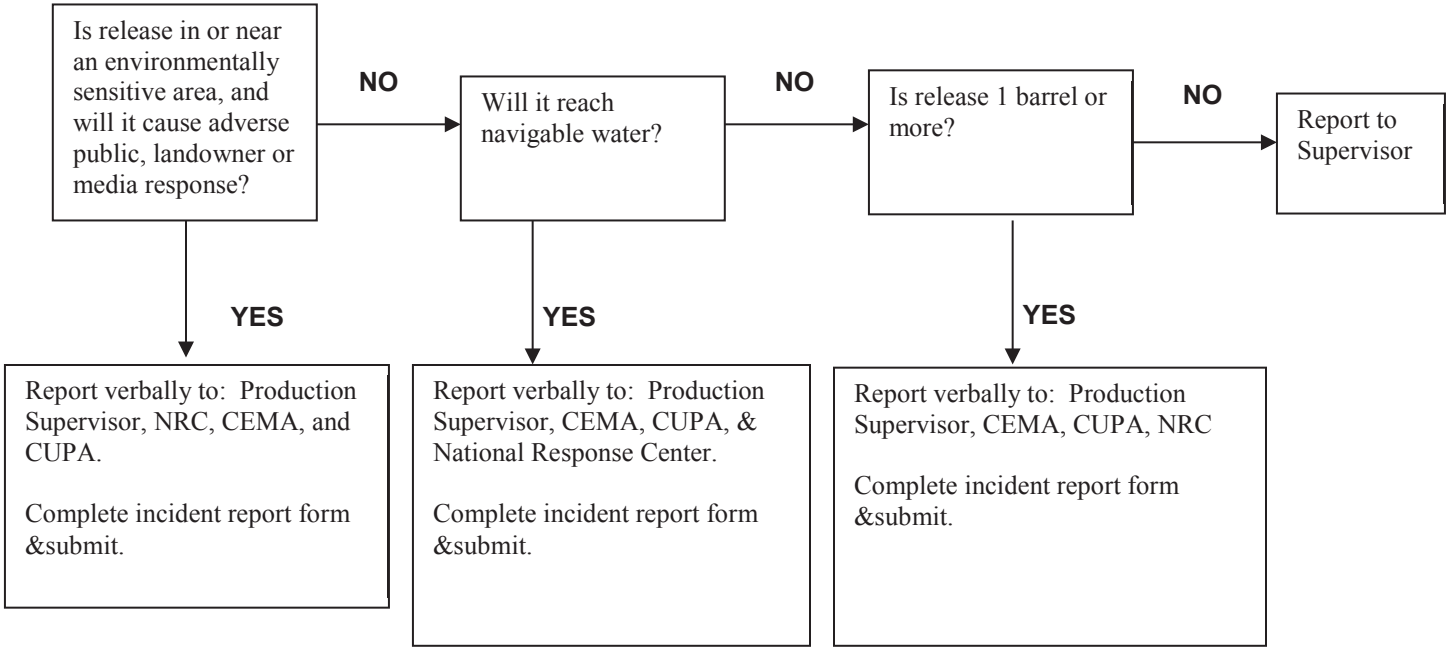
The Termo Company (TTC) has established and maintains an ongoing training program to ensure that TTC personnel responding to oil discharges are properly trained and that all necessary equipment is available to them. The program includes on-the-job training on the proper deployment of response equipment and periodic practice drills during which TTC personnel are asked to deploy equipment and material in response to a simulated discharge. The Production Supervisor is responsible for implementing and evaluating employee preparedness training.

Additions, Additional Comments:

ATTACHMENT A

OIL SPILL NOTIFICATION PROCEDURES

ATTACHMENT A. SPILL REPORTING FLOWCHART
DRILLING, COMPLETION, AND PRODUCTION OPERATIONS
OIL, CONDENSATE, AND PRODUCED WATER SPILL RESPONSE



IMPORTANT PHONE NUMBERS

National Response Center (24-Hour)	(800) 424-8802
California Emergency Management Agency	(800) 852-7550
USEPA Region 9	(866) 372-9378

ATTACHMENT B

PRODUCTION FACILITY MAPS

EXPLANATION

- SITE FEATURE
- ACTIVE WELL
- INACTIVE WELL
- STORM DRAIN (SEE NOTE 1)
- CATCH BASIN (SEE NOTE 2)
- SITE ACCESS
- APPROXIMATE PIPELINE ALIGNMENT
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N

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Trihydro CORPORATION
1252 Commerce Drive
Laramie, WY 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

ATTACHMENT B1

ALISO CANYON LEASE

THE TERMO COMPANY
LOS ANGELES, CALIFORNIA

Drawn By: CF	Checked By: MO	Scale: As Shown	Date: 10/11/13	File: Termo_SiteLocs_LosAngeles.mxd

EXPLANATION

- SITE FEATURE
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N

0 60'

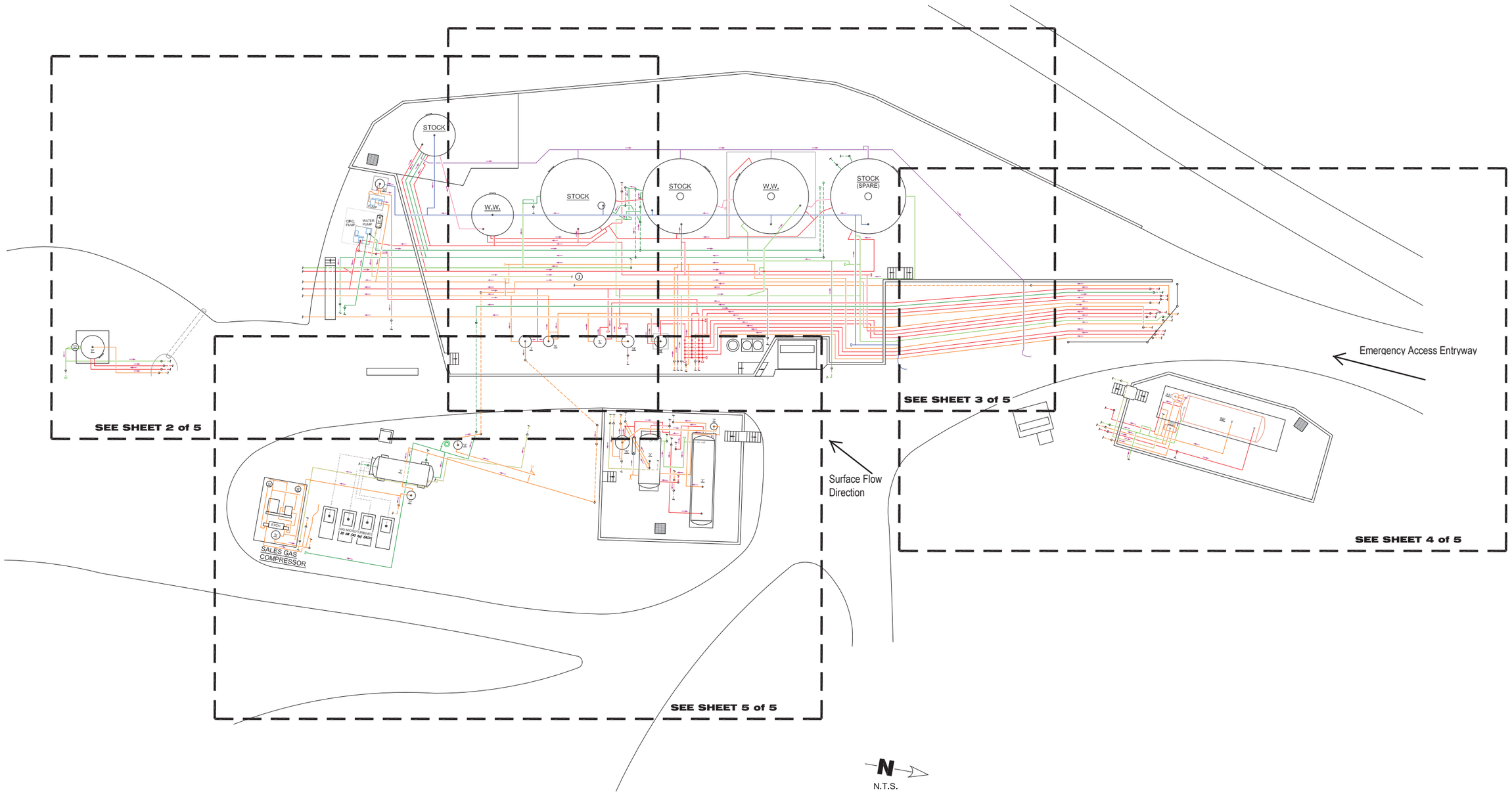
Trihydro CORPORATION
1252 Commerce Drive
Laramie, WY 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

ATTACHMENT B2

ALISO CANYON TANK FARM

THE TERMO COMPANY
LOS ANGELES, CALIFORNIA

Drawn By: CF	Checked By: MO	Scale: As Shown	Date: 10/11/13	File: Termo_SiteLocs_LosAngeles.mxd



DETAILS OMITTED FOR CLARITY

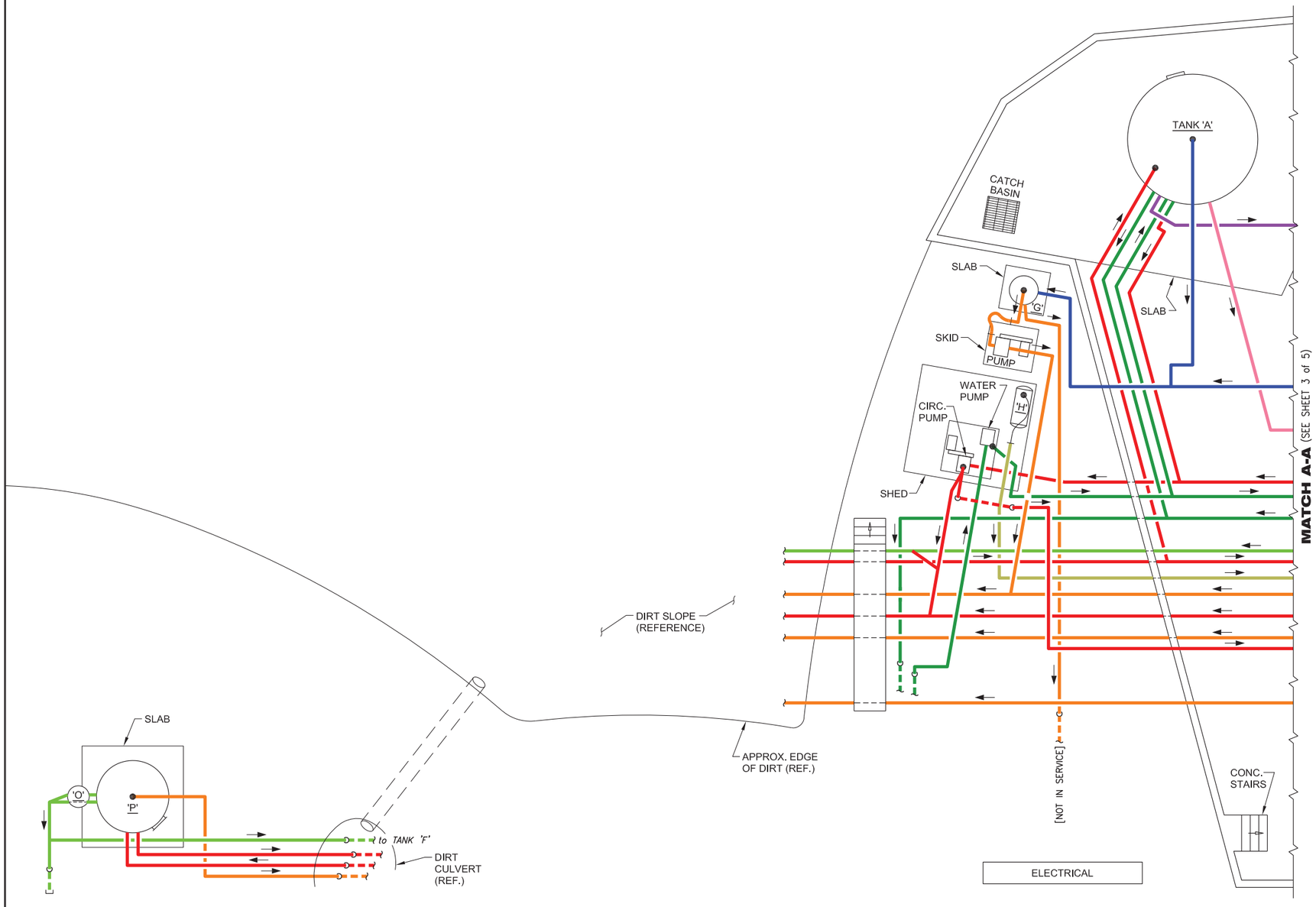
SITE MAP OVERVIEW

International Energy Services Company
3445 Kashiwa St. Torrance, Ca 90505
Tel: 310 257-8222 Fax: 310 257-8220

LOCATION:	DATE:	TITLE:
ALISO CANYON LEASE	11/26/13	SITE MAP
DRAWN BY:	SHEET:	CLIENT:
JOHN REJNIAK	1 of 5	THE TERMO COMPANY

TERMO
INDEPENDENTLY FOCUSED. PARTNERED IN DISCOVERY.

c:_projects\termo leases\aliso canyon\aliso canyon - site map [11-26-13].dwg saved 12/13/2013 10:15:51 AM by John Rejniak



N.T.S.

PIPING LEGEND

- ALCL130001 PRODUCTION LINE
- ALCL230002 CASING GAS LINE
- ALCL330003 WASTEWATER LINE
- ALCL430004 SKIM LINE
- ALCL130005 SHIPPING LINE
- ALCL230006 VAPOR RECOVERY LINE
- ALCL530015 COMPRESSED AIR LINE
- BELOW-GRADE PIPING *(REF. ONLY; DIRECTION MAY VARY)*
- FLOW DIRECTION

ITEM	ASSET ID	DESCRIPTION
'A'	ALCT110651	STOCK TANK (10651-12) 12'-0"Ø x 20'-0" H, 400 BBL *(WELDED-SEAM STEEL)*
'G'	ALCE240501	GAS (VR) SCRUBBER #501 1'-4"Ø x 5'-0" H *(WELDED-SEAM STEEL)*
'H'	ALCE551101	AIR COMP. #F08251101B 1'-0"Ø x 3'-0" L *(WELDED-SEAM STEEL)*
'O'	ALCE142890	VESSEL COLUMN #2890 6½"Ø x 17'-8"± H *(WELDED-SEAM STEEL)*
'P'	ALCE142889	HEATER TREATER #2889 6'-0"Ø x 15'-0" H *(WELDED-SEAM STEEL)*

International Energy Services Company
3445 Kashiwa St. Torrance, Ca 90505
Tel: 310 257-8222 Fax: 310 257-8220

LOCATION:	DATE:	TITLE:
ALISO CANYON LEASE	11/26/13	SITE MAP
DRAWN BY: JOHN REJNIAK	SHEET: 2 of 5	CLIENT: THE TERMO COMPANY

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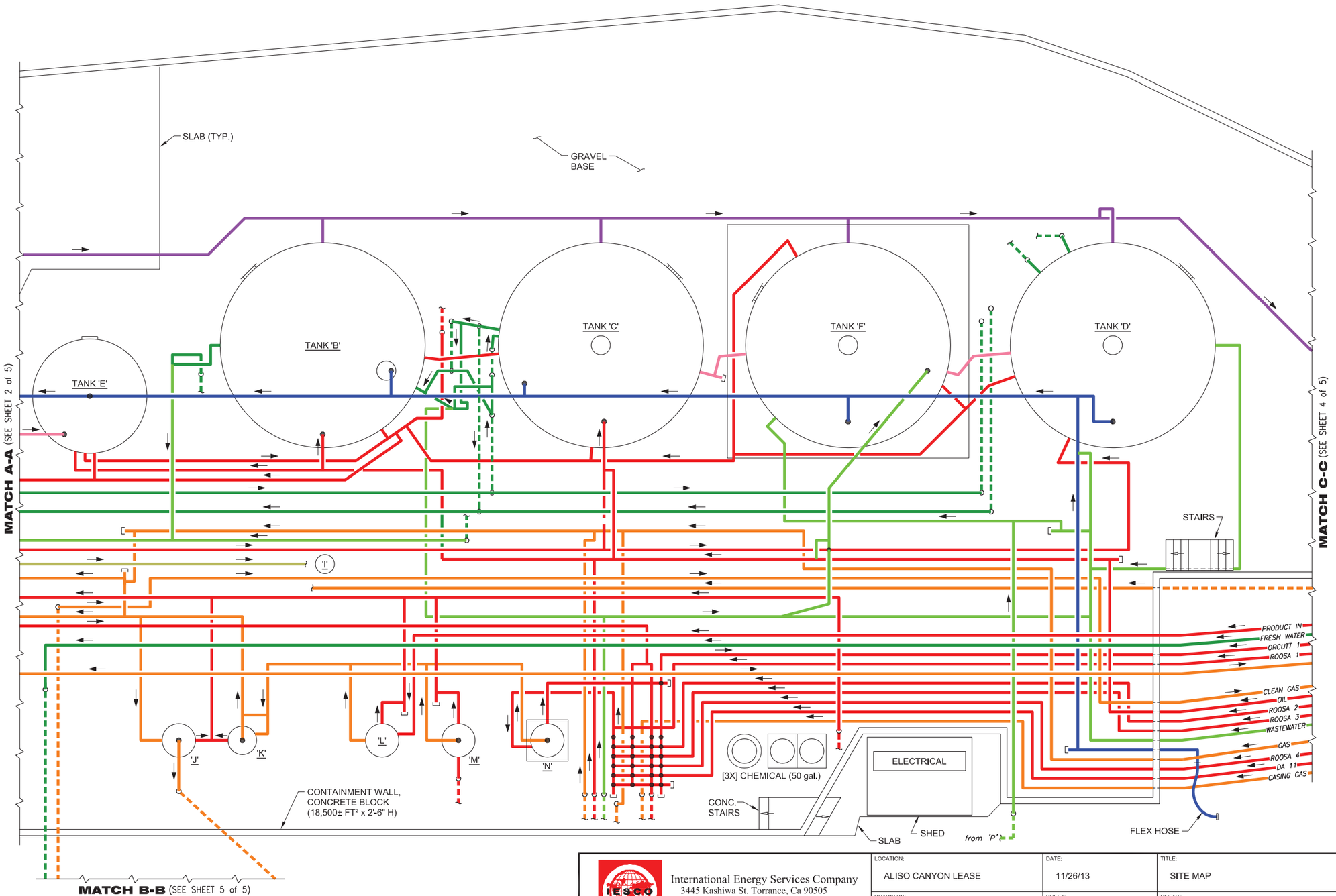

N.T.S.

PIPING LEGEND

- ALCL130001 PRODUCTION LINE
- ALCL230002 CASING GAS LINE
- ALCL330003 WASTEWATER LINE
- ALCL330016 FRESH WATER LINE
- ALCL430004 SKIM LINE
- ALCL130005 SHIPPING LINE
- ALCL230006 VAPOR RECOVERY LINE
- ALCL530015 COMPRESSED AIR LINE
- BELOW-GRADE PIPING *(REF. ONLY; DIRECTION MAY VARY)*
- FLOW DIRECTION

ITEM	ASSET ID	DESCRIPTION
'B'	ALCT111354	STOCK TANK, ROOSA (11354) 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'C'	ALCT111357	STOCK TANK, ROOSA (11357) 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'D'	ALCT111344	STOCK TANK (11344) 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'E'	ALCT313002	WASTEWATER TANK, ROOSA 12'-0"Ø x 15'-0" H, 250 BBL *(WELDED-SEAM STEEL)*
'F'	ALCT323464	WASTEWATER TANK (23464) 21'-6"Ø x 16'-0" H, 1000 BBL *(BOLTED-SEAM STEEL)*
'I'	ALCE541001	SCRUBBER, INST. AIR 1'-4"Ø x 2'-8" H *(WELDED-SEAM STEEL)*
'J'	ALCE241660	GAS SCRUBBER #H-1660 2'-6"Ø x 8'-0" H *(WELDED-SEAM STEEL)*
'K'	ALCE240003	GAS SCRUBBER #3 1'-0"Ø x 3'-6" H *(WELDED-SEAM STEEL)*
'L'	ALCE147435	TEST TRAP #7435 2'-6"Ø x 11'-0" H *(WELDED-SEAM STEEL)*
'M'	ALCE141661	TEST TRAP #H-1661 2'-6"Ø x 8'-0" H *(WELDED-SEAM STEEL)*
'N'	ALCE113036	TEST TRAP #13036 3'-0"Ø x 16'-0" H *(WELDED-SEAM STEEL)*

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DRAWN BY:	SHEET:	CLIENT:
JOHN REJNIAK	3 of 5	THE TERMO COMPANY

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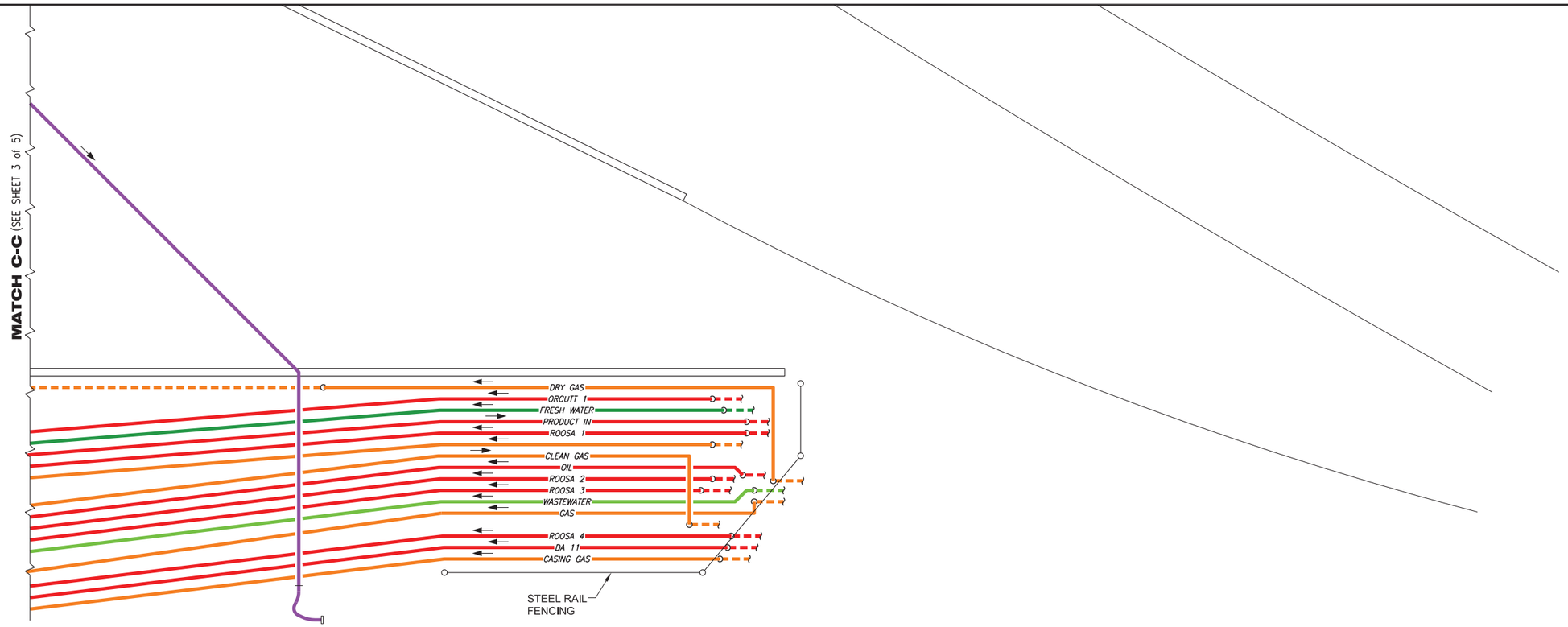

N.T.S.

N

PIPING LEGEND

	ALCL130001	PRODUCTION LINE
	ALCL230002	CASING GAS LINE
	ALCL330003	WASTEWATER LINE
	ALCL330016	FRESH WATER LINE
	ALCL130005	SHIPPING LINE
	ALCL530015	COMPRESSED AIR LINE
		BELOW-GRADE PIPING *(REF. ONLY; DIRECTION MAY VARY)*
		FLOW DIRECTION

ITEM	ASSET ID	DESCRIPTION
'AA'	ALCE252986	GAS SCRUBBER #52986 10½"Ø x 3'-0" H *(WELDED-SEAM STEEL)*
'BB'	ALCE153657	HEATER TREATER #53657 8'-0"Ø x 23'-0" L *(WELDED-SEAM STEEL)*
'CC'	ALCE121001	DRAIN POT #1 1'-0"Ø x 3'-6" L *(WELDED-SEAM STEEL)*

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JOHN REJNIAK	4 of 5	THE TERMO COMPANY

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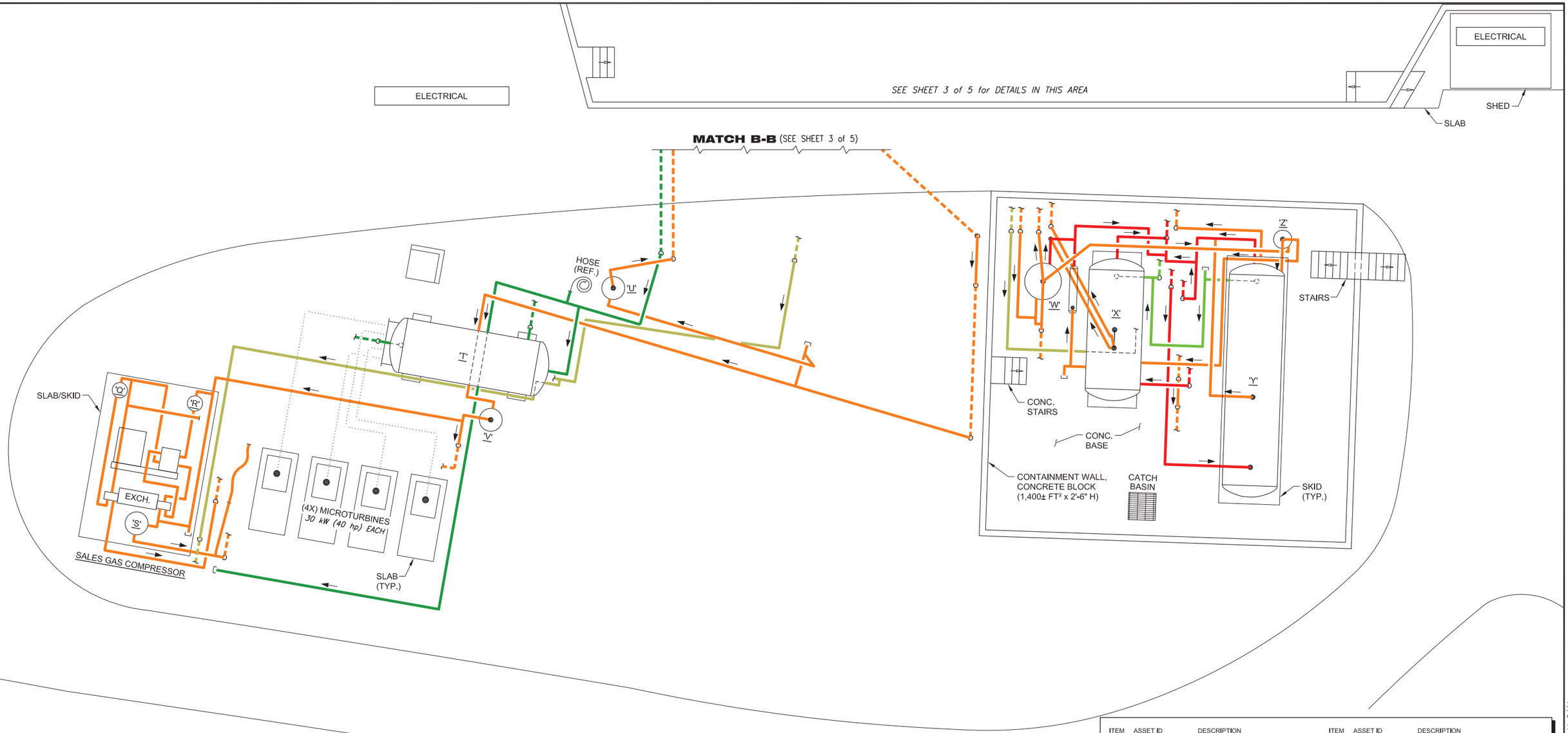

PIPING LEGEND

- ALCL130001 PRODUCTION LINE
- ALCL230002 CASING GAS LINE
- ALCL330016 FRESH WATER LINE
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ITEM	ASSET ID	DESCRIPTION	ITEM	ASSET ID	DESCRIPTION
'Q'	ALCE242157	VESSEL #CV-2157 8½"Ø x 5'-4" H *(WELDED-SEAM STEEL)*	'V'	ALCE221002	GAS SCRUBBER #2 1'-0"Ø x 3'-6" H *(WELDED-SEAM STEEL)*
'R'	ALCE242156	VESSEL #CV-2156 8½"Ø x 5'-4" H *(WELDED-SEAM STEEL)*	'W'	ALCE149846	BALL TRAP #9846 4'-0"Ø SPHERE *(WELDED-SEAM STEEL)*
'S'	ALCE242024	VESSEL #2024 1'-2"Ø x 5'-0" H *(WELDED-SEAM STEEL)*	'X'	ALCE146520	HEATER TREATER #6520 6'-0"Ø x 11'-0" L *(WELDED-SEAM STEEL)*
'T'	ALCE345678	HOT WATER HEATER #5678 6'-0"Ø x 15'-0" L *(WELDED-SEAM STEEL)*	'Y'	ALCE154099	HEATER TREATER #54099 6'-0"Ø x 22'-6" L *(WELDED-SEAM STEEL)*
'U'	ALCE242896	SCRUBBER #2896 10"Ø x 3'-0" H *(WELDED-SEAM STEEL)*	'Z'	ALCE252976	GAS SCRUBBER #52976 10½"Ø x 3'-0" H *(WELDED-SEAM STEEL)*

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ATTACHMENT C

SITE INSPECTION FORMS

INSPECTION FORM

INSPECTED BY _____ **DATE** _____

1. CONTAINER INSPECTION (TANKS, SEPARATORS, HEATER/TREATERS, DRUMS): Check valves & seams for leaks, cracks, punctures and excessive corrosion. Note any repairs required and any made. Note any tank testing conducted.

Container	Contents	Volume bbls	Tank Condition Poor/Fair/Good	Tanks & Lines Labeled Yes/No	Tanks Anchored Yes/No	Required Action	Date Corrective Action Taken

2. SECONDARY CONTAINMENT: Any trash, oil, weeds, water etc. in secondary containment? Containment in good condition? If stormwater is oily, fluid must be pumped from containment for proper disposal. If berm erodes, repair berm to ensure containment can retain volume of largest tank plus 2.4 inches of precipitation.

Secondary Containment Area	Containment Condition Poor/Fair/Good	Sheen or Oil Present Yes/No	Required Action	Date Corrective Action Taken

3. LOADING/UNLOADING AREAS: Inspect areas for signs of any leaks.

Loading/Unloading Area	Containment Condition Poor/Fair/Good	Stormwater Present? Yes/No	Contaminated? Yes/No

4. PIPELINES: Inspect all accessible areas and line path for leaks, cracks, punctures and excessive corrosion.
Are lines emptied and valved off during extended non use periods?

Pipelines	Status In Service/ Out of Service	Pipeline Condition Poor/Fair/Good	Required Action	Date Corrective Action Taken

5. SECURITY:	Yes	No	Required Action	Date Action Taken
Fence in good condition?				
Gate in good condition?				
Valves on tanks closed?				
Fire extinguishers operational?				
Pumps secured?				

COMMENTS:

THE TERMO COMPANY - SPILL REPORTING FORM

Report all spills to your supervisor or management. Call within 6 hours, written report within 4 days.

Incident Number: _____
Date and Time (YYYYMMDD)

Spill Date: _____ **Spill Time:** _____

Report Date: _____ **Report Time:** _____

Reported By: _____ **Reported To:** _____

Location of Spill

State: _____ **County:** _____

Lease: _____ **Well / Facility:** _____

Legal Location or Address: _____

_____

Additional Location Info: _____

Agency Notification

Agency:	Contact:	Notes:

Spill Information

Substance Spilled:		Volume Spilled (in BBLS): On Land	Volume Spilled (in BBLS): In Water	Volume Recovered:
	Oil			
	Produced Water			
	Condensate			
	Diesel			
	Other			

Media Affected:

Land		Storm Sewer	
Air		Ground Water	
Water		Surface Water	

If water is affected notify supervisors immediately.
Contact all relevant agencies immediately upon control of spill.

Containment:

	Spill contained within primary or secondary containment
	Spill contained on location
	Spill contained with control mechanisms
	Spill uncontained

Weather at time of spill:

Containment Action:

Source and Cause of Spill

Source:		Cause:	
Well Head		Accident	
Heater / Treater		Incident	
Seperator		Equipment	
Tank Farm		Failure	
Pipeline		Human Error	
Loading Rack		Other	
Other			

Notes:

Corrective Action To Prevent Reoccurance

Clean Up Action

Cost Estimates

Containment: _____ Labor: _____

Cleanup: _____ Labor: _____

Corrective Action: _____ Labor: _____

MAP AND PHYSICAL DESCRIPTION OF EVENT LOCATION