

# **Red Dog Operations and DeLong Mountain Regional Transportation System Road and Port**

## **Spill Prevention, Control, and Countermeasure (SPCC) Plan**

## LOG OF SPCC PLAN REVIEWS AND UPDATES

Date	By Whom	Updates
1992		Original SPCC Plan
May 2012	ERM, Inc.	Update to incorporate changes to SPCC Rule effective in 2011.
August 2018	SLR International Corporation	Update to include 5-Year Review of Plan. Commission and decommission bulk storage containers and mobile/portable containers at the Mine and Port, incorporate routine visual and annual inspection program, and update certified integrity inspection information.
May 2019	Teck Alaska Incorporated	Update to include portable equipment, DMTS Road and material sites, reference additional inspection standard operating procedures.
February 2020	Teck Alaska Incorporated	Update includes revisions throughout the document. Container tables and facility figures revised to reflect current container inventory. Container inspection checklists updated to include current forms.
July 2020	Teck Alaska Incorporated	Container tables and facility figures revised to reflect current container inventory. Container inspection records information updated to include FastField electronic forms and SharePoint directory to retain completed inspections.
February 2021	Teck Alaska Incorporated	Container tables and facility figures revised to reflect current container inventory and inspection records location.
August 2021	Teck Alaska Incorporated	Container tables and facility figures revised to reflect current container inventory and inspection records location. Updates to Table 1-1. Minor editorial changes made throughout.
February 2022	Teck Alaska Incorporated	Container tables and facility figures revised to reflect current container inventory. Minor editorial changes made throughout.

June 2023	Teck Alaska Incorporated	<p>Per 40 CFR 112.20(g)(2) reviews of both National Contingency Plan and Area Contingency Plan were completed, no revisions necessary.</p> <p>Container table revision to add inspection records location (GenCID) for mine weekly tank inspections</p> <p>Container table and facility diagram revisions to add new Heavy Equipment PM shop facility, added new areas to electronic inspection library – SharePoint</p> <p>Port Tanks 5, 6 and 7 permanently closed until sinkhole repair is completed.</p> <p>Minor editorial changes made throughout plan.</p> <p>Facility diagrams, added storage locations of Designation of Hazardous Substances (40 CFR 116.4)</p>
July 2023	Teck Alaska Incorporated	<p>Port Tanks 5, 6 and 7 no longer permanently closed and back in service.</p> <p>Minor editorial changes made throughout plan.</p>
August 2023	Teck Alaska Incorporated	<p>Minor revision to tank inspection record locations in Table A-2 and addition of five ES700 heaters to Table A-3</p>
February 2024	Teck Alaska Incorporated	<p>Minor revision to tank inspection record locations in Table A-3, addition of two tanks to Table A1 and Figure 2, and revise haz materials storage name and location on Table A2 and Figures 6 and 7.</p>
August 2024	Teck Alaska Incorporated	<p>Minor revision to tank inspection record locations in Tables A-1 and A-3, revision to tanks in Table A-2 and A-3, and revision of Figures 3, 4, 6, 8 and 9.</p>

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## ACRONYMS

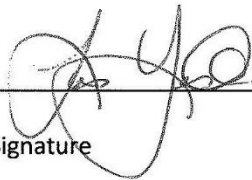
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AIDEA	Alaska Industrial Development and Export Authority
API	American Petroleum Institute
CFR	Code of Federal Regulations
CSB	concentrate storage building(s)
DML	DeLong Mountain Logistics, LLC
DMTS	DeLong Mountain Regional Transportation System
EPA	U.S. Environmental Protection Agency
FastField	Electronic form and data management software
FRP	Facility Response Plan
GenCID	Teck Alaska Incorporated proprietary enterprise resource planning system software
gpm	gallons per minute
IBC	intermediate bulk container (also known as tote)
ISO (containers)	Container mfg. to the International Organization for Standardization
NACE	National Association of Corrosion Engineers
NANA	NANA Regional Corporation
NRC	National Response Center
ODPCP	Oil Discharge Prevention and Contingency Plan
PE	Professional Engineer
PM	preventative maintenance
PPE	personal protective equipment
QualTrax	electronic document management system
RDO	Red Dog Operations
SharePoint	Cloud-based document management tool developed by Microsoft
SiteLine	Teck Alaska Incorporated proprietary environmental management system software
SOP	standard operating procedure
SPCC	Spill Prevention, Control, and Countermeasure
SRO	Spill Reporting Officer
SRT	Spill Response Team
STI	Steel Tank Institute
Teck	Teck Alaska Incorporated
TSF	Tailings Storage Facility
USCG	U.S. Coast Guard
USDOT	U.S. Department of Transportation

**1. PLAN ADMINISTRATION**

Teck Alaska Incorporated (Teck) operates the Red Dog Mine and DeLong Mountain Regional Transportation System (DMRTS) Road and Port Site within the Northwest Arctic Borough, approximately 60 miles north of Kotzebue, Alaska. This Spill Prevention, Control, and Countermeasure (SPCC) Plan was developed consistent with the requirements for onshore non-production facilities described in Title 40, Code of Federal Regulations (CFR), Sections 112.1 through 112.8.

**1.1 Management Approval****40 CFR 112.7**

Teck Alaska Incorporated is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the required standards for spill prevention, control, and countermeasure through regular review, updates, and implementation of this SPCC Plan. This plan has the full approval of management, and Teck commits the necessary manpower, equipment, and materials to control and remove any quantity of oil discharged that may be harmful.

  
\_\_\_\_\_  
Signature

Leslie Yesnik  
General Manager

Oct 31, 19  
\_\_\_\_\_  
Date

## 1.2 Professional Engineer Certification

40 CFR 112.3(d)

I hereby certify that I, or my agent, have visited and examined the Red Dog Operations and Delong Mountain Regional Transportation System Road and Port facilities, and being familiar with the provisions of 40 CFR 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, that procedures for required inspection and testing have been established, and that the plan is adequate for the facility. Compliance items, if any, are listed in Table 1-1.

This certification in no way relieves the owner or operator of the facility of their duty to prepare and fully implement this SPCC Plan, including the listed compliance items, in accordance with the requirements of 40 CFR 112.

This certification is valid until five years from the signature date on this certification or until the plan is amended or superseded, whichever is sooner. Prior to the five year recertification, an onsite inspection should be conducted.

  
Signature

Michael Rieser, PE  
CE-10379 (Alaska)




  
Date

Table 1-1: Compliance Items

Compliance Item	Reference	Proposed Completion Date	Compliance Item Resolved	
			Date	Comments
Check for presence of water in tanks not previously checked over four consecutive summer months, then transition to annual thereafter (Mine).	Section 3.5.1	October 2023 (revised)	December 2024	Port facilities completed 4-month cycle for satellite tanks, mine site in progress
Repair Port Tank Farm secondary containment area	Section 3.3	September 2023	July 2023	Liner repair completed

### **1.3 Location of SPCC Plan**

40 CFR 112.3(e)

The Environmental Department is responsible for maintaining the controlled electronic copy of the SPCC Plan, which is stored in the QualTrax electronic document management system (Document ID #2564).

### **1.4 SPCC Plan Review**

40 CFR 112.3, 112.5

#### **1.4.1 Changes in Facility Configuration**

40 CFR 112.5(a), 112.5(c)

Teck periodically reviews and evaluates the Plan for changes in the facility design, construction, operation, prevention and control technologies and/or maintenance that materially affect the facility's potential for an oil discharge. The Plan will be amended when such changes occur.

Teck will make the needed revisions to the Plan as soon as possible, but no later than six months after the change occurs. The revised Plan will be implemented as soon as possible following a technical amendment, but no later than six months from the date of the amendment. The Designated Person or designee (Section 2.1) are responsible for initiating and implementing the revisions to the Plan.

Amendments to the Plan reflecting technical changes to the facility require certification by an Alaska-registered Professional Engineer (PE). Examples of technical changes include:

- Commissioning or decommissioning of containers;
- Reconstruction, replacement, movement or installation of piping systems;
- Construction or demolition that might alter secondary containment structures;
- Changes of product or service; revisions to standard operation; modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures; and
- Any other changes that materially affect the facility's potential to discharge oil.

Non-technical amendments, which must be documented, can be completed without certification by a P.E. Non-technical amendments include the following:

- Changes in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan, or
- Change in the name or contact information of oil spill removal organizations.

#### **1.4.2 Scheduled Plan Review**

40 CFR 112.5(b)

A review and evaluation of the Plan is required at least every five years. If the review identifies revisions are necessary these will be made within six months after the five-year review. An Alaska-registered PE certifies any technical amendment(s) to the Plan in accordance with Code of Federal Regulations (CFR) Title 40, Section 112.3(d) (40 CFR 112.3(d)). The next plan review is scheduled to take place no later than five years from the date stamped in the PE certification in Section 1.2.

Scheduled reviews are recorded in the SPCC Review Log located in the front of this document. This log will be completed at least once every five years, even if no amendment is required to the Plan as a result of the review. Plan revisions or modifications are documented and recorded in the Log of SPCC Plan Reviews and Updates found at the front of this document.

### **1.5 Planned Changes in Operation**

40 CFR 112.7

No operational changes are planned at this time.

## 1.6 Records

40 CFR 112.7(e), 112.7(f), 112.8(c)(3)(iv), 112.8(c)(6)

The following records are maintained for a period of at least three years. Locations of the documents are noted below.

- Records of container and secondary containment inspections required per the Plan are located as noted on the tables in Appendix A.
- Training records of oil handling personnel and discharge prevention briefings records are maintained electronically in Teck's Human Resources Information System, termed People Central. Training records for Contractors are maintained electronically (in the Teck environmental management system software, termed SiteLine or by the environmental department?). Training records for first responder hazardous material technicians are maintained in the Response Chief office.

## 1.7 Compliance with Applicable Requirements

40 CFR 112.7(a)(1), 40 CFR 112.7(a)(2)

This Plan and the facility comply with the applicable requirements of 40 CFR 112. Non-compliant items, if present, are listed in Table 1-1 (Section 1.2), with expected dates when these items will be brought into compliance.

Impracticability determinations for the facility are described below.

### 1.7.1 Impracticability Determination: Individual Container Inspection

Inspection of IBCs/totes and drums that are stored in unopened connex (i.e., International Organization for Standardization [ISO] shipping container) units is impracticable for the following reasons:

- The connex containers are stacked and in close proximity to each other, preventing monthly access to the majority of shipping containers without extensive handling.
- Multiple IBCs/totes and drums are generally stored in each container, and visual inspection of each IBC/tote or drum would require unloading then reloading each shipping container for each inspection, as well as re-handling of connex containers to allow access to containers stacked above ground level.
- Conducting these individual inspections would require excessive handling of containers, often in poor weather conditions, and would introduce significant safety and oil spill risks.

Consequently, inspections of oil containers in unopened connex units will consist of routine inspection of the connex unit storage areas.

Routine inspection of the generator day tanks at the mine North Generator Building (tanks #6022-1902-01 through 06) and New Generator Building (tanks #6030-1902-07 and 08) is impracticable as the tanks and piping are not accessible for complete inspection without shutdown of vital equipment. These tanks are located in buildings that provide secondary containment for the entire contents of each tank, and leaks from these tanks would be quickly detected as the facilities are continuously staffed and the tanks are located overhead from the floor.

### 1.7.2 Impracticability Determination: Secondary Containment

Containment is provided for 300-gallon oil totes in the mill lube room (Mill Lube RM Bulk) through active measures, including daily walk-through inspections, frequent staff presence throughout day and night shifts, and nearby materials and equipment for spill response. The building the totes are stored in provides containment for the most likely spills from these oil containers.

An FRP prepared in accordance with 40 CFR 122 has been prepared for the facility (Port and Mine) as described in Section 3.9 of this Plan. The FRP includes a written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.



## **1.8 Cross-Reference with SPCC Provisions**

*40 CFR 112.7(a)*

The Plan does not follow the exact order presented in 40 CFR 112. Table 1-2 presents a cross-reference of plan sections relative to applicable parts of 40 CFR 112.

**Table 1-2: SPCC Cross-Reference**

Provision in 40 CFR	Topic Description	Location in SPCC Plan
112.3	SPCC Plan Review	Section 1.4
112.3(d)	Professional Engineer Certification	Section 1.2
112.3(e)	Location of SPCC Plan	Section 1.3
112.4	Plan Amendment by Regional Administrator	Section 5
112.5	Plan Review, Amendment, and Certification	Section 1.4
112.5(a)	Amend the Plan For Applicable Facility Changes	Section 1.4.1
112.5(b)	Scheduled Plan Review	Section 1.4.2
112.5(c)	Professional Engineer Certification of Technical Amendments	Section 1.4.1
112.7	Management Approval	Section 1.1
112.7	Facilities, Procedures, or Equipment Not Yet Operational	Table 1-1, Section 1.5
112.7(a)	Cross-Reference with SPCC Rule	Table 1-2
112.7(a)(1)	Compliance with Applicable Requirements	Section 1.7
112.7(a)(2)	Nonconformance and Equivalent Environmental Protection	Section 1.7
112.7(a)(3)	Facility Information	Section 2.2
112.7(a)(3)(i)	Oil Storage Containers	Section 2.2.3
112.7(a)(3)(ii)	Discharge Prevention Measures	Section 3.1
112.7(a)(3)(iii)	Discharge and Drainage Controls	Section 4.1
112.7(a)(3)(iv - vi)	Countermeasures, Material Disposal and Contacts	Section 5 and ODPCP/FRP
112.7(a)(4)	Discharge Notification	Section 5 and ODPCP/FRP
112.7(a)(5)	Discharge Response	Section 5 and ODPCP/FRP
112.7(b)	Potential Discharge and Flow Direction	Section 3.2
112.7(c)	Containment and Diversionary Structures	Section 3.3
112.7(d)	Practicability of Secondary Containment	Section 3.4
112.7(e)	Inspections, Tests, and Records	Sections 1.6 and 3.5
112.7(f)(1)	Training for Oil Handling Personnel	Section 3.6
112.7(f)(2)	Pollution Prevention Officer	Section 2.1
112.7(f)(3)	Discharge Prevention Briefings	Section 3.6
112.7(g)	Security	Section 3.7
112.7(h)	Tank Truck Loading/Unloading Racks	Section 3.11
112.7(i)	Brittle Fracture Evaluation	Section 3.8
112.7(j)	Conformance with Applicable State and Local Requirements	Section 3.9
112.7(k)	Qualified Oil-Filled Operational Equipment	Section 3.10
112.8(b)	Facility Drainage	Section 4.1
112.8(c)	Bulk Storage Containers	Section 4.2
112.8(c)(1)	Construction	Section 4.2.1
112.8(c)(2)	Secondary Containment	Section 4.2.2
112.8(c)(3)	Drainage of Diked Areas	Sections 1.6 and 4.1
112.8(c)(4)	Buried Metallic Storage Tanks	Section 3.11
112.8(c)(5)	Partially Buried and Bunkered Storage Tanks	Section 3.11
112.8(c)(6)	Facility Inspection	Sections 1.6 and 3.5
112.8(c)(7)	Heating Coils	Section 2.2.3
112.8(c)(8)	Overfill Prevention System	Section 4.2.3
112.8(c)(9)	Effluent Treatment Facilities	Section 4.2.4
112.8(c)(10)	Visible Discharges	Section 4.2.5
112.8(c)(11)	Mobile and Portable Containers	Section 4.2.6
112.8(d)	Transfer Operations, Pumping and In-Plant Processes	Section 4.3
112.20	Determination of Substantial Harm	Appendix D

ODPCP – Oil Discharge Prevention and Contingency Plan

FRP – Facility Response Plan

## 2. GENERAL FACILITY INFORMATION

**Name:** Red Dog Operations and DMTS Road and Port Site

**Physical Address:** Teck Alaska Incorporated  
Red Dog Mine, Alaska

**Type:** Lead and Zinc Mine, Process Plant, (onshore, non-USDOT Transportation Facility)

**Date of Initial Operations:** 1989

**Owner/Operator:** Teck Alaska Incorporated  
2525 C Street, Suite 310  
Anchorage, Alaska 99503

### 2.1 Designated Person

40 CFR 112.7(f)(2)

Due to the even work schedule at RDO two personnel are considered Designated Persons; Frank Bendrick and Mike Rieser and accountable for oil spill prevention at the facility, both report to facility management.

Name	Title	Phone
Frank Bendrick	Senior Environmental Coordinator	907 754-5138
Mike Rieser	Senior Hydrogeologist, P.E	907 754-3816

The following individuals serve as designees to the Designated Persons in the event a Designated Person is not available or onsite:

Name	Title	Phone
Rebecca Hager	Senior Environmental Coordinator	907 754-5141
Robert Napier	Environmental Team Leader	907 754-5145

### 2.2 Facility Description

40 CFR 112.7(a)(3)

Teck operates the Red Dog Mine Site, the DMTS Road, and the Port Site located in northwestern Alaska, which are collectively the facility described in this Plan. Teck Red Dog Operations (RDO) is a joint venture between Teck and NANA Regional Corporation, Inc. (NANA), an entity wholly owned by the Inupiat people of Northwest Alaska. The mining operation is based on a unique development and lease agreement whereby Teck is the mine operator and NANA is the landowner. RDO is an open-pit, truck-and-loader operation.

The Mine Site is located approximately 90 miles north of Kotzebue and 55 miles from the Chukchi Sea, in the DeLong Mountains along the western Brooks Range. The Port Site is located on the Chukchi Sea shoreline, approximately 52 miles southwest by road from the Mine Site. Figures of the facility are provided in Appendix B. Figure 1 provides a general location map, Figure 2 provides the Port layout, Figure 5 provides the Mine layout, and Figure 10 provides

an index to the DMTS Road segments, with Figures 11 through 27 depicting individual segments. The following sections provide a description of the activities conducted at the facility and on the DMTS Road.

### 2.2.1 Physical Layout

#### *Red Dog Mine*

The Mine Site is located on sloping ground in the foothills of the DeLong Mountains. The major activities conducted at the Mine Site involve stripping and storing of overburden material, mining and processing ore to produce mineral concentrate and transporting the concentrate to the Port Site. The Mine facility generally drains toward the Tailings Storage Facility (TSF), which is a permitted waste management area adjacent to the Mine's milling operation and serves as an impoundment for process wastewater, significantly reducing the likelihood of a release to waters of the U.S. at the Mine Site. The closest permanent body of water, Bons Creek Reservoir, is immediately west of the Construction Camp pad and over a mile southwest of the TSF. Several small creeks are in the vicinity of the Mine, including Bons Creek and Red Dog Creek. The entire mining operation encompasses approximately 67 square miles and SPCC components consists of:

- Bulk oil storage and distribution;
- A diesel self-service fuel island;
- Power generation equipment;
- Mobile equipment and fuel trucks;
- Regulated oil filled equipment; and
- Various support facilities for the Mine, including maintenance facilities, and contractor support buildings.

#### *DMTS Port Site*

The DMTS Port Site (Port) provides a docking place on the Chukchi Sea for freight, fuel, and concentrated ore lightering barges, and storage facilities for freight, fuel and concentrated ore, as well as accommodation and related support facilities. The Port, including surface facilities, is owned by the Alaska Industrial Development and Export Authority (AIDEA). Teck is currently contracted as the Port operator and pays tolls to AIDEA for shipments sent through the Port Site for Teck operations.

The Port facility is on a relatively flat gravel pad that drains toward the Chukchi Sea. Barges deliver fuel to the Port Site where it is offloaded into bulk fuel tanks. Tanker trucks haul fuel daily from the Port Site to the Mine Site. DeLong Mountain Logistics LLC (DML), a subsidiary of the NANA Development Corporation, operates the tanker trucks. DML also transports concentrate in covered trailers from the Mine Site to the Port Site. DML personnel operate and maintain trucks used for fuel and concentrate transport. Transport of fuel and concentrate is conducted year-round.

The Port consists of shallow water docks, support buildings, temporary materials storage area, two concentrate storage buildings (CSBs), a desalination unit, and a conveyor system to transport concentrate from the CSBs to the barge loading area. The Port has the following SPCC components:

- Fuel transfer equipment;
- Bulk oil storage and distribution;
- A self-service fuel island;
- Various support facilities for the Port, including power generation and maintenance buildings; and
- Response equipment facilities.

## DMTS Road

The DMTS Road is a 52-mile, double-lane road that provides a surface transportation corridor between the Mine and the Port. The road is owned by AIDEA and is a public facility open for use by other mines or users. Teck is currently contracted as the road operator and pays tolls to AIDEA for use of the road. NANA/Lynden operates tanker and cargo trucks under contract to Teck to transport fuel and cargo between the Mine and Port. The Road is not under the authority of either the Alaska Department of Transportation or the U.S. Department of Transportation. The Road is maintained and used year-round. There are no stationary regulated oil containers on the Road.

Material sites are located along the roadway to provide material for road maintenance, as well as material for earthworks at the Mine or Port. The locations of the material sites are shown on Figures 11 through 27 in Appendix B. In general, regulated oil containers that may be located at the material sites are part a piece of regulated mobile equipment listed in Appendix A within Table A-3.

### 2.2.2 Climate

The climate in the area is an arctic climate characterized by long, cold winters and short, cool summers. Approximate mean daily temperatures are 53 degrees Fahrenheit (°F) in July and 2 °F in February. Mean annual precipitation at the Mine is approximately 20 inches (Teck Alaska Incorporated, 2023). The one-in-25-year, 24-hour rainfall event is approximately 2 inches (NOAA, 2012), which is the minimum freeboard allowance for precipitation that will be provided in containments open to precipitation.

### 2.2.3 Oil-Filled Containers and Equipment

40 CFR 112.7(a)(3)(i)

Oil-filled containers 55 gallons or greater are listed in Appendix A (Tables A-1 and A-2, respectively). Mobile equipment with integrated oil/fuel storage of 55 gallons or greater is located across the property; this equipment is summarized in Table A-3. Figures showing the location of containers, excluding mobile equipment, are included in Appendix B.

Containers are categorized as described below.

#### *Bulk Storage Containers*

Bulk storage containers are large non-portable oil storage tanks. The Port facility includes seven bulk fuel storage tanks with shell capacities ranging from 2,435,000 to 3,130,000 gallons, all located inside a common secondary containment area. The Mine facility includes four bulk fuel storage tanks, with individual tank shell capacities ranging from 216,000 to 1,125,600 gallons. All bulk storage containers are field-erected, welded steel construction.

The bulk fuel storage tanks at the Port are filled as described in the U.S. Coastguard Operations Manual for Delong Mountain Regional Transportation System Seaport Facility Tank Farm (QualTrax #1675), whereas the Mine bulk fuel storage tanks are filled from a tanker truck following procedures in the DML Fuel Truck Operations (QualTrax #437).

#### *Bulk Storage Containers - Satellite Tanks*

Satellite diesel tanks are used to support remote operations. These diesel tanks are shop-built, single-wall or double-wall tanks ranging in capacity from 275 to 9,200 gallons. Satellite storage containers may be moved, but are generally kept at the same location for a long period of time. These tanks are periodically filled using mobile refuelers on an as needed basis.

### *Portable Containers*

Drums, IBCs/totes, Super Drums, and ISO tanks are stored in multiple locations throughout the facility. Portable containers are generally differentiated from other containers in that they are used to transport oil from a supplier or central area to the place of use, then returned (IBCs/totes) or disposed of when empty rather than refilled at the place of use.

Indoor storage areas for drums and totes are at various locations. Floors inside the buildings typically provide containment for drums and totes located there.

Some ISO tanks are equipped with internal heating coils. These coils are not used by RDO and are securely capped.

Empty portable containers, if not reused or stored in secondary containment, are identified using either signage or labels stating “empty” or “MT”.

Single use portable containers are typically re-used (once) to collect used oils and sent offsite for waste and container recycling.

### *Oil-filled Operational Equipment*

Oil-filled operational equipment for the purpose of this SPCC plan includes equipment with an oil storage container (or multiple containers) in which the oil, in volumes of 55-gallons or greater, is present solely to support the function of the apparatus or the device. This may include engine crankcases, oil-filled electrical equipment, hydraulic units, or other equipment in which oil is used for mechanical or operational purposes in a manner that does not significantly reduce the quantity of oil.

### *Mobile Equipment*

Mobile equipment regulated under the SPCC rule includes equipment such as trailer-mounted or skid-mounted equipment with integrated oil/fuel storage of 55-gallons or greater. The tanks on SPCC-regulated pieces of equipment generally do not provide fuel to engines that move (propel) the equipment from place to place. Examples of SPCC-regulated mobile equipment include light plants, mobile heaters, air compressors, and gen-sets with an oil capacity of 55 gallons or greater. Mobile equipment is inspected per the PM schedule setup for the equipment. PM's are normally scheduled at least once every 500 operating hours for each mobile equipment unit.

### *Mobile Refuelers*

RDO and their contractors maintain a fleet of tanker trucks for transferring fuel from the Port to the Mine, refueling vehicles and mobile equipment i.e. heaters, pumps etc. and conducting fuel deliveries to and from the tank farm and various facilities and buildings. Mobile refueler drivers transfer fuel from the bulk tanks to their tanker trucks. Small drip pans are placed under dispensing nozzles during fueling operations (Heavy Equipment Fueling and Greasing SOP, QualTrax #575). The mobile refuelers are stored away from wetlands or other navigable waters when not in active use.

The tanker trucks used to transfer fuel from the Port to the Mine are empty when parked by procedure. If this is not possible because of an unusual circumstance, for example the roadway was closed after a cargo of fuel was loaded at the Port, then the tanker would be parked in the loading area which would provide secondary containment.

Pickup-truck bed tanks are also used for transfers to other vehicles or equipment. These tanks are frequently visually inspected as part of the vehicle walk-around inspections.

#### 2.2.4 Piping and Hoses

Piping and hoses are designed for the products they handle. Piping runs outdoors and underground and includes piping that runs from the tanks to the immediate fueling area. Piping is described in Section 4.3.

#### 2.2.5 Fuel Stations

The facility includes one fuel island at the Mine and one fuel island at the Port. Employees and contractors may fuel vehicles at either fuel island. Loading or unloading of tanker trucks occur at both locations. Vehicle operators receive training on operating the pumps, as well as detailed fuel transfer procedures. Transfer operations from the bulk tanks are attended by at least one operator and monitored both visually and electronically. Detailed fuel transfer and alarm testing SOPs are stored electronically on the Red Dog electronic document management system (QualTrax #575, #577, #643, #645, and #1675).

#### 2.2.6 Container Identification

Containers are identified in Tables A-1 through A-3 in Appendix A and are located as shown on the facilities diagrams contained in the Appendix B.

If a stationary container is out of use, it may be “permanently closed” and must be marked and comply with the conditions described below in Section 2.2.7.

Operational SOPs may contain other marking requirements not required under the SPCC rule.

#### 2.2.7 Permanently Closed Containers

The term “permanently closed” is a regulatory term described in 40 CFR 112.2 that describes conditions that must be met in order to lift the requirement of maintaining management of a tank as prescribed in this SPCC plan. “Permanently Closing” a tank in this context in no way requires that the tank be scrapped, nor does it exclude the tank from being returned to service in the future providing the tank is fit for service and the required tank management actions described in this plan are resumed. The term “out of service” is synonymous in this plan with the regulatory term “permanently closed”. Tanks marked as “out of service” are managed in accordance with the requirements for “permanently closed” tanks, and “out of service” is used in lieu of “permanently closed” in marking these tanks. Portable containers that are permanently closed are marked as described in Section 2.2.3.

Permanently closed containers, must meet the following requirements to remove the inventory containment and inspection requirements under this SPCC plan:

- Liquid and sludge must be removed from the container and connecting lines;
- Lines and piping must be disconnected from the container and blanked off or capped;
- Valves must be closed and locked; and
- Conspicuous signs must be posted on the tank stating that it is either “permanently closed” or “Out of Service” and note the date (month and year) of closure. Portable containers are marked as described in Section 2.2.3.
- Portable containers which are reused (more than one fill) must meet the requirements of this section and not Section 2.2.3

In order to return a permanently closed container to service, the container must be managed in compliance with the container requirements of this SPCC plan, and added to the SPCC plan inventory within 6 months of being returned to service.

### 3. DISCHARGE PREVENTION – GENERAL

RDO recognizes that spill awareness and prevention are key components to a spill prevention program. The facility operates in a manner that provides effective procedures for the handling, transfer, and storage of oil products. Discharge prevention measures include written procedures for transfer of product to bulk storage tanks; training of personnel in spill awareness and prevention; and appropriate design and inspection of oil-filled containers and equipment, including secondary containment and discharge controls.

#### 3.1 General Spill Prevention

40 CFR 112.7(a)(3)(ii)

Oil storage tanks, mobile refuelers, and mobile equipment are properly maintained to prevent leakage of oil. Visible leaks will be noted during routine inspections and observations during operation and will be repaired as soon as possible. Operational equipment is maintained in accordance with prudent practices. Personnel onsite during operational hours visually monitor the equipment through direct use.

Spill prevention measures include procedures for transfer of oil product; training personnel in spill awareness and prevention; appropriate design and inspection of oil-filled containers and equipment, including secondary containment; and discharge controls. The following spill prevention measures apply:

- Spill prevention methods and procedures are addressed in the Annual “Oil Handler” training course;
- Fuel is transferred from the fuel loading/unloading areas using flexible Arctic-grade fuel-handling hoses; Fuel lines and couplings are inspected during each fuel transfer operation. Expansion, contraction, and vibration do not transfer through these flexible connections. Bulk transfer lines have “no drip,” quick-connect, cam-lock couplings;
- Bulk storage tanks and containers are inspected at least monthly for leaks and damage;
- Secondary containment areas are inspected at least monthly for evidence of leaks or spills;
- Oil-filled operating equipment and mobile equipment are inspected at the frequency noted in Appendix A Tables A-1, A-2 and A-3;
- Aboveground piping is visually checked for leaks and damage at least monthly, if in use; and
- Portable oil containers are inspected at least monthly (once removed from connex units and in use).

#### 3.2 Potential Discharge and Flow Direction

40 CFR 112.7(b)

Oil containers with shell volumes of 55 gallons or greater are listed in the tables in Appendix A. These tables include the estimated spill volume, discharge rate, and general direction of flow, as well as the means of containment for the most likely discharge scenario.

#### 3.3 Containment and Diversionary Structures

40 CFR 112.7(c)

The facility has multiple containment and diversionary structures. The Port facility bulk fuel tanks 1 through 4 are constructed with double walls and double bottoms that provide secondary containment for the contents of the tanks. Tanks 1 through 7 are located within a bermed and lined secondary containment area, however repair of sinkholes in the containment are required to reduce strain on the liner to acceptable levels. Tanks 5 through 7, which are single wall tanks, are currently permanently closed as discussed in Section 2.2.7. The Mine facility bulk fuel tanks are within two secondary containment areas, each with two tanks. Tables A-1 and A-2 in Appendix A provide information about secondary containment volumes and types. The bulk fuel loading and off-loading areas at the Port and Mine have secondary containment areas with a capacity of greater than 110% of the volume of the largest compartment of the mobile fuel tankers at the facilities.



The Mine facility drainage is directed towards the TSF through gravity, diversions or pumping. The TSF provides secondary containment in the event of an oil discharge from a container or piping that is not otherwise in containment.

When fueling equipment in the field a “duck pond” is placed beneath the nozzle at the equipment fill point. Valves, pump nozzles, and other equipment subject to drips are protected by placement of duck ponds or 5-gallon buckets during fuel transfers between tanker trucks and bulk fuel tanks.

ISO tanks and connexes containing oil are temporarily stored in the material storage area at the Port for short periods of time as logistically required during transportation from the vendor to the delivery point at either the Mine or to the secondary containment area at CSB-2 at the Port. Sized secondary containment for full-unopened ISO tanks is not provided at the material storage area. Outbound connexes containing oil are provided with internal secondary containment (liner affixed inside connex) prior to packaging for shipment.

### **3.4 Practicability of Secondary Containment**

40 CFR 112.7(d)

Secondary containment is not practicable for the regulated containers at the locations noted in Section 1.7.2.

### **3.5 Inspections, Tests, and Records**

40 CFR 112.7(e); 112.8(c)(6)

Inspections and tests of oil containers and secondary containment occur on a regular frequency depending on the type of container and its use. Appropriately, trained company personnel perform monthly inspections that include container supports and foundations, as well as impoundment areas. The following sections describe these inspections. Steel Tank Institute (STI) Standard SP001 (*Standard for the Inspections of Aboveground Storage Tanks*) and American Petroleum Institute (API) Standard 653 (*Tank Inspection, Repair, Alteration, and Reconstruction*), or equivalent, are used as the standards for tank inspections. See the tables in Appendix A for the inspection standard associated with each container.

Facility oil piping maintenance and inspection activities for large or high-pressure oil piping are conducted in accordance with API Standard 570. Inspection reports are kept on file on the Environmental Department directory for at least 3 years at Y:\Enviro\Dept - Enviro\Spill and Response\Inspections (Piping, Containers, Tanks). Inspections of piping using non-destructive examination methods may be conducted periodically as deemed necessary by the API 570 inspector. Other piping is inspected during inspections of associated tanks or equipment.

#### **3.5.1 Inspections**

Visual inspections are conducted monthly by the trained personnel to monitor and record the condition of each oil-containing tank and container. Because the responsibility and frequency of inspections depends on the type of container and its location, several checklists are used to satisfy the overall inspection requirement.

Checklists are predominately electronic using the FastField software on tablet computers for data collection. FastField forms contain instructions for inspections, and training is also provided to oil handling personnel who conduct routine inspections. The FastField system retains completed inspection records on the Red Dog Operations Microsoft SharePoint Site (<https://teckresources.sharepoint.com/sites/SPCCInspections>). A small number of containers are inspected using other electronic means. The form of inspection record, and location of electronic records if applicable, is noted on the container tables in Appendix A.

FastField checklists are used for the large, stationary tanks at the Mine and Port, the smaller satellite diesel tanks, and portable containers and portable container areas. Annual inspection requirements under STI SP001 are included in the monthly inspection checklists.

Oil-filled operational equipment is inspected monthly using the applicable points from STI SP001. These points include inspection for visible exterior damage to containers and checking for the presence of visible leaks from containers or lines. These same principles are applied to inspections of mobile equipment conducted through the Maintenance Work Order system. Mobile equipment and mobile refuelers are inspected during regular preventative maintenance (PM) servicing, typically every 500 operating hours.

Portable containers, such as drums and totes, may be inspected as a group if they are stored in the same containment area. As discussed in Section 1.7.1, individual containers in unopened connex units are not inspected; the area in which the connex unit is located is inspected as a portable container area.

Secondary containment for containers of volume 55 gallons or greater are inspected at the same time as tank inspections. Spills, precipitation, debris, and other materials that could reduce the volume of the secondary containment are removed as soon as practicable and noted on the corresponding tank inspection checklist. Secondary containment water discharges are recorded on the container inspection checklist.

Visible leaks or spills are promptly cleaned up and active leaks (if occurring) are corrected by responsible personnel. If a leak or other maintenance issue cannot be immediately addressed, a Maintenance Work Order is written.

The location of inspection records for each container or storage area is noted on tables in Appendix A.

### 3.5.2 Certified Inspections and Testing

Certified inspections and tests of shop-fabricated steel tanks and containers by a certified STI or API inspector shall be conducted as specified in STI SP001 or API 653, as noted in the tables in Appendix A. In general, shop-fabricated tanks with capacities of 5,000 gallons or less, that have appropriate environmental controls for both spill prevention and release detection and are routinely inspected and problems corrected as defined in Sections 3.5.1 and 3.5.2, do not require periodic inspection by certified inspectors. Shop-fabricated tanks with capacities greater than 5,000 gallons are required to have periodic certified inspections. Tanks with capacities greater than 10,000 gallons are inspected per the schedule established in the oil discharge prevention and contingency plan (ODPCP). Appropriately certified specialized contractors conduct API inspections and consequently procedures and checklists for these inspections are not included in this plan.

## 3.6 Training for Oil-Handling Personnel

40 CFR 112.7(f)

RDO recognizes that all oil-handling personnel must be trained and kept current in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of this SPCC Plan.

Oil-handling personnel include employees engaged in the operation and maintenance of oil storage containers or the operation of equipment related to storage containers and emergency response personnel.

Annual spill prevention briefings are mandatory for all oil-handling personnel to assure adequate understanding of the SPCC Plan. Such briefings highlight and describe known discharges or failures, malfunctioning components, and recently developed precautionary measures. This briefing information is incorporated in the annual "Oil Handler" training course.

Personnel training is documented and maintained as described in Section 1.6 for at least three years.

### 3.7 Facility Security

40 CFR 112.7(g)

The facility is in a remote area in the Northwest Arctic Borough of Alaska and is not connected to any State highway. The airport adjacent to the Mine site is privately owned by Teck and is not open for public use. In addition to the remote location and restricted access, security is maintained by:

- At least 400 employees work at the Mine facility during operating hours; at least 10 employees work at the Port. Operating activities occur 24 hours per day, 7 days a week.
- Adequate lighting is provided. Exterior lights illuminate the facility during hours of darkness, and portable lighting is available to assist in spill response.
- Loading/unloading connections of piping are securely capped or blank-flanged when not in service or when in standby service for an extended time.
- Aboveground piping interconnecting the tanks is safe from vehicular traffic and heavy equipment. Each area that contains aboveground piping also has signs to warn vehicles about the piping. Detailed descriptions of facility piping are provided in Section 4.3.

### 3.8 Brittle Fracture

40 CFR 112.7(i)

Although the large bulk storage tanks at the Port are field-constructed, the shell and tank bottoms have thickness less than 0.5-inch. Certified inspection reports indicate the shell and bottom thickness of all field-constructed tanks are less than 0.5-inch. Storage tanks with a maximum shell thickness of 0.5-inch or less are not generally considered at risk for brittle failure.<sup>1</sup> Therefore, brittle fracture analysis is not applicable at the facility.

### 3.9 Conformance with Federal, State and Local Applicable Requirements

40 CFR 112.7(j)

The facility complies with spill reporting requirements for the U.S. Environmental Protection Agency (EPA), the U.S. Coast Guard (USCG), the U.S. Department of Transportation (USDOT), the State of Alaska, and the Northwest Arctic Borough. The facility has oil storage capacity to require the following response plans:

- ODPCP prepared in accordance with the requirements of Title 46, Chapter 4, Section 30 of the Alaska Statutes (AS 46.04.30). The ODPCP has been prepared and is in effect (QualTrax #1610).
- EPA Facility Response Plan (FRP) number FRPAKA0018, Red Dog Mine and Port Facilities, prepared in accordance with 40 CFR 112.20 (QualTrax #6215).
- USCG FRP prepared in accordance with 33 CFR 154 facility identification number ANC-K-057. The USCG FRP has been prepared and is in effect (QualTrax #6214).
- USDOT Response Plan, sequence number 3172, prepared in accordance with 49 CFR 194. The USDOT Response Plan has been prepared and is in effect (QualTrax #6213).

The above referenced plans provide sufficient information to meet the requirement of the Northwest Arctic Borough Title 9 permit to have an oil spill control and cleanup plan for onshore and offshore bulk fuel and petroleum storage (Northwest Arctic Borough, 2018).

The substantial harm determination indicating an EPA FRP is required for the facility is included in Appendix D of this plan. The EPA FRP was submitted to the EPA Regional Administrator, and was approved until November 5, 2024 (U.S. EPA, 2019). The Northwest Arctic Borough has enacted an ordinance<sup>2</sup> requiring that fuel storage containers larger than 660 gallons be provided with impermeable lining and diking or other satisfactory secondary containment. Because protection equivalent to impermeable lining and diking is allowed, double-wall tanks meet this requirement.

<sup>1</sup> U.S. Environmental Protection Agency, *SPCC Guidance for Regional Inspectors*, Section 7.2.6, Page 7-20.

<sup>2</sup> Northwest Arctic Borough, Alaska - Code of Ordinances, Title 9, Chapter 9.25.

The Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System individual permits for the Mine (ADEC, 2017a) and Port (ADEC, 2017b) contain requirements for permittees to minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. The SPCC plan collaborates with stormwater pollution prevention requirements listed in both the port APDES (permit number AK0040649) and mine site APDES (permit number AK0038652). The Mine stormwater pollution prevention measures are described in the Red Dog Mine Pollution Prevention Plan (QualTrax #660), and the Port stormwater pollution prevention measures are described in the Red Dog Port Best Management Practices Plan (QualTrax #1548).

The ADEC Waste Management Permit issued to Teck contains a condition that Teck shall maintain fuel handling and storage facilities in a manner that will minimize the discharge of hazardous substances (ADEC, 2021). This SPCC plan demonstrates compliance with this stipulation.

### 3.10 Oil-Filled Operational Equipment

40 CFR 112.7(k)

Oil-filled operational equipment that contains 55 gallons or more of oil is located at the facility. The Port equipment is listed in Table A-1 and the Mine equipment is listed in Table A-2. There has not been a discharge of 42-gallons of oil or greater to waters of the U.S. from oil-filled operational equipment at the Red Dog Mine or DTMS facilities within the last three years. Oil-filled operational equipment is at the facility is consequently considered qualified oil-filled operational equipment for the purposes of secondary containment.

All of the oil-filled operational equipment is provided with means to detect a release, including visual observation, and, at a minimum, general containment in accordance with 40 CFR 112.7(c) is provided.

### 3.11 Non-Applicable Requirements

40 CFR 112.7(h), 40 CFR 112.8(c)(4), 112.8(c)(5)

The following installations are not present at the facility:

- The facilities do not have tank car or truck loading/unloading racks (no loading/unloading arm).
- Underground Storage Tanks (completely or partially buried or bunkered) are not present at the facilities.

The requirements of 40 CFR 112.7 and 112.8 that apply solely to these types of installations do not apply at the facility.

## 4. DISCHARGE PREVENTION

### 4.1 Facility Drainage

40 CFR 112.7(a)(3)(iii); 112.8(b); 112.8(c)(3)

#### 4.1.1 Diked Areas

Containment areas are visually inspected for the presence of oil, water or debris during the routine inspection of the facilities as described in Section 3.5.1, or after significant rain events. If pooled water is found it is removed, and the removal is logged using FastField, or paper copy at the Port (representative log document Qualtrax #6332). If sheen is observed, it is treated from the water prior to discharge. If oil is observed, it is immediately reported to a supervisor and to the Spill Reporting Officer who will assess if further notification is required. The Spill Reporting Officer can be contacted by calling the Red Dog Spill Line as described in Section 5.1 of this document. The Secondary Containment Pumping SOP (QualTrax #179) describes the procedure to remove water from containment areas.

Some secondary containment areas are equipped with manual, open-and-closed design drainage valves. No secondary containment areas are equipped with flapper-type valves. All secondary containment areas are manually drained.

#### 4.1.2 Undiked Areas

Undiked areas at the Mine with a potential for discharge, such as pipelines that are outside of containment and mobile refueler parking areas, are designed to drain into the Tailings Storage Facility (TSF), which serves as a temporary catchment basin. For approximately nine months of the year, the ground is frozen, which helps facilitate cleanup of spilled material.

Undiked areas at the Port with a potential for discharge, such as from the USDOT/USCG-regulated pipeline and lines to the fuel island, would flow in the direction of the lagoon or ocean, either overland or in facility ditches. For approximately nine months of the year, the ground and lagoon are frozen, which helps facilitate cleanup of spilled material.

### 4.2 Bulk Storage Containers

40 CFR 112.7(a)(3)(iii); 112.8(c)

Appendix A, Tables A-1, A-2 and A-3, Port, Mine and Mobile Containers, respectively, summarize the construction, volume, content, secondary containment, overfill and discharge controls of bulk storage containers, and location of inspection records, as applicable.

#### 4.2.1 Construction

40 CFR 112.8(c)(1)

Oil containers are constructed of steel or plastic, in accordance with industry specifications. The design and construction of oil storage containers and associated piping are compatible with the characteristics of the oil product they contain and with temperature and pressure conditions. The transfer hoses are designed for petroleum products.

#### 4.2.2 Secondary Containment

40 CFR 112.8(c)(2)

Sufficiently impervious, sized secondary containment, or drainage to the TSF which acts as a facility catchment basin and is not waters of the United States, is provided for all stationary, mobile, satellite, and portable oil storage containers with capacities equal to or greater than 55 gallons, with the exception of intermediate bulk containers (IBCs)/totes and drums in unopened connex units and ISO tanks being staged for short periods at the Port materials storage area. Equivalent protection for the Port materials storage area is described in the impracticability

determination, Section 1.7.2. The volume of secondary containment provided for all other containers is described in the tables in Appendix A. Additional information on containment for containers in connex units, ISO tanks, mobile equipment, mobile refuelers, and oil-filled operation equipment is provided as follows.

### *Connex Units and ISO Tanks*

Connex units containing oil containers of 55 gallons or greater in capacity are generally fitted with interior liners that provide sized secondary containment during loading prior to shipping to the DMTS Port. ISO tanks and connexes containing oil are temporarily staged in the material storage area at the Port for short periods of time as logistically required until transfer to the secondary containment area at CSB-2 at the Port or to the cold storage area at the Mine for storage. Outbound connex units (i.e., being loaded onto barges at the DMTS Port) that contain oil in regulated quantities are fitted with interior liners that provide sized secondary containment.

Sized secondary containment is provided at the cold storage areas at the Mine as follows:

- The site drainage from the cold storage area is in the direction of the TSF, which is a waste management facility and not waters of the United States. This containment is larger than any single container in the cold storage area. A gravel perimeter berm is in place down gradient of the storage pad and would intercept overland flow of oil from the cold storage area prior to reaching the TSF waste treatment facility pond, thereby simplifying recovery for a discharge of oil in this area.
- Connex units containing oil containers regulated under 40 CFR 112 generally are fitted with interior liners that provide secondary containment prior to shipping to Red Dog. Likewise, connex units containing oil for back-haul are fitted with interior liners during loading at the Cold Storage Area.

### *Mobile Equipment*

Sized secondary containment is provided for mobile equipment fuel tanks as follows:

- Mobile equipment may have integrated secondary containment.
- Over the majority of the Mine area, specifically in the pits, mill facilities, cold storage area, incinerator, and laydown yard, mine drainage is collected and directed to the TSF. See Figure 5 for the location of these areas. The constructed gravel pads and diversion structures present in these areas are capable of containing oil from a spill from mobile equipment described above until cleanup occurs.
- If mobile equipment does not have integrated secondary containment, and is in use outside of the areas in which the mine drainage collection system provides secondary containment, then secondary containment will be provided.

### *Mobile Refuelers*

Mobile refuelers are provided general containment when in use. General containment includes the use of duck ponds under hose connection when transferring fuel.

### *Oil-Filled Operating Equipment*

Oil-filled operating equipment is provided with general secondary containment. Depending on equipment, this includes buildings, drainage sumps, and concrete slabs.

#### 4.2.3 Oil-Water Separators associated with Secondary Containment

40 CFR 112.8(c)(2)

The oil-water separator in the Heavy Equipment Shop is used for wastewater treatment, and water from the shop floor drain reports to this treatment sump. The shop floor provides secondary containment for the tanks located in this area, so the oil-water separator is part of this containment. The oil-water separator discharge is controlled by

an electric pump, the discharge from which extends higher than the floor area that acts as containment. The oil-water separator oil chamber is equipped with a sensor that disables the discharge pump when oil presence is detected. The oil-water separator system consequently provides containment sufficiently impervious to contain oil until it can be removed.

#### 4.2.4 Overfill Prevention Systems

40 CFR 112.8(c)(8)

The tanks have overfill prevention systems as noted in Appendix A, Tables A-1 and A-2, Potential Oil Spill Sources, 55 Gallons or Greater. Environmental protection for overfills is provided by at least one of the following:

- Determination of fuel quantity transfer prior to the transfer (fuel level gauge, sticking tank, etc.); or
- Continuous observation of fuel transfer; or
- Automatic high-level shutoff and monitored alarms for automated transfers.

Drums may be refilled onsite, on an as-needed basis. The refilling takes place within containment or inside a building. Spill prevention is through visual means and by determining the volume to be transferred prior to the transfer.

#### 4.2.5 Effluent Treatment Facilities

40 CFR 112.8(c)(9)

The Mine facility has an effluent treatment facility to treat mine drainage water stored in the TSF prior to discharge. This treatment facility is not designed or permitted to remove oil. Instead, the water in the tailing impoundment is visually monitored daily for the presence of a sheen, and if present, the sheen is recovered directly from the pond.

An oil-water separator is present at the Heavy Equipment Shop. As described in Section 4.2.3, this oil-water separator acts as both as wastewater treatment system and as part of a secondary containment system. The system is inspected monthly and documented in SiteLine

At the Port Site, storm water from the CSBs and domestic wastewater are treated and discharged to Chukchi Sea. The treatment systems are not designed or permitted to remove oil, and water that reports to the treatment plant does not originate from secondary containment areas. The CSB stormwater collection area is inspected for sheens when not frozen or snow covered.

#### 4.2.6 Visible Discharges

40 CFR 112.8(c)(10)

Visible discharges from a container or appurtenance (including seams, gaskets, pumps, valves, rivets, bolts, or within the containment associated with a contained) are noted during the visual inspections. The source of the discharge from the container or appurtenance is promptly corrected upon discovery. Oil observed in secondary containment is promptly removed and disposed of as detailed in the Secondary Containment Pumping SOP (QualTrax #179).

#### 4.2.7 Portable Containers

40 CFR 112.8(c)(11)

Portable containers in active use (e.g., during product transfers, container transport or preparation for activities involving the container) are not always provided with sized secondary containment. However, general containment procedures as described in Section 3 are applied to portable containers in active use.

### 4.3 Transfer Operations, Pumping and In-Plant Processes

40 CFR 112.8(d)

Aboveground and buried piping are depicted in Appendix B figures and described below.

#### 4.3.1 Buried Piping

Buried oil piping at RDO consists of the following segments at the Port and Mine.

At the Port (Figure 3):

- A 971 foot long, buried 2-inch fuel line is used to transfer fuel from the fuel loading rack/dispenser area to the generator day tank (#4002-1902);
- A 30.7 foot long, buried 1-inch line is used to transfer fuel from the generator day tank (#4008-1902) to the powerhouse; and
- A 111 foot long, buried 1-inch fuel line is used to supply fuel to the incinerator from the generator day tank (#4008-1902).

At the Mine (Figure 6):

- Twin 85-foot pipe runs from tanks M3 and M4 to the fuel island (one run is 6-inch line and the other run is 4-inch line);
- 710 feet of 2-inch line from the fuel island to the north powerhouse day tanks (#6022-1902-01 through 06);
- 500 feet of 2-inch line from the fuel island to the new powerhouse day tanks (#6030-1902-07 and 08);
- 7 feet of 2-inch line from the fuel island to the light equipment fuel dispenser; and
- 15 feet of 2-inch line from the fuel island to the medium-duty equipment fuel dispenser.

All buried oil piping except the 4-inch and 6-inch lines from Tanks M3 and M4 to the fuel island at the mine was installed and/or replaced prior to August 16, 2002. All buried oil piping is wrapped and/or coated with an appropriate corrosion protective material and equipped with cathodic protection.

The buried piping is maintained and inspected in accordance with the National Association of Corrosion Engineers (NACE) International's, Standard Recommended Practice - Control of External Corrosion on Underground or Submerged Metallic Piping Systems, 2007 edition (NACE SP0169-2007). Documentation of piping and cathodic protection system inspections and maintenance is controlled by the Maintenance Department and records are retained electronically in the GenCID system as records to PM #13150.

If a section of buried line is exposed for any reason, it is inspected for deterioration. If corrosion damage is found, additional examination and corrective action as indicated by the magnitude of the damage is undertaken.

#### 4.3.2 Aboveground Piping

The majority of the oil piping at RDO is aboveground, with 4,500 feet of aboveground piping at the Port facility and 150 feet at the Mine Site, as shown in Appendix B figures. Piping supports are designed to minimize exterior abrasion, corrosion, and/or chafing and allow for expansion and contraction. All aboveground piping is protected from damage by vehicles either by physical barriers or by its location relative to vehicular traffic. Aboveground piping is protected from atmospheric corrosion by protective coatings.

At the Port, the 12" USCG/USDOT Pipeline Hazardous Material Safety Administration-regulated oil pipeline outside of secondary containment that transfers oil from the fuel barges to the tank farm is pneumatically pressure tested per requirements in the USCG Operations Manual. Records of the testing are maintained at the Port facility. The pipeline is stenciled with the maximum allowable operating pressure. The pipeline is also visually inspected before and during each transfer operation.

Pipelines removed from service are drained, identified as to origin, marked with the words "Out of Service" and the date, and capped or blank-flanged.



In-service aboveground piping is visually inspected monthly for spills and leaks by operating personnel. At the Port, the fuel transfer pipeline is inspected prior to and during each transfer; it is not inspected when empty during the winter. The inspection also assesses the general condition of items such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Maintenance and inspection of pipelines are conducted in accordance with API 570. The inspection schedule and copies of previous inspections are kept on file and archived onsite for the life of the system and are available upon request.

Fuel is offloaded by barge at the Port through a manifold/pump system to the designated tank at a rate of 2,800 to 6,400 gallons per minute (gpm). Details of the barge offloading procedures are provided in the U.S. Coastguard Operations Manual (QualTrax #1675). An emergency shutdown is present on each barge. A manually activated shutdown valve is also located on the dock. The pumphouse at the Port has two pumps that supply diesel to the power plant or transfer fuel between storage tanks at a rate of 50 gpm. Two additional pumps transfer fuel from the storage tanks to tanker trucks at 400 gpm. One pump is dedicated to vehicle refueling and transfers fuel at 30 gpm. Emergency shutdown buttons/stations are located at the fuel island.

At the Mine, fuel is offloaded by tank truck directly into one of the diesel storage tanks by a 300 gpm pump located in the pumphouse. Only trained, designated operators perform fuel loading/unloading functions. Two 30 gpm pumps, one operating and one on standby, transfer fuel to the Powerhouse day tanks. Two additional 30 gpm pumps are available for vehicle and equipment refueling. Emergency shutdown buttons/valves are located at tanks M-3 and M-4 and at the fuel island for tanks M-1 and M-2.

## 5. DISCHARGE NOTIFICATIONS AND RESPONSE

### 5.1 Reporting and Notifications

40 CFR 112.7(a)(4)

Employees will notify their supervisor or call the Red Dog Spill Line IMMEDIATELY upon discovering a release of oil. The Red Dog Spill Line is reached by dialing 45367 from any Red Dog telephone, or 907-754-5367 from any other telephone. The Red Dog Spill Line is answered 24 hours a day, 7 days a week. Releases which occurred from the DML contactor onsite are reported by the contractor directly to the state and federal agencies if required.

If no response, report the spill to Red Dog Environmental by one of the following alternatives:

- Call 911 from a Red Dog phone, ask for the Spill Line; or
- At the mine radio the Control Room on Channel 4; or
- At the Port or on the Port Road radio the Hopper Crew on Channel 3.

Instructions for spill reporting are summarized in the Environmental Pocket Reference for Employees and Contractors (QualTrax #1569-2).

The Environmental Department has a designated Spill Reporting Officer, or their designee, who is responsible for reporting oil spills to agencies and communities. External spill reporting is conducted in accordance with the SOP maintained in QualTrax (document #978, External Spill Reporting SOP). Agency and community reporting requirements, agency and community contact information, and the Teck/Red Dog contact list and incident management team are maintained in QualTrax (document #971, Environmental and Community Relations Emergency Reporting Contact List).

The National Response Center (NRC) must be notified for any spill discharged in quantities that may be harmful, as described in 40 CFR 110, into or upon the navigable waters of the United States or adjoining shorelines. Oil sheen on navigable waters would require NRC notification. Notification of the NRC fulfills all federal notification requirements. The following data shall also be collected and provided to the NRC:

- Spill (material and volume);
- Location of spill (latitude and longitude);
- Safety issues (evacuations and injuries);
- Description of all affected media;
- Cause;
- Actions to mitigate effects of discharge;
- Description of any evacuations; and
- A list of agencies notified.

In addition to the above NRC reporting requirements, 40 CFR 112.4(a) requires that information be submitted to the EPA Regional Administrator and the appropriate state emergency contact in charge of oil pollution activities whenever the facility discharges:

- More than 1,000 gallons of oil in a single event into or upon the navigable waters of the United States or adjoining shorelines; or
- More than 42 gallons of oil in each of two discharge incidents into or upon the navigable waters of the United States or adjoining shorelines within a 12-month period.

The following information must be submitted to the Regional Administrator within 60 days:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

## 5.2 Discharge Response

40 CFR 112.7(a)(5)

State and federal laws prohibit uncontrolled discharge of oil to waters of the United States. In addition, contamination of land and groundwater by oil is prohibited by state and federal regulations. Immediate action must be taken to control, contain, and recover discharged product.

Oil spills fall into two categories:

### Incidental Releases

Characteristics of incidental releases:

- Does not pose significant safety hazard for cleanup to employees with proper personal protective equipment (PPE) and job training;
- Does not have potential to become an emergency (potential for fire or explosion, hazardous atmosphere, other hazard); and
- Does not have potential to spread to water or tundra.

A spill confined to gravel or a road surface that is not spreading is an example of an incidental release.

### Emergency Releases

Characteristics of emergency releases:

- Spill to water or tundra, or potential to spread to water or tundra; and/or
- A spill with a potential to become an emergency.

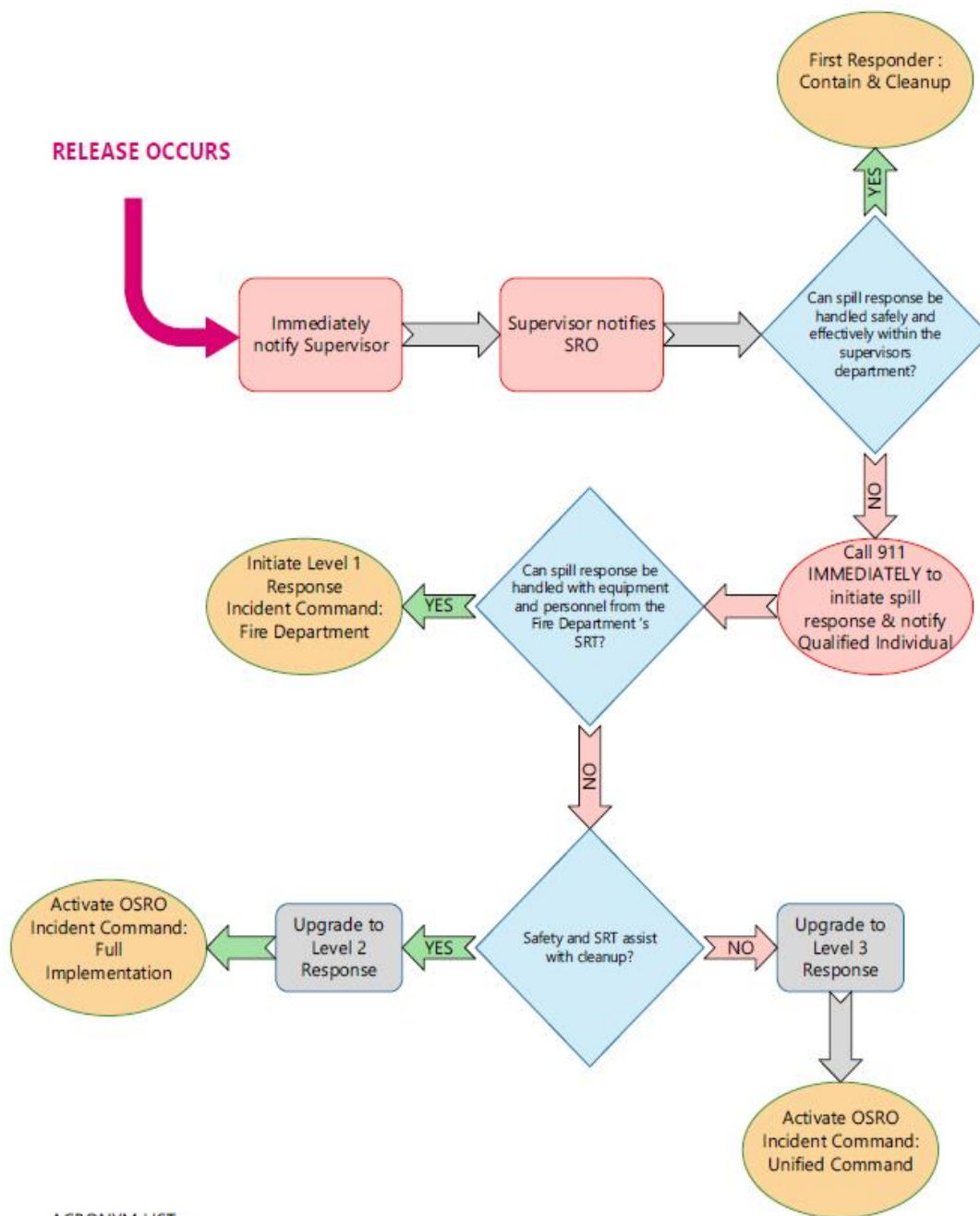
The ODPCP includes procedures for spill response, containment, cleanup, and waste disposal. The Red Dog Environmental Department will determine the type of spill and level of severity appropriate response as described in the ODPCP and summarized on Figure 5.1. The ODPCP details response actions for emergency releases, which can be classified as Level 1, 2 and 3 spills as described in the ODPCP.

Abbreviated procedures for first responders to incidental spills are provided below. First Responders are oil-handling personnel trained as described in Section 3.6 of this plan. The Red Dog Operations Spill Cleanup SOP (QualTrax #1065) provides complete information on cleanup of incidental oil releases.

**Response Procedure to Incidental Spills**

- Stop the leak if possible and safe to do so. Shut down operating equipment if it is leaking;
- Remove or turn off ignition sources, including electrical power if it poses a risk;
- Prevent foot or vehicle traffic from entering spill area;
- If you need assistance, ask your coworker or supervisor to provide help;
- Mobilize spill response equipment (spill kit); and
- Use your spill kit:
  - Don the appropriate PPE;
  - Contain the spill so it does not spread (dirt or snow berms, sorbents, other);
  - Use absorbent pads to recover oil and shovel to recover oil-contaminated soil;
  - Duck pond may be used to contain oil-contaminated soil and sorbents; and
  - Place oily waste, such as absorbent pads and used PPE, in bags (then incinerate).

If needed, arrange with surface crew for removal or excavation of contaminated soil/gravel. Provide details of the spill response to the Environmental Department to allow them to complete the spill report.



ACRONYM LIST

SRO – Spill Reporting Officer  
 SRT – Spill Response Team  
 OSRO – Oil Spill Removal Organization

Figure 5-1: Spill Response Flowchart

## 6. REFERENCES

- Alaska Department of Environmental Conservation, 2018. Alaska Pollutant Discharge Elimination System, Individual Permit issued to Teck Alaska Incorporated, Permit Number AK0038652. September 1.
- Alaska Department of Environmental Conservation, 2014. Alaska Pollutant Discharge Elimination System, Individual Permit for the DeLong Mountain Regional Transportation System Port Facility issued to Teck Alaska Incorporated, Permit Number AK0040649. April 8.
- Alaska Department of Environmental Conservation, 2021. Waste Management Permit for Teck Alaska Incorporated, Permit Number 2021DB0001. September 23, 2021
- Alaska Statutes, Title 46, Chapter 4, Section 30, *Oil Pollution Control*.
- American Petroleum Institute. Standard 653, 4<sup>th</sup> Edition, *Tank Inspection, Repair, Alteration, and Reconstruction*, April 2009.
- Code of Federal Regulations, Title 40, Part 112, *Oil Pollution Prevention*.
- Code of Federal Regulations, Title 40, Part 122, U.S. Environmental Protection Agency Administered Permit Programs: The National Pollutant Discharge Elimination System.
- National Oceanic and Atmospheric Administration (NOAA), 2012. NOAA Atlas 14, Precipitation-Frequency Atlas of the United States, Volume 7 Version 2.0. On-line calculator at: [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_ak.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html)
- Northwest Arctic Borough, Alaska - Code of Ordinances, Title 9, Chapter 9.25, *Zoning and Land Use, Borough Standards* Subchapter 9.25.020(J), *Area Standards* (Ord. 12-03 §1, 2013; Ord. 10-14, 2011).
- Northwest Arctic Borough, 2018. Title 9 Master Plan Permit No: 106-03-18, issued to Teck Alaska Incorporated on July 26, 2018, expiration on December 31, 2031. Northwest Arctic Borough, Planning Department, Kotzebue, Alaska.
- QualTrax (Red Dog Document Control) Documents (ID number and title):
- |        |   |
|--------|---|
| 179    | Secondary Containment Pumping SOP   |
| 437    | NANA/Lynden Fuel Truck Operations   |
| 575    | Heavy Equipment Fueling and Greasing SOP  |
| 577    | Satellite Fuel Tank Inspection and Filling SOP  |
| 643    | Fuel Tank Alarm Testing Procedure   |
| 645    | Port Fueling Procedure  |
| 660    | Red Dog Mine Pollution Prevention Plan for Storm Water Management   |
| 971    | Environmental & Community Relations Emergency Reporting Contact List  |
| 978    | External Spill Reporting SOP  |
| 1065   | Spill Cleanup SOP   |
| 1548   | Red Dog Port Best Management Practices Plan   |
| 1569-2 | Environmental Pocket Reference for Employees and Contractors, Red Dog Operations                                |
| 1610   | Red Dog Oil Discharge Prevention and Contingency Plan   |
| 1675   | U.S. Coastguard Operations Manual for DeLong Mountain Regional Transportation System Seaport Facility Tank Farm |
| 2564   | Red Dog Operations and DeLong Mountain Regional Transportation System Road and Port SPCC Plan                   |
| 6213   | U.S. Department of Transportation, Response Plan Sequence 3172, 49 CFR 194, Red Dog Operations                  |
| 6214   | U.S. Coast Guard, Facility Response Plan, 33 CFR 154, Red Dog Operations  |
| 6215   | U.S. EPA, Facility Response Plan FRPAKA0018, 40 CFR 112, Red Dog Operations                                     |

6332 Port Secondary Containment Pump / Drain Log

Steel Tank Institute), Standard SP001, 6<sup>th</sup> Edition, *Standard for Inspection of Aboveground Storage Tanks*. January 2018.

Teck Alaska Incorporated, 2023. Meteorological data from the Red Dog Mine, 1992-2022 (precipitation) and 1997-2022 (temperature).

U.S. Environmental Protection Agency, Region 10, letter from Robert Whittier, On Scene Coordinator, to Red Dog Operations, Teck Alaska Incorporated, *RE: Review of FRPAKA0018, Red Dog Operations*, November 5, 2019.

**APPENDIX A**  
**OIL-FILLED CONTAINER TABLES**



Table A-1: Port Containers

Figure #	Container ID or location ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates- Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Inspection Records	
Bulk Storage Containers (regulated by 40 CFR 112.8)																			
3	4008-1901-01	Port Tank Farm / Diesel tank Port 1	Diesel tank Port 1	Diesel	2,436,000	Field-erected, Vertical, Cylindrical, Double wall, Double bottom	Overflow Alarm, Sump Alarm	Lined impoundment	4,400,000	1988	External: 2015/2020 Internal: 2010/2020 API 653	Double bottom, Double wall	Painted	Leak or overfill during transfer	336,000	Toward impoundment	28,000	Note 1&5	
3	4008-1901-02	Port Tank Farm / Diesel tank Port 2	Diesel tank Port 2	Diesel	2,436,000	Field-erected, Vertical, Cylindrical, Double wall, Double bottom	Overflow Alarm, Sump Alarm	Lined impoundment	4,400,000	1988	External: 2017/2022 Internal: 2017/2027 API 653	Double bottom, Double wall	Painted	Leak or overfill during transfer	336,000	Toward impoundment	28,000	Note 1&5	
3	4008-1901-03	Port Tank Farm / Diesel Port 3	Diesel tank Port 3	Diesel	2,436,000	Field-erected, Vertical, Cylindrical, Double wall, Double bottom	Overflow Alarm, Sump Alarm	Lined impoundment	4,400,000	1987	External: 2017/2022 Internal: 2017/2027 API 653	Double bottom, Double wall	Painted	Leak or overfill during transfer	336,000	Toward impoundment	28,000	Note 1&5	
3	4008-1901-04	Port Tank Farm / Diesel Port 4	Diesel tank Port 4	Diesel	2,436,000	Field-erected, Vertical, Cylindrical, Double wall, Double bottom	Overflow Alarm, Sump Alarm	Lined impoundment	4,400,000	1988	External: 2016/2021 Internal: 2011/2021 API 653	Double bottom, Double wall	Painted	Leak or overfill during transfer	336,000	Toward impoundment	28,000	Note 1&5	
3	4008-1901-05	Port Tank Farm / Diesel Port 5	Diesel tank Port 5	Diesel	2,436,000	Field-erected, Vertical, Cylindrical, Single wall, Double bottom	Overflow Alarm, Sump Alarm, Float Gauge, Auto Tank Gaging system	Lined impoundment	4,400,000	1997	External: 2016/2021 Internal: 2016/2026 API 653	Double bottom	Painted	Leak or overfill during transfer	336,000	South	28,000	Note 1&5	
3	4008-1901-06	Port Tank Farm / Diesel Port 6	Diesel tank Port 6	Diesel	2,469,600	Field-erected, Vertical, Cylindrical, Single wall, Double bottom	Overflow Alarm, Sump Alarm, Float Gauge, Auto Tank Gaging system	Lined impoundment	4,400,000	2000	External: 2015/2020 Internal: 2010/2020 API 653	Double bottom	Painted	Leak or overfill during transfer	336,000	South	28,000	Note 1&5	
3	4008-1901-07	Port Tank Farm / Diesel Port 7	Diesel tank Port 7	Diesel	3,130,000	Field-erected, Vertical, Cylindrical, Single wall Steel	High Level Shutoff Switch, Float Gauge, Auto Tank Gaging system	Lined impoundment	4,400,000	2020	New in 2020 API 653	Leak detection piping below tank and above liner	Painted, Impressed Current Cathodic Protection	Leak or overfill during transfer	336,000	South	28,000	Note 1&5	
Bulk Storage Containers (regulated by 40 CFR 112.8) - "Satellite Tanks"																			
3	4002-1902	Powerhouse / Generator Diesel Tank Outside	Generator Day Tank	Diesel	2,592	Shop-fabricated Steel, Double wall	Low Level Alarm, Level Alarm High, High Level Shutdown, Level Gauge	Double-walled	>2592	2014	Periodic STI SP001	Elevated; Double-walled	Elevated, painted	Leak	60	West	2,592	Note 1	
3	4002-1903-01	Inside Powerhouse Generator Fuel Tank	Generator Fuel Tank	Diesel	275	Shop-fabricated Steel, Single wall	Level Gauge	Steel containment	436	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	350	Note 1	
3	4002-1903-02	Inside Powerhouse Generator Fuel Tank	Generator Fuel Tank	Diesel	275	Shop-fabricated Steel, Single wall	Level Gauge	Steel containment	436	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	350	Note 1	
3	4002-1912	Inside Powerhouse / Oil Storage Tank	Oil storage	Lube oil	300	Shop-fabricated Steel, Single wall	Visual	Inside building, steel floor	>800	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	300	Note 1	
3	4002-1913	Inside Powerhouse / Oil Storage Tank	Oil Storage Powerhouse	Used oil	800	Shop-fabricated Steel, Single wall	Visual	Inside building, steel floor	>800	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	800	Note 1	
3	4002-1909	Emergency Fire Pump Generator Tank	Fire Pump Fuel Tank	Diesel	550	Shop-fabricated Steel, Single wall, Diked tank	Visual	Diked tank, lined berm	1,068	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted	Leak	60	West	550	Note 1	
3	4002-1914	Inside Dawg Shed / Used Oil Tank	Used Oil Storage	Used oil	300	Shop-fabricated Steel, Single wall	Visual	Diked containment	1,473	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	300	Note 1	

Table A-1: Port Containers

Figure #	Container ID or location ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates- Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Inspection Records
3	4002-1915	Inside Dawg Shed / Used Oil Tank	Used Oil Storage	Used oil	300	Shop-fabricated Steel, Single wall	Visual	Diked containment	1,473	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	300	Note 1
3	4002-1916	Inside Dawg Shed / Used Oil Tank	Used Oil Storage	Used oil	500	Shop-fabricated Steel, Single wall, Diked	Level Gauge	Diked tank	519	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	500	Note 1
3	4002-1918	Inside Dawg Shed / Diesel Tank	Diesel Tank	Diesel	500	Shop-fabricated Steel, Single wall, Diked tank	Level Gauge	Diked tank	598	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted, indoors	Leak	60	Indoors	500	Note 1
3	4002-1919	Incinerator / Diesel Tank	Incinerator Day Tank	Diesel	800	Shop-fabricated Steel, Single wall, Diked	Level Gauge	Diked tank	>800	N/A	Periodic STI SP001	Elevated above metal dike	Elevated, painted	Leak	60	North	800	Note 1
4	4003-1903-01	CSB-2 Equipment Maintenance Shop Lube Bay / Used Oil Tank	Used oil tank	Used oil	300	Shop-fabricated Aluminum	Visual	Inside building, concrete floor	>300	N/A	Periodic STI SP001	On concrete floor	Indoors, painted	Leak	60	Indoors	300	Note 1
4	4003-1923- 01	CSB-2 Equipment Maintenance Shop Lube Bay / Used Oil Tank	Motor oil tank	Motor oil	265	Shop-fabricated Aluminum	Visual	Inside building, concrete floor	>265	N/A	Periodic STI SP001	On concrete floor	Indoors, painted	Leak	60	Indoors	265	Note 1
4	4003-1923- 02	CSB-2 Equipment Maintenance Shop Lube Bay / Used Oil Tank	Hydraulic oil tank	Hydraulic oil	265	Shop-fabricated Aluminum	Visual	Inside building, concrete floor	>265	N/A	Periodic STI SP001	On concrete floor	Indoors, painted	Leak	60	Indoors	265	Note 1
4	4003-1923- 03	CSB-2 Equipment Maintenance Shop Lube Bay / Used Oil Tank	Lube oil tank	10W Lube oil	265	Shop-fabricated Aluminum	Visual	Inside building, concrete floor	>265	N/A	Periodic STI SP001	On concrete floor	Indoors, painted	Leak	60	Indoors	265	Note 1
4	4003-1923- 04	CSB-2 Equipment Maintenance Shop Lube Bay / Used Oil Tank	Lube oil tank	30W Lube oil	265	Shop-fabricated Aluminum	Visual	Inside building, concrete floor	>265	N/A	Periodic STI SP001	On concrete floor	Indoors, painted	Leak	60	Indoors	265	Note 1
4	4004-1901	Transfer Tower 1 / Diesel Tank	Transfer Tower 1 Diesel Tank	Diesel	800	Shop-fabricated Steel, Single wall, Diked tank	Level Gauge	Steel containment and lined berm	1,363	N/A	Periodic STI SP001	Elevated above metal dike and lined berm	Elevated, painted	Leak	60	Southwest	800	Note 1
Portable Container Areas (regulated by 40 CFR 112.8)																		
3	Spill Tent	Spill Tent / Portable Containers	Drums (55 gal each) Up to 15	Misc. oils and chemicals	550	Steel or plastic drums	Visual	Inside tent, spill pallets	>55	N/A	Monthly STI SP001	On spill pallet inside tent	Indoors, painted or plastic	Leak	60	Indoors	55	Note 1
3	Dawg Shed	Dawg Shed / Portable Containers	Drums (55 gal each) Up to 4	Misc. oils and chemicals	210	Steel or plastic drums	Visual	Inside building	>55	N/A	Monthly STI SP001		Indoors, painted or plastic	Leak	60	Indoors	55	Note 1
4	CSB-1 Connexs	CSB-1 Connex Units (3 units) / Portable Containers	Drums (55 gal each) Up to 20 Totes (330 gal each) Up to 12 Super drums (800 gal each) Up to 2	Hydraulic, Drive Train & Engine oils	6660	Steel or plastic drums		Inside building, spill pallets and concrete floor to blind sump	>55	N/A	Monthly STI SP001	On spill pallet on concrete floor	Indoors, painted or plastic	Leak	60	Indoors	800	Note 1
4	CSB-2	CSB-2 Lube Bay / Portable Containers	Drums (55 gal each) Up to 12 Totes (330 gal each) Up to 2	Hydraulic, motor or used oils	1320	Steel or plastic drums	Visual	Inside building, concrete floor	>55	N/A	Monthly STI SP001	On concrete floor	Indoors, painted or plastic	Leak	5	Indoors	330	Note 1
3	Incin Jet Fuel ISO tank	Incinerator Temporary Fuel Tank	ISO Tank	Jet Fuel	6000	Aluminum	Visual	Outside, lined foldup containment	>6600	N/A	Monthly STI SP001	Elevated	Outdoors	Leak	60	North	6000	Note 1

Table A-1: Port Containers

Figure #	Container ID or location ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates- Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Inspection Records
3	Fuel Island Gas ISO	Fuel Island Gasoline	ISO Tank	Gasoline	6000	Aluminum	Visual	Outside, lined foldup containment	>6600	N/A	Monthly STI SP001	Elevated	Outdoors	Leak	60	North	6000	Note 1
4	CSB-2 Connex	CSB-2 Connex Unit (1 unit) / Portable Containers	Super drums (880 gal each) Up to 6 Drums (55 gal each) Up to 10 Totes (330 gal each) Up to 10	Misc. oils and chemicals	9,130	Steel drum	Visual	Inside lined Conex	>880	N/A	Monthly STI SP001	Elevated on pallet	Indoors, Steel, Elevated	Leak	5	Indoors	880	Note 1
4	CSB-2 ISO Pad	Staged ISO tanks and Connex w/regulated containers storage area	Up to 60 (maximum individual tank = 6,000 gal)	Misc. Oils	6,000	Portable stainless steel ISO tanks	Visual	Inside CSB2 Bermed Area	Active containment with earthen berm and collection basin	N/A	Monthly STI SP001	Elevated	Outdoors	Leak	60	Southeast	6000	Note 1
Oil-filled Operational Equipment (Regulated by 40 CFR 112.7)																		
3	4002-2309	Port PAC Elevator / Hydraulic Tank	PAC Elevator Hydraulic tank	Hydraulic oil	75	Shop-fabricated Steel, Single wall	Visual	Inside building, concrete floor	Concrete floor	N/A	See Note 4	Elevated above concrete floor	Elevated, painted	Leak	5	Indoors	75	Note 1
3	4004-0802	P-11 Ship loader controls / Hydraulic Tank	P-11 Hydraulic Storage	Fish oil	100	Steel, welded	Sight Glass	Inside shed, steel floor drains to collection tank	197	N/A	See Note 4	Elevated	Elevated, indoors, painted	Leak	5	Indoors	100	Note 1
4	4004-0803	Truck Unloading Building (TUB) / Hydraulic Tank	In-house hydraulic storage tank	Hydraulic oil	75	Steel, welded	Visual	Inside building, concrete floor and steel containment	93.5	N/A	See Note 4	Elevated above concrete floor	Elevated, painted	Leak	5	Indoors	75	Note 1
3	#1 Generator	Inside Powerhouse / #1 Oil Sump	#1 Generator, 1200 kW	Lube oil	120	Steel, welded	Dipstick	Inside building, steel floor	>800	N/A	See Note 4	Elevated above steel floor	Elevated, painted	Leak	5	Indoors	120	Note 2
3	#2 Generator	Inside Powerhouse / #2 Oil Sump	#2 Generator, 650 kW	Lube oil	60	Steel, welded	Dipstick	Inside building, steel floor	>800	N/A	See Note 4	Elevated above steel floor	Elevated, painted	Leak	5	Indoors	60	Note 2
3	#3 Generator	Inside Powerhouse / #3 Oil Sump	#3 Generator, 650 kW	Lube oil	60	Steel, welded	Dipstick	Inside building, steel floor	>800	N/A	See Note 4	Elevated above steel floor	Elevated, painted	Leak	5	Indoors	60	Note 2
3	#4 Generator	Inside Powerhouse / #4 Oil Sump	#4 Generator, 650 kW	Lube oil	60	Steel, welded	Dipstick	Inside building, steel floor	>800	N/A	See Note 4	Elevated above steel floor	Elevated, painted	Leak	5	Indoors	60	Note 2
In Transit																		
3	Temporary Material Storage Area	Materials Storage Area / ISO Tank Temp Laydown	ISO Tank Storage (6,000 gal each) Totes (up to 600 gal each)	Various	180,000	Steel/Aluminum/Plastic	Visual	Bermed staging area (no liner) Note 3	Active measures	N/A	daily	N/A	N/A	Leak	50	Southeast	6000	Note 1

- Notes:
- 1. Maintained in Fastfield
  - 2. Maintained in Port Medic Safety Office as hardcopies
  - 3. Empty ISO tanks at the Materials Storage Area are staged prior to being barged offsite; occasionally a full ISO tank will be staged in transportation service to be taken to the Mine site.
  - 4. Oil-filled operational equipment is inspected at least monthly using applicable points from STI SP-001 monthly inspection form. Example form contained in Appendix C.
  - 5. Maintained by Environmental Dept, for large bulk tank API inspection reports requiring certified inspectors, NDT, etc.

Key:

API       American Petroleum Institute

N/A       not applicable

STI       Steel Tank Institute

Table A-2: Mine Containers

Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
Bulk Storage Containers (regulated by 40 CFR 112.8), includes "Satellite" tanks																		
6	M-1	Mine Tank Farm / Lower Tank Farm	Diesel tank, Vertical	Diesel	216,000	Field-erected Steel, Double-wall, Vertical, Cylindrical	Overflow Alarm	Double-wall, lined impoundment	Double-wall 325,873 <sup>6</sup> , lined containment area 270,000	1988	External: 2018/2023 Internal: 2018/2028 API 653	Double-wall	Painted	Leak, Rupture	1,000	Southwest	216,000	Note 1 & 5
6	M-2	Mine Tank Farm / Lower Tank Farm	Diesel tank, Vertical	Diesel	216,000	Field-erected Steel, Double-wall, Vertical, Cylindrical	Overflow Alarm	Double-wall, lined impoundment	Double-wall 325,873 <sup>6</sup> , lined containment area 270,000	1988	External: 2018/2023 Internal: 2018/2028 API 653	Double-wall	Painted	Leak, Rupture	1,000	Southwest	216,000	Note 1 & 5
6	M-3	Mine Tank Farm / Upper Tank Farm	Diesel tank, Vertical	Diesel	1,201,200	Field-erected Steel, Single-wall, Double-bottom, Vertical, Cylindrical	Overflow Alarm Autogauge System	Lined impoundment	1,807,490	1995	External: 2017/2022 Internal: 2017/2027 API 653	Double-bottom	Painted	Leak, Rupture	1,000	West-southwest	1,201,200	Note 1 & 5
6	M-4	Mine Tank Farm / Upper Tank Farm	Diesel tank, Vertical	Diesel	1,125,600	Field-erected Steel, Single-wall, Double-bottom, Vertical, Cylindrical	Overflow Alarm	Lined impoundment	1,807,490	2001	External: 2016/2021 Internal: 2011/2021 API 653	Double-bottom	Painted	Leak, Rupture	1,000	West-southwest	1,125,600	Note 1 & 5
6	HE-1	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	2,660	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	2,660	Note 2
6	HE-2	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	2,500	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	2,500	Note 2
6	HE-3	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	2,500	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	2,500	Note 2
6	HE-4	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	2,660	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	2,660	Note 2
6	HE-5	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	3,225	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	3,225	Note 2
6	HE-6	Heavy Equipment Shop / Rack Atop Wash Bay	Lube Oil Tank, Rectangular	Lube oil	1,980	Steel, welded	Level tube	Concrete floor; indoor with sump	>3,400	1988	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	1,980	Note 2
6	HE Shop Oil/Water Separator	Heavy Equipment Shop	Oil/Water Separator	Oily Water	700	Steel, welded	High Level & oil Switch	NA	NA	1988	NA	NA	NA	NA	NA	Indoors	NA	Note 1 & 2
6	6022-1911	Powerhouse North / Lube Oil Tank	Lube oil storage	Lube oil	1,420	Steel, welded	High Level Alarm, Low Level Alarm	Inside building	>1,420	1988	Periodic STI SP001	Elevated	Painted, Indoors	Leak, Rupture	50	Indoors	1,420	Note 1
6	6022-1923-01	Powerhouse North / Oily Water transfer Tank	Oily water transfer tower tank	Oily Water	700	Steel, welded	Level Gauge	Inside building	>700	1988	Periodic STI SP001	Elevated	Painted, Indoors	Leak, Rupture	50	Indoors	700	Note 1
6	6025-1905	Service Complex Boiler Room / Vertical Tank	Diesel tank, Vertical	Diesel	750	Steel, welded	Level Gauge	Inside building with floor sump	>750	1988	Periodic STI SP001	Elevated above concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	750	Note 1
6	6025-1906-01	Service Complex Generator / Diesel Tank	Diesel tank, Rectangular	Diesel	160	Shop-Fabricated Steel, Single-wall Day Tank	Level Gauge	Inside building with floor sump	>750	1988	Periodic STI SP001	Elevated above concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	160	Note 1
6	6025-1906-02	Service Complex Generator / Diesel Tank	Diesel tank, Rectangular	Diesel	160	Shop-Fabricated Steel, Single-wall Day Tank	Level Gauge	Inside building with floor sump	>750	1988	Periodic STI SP001	Elevated above concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	160	Note 1

Table A-2: Mine Containers

Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
7	Env LZ Gas Tank	Incinerator Pad / Enviro Gasoline Tank	Gasoline tank, Horizontal	Gasoline	275	Shop-fabricated, Rectangular, Double-wall tank	Level Gauge	Double-wall + overfill bucket	>275	2013	Monthly STI SP001	Double-wall	Elevated, Painted; inside shed	Leak, Rupture	50	West	275	Note 1
6	6030-1911	Powerhouse South / Lube Oil Tank	Lube oil storage	Lube Oil	528	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building	>1320	2001	Periodic STI SP001	Elevated	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	528	Note 1
6	19-126	Inside 6017 Module / Fire Pump Engine Tank	Fire pump diesel engine diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel	Level Gauge	Inside building	>500	1999	Periodic STI SP001	Elevated above concrete floor	Elevated, Painted, Indoors	Leak, Rupture	50	Indoors	500	Note 1
7	19-249	Mine Site Incinerator / Small 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>300	2017	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	West	300	Note 1
8	19-254	Emulsion Pad Kivalina Dump / Diesel Tank	Diesel tank, Horizontal, Rectangular	Diesel	1,000	Shop-Fabricated Steel, Double-wall Tank	Level Gauge	Double-wall; lined berm	>1000	2003	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	West	9,200	Note 1
9	19-257	Construction Camp / Diesel Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall; lined berm for overfills	>500	2007	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	North	500	Note 1
9	19-279	Construction Camp / Diesel tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>500	2015	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	South	500	Note 1
9	19-280	Construction Camp, Geo Tent / 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>300	2015	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	East	300	Note 1
6	19-281	Projects Trailer (west) / Diesel Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>300	2015	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	North	300	Note 1
7	19-283	Mine Site Incinerator / Large 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>1,000	2018	Periodic STI SP001	Double-wall	Elevated, Painted	Leak , Rupture	50	West	1,000	Note 1
6	19-284	Red Dog Creek Diversion Pumpback / 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO, RFSC	Double-wall	>300	2017	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	Northeast	500	Note 1
6	19-297	Projects Trailer (east) / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	Visual, Overfill Bucket	Double-wall	>500	2017	Periodic STI SP001	Double-wall with monitoring port	Elevated, painted	Leak, Rupture	50	West	500	Note 1
6	19-299	Tails Dam Seepage Pumpback / 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO, RFSC	Double-wall	>300	2017	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	West	300	Note 1
6	19-319	VIP 2 Storage Tank / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	Visual, Overfill Bucket	Double-wall	>500	2018	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	North	500	Note 1
6	19-318	North end of services complex / 1000 gal Tank	Diesel tank, Horizontal	Diesel	1,000	Shop-Fabricated Steel, Double-wall Tank	AFNSO	Double-wall	>1,000	2018	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	Northeast	1,000	Note 1
6	19-321	2C Tunnel Heater / 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO, RFSC	Double-wall	>300	2018	Periodic STI SP001	Double-wall, LDG	Elevated, Painted	Leak, Rupture	50	Northeast	300	Note 1
6	19-322	Tire Tent / 300 gal Tank	Diesel tank, Horizontal	Diesel	300	Shop-Fabricated Steel, Double-wall Tank	AFNSO, RFSC	Double-wall	>300	2018	Periodic STI SP001	Double-wall, LDG	Elevated, Painted	Leak, Rupture	50	South	300	Note 1
6	19-323	PAC Emergency Generator / 1000 gal Tank	Diesel tank, Horizontal	Diesel	1,000	Shop-Fabricated Steel, Double-wall Tank	AFNSO, Level Gauge, RFSC	Double-wall	>1,000	2018	Periodic STI SP001	Double-wall, LDG	Elevated, Painted	Leak, Rupture	50	Northeast	1,000	Note 1
9	19-324	Construction Camp, Geo Tent / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	AFNSO, RFSC	Double-wall	>500	2018	Periodic STI SP001	Double-wall, LDG	Elevated, Painted	Leak, Rupture	50	Southwest	500	Note 1
6	19-325	Construction Fab Tent / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-fabricated Steel, Double-wall Tank	AFNSO, Level Gauge, RFSC	Double-wall	>500	2018	Periodic STI SP001	Double-wall, LDG	Elevated, Painted	Leak, Rupture	50	North	500	Note 1
9	19-260	ConPac Complex / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	Level Gauge + Overfill Bucket	Double-wall + overfill bucket	>500	2015	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	South	500	Note 1
9	19-348	Construction Camp / 500 gal Tank	Diesel tank, Horizontal	Diesel	500	Shop-Fabricated Steel, Double-wall Tank	Level Gauge + Overfill Bucket	Double-wall + overfill bucket	>500	2015	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	South	500	Note 1

Table A-2: Mine Containers

Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
6	94-87	Slurry Genset Fuel tank	Diesel tank, Horizontal	Diesel	950	Shop-Fabricated Steel, Double-wall Tank	Level Gauge + Overfill Bucket	Double-wall + overfill bucket	>950	2019	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	South	950	Note 1
9	94-36	Airport Generator / Diesel Tank	Airport Genset	Diesel	140	Shop-fabricated steel, Single-wall	RFSC	Active	>140	N/A	Periodic STI SP001	elevated	Elevated, Painted	Leak, Rupture	50	West	140	Note 1
8	94-74	Kivalina Generator / Diesel Tank	Kivalina Genset	Diesel	193	Shop-fabricated steel, Double-wall	RFSC	Double-wall	>193	N/A	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	West	193	Note 1
6	69-342	Emergency Seepage Diesel Pump	Main Dam Seepage Pumphouse	Diesel	110	Shop-fabricated steel, Double-wall	Level Gauge	Double wall	>110	2019	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	North	110	Note 1
9	94-79	Bons Generator / Diesel tank	Bons Genset	Diesel	200	Shop-fabricated steel, Double-wall	RFSC	Double-wall	>200	2018	Periodic STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	West	200	Note 1
6	6022-1902-01	Powerhouse North	Head #1 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1902-02	Powerhouse North	Head #2 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1902-03	Powerhouse North	Head #3 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1902-04	Powerhouse North	Head #4 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1902-05	Powerhouse North	Head #5 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1902-06	Powerhouse North	Head #6 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6022-1901	Powerhouse North / Settling tank	Settling Tank Diesel	Diesel	980	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>980	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	980	N/A
6	6030-1902-07	Powerhouse South	Head #7 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6030-1902-08	Powerhouse South	Head #8 Engine Tank	Diesel	375	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	No Access	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	N/A
6	6030-1901	Powerhouse South / Settling Tank	Settling Tank Diesel	Diesel	980	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>980	1989	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	980	Note 1
6	6030-1910	Powerhouse South / Oily Water Transfer Tank	Used Oil/ Oily Water Transfer Tank	Oil / water	700	Steel, welded	HL Alarm, LLevel Alarm, HL Shutdown	Inside building with floor sump	>375	1989	Periodic STI SP001	Elevated, on concrete floor	Elevated, Painted	Leak, Rupture	50	Indoors	375	Note 1
6	Mill Lube RM Bulk	Mill Lube Room / Bulk Tank Rack	4 bulk tote type tanks	new oil	350	stainless	visual level indicator	inside w active	55	N/A	Periodic STI SP001	Elevated, on concrete floor	stainless	Leak, Rupture	25	Indoors	350	Note 1

Table A-2: Mine Containers

Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
Portable Container Areas (regulated by 40 CFR 112.8) – covered under RDO Portable Container Management Program																		
6	PH Oil ISO Tank	Powerhouse North / Outside Lube Oil ISO	ISO Tank	Oil	6,000	Steel	Visual	Steel Containment	8,168	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	West	6,000	Note 1
6	NL-1 inside shop	NANA Lynden Shop / Inside Portable	Totes (300 gallons each; 4 maximum)	Oils, Used Oil	1,200	Steel or plastic totes	Visual	Inside building with floor sump	>300	N/A	Monthly STI SP001	On concrete floor	Painted or Plastic	Leak, Rupture	50	Indoors	300	Note 1
6	NL-2 outside	NANA Lynden Shop / Outside Connex	Drums (55 gallons each; 20 maximum)	Various oils	1,100	Steel or plastic drums	Visual	Inside connex with secondary containment	>300	N/A	Monthly STI SP001	Interior liner	Painted or Plastic	Leak, Rupture	50	Indoors	55	Note 1
6	MIBC ISO Tank	Mill / Outside MIBC ISO Tank	MIBC ISO tank	MIBC	6,000	Steel	Visual	Steel Containment	>6,000	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	South	6,000	Note 1
6	HE outside	HE Shop Outside / 2 Tote Storage Rack	Two totes	Various oils	600	Steel or plastic drums and totes	Visual	Steel Containment	300	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	Northwest	300	Note 1
6	HE inside drums	Heavy Equipment Shop / Inside Drums	Drum Storage Up to 10	Lube oil	550	Steel or plastic drums	Visual	Concrete floor; indoor with sump	>3,400	N/A	Monthly STI SP001	On concrete floor	Painted, Indoors	Leak, Rupture	55	Indoors	55	Note 1
7	DRDCK	Cold Storage / Drum, Tote Dock	Drums (55 gallons each; 350 maximum) Totes (300 gallons each; 250 maximum) Super drums (880 gallons each; 50 maximum)	Various oils	101,750	Steel or plastic drums and totes	Visual	Lined containment, gravel berm	>968	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	West	330	Note 1
7	SDRDCK	Cold Storage / Drum Dock	Drums (55 gallons each; 350 maximum) Totes (300 gallons each; 250 maximum) Super drums (880 gallons each; 50 maximum)	Various oils	44,000	Aluminum, welded	Visual	Lined containment, gravel berm	>968	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	West	880	Note 1
6	HazCAA	Warehouse Dock	Drums and/or totes in connex units	Various oils	unknown	Steel or plastic drums and totes	Visual	Inside connex	>330	N/A	Monthly STI SP001	Elevated	Inside connex or warehouse	Leak, Rupture	50	east	330	Note 1
7	IMO ST3	Cold Storage / IMO Tanks	ISO tanks (6,000 gallons each; 10 maximum)	Various oils	60,000	Steel	Visual	Active measures & earthen berm	N/A	N/A	Monthly STI SP001	Elevated	Elevated, Painted or Plastic	Leak, Rupture	50	West	6,000	Note 1
7	IMO ST2	Cold Storage / IMO Tanks	ISO tanks (6,000 gallons each; 32 maximum)	Various oils	192,000	Steel	Visual	Active measures & earthen berm	N/A	N/A	Monthly STI SP001	Elevated	Elevated, Painted or Plastic	Leak, Rupture	50	West	6,000	Note 1
7	IMO ST6	Cold Storage / IMO Tanks	ISO tanks (6,000 gallons each; 32 maximum)	Various oils	192,000	Steel	Visual	Active measures & earthen berm	N/A	N/A	Monthly STI SP001	Elevated	Elevated, Painted or Plastic	Leak, Rupture	50	West	6,000	Note 1
8	D&B Surfact ISO	Emulsion Plant / Surfactant ISO Outside	Surfactant ISO tank	Surfactant	6,000	Steel	Visual	Lined containment, concrete walls	>6,000	N/A	Monthly STI SP001	Elevated	Elevated, Painted	Leak, Rupture	50	West	6,000	Note 1
8	PAA T&W Inside Shop	Paa River T&W Shop / Inside Portable drums totes	Drums (55 gallons each; 8 maximum) Totes (300 gallons each; 4 maximum)	Misc. Oils	1,640	Steel or plastic drums and totes	Visual	Concrete floor with scupper	>2000	N/A	Monthly STI SP001	N/A	indoors	Leak, Rupture	50	inside	300	Note 1
8	PAA T&W Storage Connexes	Paa River T&W Connex Units / Outside Connexes	Drums and/or totes in five connex units	New oil	8,000	Steel or plastic drums and totes	Visual	Lined containment, gravel berm	>300	N/A	Monthly STI SP001	N/A	N/A	Leak, Rupture	50	north	300	Note 1
6	PH DR Rack	Powerhouse North / Drums Inside	1 drum on mobile dolly, used for all engines, 2x drums on containment	New oil	165	Steel drum	Visual	Engine sump	>55	N/A	Monthly STI SP001	N/A	N/A	Leak, Rupture	25	indoors	55	Note 1
6	Mill Lube RM2	Mill Lube Room / Drums and Totes	8+ Drums and 2 totes	Oil, used oil	1,100	Steel or plastic drums and totes	Visual	Inside, concrete with active measures	55	N/A	Monthly STI SP001	N/A	N/A	Leak, Rupture	25	indoors	55	Note 2 MWO# 833921
6	VEG OIL 1	Kitchen Warehouse	1 tote	used vegetable oil	250	plastic tote	Visual	Inside, metal floor w/active measures	N/A	N/A	Monthly STI SP001	N/A	N/A	Leak, Rupture	25	Indoors	300	Note 1

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Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
Oil-filled Operational Equipment (Regulated by 40 CFR 112.7)																		
6	6003-2303	PAC Elevator / Hydraulic Tank	Hydraulic tank, Rectangular	Hydraulic Oil	80	Shop-Fabricated, Steel, Single-wall	Visual	Inside building	>80	N/A	quarterly GenCid PM (safety Issue)	On concrete floor	Painted, Indoors	Leak	5	Indoors	80	Note 2 MWO 45179
6	6003-2305	New PAC Elevator Hydraulic Tank	Hydraulic tank, Rectangular	Hydraulic Oil	100	Shop-Fabricated, Steel, Single-wall	Visual	Inside building	>100	2018	quarterly GenCid PM (safety Issue)	On concrete floor	Painted, Indoors	Leak	5	Indoors	100	Note 2 MWO 45179
6	2001-2001	Jaw Crusher / Hydraulic Tank	2005 Jaw Crusher	Hydraulic Oil	300	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>300	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	300	Note 1
6	2003-2101-A	Mill Complex / SAG 1 Hydraulic Tank	2133 SAG 1	Oil	200	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>200	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	200	Note 2 MWO 21695
6	2004-2101-A	Mill Complex / SAG 2 Hydraulic Tank	2135 SAG 2	Oil	200	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>200	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	200	Note 2 MWO 21695
6	2004-2102-A	Mill Complex / Ball Mill 3 Hydraulic	2115 Ball Mill 3	Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2006-2101-02-A	Mill Complex / Ball Mill 2 Hydraulic	2126 Ball Mill 2	Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2005-3301	Water Treatment Plant 2 / Clarifier Gearbox	3301 WTP2 Clarifier	Oil	74	Shop-Fabricated, Steel, Single-wall	Visual	TSF	>74	N/A	Periodic PM	N/A	N/A	Leak	5	N/A	74	Note 2 MWO 21695
6	2006-2101-01	Mill Complex / Ball Mill 1 Hydraulic	2125 Ball Mill 1	Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2008-2402	Mill Complex Pb Thickener Hydraulic	2402 Pb Thickener	Oil	70	Shop-Fabricated, Steel, Single-wall	Visual	TSF	>70	N/A	Periodic PM	N/A	N/A	Leak	5	N/A	70	Note 2 MWO 21695
6	2010-2101-A	Mill Complex / SAG 3 Hydraulic Tank	2143 SAG 3	Oil	200	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>200	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	200	Note 2 MWO 21695
6	2010-2102-A	Mill Complex / Ball Mill 4 Hydraulic Tank	2146 Ball Mill 4	Oil	200	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>200	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	200	Note 2 MWO 21695
6	2011-2201-01	Mill Complex / Zn Filter Hydraulic Tank	2201 Zn Filter	Hydraulic Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2011-2201-02	Mill Complex / Zn Filter Hydraulic Tank	2234 ZN Filter	Hydraulic Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2011-2601-03	Mill Complex / Zn Filter Hydraulic Tank	2631 ZN Filter	Hydraulic Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2011-2604	Mill Complex / Zn Filter Hydraulic Tank	2632 Pb Filter	Hydraulic Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2011-2607	Mill Complex / Zn Filter Hydraulic Tank	26110 ZN Filter	Hydraulic Oil	110	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>110	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	110	Note 2 MWO 21695
6	2012-2102-A	Gyro Crusher / Hydraulic Tank	2142 Gyro Crusher	Hydraulic Oil	260	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>260	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	260	Note 1
6	2024-0801	Lime Slaker / Lime Connex Tipper	8189 Lime Tipper	Hydraulic Oil	320	Shop-Fabricated, Steel, Single-wall	Visual	Inside building, concrete floor	>320	N/A	Periodic PM	On concrete floor	Indoors	Leak	5	Indoors	320	Note 2 MWO 21695
6	2030-3301	Mill Complex / Zn Filter Hydraulic Tank	3303 Zn Thickener	Oil	74	Shop-Fabricated, Steel, Single-wall	Visual	TSF	>74	N/A	Periodic PM	On Concrete floor	Indoors	Leak	5	Indoors	74	Note 2 MWO 21695
6	6022-0101-01	Powerhouse North /Oil Sump 1	Engine 1	Lube Oil	350	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4



Table A-2: Mine Containers

Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records
6	6022-0101-02	Powerhouse North /Oil Sump 2	Engine 2	Lube Oil	350	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6022-0101-03	Powerhouse North /Oil Sump 3	Engine 3	Lube Oil	350	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6022-0101-04	Powerhouse North /Oil Sump 4	Engine 4	Lube Oil	350	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6022-0101-05	Powerhouse North /Oil Sump 5	Engine 5	Lube Oil	350	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6022-0101-06	Powerhouse North /Oil Sump 6	Engine 6	Lube Oil	600	Steel, welded	Dipstick	Inside building	>600	1988	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6030-0101-07	Powerhouse South /Oil Sump 7	Engine 7	Lube Oil	600	Steel, welded	Dipstick	Inside building	>600	2001	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
6	6030-0101-08	Powerhouse South /Oil Sump 8	Engine 8	Lube Oil	600	Steel, welded	Dipstick	Inside building	>600	2001	Periodic PM	Elevated	Elevated, Painted, Indoors	Leak	5	Indoors	350	Note 4
8	6005-0803	Emulsion Building / Outside NH4NO3 Tipper	NH <sub>4</sub> NO <sub>3</sub> Tipper	Hydraulic Oil	220	Shop-Fabricated, Steel, Single-wall	Visual	Active	>220	N/A	Periodic PM	Visual	Elevated, Painted, Indoors	Leak	5	North	220	Note 1

Table A-2: Mine Containers																			
Figure #	Container / Containment ID	Location / Common Name	Additional Info/ Common Name	Contents	Shell Capacity (gallons)	Construction	Liquid Level Mechanism/ Overfill Protection	Secondary Containment Type	Secondary Containment Volume (gallons)	Construction Year	Inspection Dates - Last/Next Inspection Standard	Leak Detection System	Corrosion Protection	Potential Failure	Failure Flow Rate (gallons per hour)	Direction of Flow (outside containment)	Total Estimated Release (gallons)	Location of Records	
Seasonal Containers (regulated by 40 CFR 112.8)																			
9	Ruen Connex	Ruen Maint. Shop / Connex Outside	Totes (3 - 330 gallons each)	Oil, used oil	990	Steel or plastic totes	Visual	Lined connex unit	>330 gallons	N/A	Monthly STI SP001	N/A	N/A	Leak, Rupture	50	Southwest	330	Note 1	
Location Varies	19-370	Portable Crusher / Diesel Tank	Diesel tank, affixed under genset trailer	Diesel	1,710	Shop-Fabricated Steel, Double-wall Tank	n/a	Double-wall	>1,500	N/A	Monthly STI SP001	Double-wall	Elevated, Painted	Leak, Rupture	50	Varies	2,274	Note 1	
7	Enviro LZ ISO	Enviro Heli LZ / Jet A ISO	Jet Fuel tank, Horizontal	Jet fuel	6,000	ISO tank	Visual	Metal Containment	>6,000	N/A	Monthly STI SP001	elevated above metal containment	Elevated, Painted	Leak, Rupture	50	West	6,000	Note 1	
9	Expl LZ ISO W	Explor Heli LZ / Jet A ISO, 2 tanks	Jet Fuel tank, Horizontal	Jet fuel	12,000 (2 x 6,000)	ISO tank	Visual	lined jersey barrier	>6,000	N/A	Monthly STI SP001	visual	Elevated, Painted	Leak, Rupture	50	North	6,000	Note 1	
9	Expl LZ ISO E	Explor Heli LZ / Jet A ISO, 2 tanks	Jet Fuel tank, Horizontal	Jet fuel	12,000 (2 x 6,000)	ISO tank	Visual	lined jersey barrier	>6,000	N/A	Monthly STI SP001	visual	Elevated, Painted	Leak, Rupture	50	North	6,000	Note 1	
9	Expl LZ Drums	Explor Heli LZ / off-spec Jet A drums	Drums (55 gallons each; 2 maximum)	Jet Fuel	55	Steel or plastic drums	Visual	Drum Pallet	>65	N/A	Monthly STI SP001	visual	Steel	Leak, Rupture	50	North	55	Note 1	
8	Expl LZ Totes	Kivalina LZ / Flyable Totes	Flyable fuel containers (90 gallons each) Up to 6	Diesel	90	Aluminum, welded, Double-wall	Visual	Double-wall fly tank	>90	1999	Monthly STI SP001	Double-wall	Aluminum	Leak, Rupture	50	West	90	Note 1	
8	Expl LZ Totes	Kivalina LZ / Flyable Totes	Flyable fuel containers (110 gallons each) Up to 28	Diesel	110	Aluminum, welded, Double-wall	Visual	Double-wall fly tank	>110	1999	Monthly STI SP001	Double-wall	Aluminum	Leak, Rupture	50	West	110	Note 1	
8	Expl LZ Totes	Kivalina LZ / Flyable Totes	Flyable fuel containers (150 gallons each) Up to 5	Diesel	150	Aluminum, welded, Double-wall	Visual	Double-wall fly tank	>150	1999	Monthly STI SP001	Double-wall	Aluminum	Leak, Rupture	50	West	150	Note 1	
Notes:									Key:										
1. Inspections done using FastField electronic and completed forms maintained in SharePoint									AFNSO			automatic flow nozzle shutoff		N/A		not applicable			
2. Maintained in GenCID under equipment ID									API			American Petroleum Institute		RFSC		remote fill / spill containment			
3. Maintained in MAINTelligence Maintenance Software									LDG			leak detection gauge		STI		Steel Tank Institute			
4. Noted in Powerhouse Daily Inspections using FastField									LZ			landing zone							
5. Large bulk tank API inspection reports requiring certified inspectors, NDT, etc. maintained by Environmental Dept and records kept on Red Dog network at Y:\Enviro\Dept - Enviro\Spill and Response\Inspections (Piping, Containers, Tanks)																			

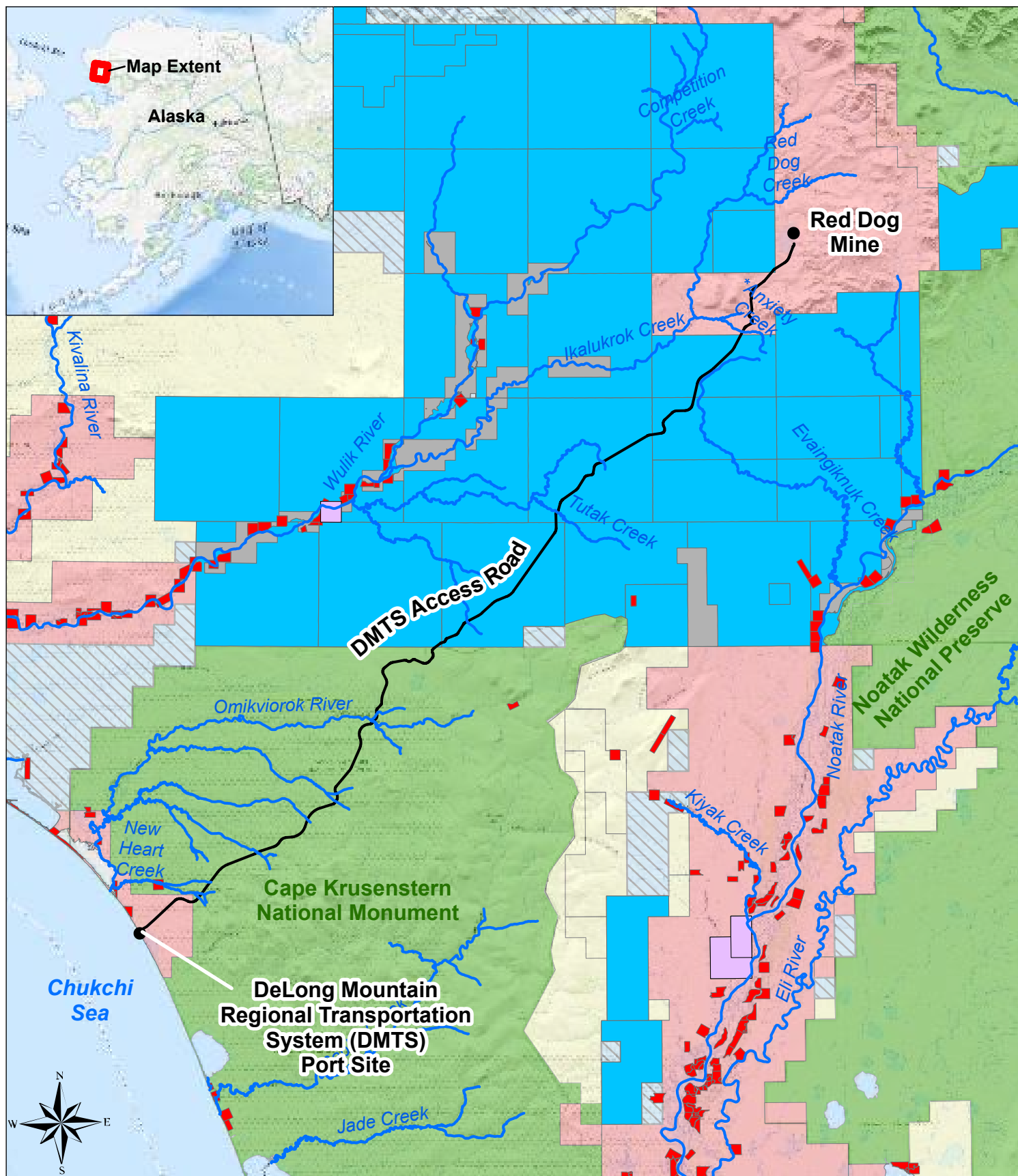
Table A-3: Mobile Equipment

Equipment Tag	Owner	Equipment Type	Contents	Tank Capacity(gallons)	Construction	Secondary Containment?	Inspection Frequency	Status/Date	Record Location (see notes)
67-11	Mine, surface	MOBILE FUEL TRAILER	diesel	500	single wall, metal	no	PM - 500 hrs		GenCID
67-82	Mine, surface	MOBILE FUEL TRAILER	diesel	500	single wall, metal	no	PM - 500 hrs		GenCID
68-132	HE	Heat King 300	diesel	180	single wall, metal	no	PM - 500 hrs		GenCID
68-133	HE	Heat King 300	diesel	240	single wall, metal	no	PM - 500 hrs		GenCID
68-144		Totem 10CD indirect heater/generator	diesel	250	single wall, metal	no	PM - 500 hrs		GenCID
68-162	Projects	INDIRECT MAXI-HEAT	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
68-163	Projects	INDIRECT MAXI-HEAT	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
68-175	Projects	INDIRECT MAXI-HEAT	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
68-176	Projects	INDIRECT MAXI-HEAT	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
68-182	Surface	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-183	Mine	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-184	HE	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-184	HE	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-187	Mine	LIGHT TOWER MAGNUM MLT 4080	diesel	56	single wall, metal	no	PM - 500 hrs		GenCID
68-188	Mine	LIGHT TOWER MAGNUM MLT 4080	diesel	56	single wall, metal	no	PM - 500 hrs		GenCID
68-222	HE	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-227	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-228	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-229	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-230	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-231	AAEP	INDIRECT HEATER ES-700	diesel	180	single wall, metal	no	PM - 3000 hrs		GenCID
68-232	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-233	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-234	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-234	HE	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-253	HE	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-254	Projects	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-259	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-260	AAEP	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	PM - 3000 hrs		GenCID
68-51	HE	Maxi-Heat OHV-500	diesel		single wall, metal	no	PM - 500 hrs		GenCID
68-55	Mine	INDIRECT MAXI-HEAT	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
69-131	Mine	PUMP - POWER PRIME-WATER TREATMENT DV150	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-132	Mine	PUMP - POWER PRIME-WATER TREATMENT DV150	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-133	Mine	PUMP - POWER PRIME-WATER TREATMENT DV150	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-134	Mine	PUMP - POWER PRIME - MILL OPS WATER TREATMENT DV1	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-135	Port	PUMP - POWER PRIME - PORT	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-156	Surface	PUMP - POWER PRIME MINE DV150	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-165	Surface	Airport runway broom	diesel	100	single wall, metal	no	PM - 500 hrs		GenCID
69-176	Surface	PUMP POWER PRIME - SURFACE	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-177	Mine	GODWIN PUMP - HL5M SS DIESEL HI HEAD (2010)	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
69-189	Mine	GODWIN PUMP - MINE DEWATERING HL5M	diesel	175	single wall, metal	no	PM - 500 hrs		GenCID
69-208	Surface	PUMP POWER PRIME - SURFACE	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-222	Mine	GODWIN PUMP - MINE DEWATERING CD150M	diesel	60	single wall, metal	no	PM - 500 hrs		GenCID
69-223	Mine	GODWIN PUMP - MINE DEWATERING CD150M	diesel	60	single wall, metal	no	PM - 500 hrs		GenCID
69-227	Surface	PUMP POWER PRIME - SURFACE	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
69-228	Mine	GODWIN PUMP 6" S/S - MINE DEWATERING CD150M	diesel	60	single wall, metal	no	PM - 500 hrs		GenCID
69-229	Mine	GODWIN PUMP 6" S/S - MINE DEWATERING CD150M	diesel	60	single wall, metal	no	PM - 500 hrs		GenCID
69-230	Mine	GODWIN PUMP 6" SELF PRIME - SKID MOUNT - PORT	diesel	60	single wall, metal	no	PM - 500 hrs		GenCID
69-285	Surface	Airport runway broom	diesel	100	single wall, metal	no	PM - 500 hrs		GenCID
69-306	Construction	PUMP - POWER PRIME HH125C MINE (2018)	diesel	190	single wall, metal	no	PM - 500 hrs		GenCID
69-307	Construction	PUMP - POWER PRIME HH125C MINE (2018)	diesel	190	single wall, metal	no	PM - 500 hrs		GenCID
69-312	Construction	PUMP - POWER PRIME RENTAL 2019	diesel	190	single wall, metal	no	PM - 500 hrs		GenCID
69-313	Construction	PUMP - POWER PRIME RENTAL 2019	diesel	190	single wall, metal	no	PM - 500 hrs		GenCID
69-342	T&W	Emergency Seepage Pump	diesel	120	single wall, metal	no	PM - 500 hrs		GenCID
78-111	DML	Primary Tanker Truck (5 compartments with 5,000 gallons each)	DIESEL	25,000	single wall, metal	no	Quarterly Inspection (recorded)		Contractor - DML Shop
78-112	DML	Backup Tanker Truck (3 compartments with 3,500 gallons each)	DIESEL	10,500	single wall, metal	no	Quarterly Inspection (recorded)		Contractor - DML Shop
78-114	DML	Primary Tanker Truck (5 compartments with 5,000 gallons each)	DIESEL	25,000	single wall, metal	no	Quarterly Inspection (recorded)	not in service yet	Contractor - DML Shop
80-278	Port	Pickup Truck Slip Tank	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Port Medic Office
80-308	Port	Pickup Truck Slip Tank	diesel	133	single wall, metal	no	Monthly Inspection (recorded)		Port Medic Office
80-317	Port	Pickup Truck Slip Tank	diesel	133	single wall, metal	no	Monthly Inspection (recorded)		Port Medic Office
82-071	Port	2006 FORD F750 FUEL TRUCK - PORT	diesel	3,000	single wall, metal	no	PM - 500 hrs		GenCID
82-077	HE	TRUCK - STERLING LT9500 LUBE/FUEL	various oils	largest/total	single wall, metal	no	PM - 500 hrs		GenCID
82-080	HE, D&B	TRUCK - STERLING LT7500 (EMULSION)	diesel, surfactant	200	single wall, metal	no	PM - 500 hrs		GenCID
82-082	HE	TRUCK - PETERBILT 367 LUBE/FUEL	various oils	Varies	single wall, metal	no	PM - 500 hrs		GenCID
82-115	HE, D&B	2017 TRUCK - WESTERN STAR EMULSION	diesel, surfactant	200	single wall, metal	no	PM - 500 hrs		GenCID
82-118	HE	2018 TRUCK - WESTERN STAR FUEL/LUBE	various oils	Varies	single wall, metal	no	PM - 500 hrs		GenCID
82-126	HE, D&B	2017 TRUCK - WESTERN STAR EMULSION	diesel, surfactant	200	single wall, metal	no	PM - 500 hrs		GenCID
94-99	Port	CAT XQ60 Generator	diesel	80	single wall, metal?	yes	PM - 500 hrs	added 02/16/2022	GenCID
Mobile Refuelers	Owner	Equipment Type	Contents	Tank Capacity(gallons)	Construction	Secondary Containment?	Inspection Frequency		Record Location
NA	NCC	TUQU MOBILE HEATER ES700	diesel	240	single wall, metal	no	annual PM		Contractor - NCC Shop - MaintenancePRO
RD707	Paa River	Mechanic Truck, Multiple Tanks: 300-gallon diesel, 100-gallon oil, 150-gallon used oil	DIESEL, OIL	Varies	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD721	Paa River	Contractor Pickup Truck	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD722	Paa River	Contractor Pickup Truck	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD724	Paa River	Contractor Pickup Truck	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD726	Paa River	BULK FUELING TRUCK	DIESEL	2,800	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD732	Paa River	Lube Truck, Multiple Tanks: 4 tanks (each 150 gallons), all oils	OIL	Varies	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD735	Paa River	Contractor Pickup Truck	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD736	Paa River	Contractor Pickup Truck	diesel	100	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD773	Paa River	BULK FUELING TRUCK	DIESEL	1800	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
RD782	Paa River	INDIRECT HEATER ES-700	diesel	240	single wall, metal	no	Monthly Inspection (recorded)		Fastfield
TR007	Ruen Drilling	Bulk Fueling Trailer	DIESEL	750	double wall, metal	yes	Monthly Inspection (recorded)		Contractor - Ruen office
<b>Notes:</b> <ul style="list-style-type: none"><li>- GenCID - Maintained in Maintenance Work Order system in GenCID under equipment ID</li><li>- Port Medic Office - Inspections recorded using paper hardcopy, records maintained in Port Medic Safety Office</li><li>- Contractor - Ruen office - Inspections recorded using paper hardcopy, records maintained in Ruen Office at CC Camp</li><li>- Contractor - DML Shop - Inspections recorded using paper hardcopy, records maintained in DML Shop, inside HE Shop at Mill Pad Service Complex</li></ul>									

## **APPENDIX B**

### **FACILITY DIAGRAMS**

Figure 1: General Vicinity Map  
Figure 2: Port Site Layout Map  
Figure 3: Port Fuel Storage Area  
Figure 4: Concentrate Storage Buildings  
Figure 5: Mine Site Layout Map  
Figure 6: Mine Site  
Figure 7: Cold Storage and Incinerator Area  
Figure 8: Kivalina Dump Area  
Figure 9: Construction Camp Area  
Figure 10: DMTS Segments Overview  
Figure 11: Segment 1, Road Alignment Sheet Mile 0 – Mile 2 (Material Source 2)  
Figure 12: Segment 2, Road Alignment Sheet Mile 3 – Mile 5  
Figure 13: Segment 3, Road Alignment Sheet Mile 6 – Mile 8 (Material Source 3)  
Figure 14: Segment 4, Road Alignment Sheet Mile 8 – Mile 10 (Material Source 3)  
Figure 15: Segment 5, Road Alignment Sheet Mile 11 – Mile 13 (Material Source 4)  
Figure 16: Segment 6, Road Alignment Sheet Mile 14 - Mile 17 (Material Source 5)  
Figure 17: Segment 7, Road Alignment Sheet Mile 17 - Mile 20 (Material Source 6)  
Figure 18: Segment 8, Road Alignment Sheet Mile 21 - Mile 23  
Figure 19: Segment 9, Road Alignment Sheet Mile 24 - Mile 26 (Material Source 7)  
Figure 20: Segment 10, Road Alignment Sheet Mile 27 - Mile 29 (Material Source 8)  
Figure 21: Segment 11, Road Alignment Sheet Mile 30 - Mile 32 (Material Source 8A)  
Figure 22: Segment 12, Road Alignment Sheet Mile 33 - Mile 35 (Material Source 9)  
Figure 23: Segment 13, Road Alignment Sheet Mile 36 - Mile 38 (Material Source 10)  
Figure 24: Segment 14, Road Alignment Sheet Mile 38 - Mile 41 (Material Sources 10 and 11A)  
Figure 25: Segment 15, Road Alignment Sheet Mile 41 - Mile 43 (Material Source 12)  
Figure 26: Segment 16, Road Alignment Sheet Mile 44 - Mile 47 (Material Source 13)  
Figure 27: Segment 17, Road Alignment Sheet Mile 47 - Mile 50



#### Legend

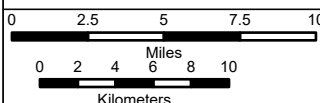
— River — DMTS Road

#### Land Ownership

Bureau of Land Management	Native Patent or IC (NANA)
National Park Service	Native Allotment
State of Alaska - Patent or TA	Municipal
State of Alaska - Selected	Private



Teck



By: JG-SLR

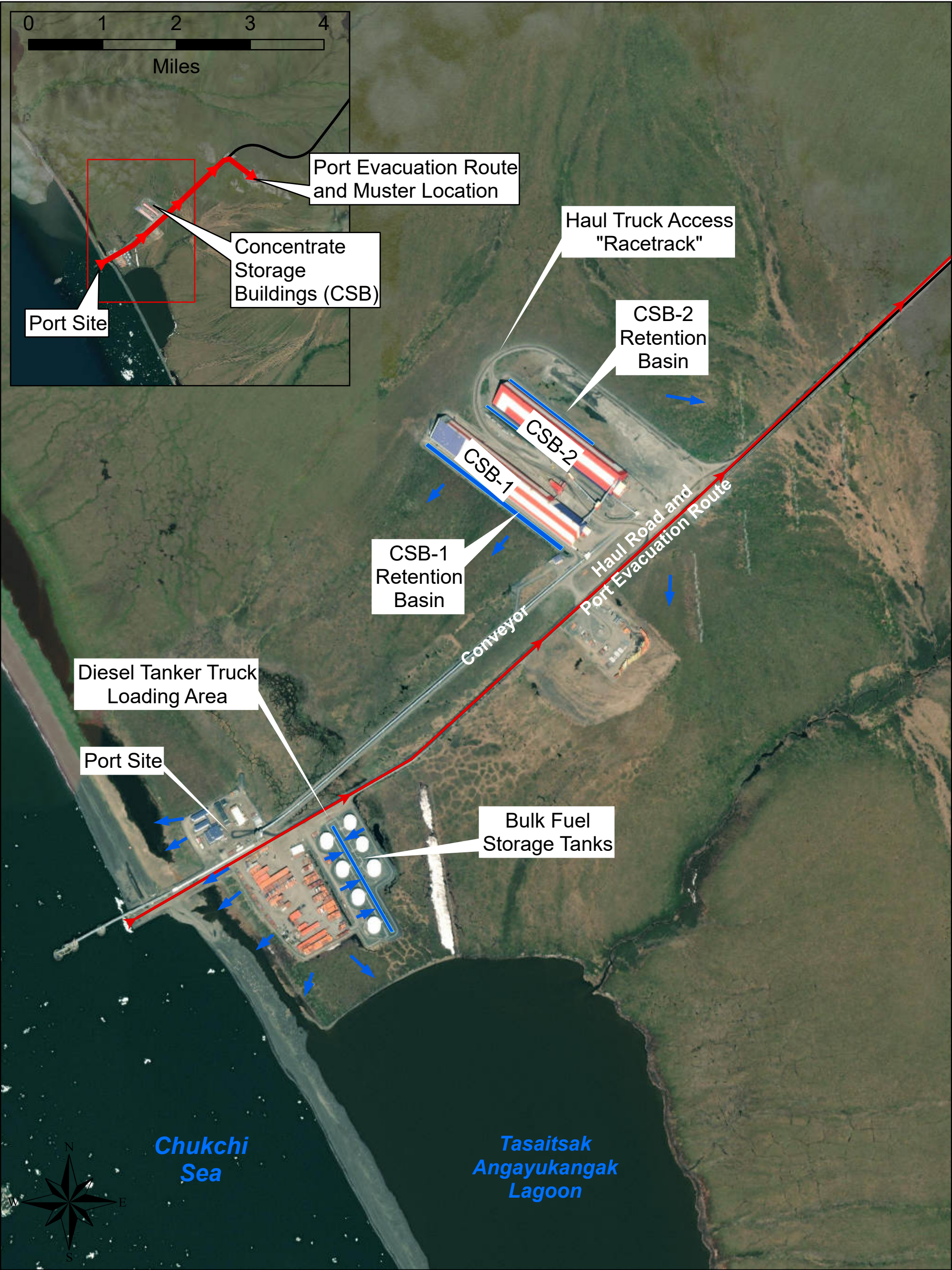
Date: June, 2023

#### Red Dog Operations SPCC Plan

#### Figure 1 General Vicinity Map

Coordinate System NAD 1983 2011 StatePlane Alaska 7 FIPS 5007 Feet





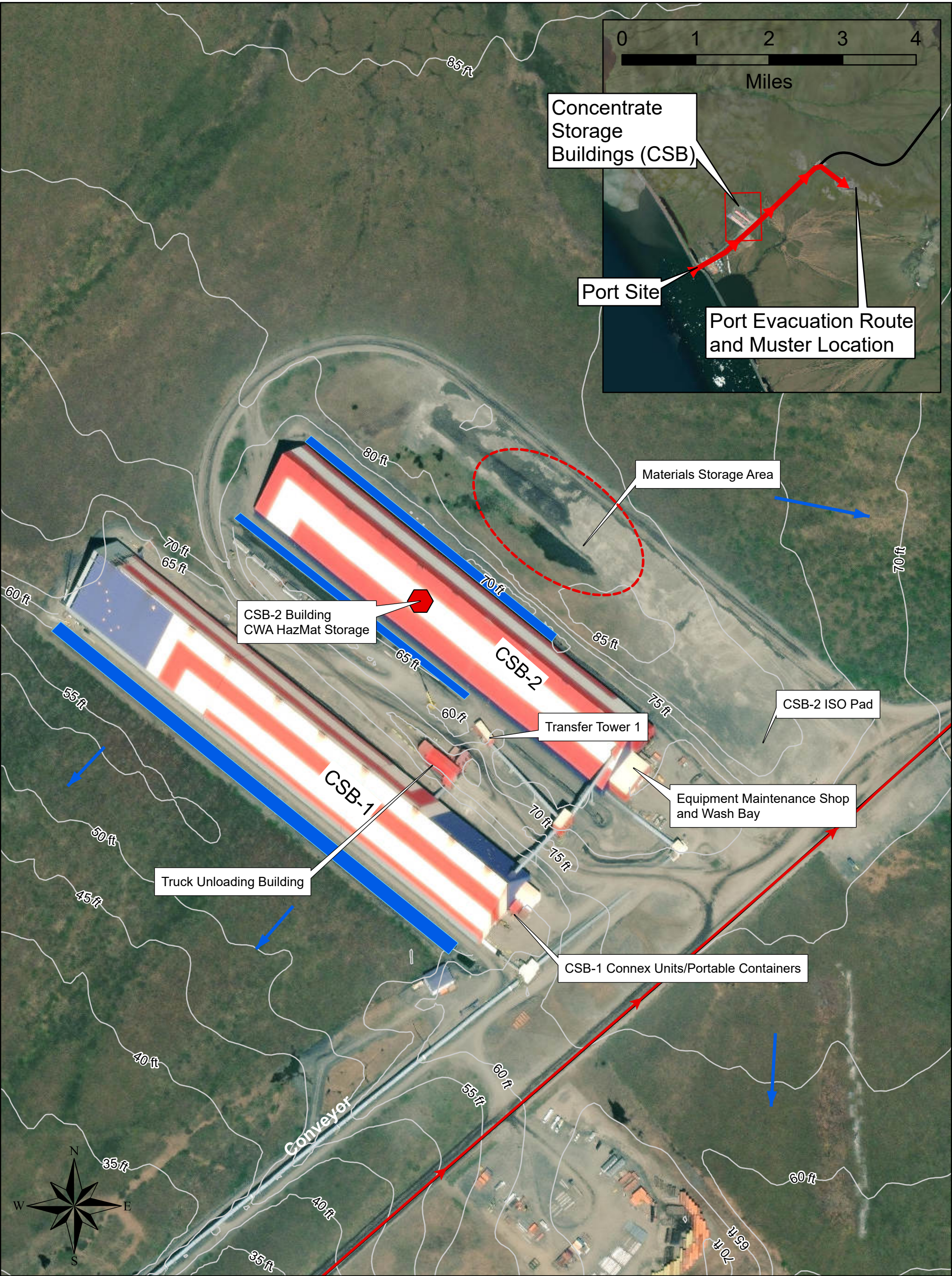
<div><div>00.10.20.30.40.5</div><div>Miles</div></div> <div><div>Legend</div><div><div><div>→</div>Port Evacuation Route</div><div><div>→</div>Surface Flow Direction</div><div><div>■</div>Retention Basin</div></div></div>	<div><div><div><div><div></div><div>RED DOG MINE</div></div><div><div></div><div>Teck</div></div></div></div></div>	<div>Red Dog Operations SPCC Plan</div>
<div>Figure 2 Port Site Layout Map</div>		
<div>By: JG-SLR</div>	<div>Date: August, 2024</div>	<div>Coordinate System: NAD 1983 2011 StatePlane Alaska 7 FIPS 5007 Feet</div>





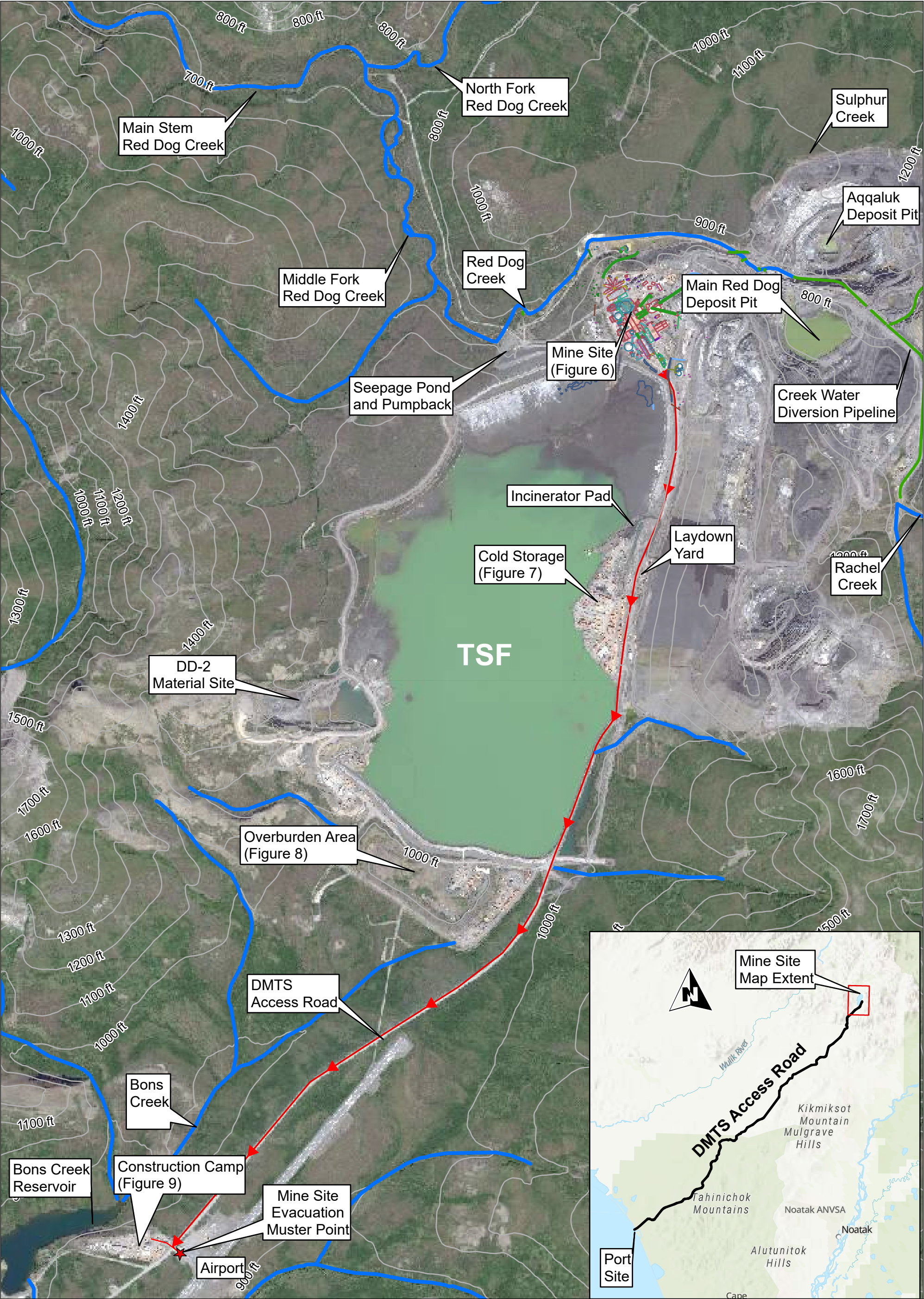
<b>Legend</b> Port Evacuation Route 2' Contour 10' Contour Retention Basin Secondary Containment Surface Flow Direction Oil Storage Container ID Dispenser Buried Oil Piping Above Ground Pipeline Fire and Spill Response Equipment Emergency Shutoff Fire Water Tank	 <b>Teck</b> <b>Red Dog Operations SPCC Plan</b>
<b>Figure 3 Port Site (See Table A-1 for container contents and capacities)</b>	
By: JG-SLR	Date: August, 2024
Coordinate System: NAD 1983 2011 StatePlane Alaska 7 FIPS 5007 Feet	





<div><div>02505007501,000</div><div>Feet</div></div> <div><div>Legend</div><div><div><div><div></div></div><div>CWA HazMat Storage</div></div><div><div><div></div></div><div>Surface Flow Direction</div></div><div><div><div></div></div><div>Mobile Equipment Storage Area</div></div><div><div><div></div></div><div>Retention Basin</div></div><div><div><div></div></div><div>5ft Elevation Contor</div></div><div><div><div></div></div><div>Port Evacuation Route</div></div></div></div>	<div><div><div><div></div><div>RED DOG MINE</div></div><div><div>Teck</div></div></div></div>	<div>Red Dog Operations</div> <div>SPCC Plan</div>
<div>Figure 4</div> <div>Concentrate Storage Buildings</div> <div>(See Table A-1 for container contents and capacities)</div>		
<div>By: JG-SLR</div>	<div>Date: August, 2024</div>	<div>Coordinate System:NAD 1983 2011 StatePlane Alaska 7 FIPS 5007 Feet</div>





<b>Legend</b> ➡ Mine Evacuation Route — Creek or Drainage Ditch — Water Pipeline — 100ft Elevation Contour	   0 0.25 0.5 Miles 0 0.25 0.5 0.75 1 Kilometers By: JG-SLR Date: 6/8/2023	<b>Red Dog Operations SPCC Plan</b>  <b>Figure 5 Mine Site Layout Map</b>  Coordinate System: NAD83 Alaska State Plane Zone 7ft
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**Legend**

Oil Water Separator

Stationary Tanks

Portable Tanks

ADEC Regulated Tanks

Oil filled Equipment

Fire Water Tank

Emergency Shutoff

Spill Response Equipment

CWA HazMat Storage

Hazardous Waste Central Accumulation Area

Mobile Equip Storage Area

Containment Structure

Surface Contours, 10ft

Surface Flow Direction

Buried Oil Piping

Evacuation Route

By JKG-SLR Date: 8/20/2024  
Satellite Photo and Topography  
Acquired on July 10, 2022

0 50 100 150 200  
Feet

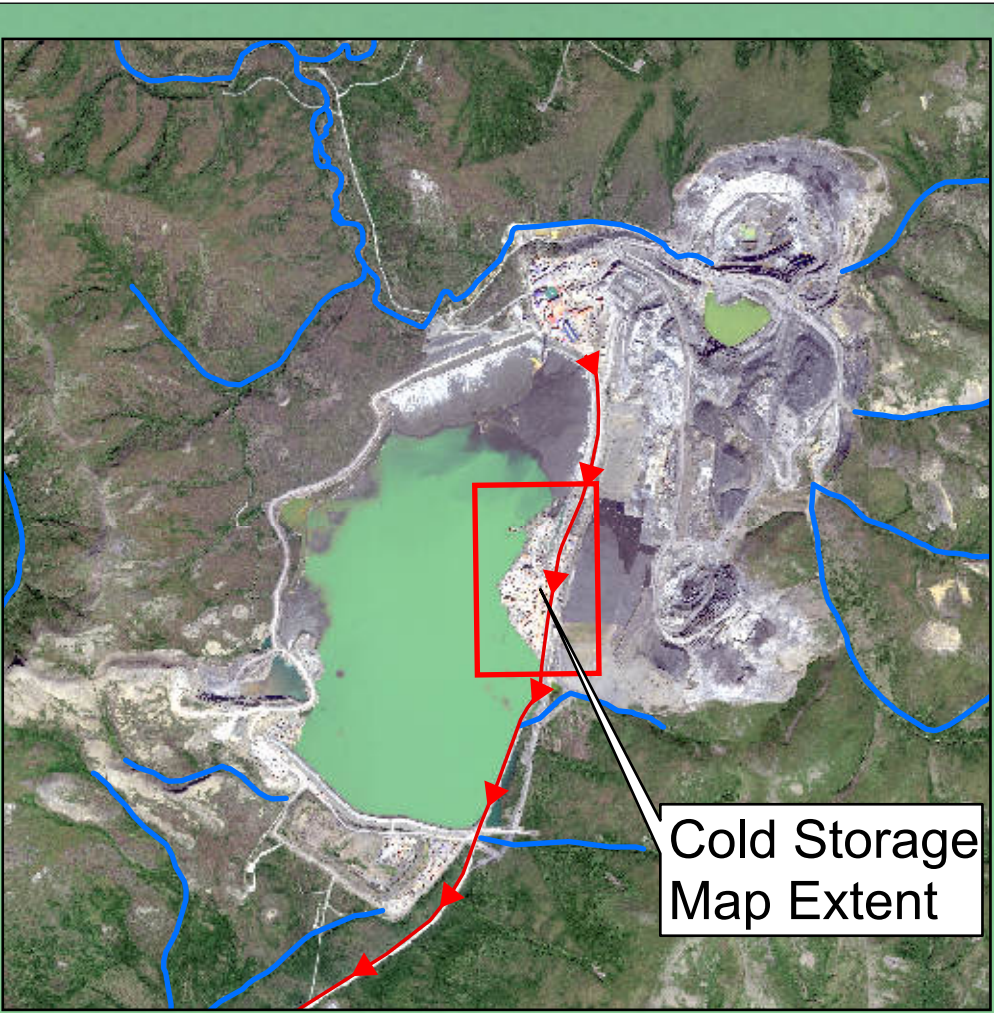
0 20 40 60 80  
Meters

Red Dog Operations  
SPCC Plan

Teck

Figure 6 - Mine Site  
(See Table A-2 for container  
contents and capacities)





Cold Storage  
Map Extent



### Legend

- Stationary Tanks
- Portable Tanks
- CWA HazMat Storage
- Container Storage Area
- Surface Contours, 10ft
- Surface Flow Direction
- Evacuation Route

By: JKG-SLR    Date: 8/5/2024

Satellite Photo and Topography  
Acquired on July 10, 2022

0 25 50 100 150 200  
Feet

0 10 20 40 60 80  
Meters

Red Dog Operations  
SPCC Plan



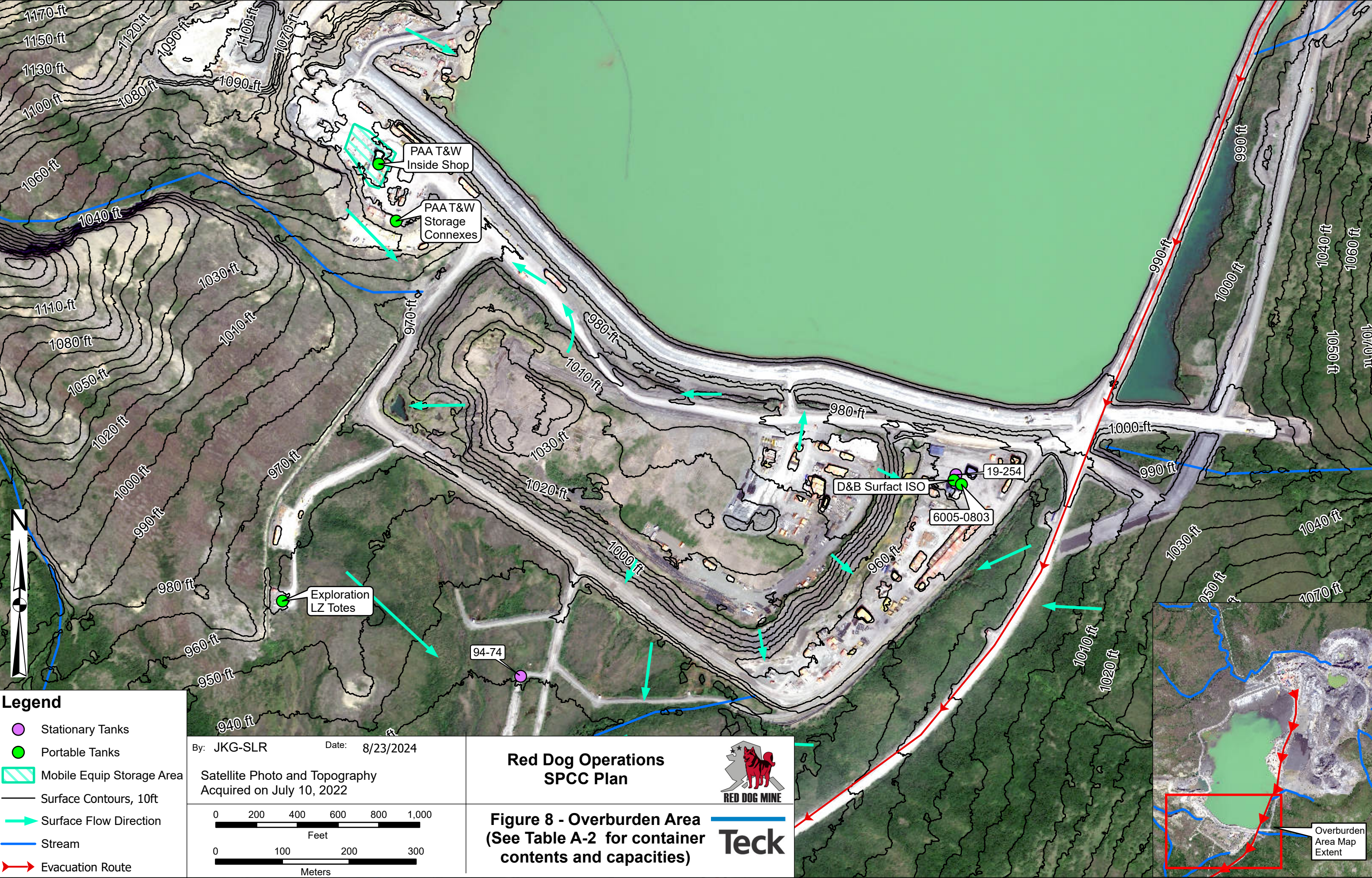
  
RED DOG MINE

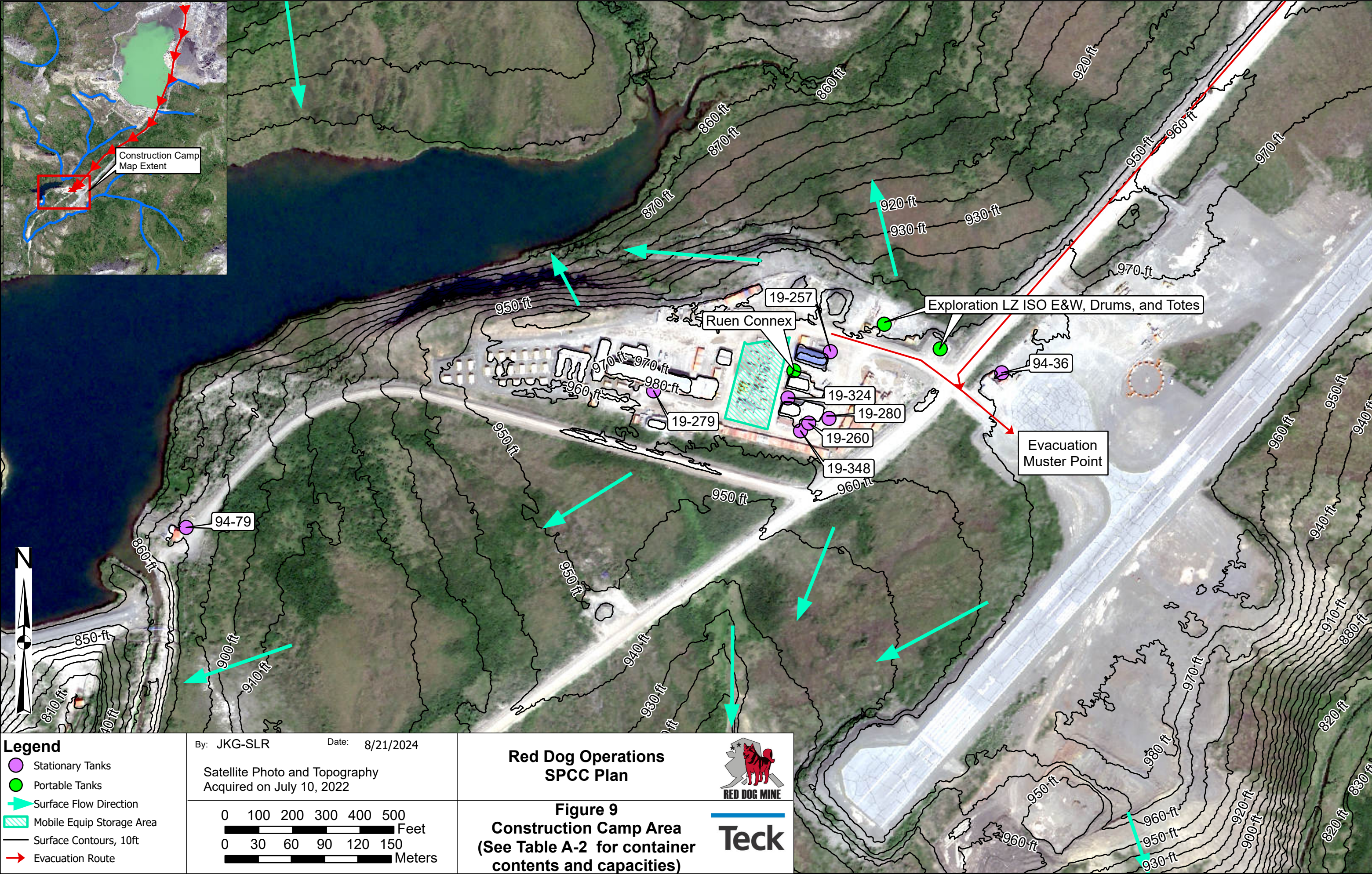
Figure 7 - Cold Storage  
(See Table A-2 for container  
contents and capacities)

  
Teck









**Legend**

- Stationary Tanks
- Portable Tanks
- Surface Flow Direction
- Mobile Equip Storage Area
- Surface Contours, 10ft
- Evacuation Route

By: JKG-SLR      Date: 8/21/2024

Satellite Photo and Topography  
Acquired on July 10, 2022

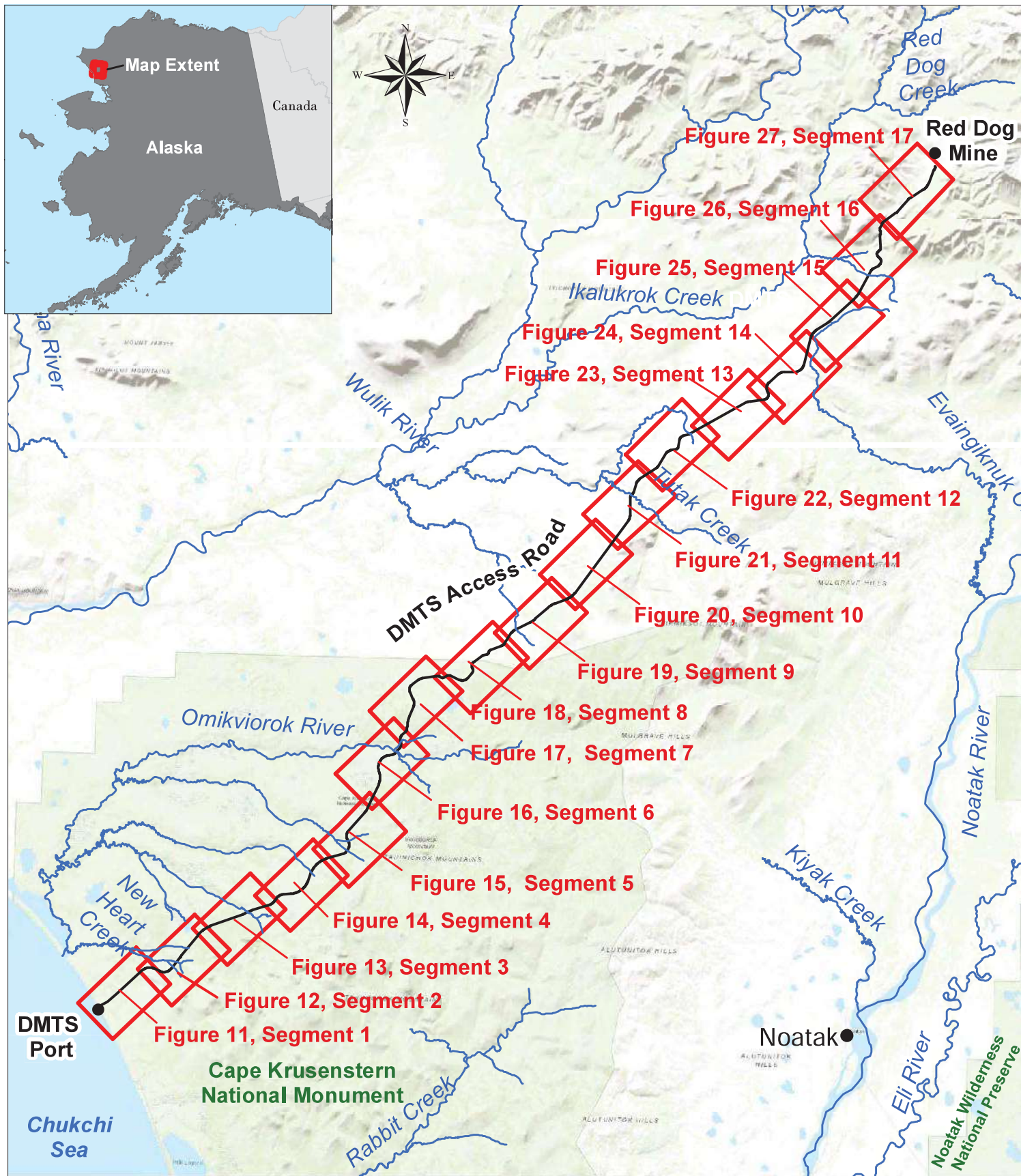
0 100 200 300 400 500 Feet  
0 30 60 90 120 150 Meters

**Red Dog Operations  
SPCC Plan**

**Figure 9  
Construction Camp Area  
(See Table A-2 for container  
contents and capacities)**

**Teck**



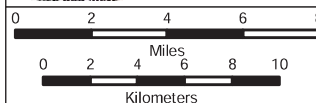


#### Legend

- River
- DMTS Road
- DMTS Segment Sheet Boundary



**Teck**



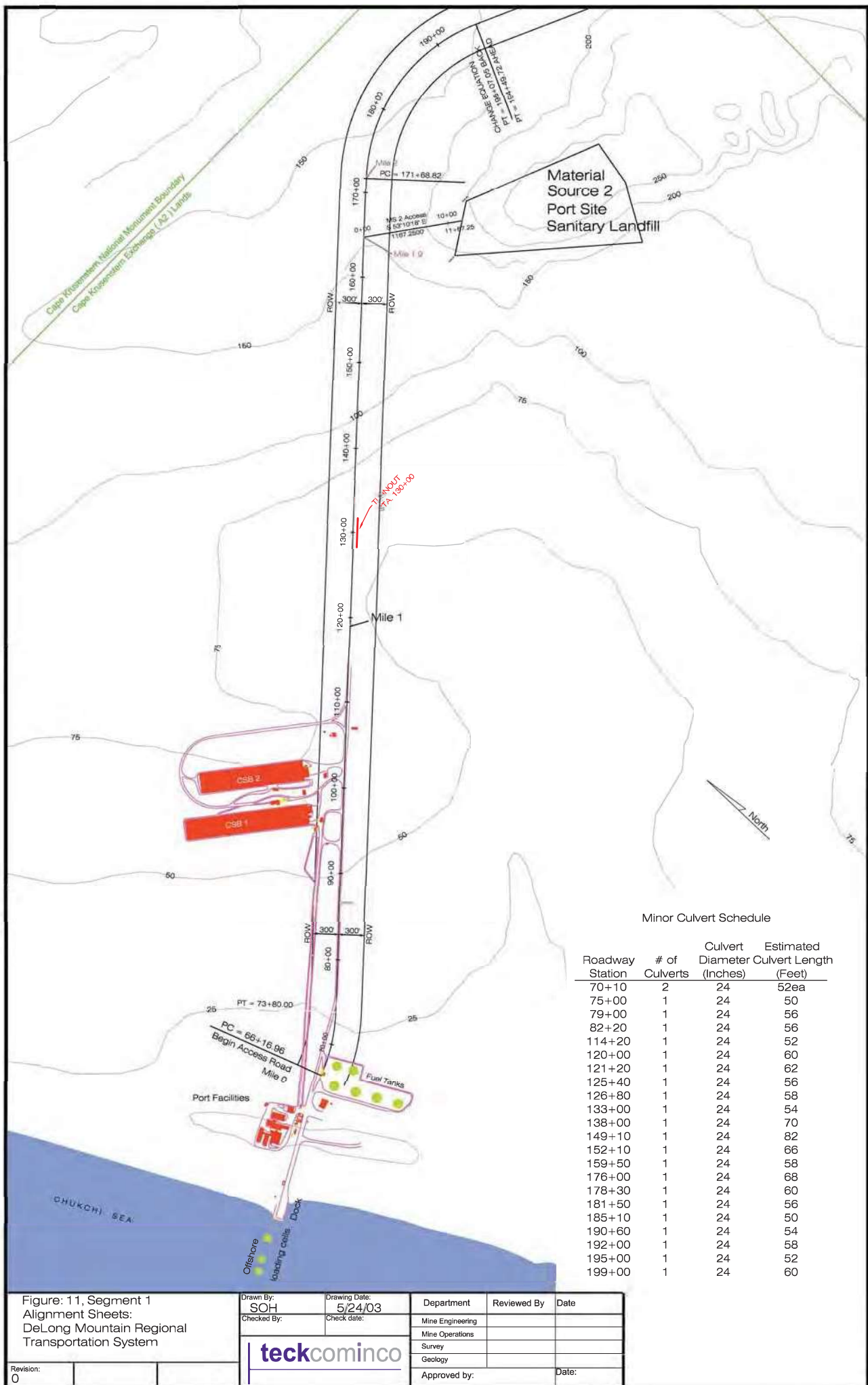
By: JG-SLR

Date: March, 2018

#### Red Dog Operations SPCC Plan

#### Figure 10 DMRTS Segments Overview

Coordinate System NAD 1983 2011 StatePlane Alaska 7 FIPS 5007 Feet



Minor Culvert Schedule

Roadway Station	# of Culverts	Culvert Diameter (Inches)	Estimated Culvert Length (Feet)
70+10	2	24	52ea
75+00	1	24	50
79+00	1	24	56
82+20	1	24	56
114+20	1	24	52
120+00	1	24	60
121+20	1	24	62
125+40	1	24	56
126+80	1	24	58
133+00	1	24	54
138+00	1	24	70
149+10	1	24	82
152+10	1	24	66
159+50	1	24	58
176+00	1	24	68
178+30	1	24	60
181+50	1	24	56
185+10	1	24	50
190+60	1	24	54
192+00	1	24	58
195+00	1	24	52
199+00	1	24	60

Figure: 11, Segment 1  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

Drawn By: <b>SOH</b>	Drawing Date: <b>5/24/03</b>	Department	Reviewed By	Date
Checked By:	Check date:	Mine Engineering		
<b>teckcominco</b>		Mine Operations		
		Survey		
		Geology		
Approved by:		Date:		

Revision:  
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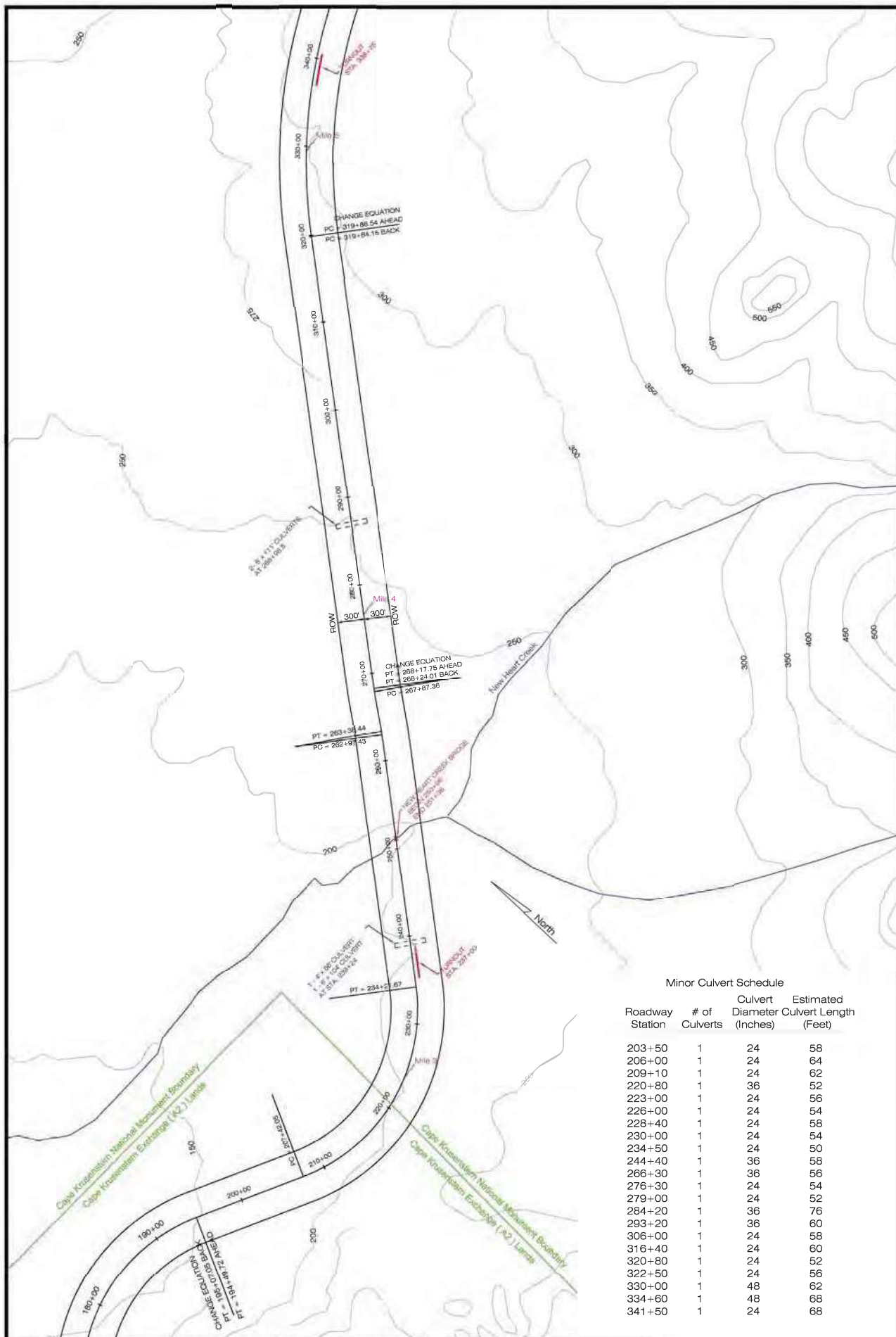


Figure: 12, Segment 2  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

Drawn By: <b>SOH</b>	Drawing Date: <b>5/25/03</b>	Department	Reviewed By	Date
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<b>teckcominco</b>		Mine Operations		
		Survey		
		Geology		
		Approved by:		Date:

Revision:  
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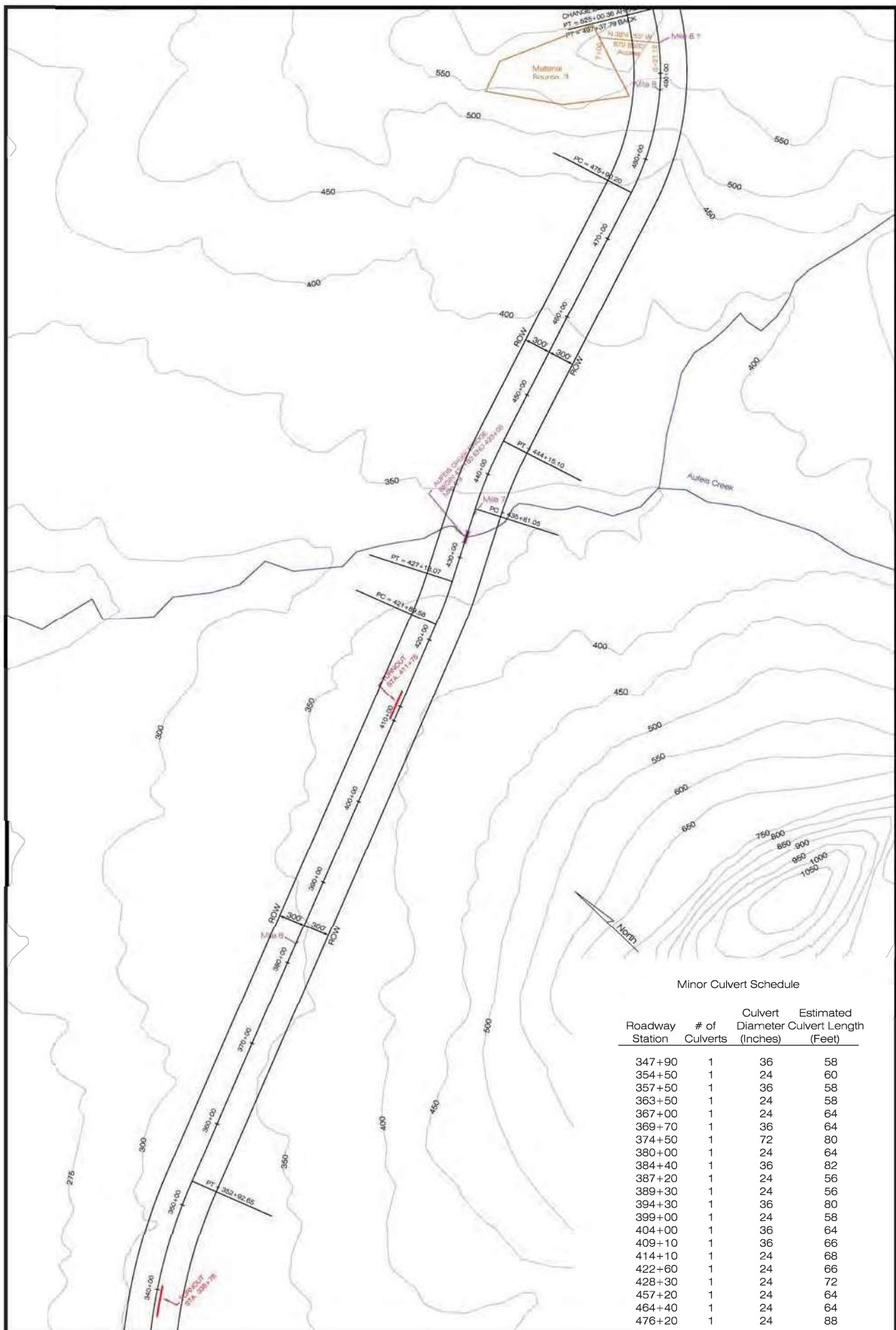


Figure: 13, Segment 3 Alignment Sheets: DeLong Mountain Regional Transportation System		Drawn By: SOH	Drawing Date: 5/25/03	Department	Reviewed By	Date
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Revision: 0				Mine Operations		
				Survey		
				Geology		
		Approved by:		Date:		

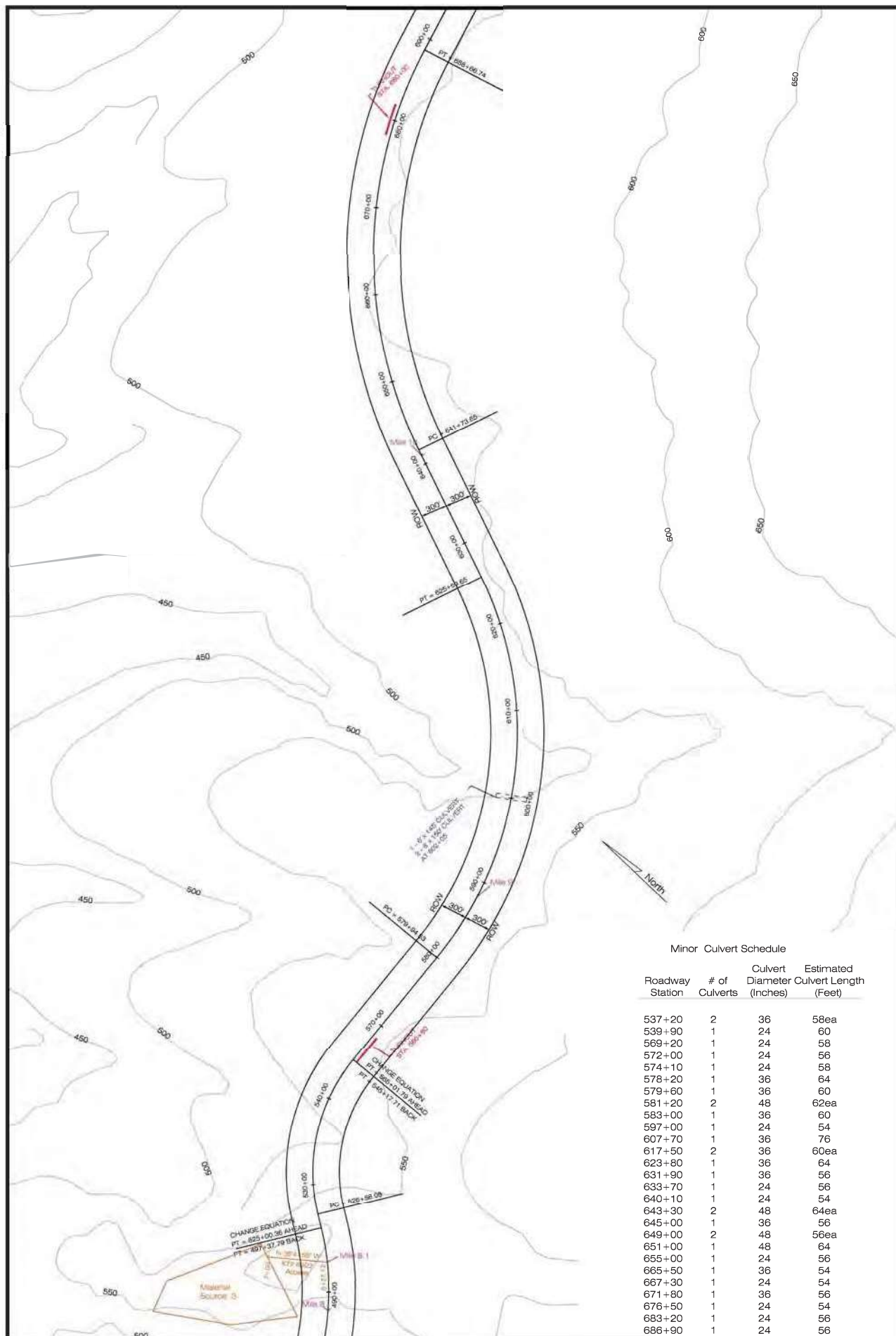
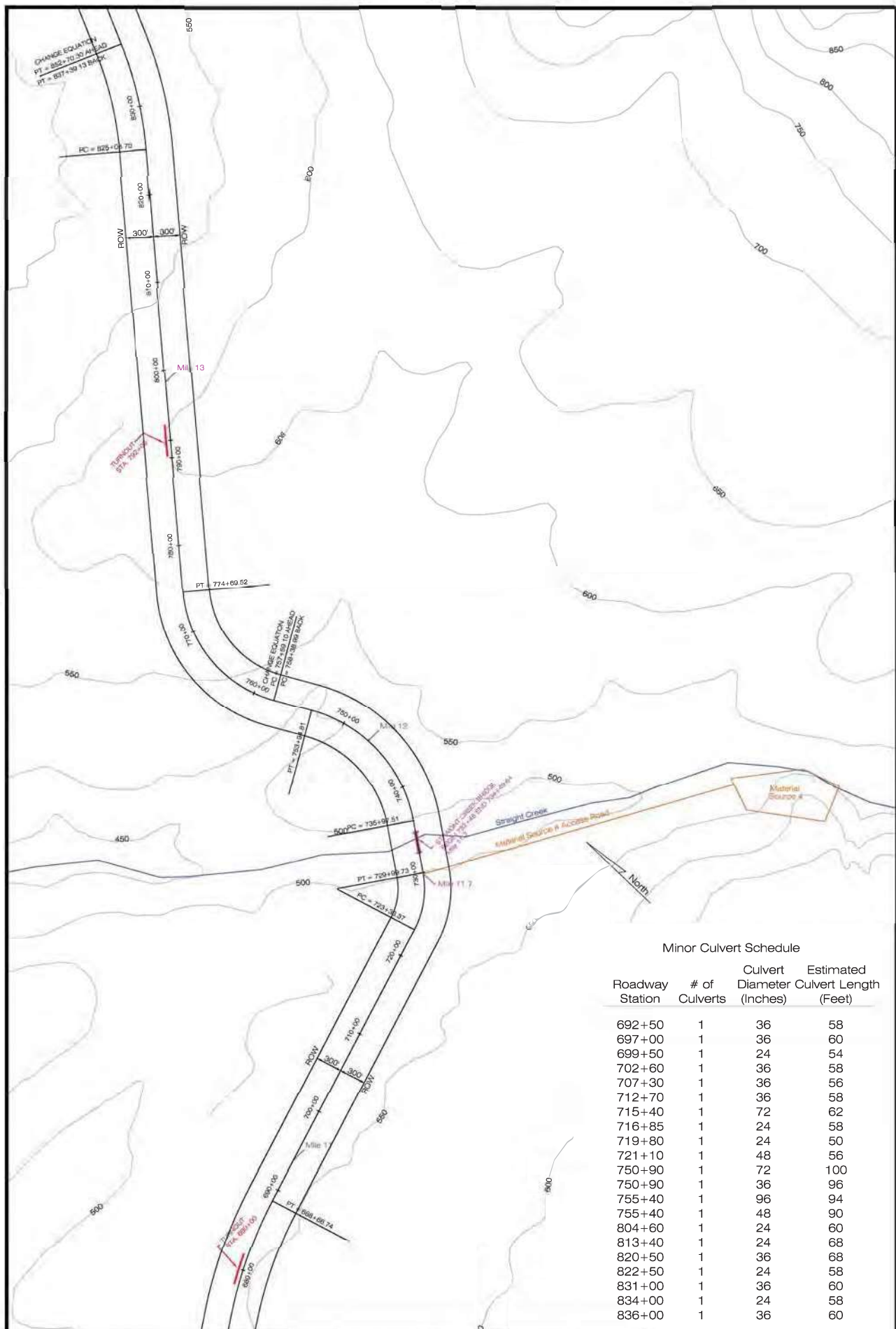


Figure: 14, Segment 4 Alignment Sheets: DeLong Mountain Regional Transportation System	Drawn By: <b>SOH</b> Checked By:	Drawing Date: <b>5/25/03</b> Check date:	Department Mine Engineering Mine Operations Survey Geology	Reviewed By     	Date     
			Approved by: _____ Date: _____		



Minor Culvert Schedule

Roadway Station	# of Culverts	Culvert Diameter (Inches)	Estimated Culvert Length (Feet)
692+50	1	36	58
697+00	1	36	60
699+50	1	24	54
702+60	1	36	58
707+30	1	36	56
712+70	1	36	58
715+40	1	72	62
716+85	1	24	58
719+80	1	24	50
721+10	1	48	56
750+90	1	72	100
750+90	1	36	96
755+40	1	96	94
755+40	1	48	90
804+60	1	24	60
813+40	1	24	68
820+50	1	36	68
822+50	1	24	58
831+00	1	36	60
834+00	1	24	58
836+00	1	36	60

Figure:15, Segment 5  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

Drawn By:  
SOH

Drawing Date:  
5/23/03

Department:  
Mine Engineering

Reviewed By:

Date:

Checked By:

Check date:

Mine Operations

Survey

Geology

Approved by:

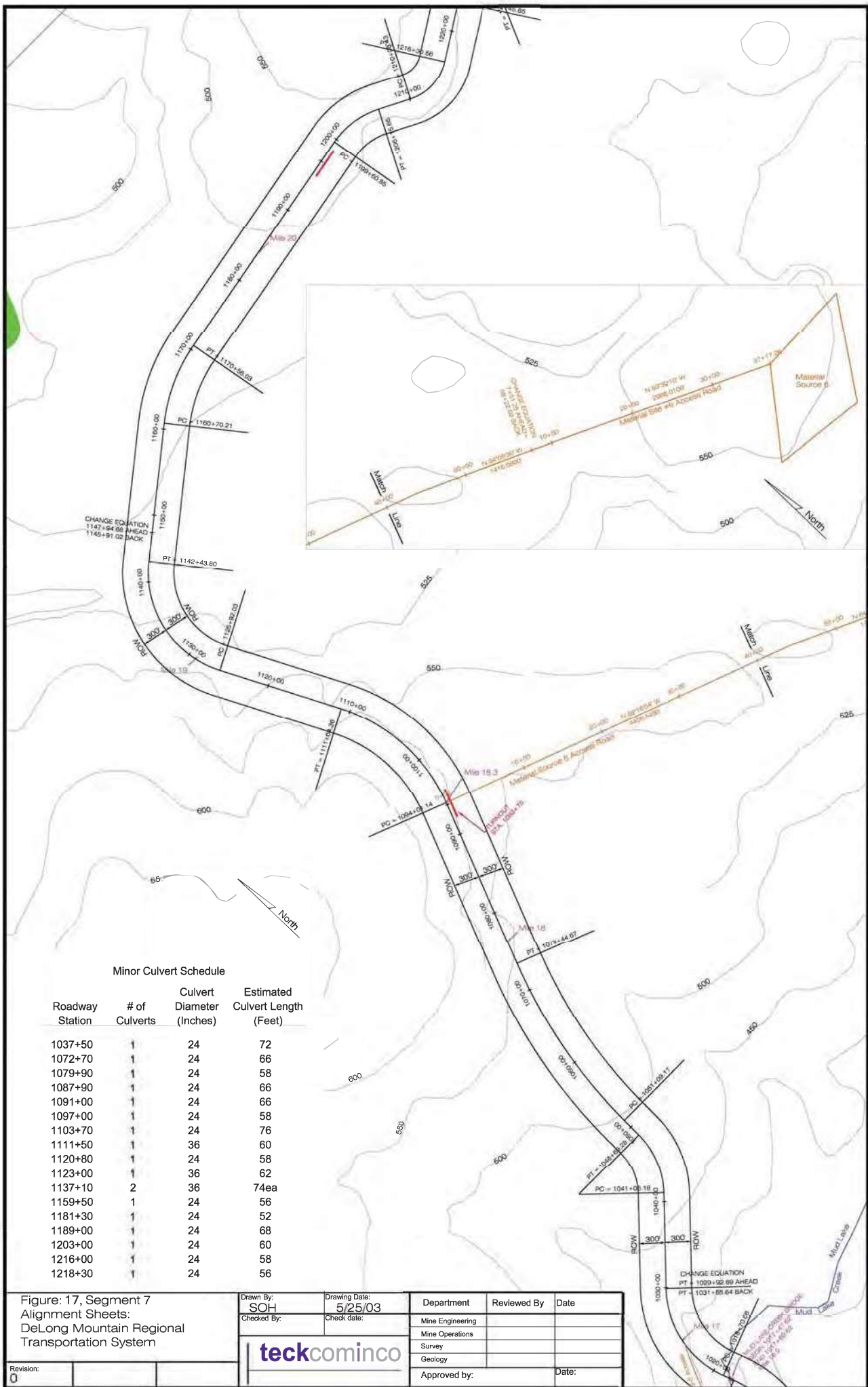
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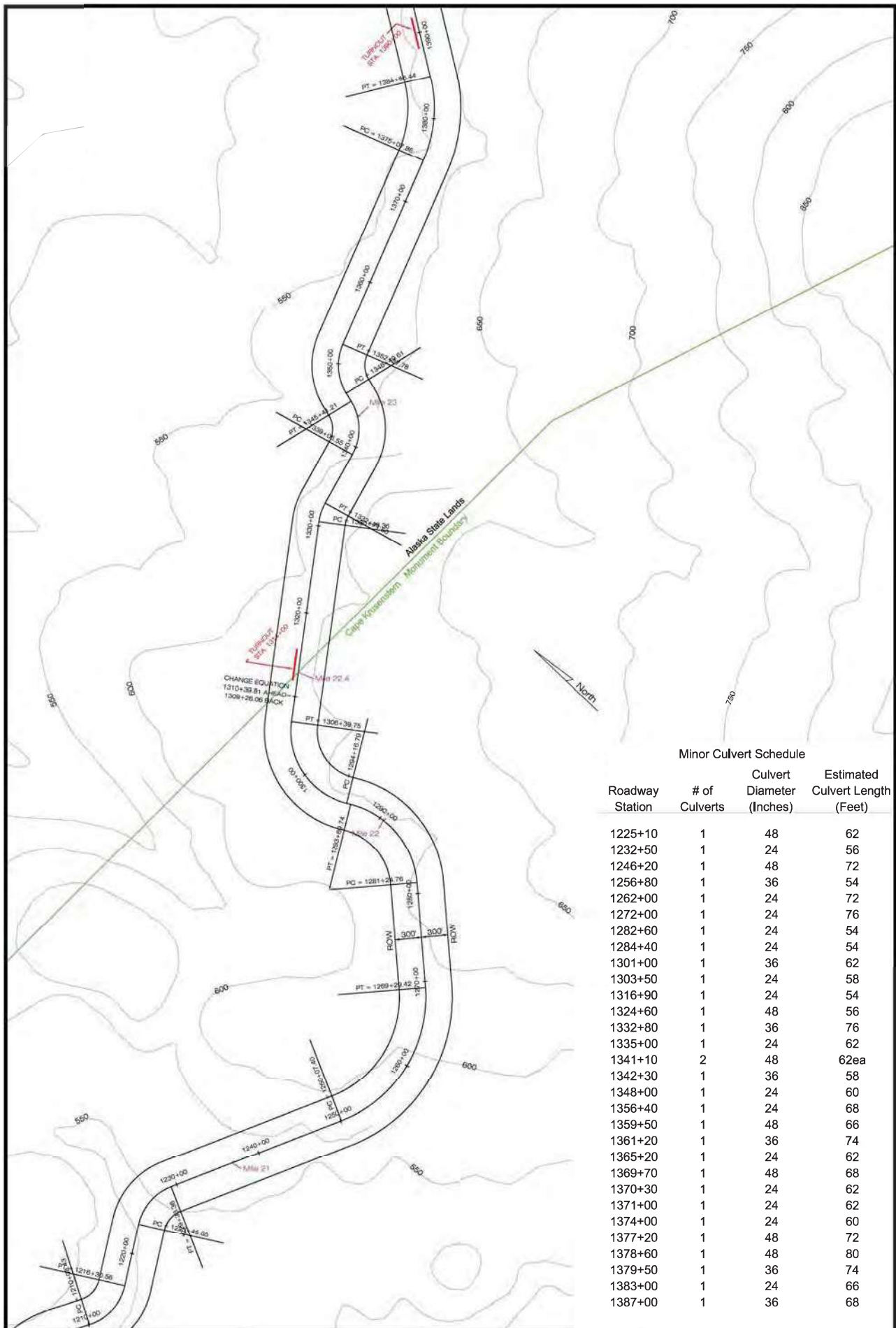
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Minor Culvert Schedule

Roadway Station	# of Culverts	Culvert Diameter (Inches)	Estimated Culvert Length (Feet)
1225+10	1	48	62
1232+50	1	24	56
1246+20	1	48	72
1256+80	1	36	54
1262+00	1	24	72
1272+00	1	24	76
1282+60	1	24	54
1284+40	1	24	54
1301+00	1	36	62
1303+50	1	24	58
1316+90	1	24	54
1324+60	1	48	56
1332+80	1	36	76
1335+00	1	24	62
1341+10	2	48	62ea
1342+30	1	36	58
1348+00	1	24	60
1356+40	1	24	68
1359+50	1	48	66
1361+20	1	36	74
1365+20	1	24	62
1369+70	1	48	68
1370+30	1	24	62
1371+00	1	24	62
1374+00	1	24	60
1377+20	1	48	72
1378+60	1	48	80
1379+50	1	36	74
1383+00	1	24	66
1387+00	1	36	68

Figure: 18, Segment 8  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

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Checked By:

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Check date:

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Department Reviewed By Date

Mine Engineering

Mine Operations

Survey

Geology

Approved by:

Date:

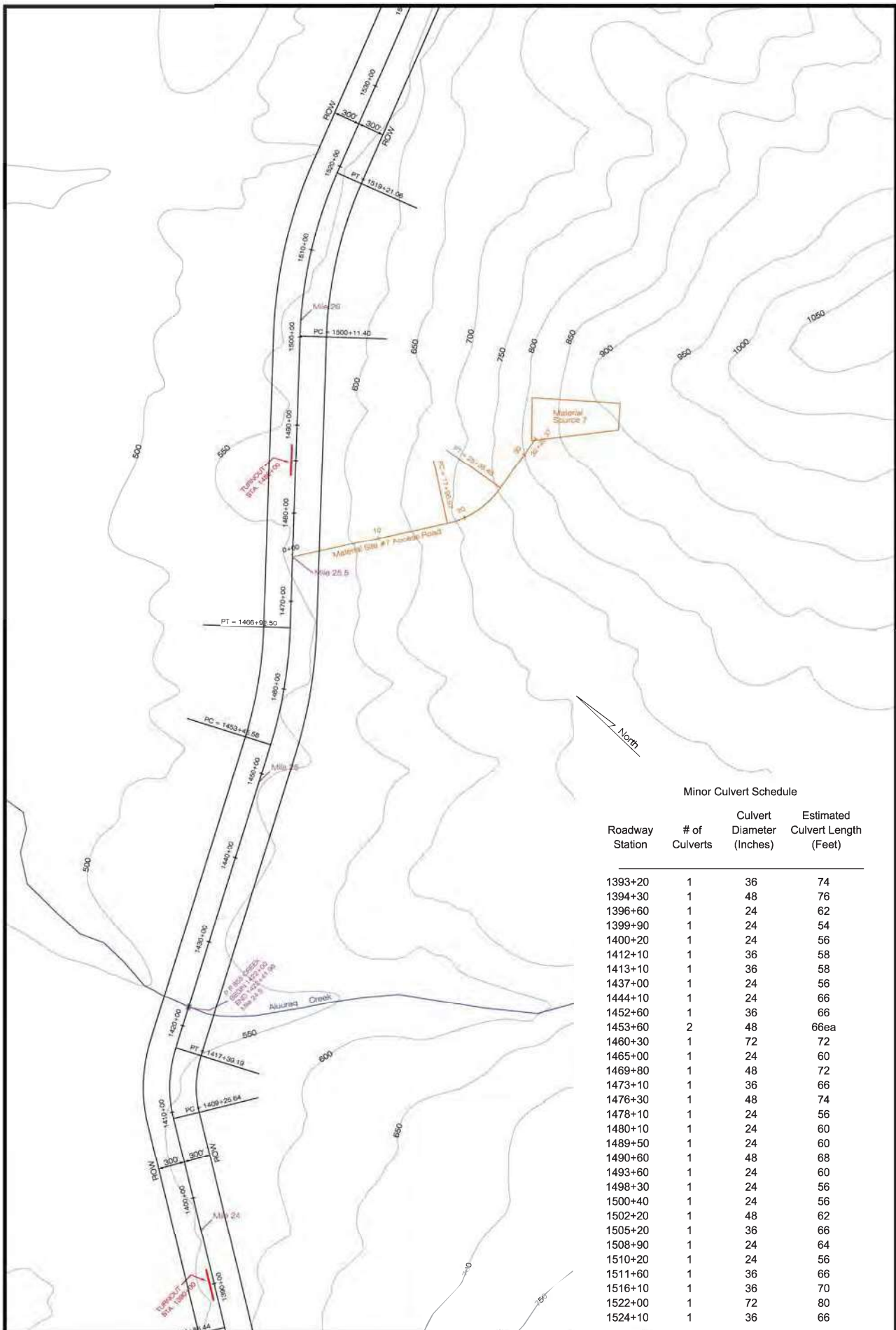
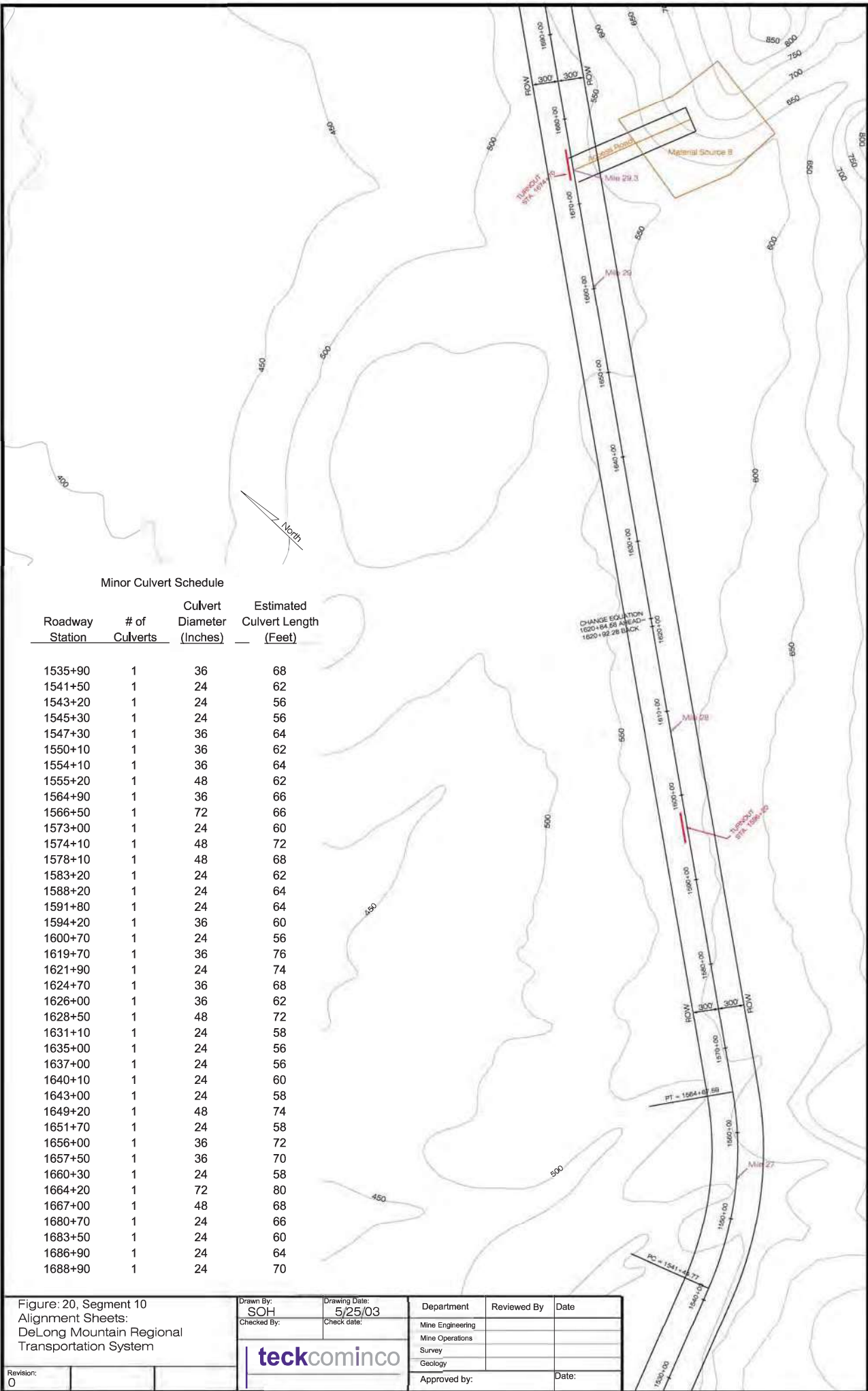


Figure 19, Segment 9 Alignment Sheets: DeLong Mountain Regional Transportation System		Drawn By: SOH	Drawing Date: 5/25/03	Department	Reviewed By	Date
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		teckcominco		Mine Operations		
				Survey		
				Geology		
		Approved by:		Date:		



Minor Culvert Schedule

Roadway Station	# of Culverts	Culvert Diameter (Inches)	Estimated Culvert Length (Feet)
1535+90	1	36	68
1541+50	1	24	62
1543+20	1	24	56
1545+30	1	24	56
1547+30	1	36	64
1550+10	1	36	62
1554+10	1	36	64
1555+20	1	48	62
1564+90	1	36	66
1566+50	1	72	66
1573+00	1	24	60
1574+10	1	48	72
1578+10	1	48	68
1583+20	1	24	62
1588+20	1	24	64
1591+80	1	24	64
1594+20	1	36	60
1600+70	1	24	56
1619+70	1	36	76
1621+90	1	24	74
1624+70	1	36	68
1626+00	1	36	62
1628+50	1	48	72
1631+10	1	24	58
1635+00	1	24	56
1637+00	1	24	56
1640+10	1	24	60
1643+00	1	24	58
1649+20	1	48	74
1651+70	1	24	58
1656+00	1	36	72
1657+50	1	36	70
1660+30	1	24	58
1664+20	1	72	80
1667+00	1	48	68
1680+70	1	24	66
1683+50	1	24	60
1686+90	1	24	64
1688+90	1	24	70

Figure: 20, Segment 10  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

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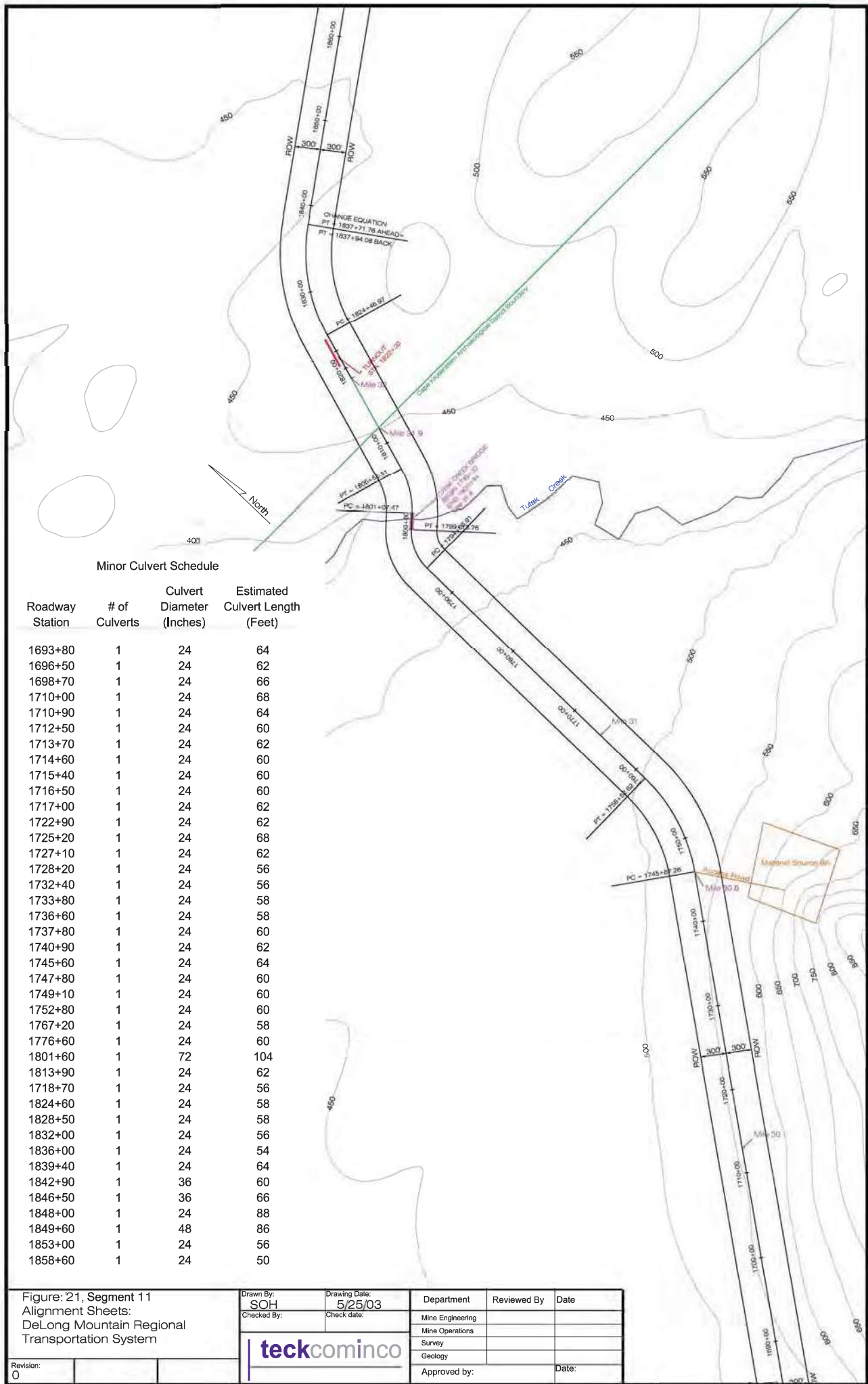


Figure: 21, Segment 11  
 Alignment Sheets:  
 DeLong Mountain Regional  
 Transportation System

Drawn By: SOH	Drawn Date: 5/25/03	Department	Reviewed By	Date
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teckcominco		Mine Operations		
		Survey		
		Geology		
Approved by:		Date:		

Revision:  
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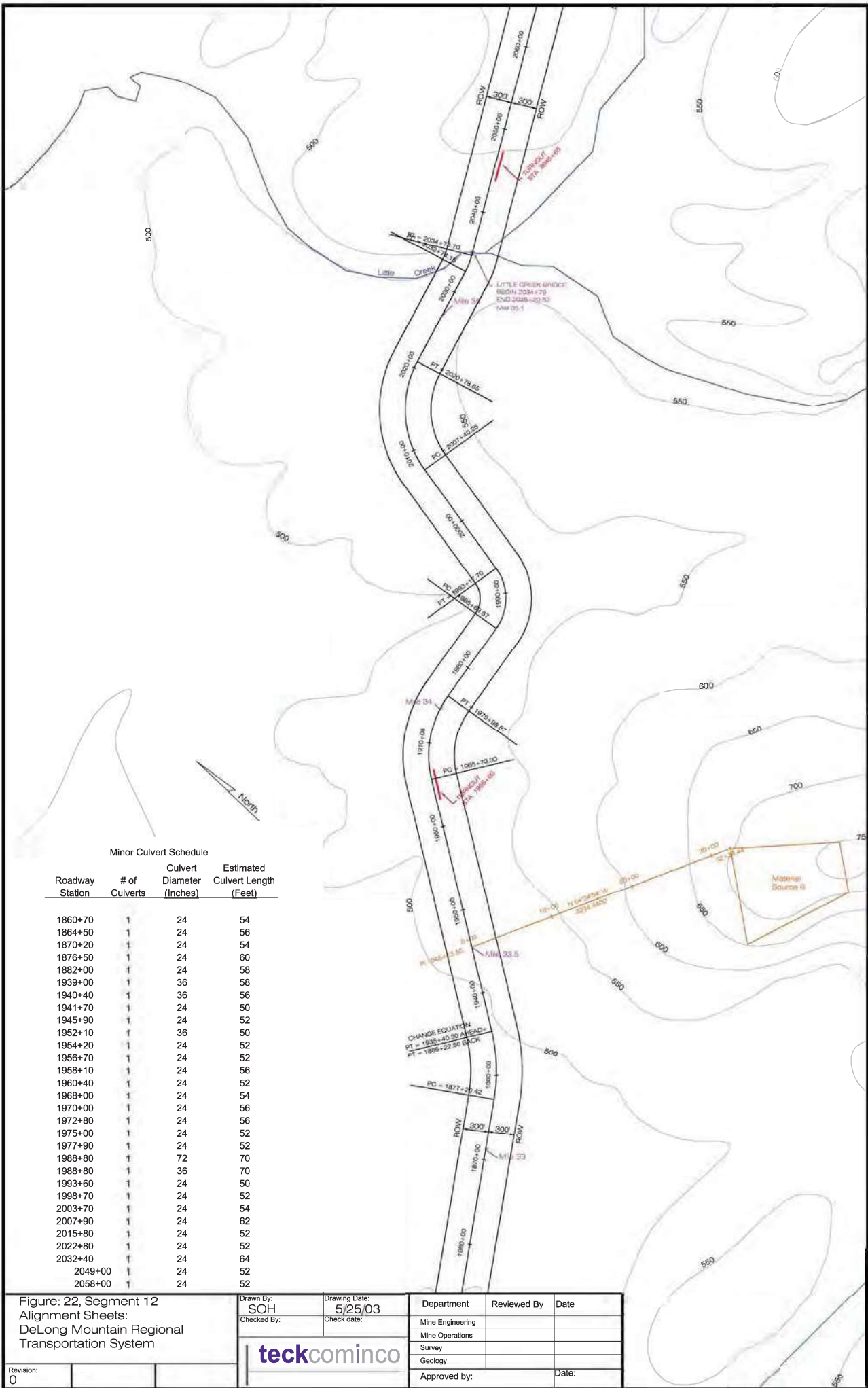


Figure 22, Segment 12  
Alignment Sheets:  
DeLong Mountain Regional  
Transportation System

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SOH

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5/25/03

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Mine Engineering

Mine Operations

Survey

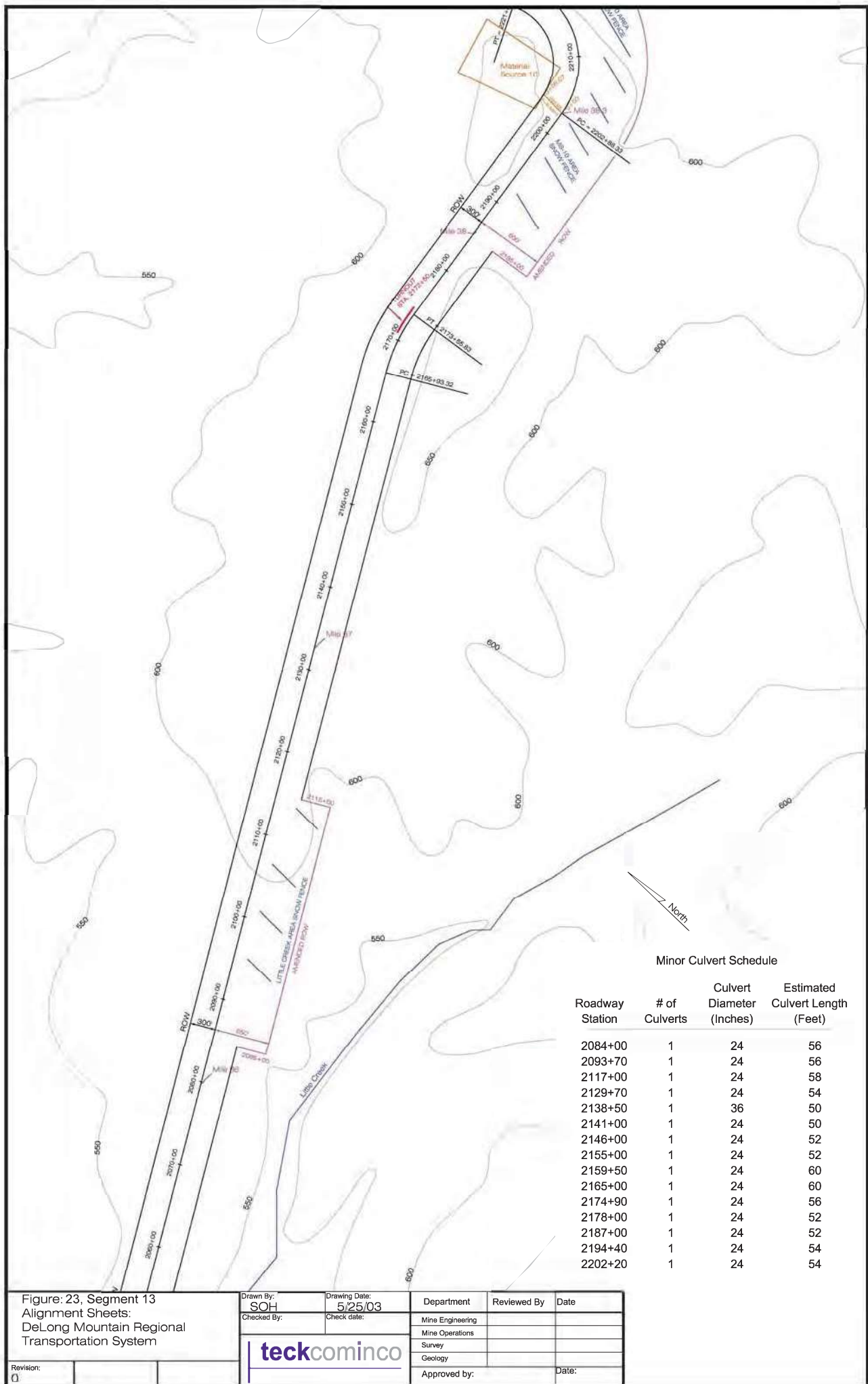
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Approved by:

Reviewed By

Date

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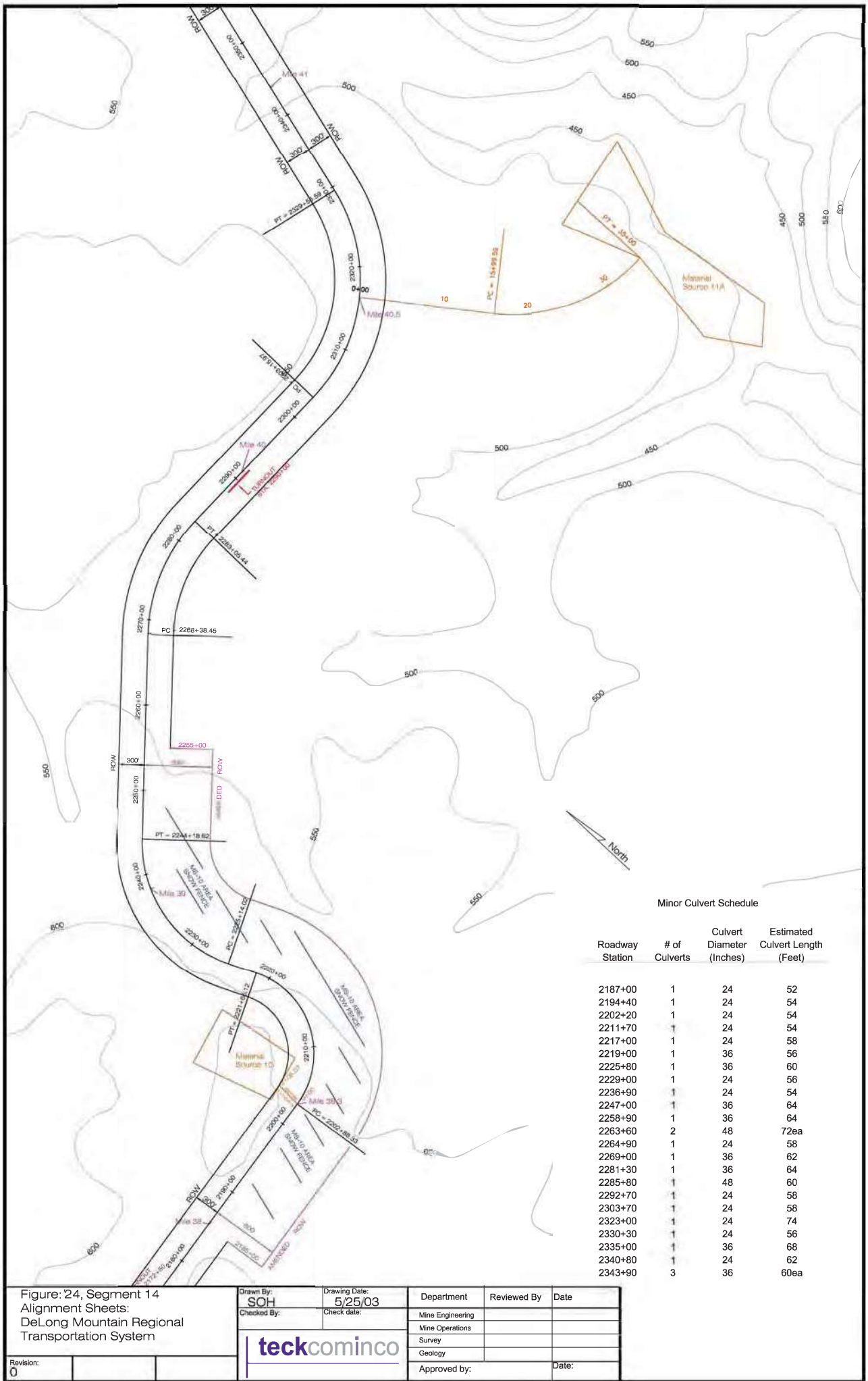
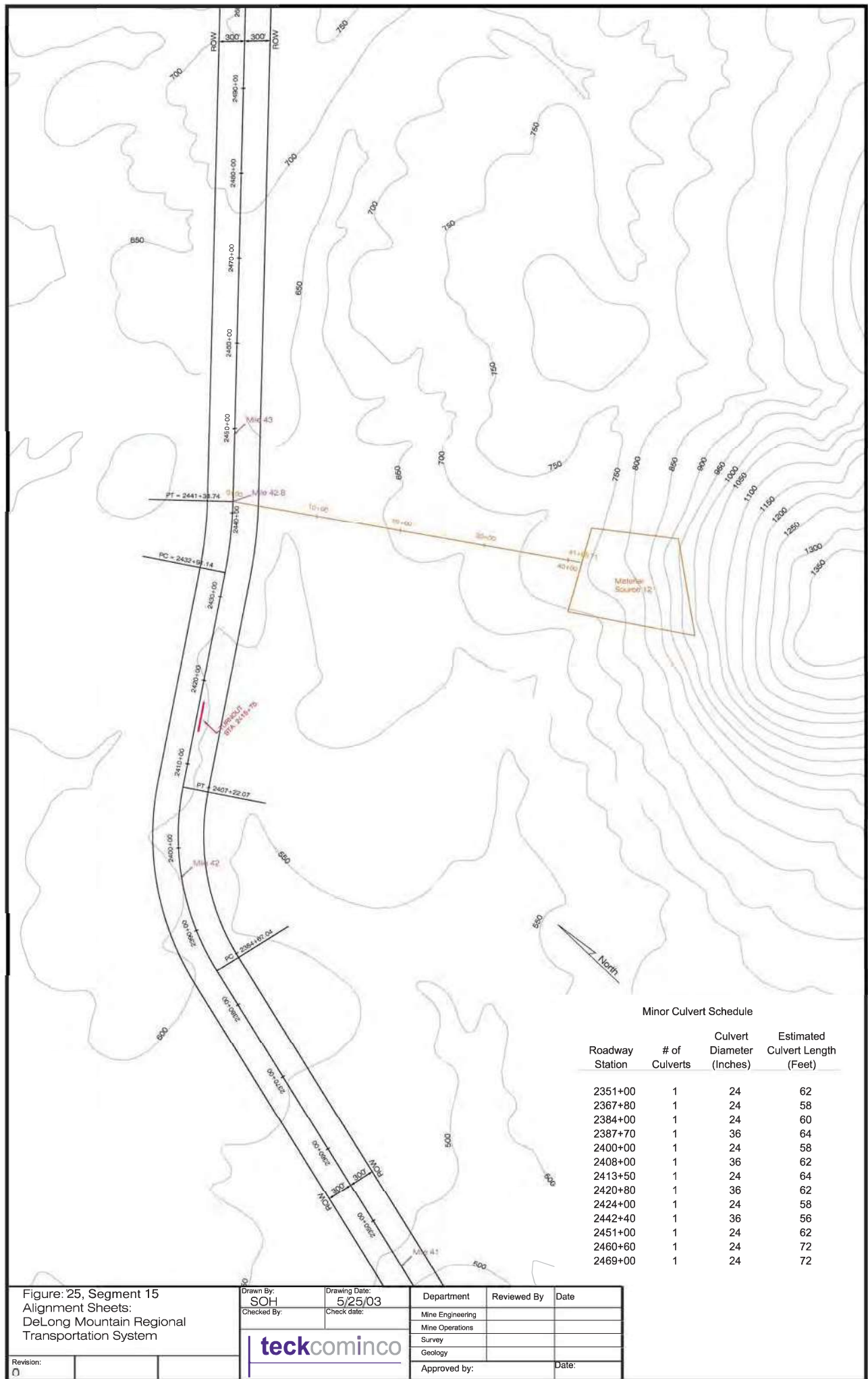
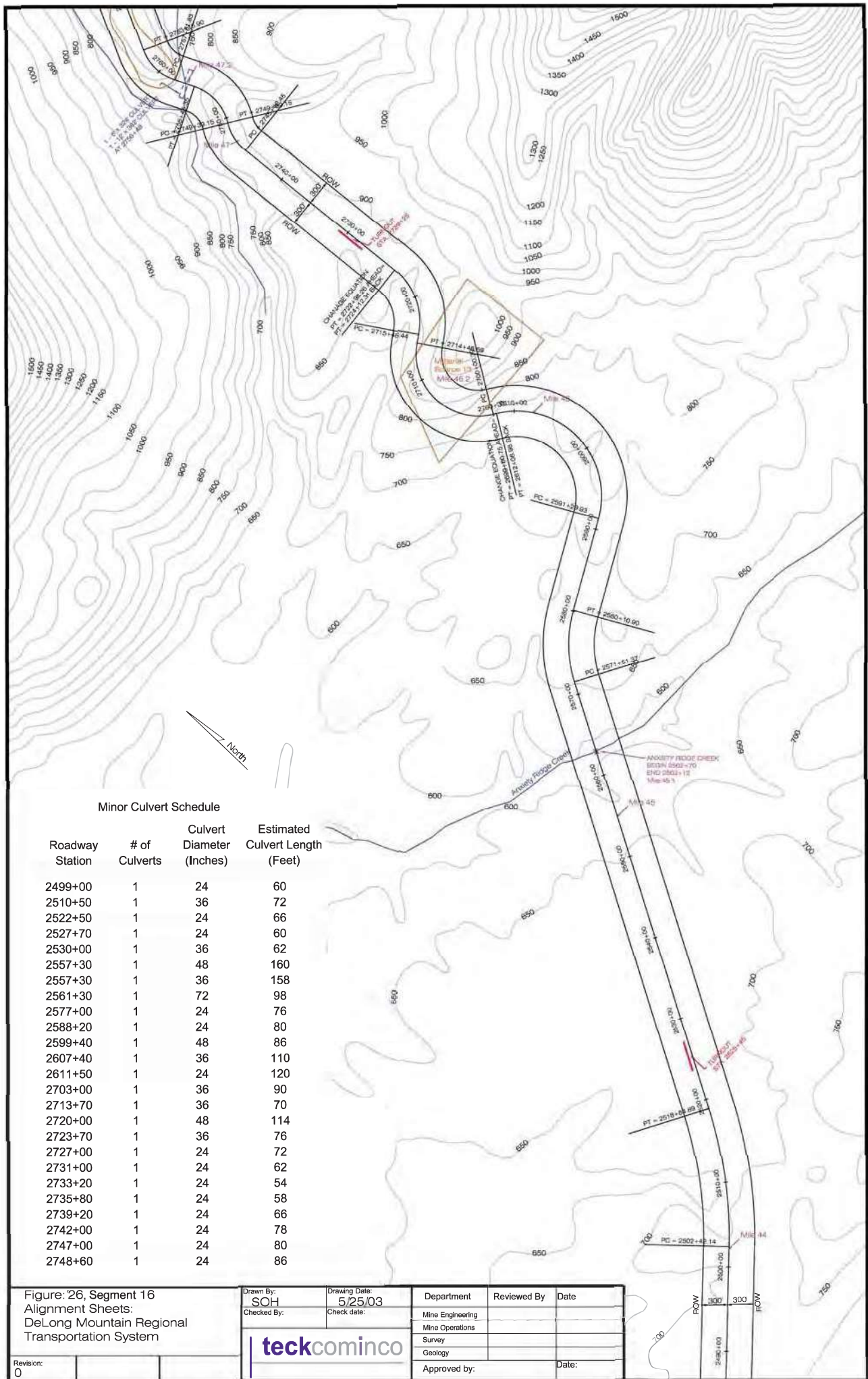


Figure: 24, Segment 14 Alignment Sheets: DeLong Mountain Regional Transportation System		Drawn By: <b>SOH</b>	Drawing Date: <b>5/25/03</b>	Department Mine Engineering	Reviewed By	Date
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		<b>teckcominco</b>		Survey		
				Geology		
				Approved by:		Date:









[Insert figures]



## **APPENDIX C**

### **SUBSTANTIAL HARM DETERMINATION**

### Substantial Harm Determination

Facility Name: Teck Alaska Inc. – Red Dog Alaska Operations  
Facility Address: DeLong Mountain Regional Transport System Port and Red Dog Mine  
within Northwest Arctic Borough, Alaska

Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

**YES**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest above-ground oil storage tank plus sufficient freeboard to allow for precipitation?

**No**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Appendix 2.6A or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments.

**YES**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Appendix 2.6A or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

**No**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

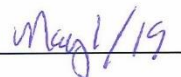
**No**

### Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

  
Signature

Leslie Yesnik  
General Manager

  
Date