



May 7, 2024

Via Electronic Mail

Patrick Lennberg
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215,
Denver, CO 80203

**Subject: Loveland Ready-Mix Concrete, Inc. (LRM)
Knox Pit Permit No. M-2017-036 - Sampling Reduction Request –
Response to Adequacy Review**

Mr. Lennberg:

Loveland Ready-Mix Concrete, Inc. (LRM), represented by Telesto Solutions, Inc. (Telesto), is responding to your adequacy review for Technical Revision 2 (TR-2) regarding the proposed reduction in sampling frequency for Knox Pit, Permit No. M-2017-036. We appreciate your consideration of our responses to your review:

ESTABLISHMENT OF POINT(S) OF COMPLIANCE

LRM acknowledges that the Colorado Water Quality Control Act, Reg. 41 defines the term "point of compliance," and the provisions by which such a point should be established. DRMS has the authority and obligation to establish points of compliance at which WQCC standards must be met. Monthly depth-to-groundwater measurements establish that the direction of groundwater beneath the site is from the northwest to the southeast.

LRM commits to continue sampling monitoring wells MW-06, MW-10, MW-12, and MW-13 for points of compliance at Knox Pit (Figure 1). MW-06 provides groundwater quality data entering the site from the northwest corner, while MW-10 will monitor groundwater quality around the batch plant and any changes from on-site dewatering and/or recharge. MW-12 and MW-13 will monitor groundwater quality compliance as groundwater leaves the site towards the southeast (Figure 1). LRM believes identifying and sampling these four monitoring wells meets the criteria of Rule 3.1.7(6)(b).

REDUCTION IN SAMPLING FREQUENCY

Regarding LRM's request for a reduction in sampling frequency, we accept the Division's recommendation to conduct sampling two times a year, aligned with low and high groundwater levels. Based on the water level data, we agree that sampling during the first and third quarters are appropriate.

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ANALYTE LIST

We note the Division's concern regarding the proposed reduction in the number of analytes tested during monitoring activities. We understand the importance of ensuring the adequacy of the analyte list to detect any unauthorized release of pollutants to groundwater, as per Rule 3.1.5(11). As provided in the Division's "*Groundwater Monitoring: Sampling and Analysis Plan Guidance*," September 2023, a Sampling and Analysis Plan will be informed by a baseline characterization of groundwater monitoring at the site. Baseline sampling should be sufficient to allow the Division to assess the impacts of future mining at the site. Sampling should provide sufficient frequency and duration to capture site-specific, temporal, variability. LRM believes the six years of quarterly sampling has met the requirements for the baseline characterization of the site.

Baseline monitoring provides a description of the site's existing geochemical environment as described in the report entitled, "*Knox Pit Baseline Water Quality Evaluation, Permit No. M-2017-036*" submitted December 2019. In this report, Telesto showed that the groundwater is in a stable, oxidized state, and dewatering during mining will only continue that state. Thus, there are no expected changes to on-site water quality from mining activities, and the 6 years of quarterly background water quality is indicative future on-site groundwater quality.

Because the baseline is anticipated to remain constant, those analytes that are below detection are expected to remain below detection. Using the general procedure for compliance with Reg. 41 and 42, provided in the "*Groundwater Monitoring Compliance Bulletin*," November 19, 2019, sampling for 12 of the 27 analytes in the Division's revised analyte list are not required as there is negligible potential for impact due to mining. Table 1 lists the analytes with negligible potential for impacts due to mining. Twelve metals listed in the Division's Appendix 1 "*Proposed parameter list for Knox Pit: M2017-036*" have never shown a water quality standard exceedance and/or have shown a low measure of variability over the six years of sampling. The time-series graphs and summary of statistical analysis of the analytes, provided as additional information with the TR-2, show these metals have consistently remained below the water quality standard. Thus, LRM proposes testing for the analyte list provided in Table 2 during the respective monitoring periods.

LRM's rationale for the analytes in Table 2 is based upon two potentials, but unlikely, scenarios that could change groundwater quality on site: 1) a release of processing chemicals, and/or 2) offsite sources being drawn in due to dewatering.

Processing Chemicals

During the Land Use permitting process for Larimer County, LRM submitted the required "Hazardous Material Impact Analysis" (HMIA) (Attachment 1). The HMIA lists the materials and quantities that will be present on-site during operations. The diesel tank and used oil stored on site will be double-contained and are located upgradient of the water quality pond. Similarly, other concrete additives are double contained and upgradient of the water quality pond. Thus, potential threat from releases of diesel, used oil, and additives to groundwater are negligible. Portland cement is also double contained, but the sheer volume increases its chance (although slim) for releases. Thus, LRM believes the proposed analyte list provided in Table 2, specifically aluminum and iron, are the reportable chemical components provided in the Safety Data Sheets (SDSs) that would show a potential release to the groundwater from Portland cement.

Offsite Sources

As LRM dewater the site, groundwater flow paths may change slightly (although LRM does have mitigation strategies to reduce large changes to groundwater hydraulics) and introduce groundwater from other sources. LRM commits to using TDS as an indicator parameter for changing groundwater quality conditions. Significant changes in TDS should provide an indication of changes in overall groundwater chemistry from an offsite source. During future sampling events in the compliance wells, if the water quality results show a significant change in TDS, LRM commits to providing additional groundwater sampling and expanding the analyte list to include the full suite of parameters listed in the Division's Appendix 1 "*Proposed parameter list for Knox Pit: M2017-036*".

We are committed to addressing the outlined items to the Division's satisfaction and ensuring compliance with all relevant regulations. If further information or clarification is required, please do not hesitate to contact us.

Thank you for your attention to this matter.

Sincerely,



Telesto Solutions, Inc.

Tim Gerken

Staff Geologist

TJG:wln

Enclosure

cc: wln

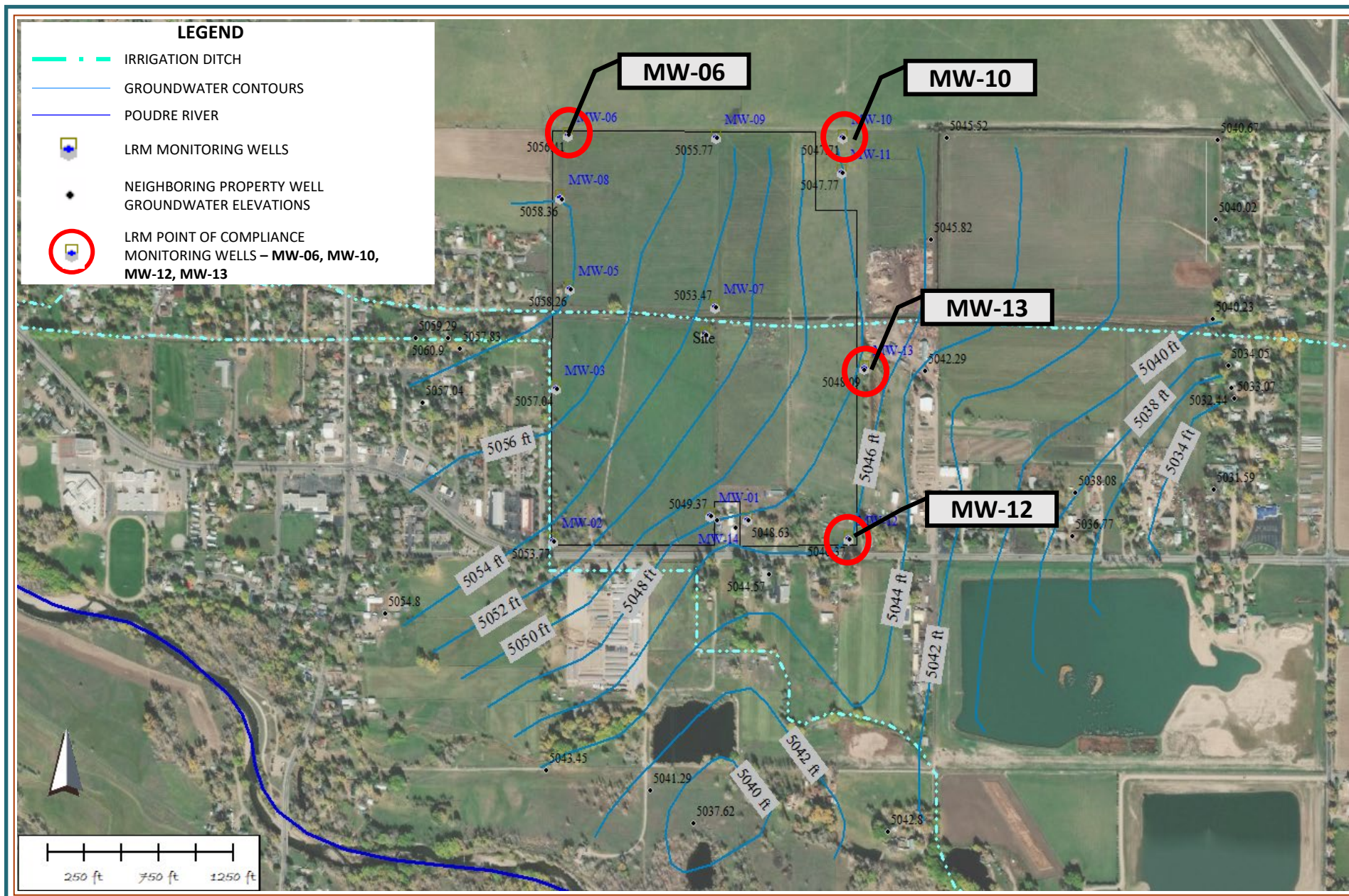


FIGURE 1
Proposed Point of Compliance Wells for Knox Pit – Permit No.: M2017-036

Table 1: Analytes with Negligible Potential for Impact Due to Mining at Knox Pit, M2017-036

Analyte	Table Value Standard (mg/L, unless other unit given)	Number of WQCC Standard Exceedances
Antimony - Dissolved	0.0006	0
Arsenic - Dissolved	0.01	0
Barium - Dissolved	2	0
Beryllium - Dissolved	0.004	0
Boron - Dissolved	0.75	0
Cadmium - Dissolved	0.005	0
Chromium - Dissolved	0.1	0
Cobalt - Dissolved	0.05	0
Copper - Dissolved	0.2	0
Lead - Dissolved	0.05	0
Nickel - Dissolved	0.1	0
Silver - Dissolved	0.05	0

Table 2: Proposed Parameters List for Knox Pit, M2017-036

Analyte	Table Value Standard (mg/L, unless other unit given)	Notes
pH Field (pH unit)	6.50 - 8.50	Field Measurements
Conductivity	+/- 5%	Field Measurements
Temperature	+/- 0.5 C	Field Measurements
Bicarbonate as CaCO ₃	NA	
TDS	400 mg/L, or 1.25X background	
Chloride - Dissolved	250	
Fluoride - Dissolved	2	
Nitrite + Nitrate as Nitrogen	10	
Sulfate - Dissolved	250	
Aluminum - Dissolved	5	
Iron - Dissolved	0.3	
Manganese - Dissolved	0.05	
Molybdenum - Dissolved	0.21	
Selenium - Dissolved	0.02	
Uranium - Dissolved	0.0168	

To: S. Fancher-English
Date: 05/07/2024
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ATTACHMENT 1

Hazardous Material Impact Analysis

Revised – 3rd Submittal – April 2019

Loveland Ready-Mix Concrete Inc., LaPorte Operations

Facility Operations

The proposed Loveland Ready-Mix Concrete, Inc. facility near the community of LaPorte will be a sand and gravel pit with ancillary sand and gravel processing and a concrete batch plant. A portable concrete crusher will be used on-site to recycle returned/used concrete. Mining operation hours will be from 7:30 am – 5:00 pm Monday through Friday, with one hour for startup and shutdown. Concrete batching and hauling hours will be from 5:00 am to 5:00 pm Monday through Friday, with one hour for shutdown; and, from 8:00 am to noon on Saturday. Maintenance and repair may occur from 8 am to 2 pm on Saturday. There will be approximately 30 fulltime employees on-site during a typical work day.

Raw materials for the concrete batch plant include aggregates, cement, and admixtures. The aggregates for the plant will be mined on-site. Cement and admixtures will be delivered to the site using conventional transport trucks.

Contract services using conventional transport trucks will deliver diesel fuel. Oil will be delivered in 55-gallon drums. Used oil will be removed by a licensed contractor.

Natural gas will be delivered through conventional gas lines and then compressors will be used to produce compressed natural gas (CNG) to be used in mixer trucks. CNG is transferred directly to trucks through a slow fill system; trucks will be connected at the end of the work day to the fueling station where the fuel tanks will be slowly filled at night. No CNG storage tanks will be located on-site. Natural gas will also be used to heat water for batching in the winter.

Sand, gravel, and crushed concrete stockpiles will be adjacent to the aggregate processing plant. Mined material will be transferred to the aggregate processing plant on a conveyor. Overburden stockpiles from dirt scraped off the surface of the aggregate reserves will be placed around the perimeter of the mining area.

Structures will include parking facilities, diesel fuel storage, truck wash out bays, water/sediment ponds, aggregate processing plant, batch plant, cement and fly ash silos, aggregate conveyor, portable concrete crusher, CNG compressors and an office.

Equipment used for extracting and hauling aggregate will be parked on-site, near the batch plant area. Daily equipment monitoring will occur on-site. Major repair, overhaul, and maintenance activities will be performed off-site. Oil changes and other minor maintenance may be performed on mobile mining and production equipment on-site by outside licensed contractors.

The site is currently used for growing hay and for pasture and has historically been used for agriculture. No known petroleum or chemical spills exist on the property.

No manufacturing of chemicals will occur on-site. Aggregates, cement, admixtures, and water for ready-mix concrete are weighed and fed into mixer trucks; trucks mix concrete as they travel to jobsite. No chemicals are disposed of on-site. Returned/waste concrete is laid out and cured before it is crushed for recycling.

No underground storage tanks (USTs) are planned for this facility.

The attached Figure 1 depicts the layout of proposed batch plant facilities.

Materials Storage

Facility Identification Numbers:

Dun and Bradstreet Number: 007083108

NAICS: 32732 (Ready-Mix Concrete Manufacturing)

SIC: 3273 (Ready-Mixed Concrete)

In accordance with the 1986 Emergency Planning and Community Right-to-Know Act (EPCRA) Sections 311-312, any facility that is required to maintain Safety Data Sheets (SDSs) under the Occupational Safety and Health Administration (OSHA) regulations must submit an annual inventory of hazardous chemicals that exceed reporting thresholds. An SDS for each reportable chemical will be maintained on-site. The following materials will be present on-site, and quantities used may be at or above the EPCRA reporting thresholds. LRM typically reports the required inventory in a Tier II form which lists specific chemical names as indicated on the SDSs.

Name of Structure	Container Description	Volume of On-Site Storage	Contents and CAS No.	Tier II Report
Diesel Tank - AST 1	Double-wall AST Adjacent to batch plant	10,000 gallons	Diesel Fuel 68334-30-5	Yes
Used Oil – AST 2	Single-wall AST Adjacent to batch plant	400 gallons	Used Oil 324191	No
Cement Silo	Above ground silo Adjacent to batch plant	125 tons	Portland Cement 65997-15-1	Yes **
Fly Ash Silo	Above ground silo Adjacent to batch plant	65 tons	Coal Fly Ash 68131-74-8	Yes **
Calcium Chloride Tank	Above ground tank Adjacent to batch plant	6,000 gallons	Calcium Chloride (as admixture) 10043-52-4	Yes **
Admixture Tanks	Storage Tanks Inside batch plant	1,000 gallons ea	Sika Admixtures CAS not established	No*
Misc. Oil Storage	Drums stored on pallets in enclosed storage Adjacent to batch plant	55 gallons ea	Oils and Lubricants CAS not established	No
Low PH Soap Tank	Plastic Tank inside soap shed Adjacent to truck wash bays	300 gallons	Low PH Soap CAS not established	No
Compressed Natural Gas (CNG)	CNG trucks CNG fueling area		Natural Gas No CAS for this use	No

* Sika admixtures are not typically included in Tier II or TRI Reporting since quantities of reportable chemical components included in mixtures do not meet or exceed threshold amounts. In past years, Sikaset NC admixture had reportable amounts of Calcium Nitrate as a component. Tier II and TRI Reporting will be completed and submitted yearly for all reportable chemical components exceeding the reporting thresholds.

** Chemical components present in mixtures may be reportable, depending on amounts used in the production year and the percentage of reportable chemicals present in the mixture.

The potential for hazards and hazardous materials impacts is based on thresholds derived from EPCRA 311-312. There are no hazardous emissions or acutely hazardous materials, substances, or waste on-site.

Potential for Spills and Releases

There will be no structures or operations that will physically interfere with an emergency response plan or emergency evacuation plan. Primary and emergency access routes are shown on Figure 2.

Possible failure modes that could result in discharges from storage vessels include: operator error during material loading or unloading, impact from construction related activities, corrosion, failed connecting hoses or valves either on the storage tank or on the delivery truck, vandalism, or lightning strikes.

The following materials will be delivered to the site using conventional trucking. The maximum quantities on any single delivery will be as follows:

Contents	Delivery Method	Max Volume per delivery
Diesel Fuel	Commercial Tanker Truck Adjacent to batch plant Pumped into storage tank through hose	7,000 gallons
Used Oil – AST 2	Commercial Tanker Truck (removal) Adjacent to batch plant Pumped from storage tank through hose	300 gallons
Portland Cement	Above ground silo Adjacent to batch plant Transfer to silo through pneumatic conveyance	30 tons
Coal Fly Ash	Above ground silo Adjacent to batch plant Transfer to silo through pneumatic conveyance	25 tons
Calcium Chloride as Admixture	Bulk tank truck Adjacent to batch plant Pumped into storage tank through hose	4,500 gallons
Admixtures	Bulk tank truck Inside batch plant Pumped into storage tanks through hose	1,800 gallons
Misc. Oil	Drums brought in on service truck	55 gallons ea
Low PH Soap	Commercial tank truck Pumped into storage tank through hose	200 gallons

Control Measures

Sand and gravel are the only materials that will be stored outside. All other materials will be stored in enclosed containers. Liquid admixture storage tanks will be stored inside the batch plant. Diesel fuel will be stored in a

double walled tank. Secondary containment will be provided for all miscellaneous oils and lubricants. Pneumatic transfer and silos with bag houses will control cement and fly ash discharges.

The site area where the batch plant, parking, and material storage are located will be graded so that any spills will be directed to detention areas on site, as depicted on Figure 1. Earthen berms and drainage swales will also be used to divert and control any releases. There will be a dozer on-site at all times that can be immediately activated for additional containment measures if needed. This will insure that any spills will be contained on-site until cleaned up and disposed of properly, with no impact to neighboring properties.

The Little Cache la Poudre Ditch is the only water source close to the plant area that has the potential to intercept spills and transport chemicals off-site. Site grading, berming, and placement of water storage/supply pond will prevent any spills from reaching the ditch and impacting neighboring properties.

LRM is committed to a strong antipollution and spill prevention program and a strong, pro-active training and inspection program that will prevent or minimize the occurrence of spills.

Reporting Information and Procedures

An engineer-certified Spill Prevention Control and Countermeasure Plan (SPCC) will be prepared for this site. Petroleum storage that is SPCC-regulated includes the 10,000 gallon diesel aboveground storage tank (AST), the 400 gallon used oil AST, and the 55 gallon oil storage. The 10,000 gallon AST will be registered with the Colorado Department of Labor and Employment, Division of Oil and Public Safety. In the event of a petroleum release, the first responding employee who discovers the spill will report the spill to the SPCC Administrator (Plant Manager). If necessary, depending on the size of the release, the SPCC Administrator will dispatch a spill cleanup contractor to the site and will contact the appropriate agencies and report the release.

Tier II Reporting will be completed and submitted yearly for all hazardous materials exceeding the reporting thresholds, including chemical components in mixtures. SDS reports for Portland cement and all admixtures will be reviewed yearly to check for reportable chemicals and will be checked against volumes stored and yearly amounts consumed.

EPA's Toxics Release Inventory (TRI) reporting will be prepared, certified, and submitted as required by Section 313 of the EPCRA and Section 6607 of the Pollution Prevention Act. This facility will submit TRI Form R based on the following criteria: this facility will employ over 10 people; concrete production has a NAICS code which is applicable to reporting requirements; no chemicals on site are PBT chemicals; no chemicals are manufactured on this site, however, EPCRA 313 chemicals are processed on this site; and there is no recycling, energy recovery, treatment, or disposal of any reportable chemicals on-site.

The Larimer County Local Emergency Planning Committee (LEPC) and the Poudre Fire Authority will receive yearly updates of Tier II Reports when they are submitted.

Date: 4/9/2019 7:54:38 AM X:\Loveland Ready Mix\Apr19\20190409_Site Plan.dwg Plotted By: Linda Keller

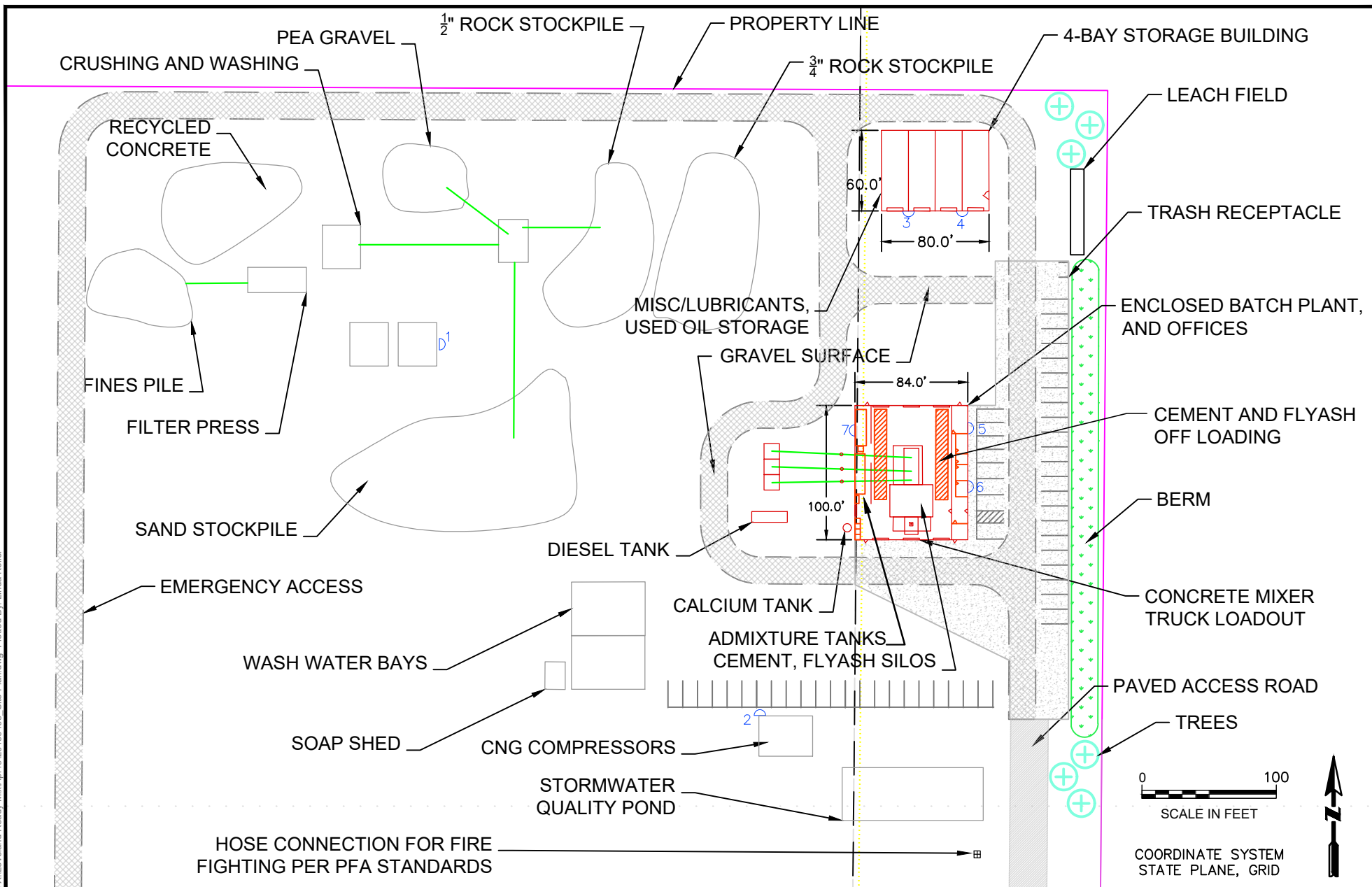
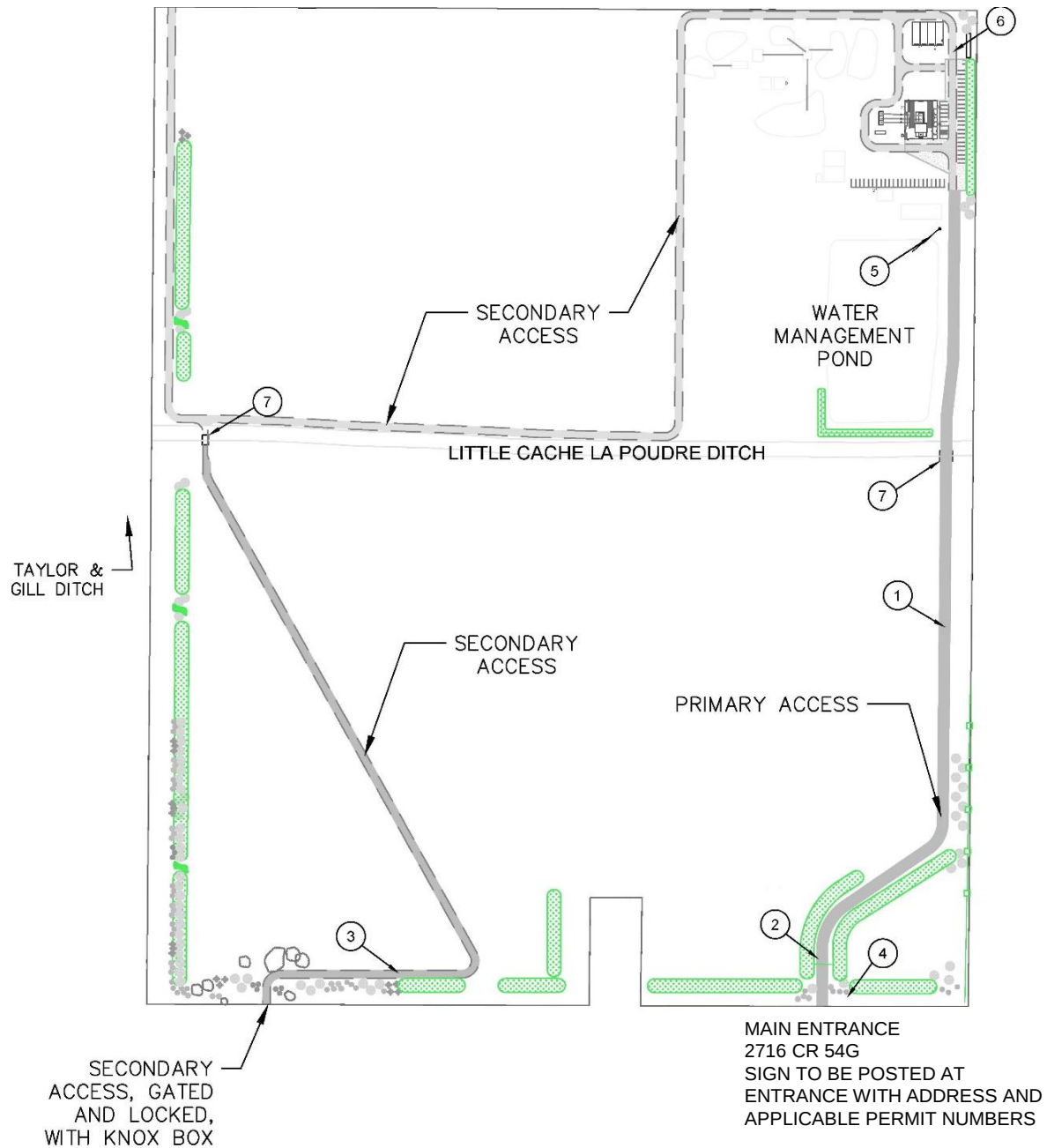


FIGURE 1
BATCH PLANT AREA SITE PLAN

NOTES:

SECONDARY ACCESS FOR EMERGENCY AND OTHER ACCESS PURPOSES WILL BE PROVIDED THROUGHOUT THE LIFE OF MINING. THE ROUTES SHOWN HERE REPRESENT A TYPICAL SECONDARY ACCESS PLAN, BUT THE ROUTES MAY BE ADJUSTED BASED ON THE SPECIFIC CONDITIONS FACED DURING MINING OPERATIONS.

A 25-FOOT RADIUS MINIMUM INSIDE TURN RADIUS WILL BE PROVIDED FOR THE MAIN AND SECONDARY ACCESSES.



- 1 - 28' WIDE, PAVED ROAD, MIN. CAPACITY 80,000 LBS
- 2 - DOUBLE PANEL SECURITY GATE - LOCKED AFTER BUSINESS HOURS
- 3 - 20' WIDE, ALL WEATHER ACCESS ROAD, MIN. CAPACITY 80,000 LBS
- 4 - MONUMENT SIGN AT ENTRANCE
- 5 - CAPPED 6" PVC PIPE TO POND BOTTOM, ACCESSED BY PUMPER TRUCK, PULL OFF FOR PUMPER TRUCK TO BE SIGNED "NO PARKING"
- 6 - SIGNAGE PROVIDED AT 150' INTERVALS: NO PARKING FIRE LANE
- 7 - NEW BRIDGE, MIN. CAPACITY 80,000 LBS



NOT TO SCALE

PLACE PATH AND FILE NAME OF POWERPOINT FILE HERE

PROJECT:	360100	TASK:	003-04
PREPARED BY:			

**FIGURE 2
SITE ACCESS MAP**

PREPARED FOR:	
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