

OWNER

Environmental Desktop Review Scope and Constraints



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TORUS

[REDACTED] [REDACTED], [REDACTED] County, [REDACTED]

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CONTENTS

1.	INTRODUCTION	1
1.1.	PURPOSE	1
1.2.	STUDY AREA	1
1.3.	EXCLUSIONS	1
2.	DATA SOURCES	2
3.	THREATENED AND ENDANGERED SPECIES	3
3.1.	SPECIES EXPECTED ON THE OFFICIAL LIST	3
3.2.	AMERICAN BURYING BEETLE	3
4.	WETLANDS AND WATERS	5
5.	CULTURAL RESOURCES	6
6.	NOISE	7
6.1.	SOURCES	7
6.2.	SCREENING	7
6.3.	CRITERIA AND CONCLUSION	8
7.	WASTE STREAMS	9
8.	CONSTRUCTION DUST, LIGHT AND TRAFFIC	11
9.	CONSTRUCTION TIMING WINDOWS	12
10.	FLOODPLAIN AND LEGACY OIL AND GAS FEATURES	13
11.	CONCLUSIONS AND NEXT STEPS	14

FIGURES AND TABLES

Table 2-1: Data Sources for the Desktop Review	2
Table 3-1: Species Expected for the Project Area	3
Table 3-2: American Burying Beetle Decision Path	3
Table 4-1: Wetlands and Waters Review	5
Table 5-1: Cultural Resources Review	6
Table 6-1: Noise Sources	7
Table 6-2: Screened Noise Levels by Distance from the Source	8
Table 7-1: Waste Streams and Disposal	9
Table 8-1: Construction Dust, Light and Traffic Measures	11
Table 9-1: Construction Timing Windows	12
Table 11-1: Desktop Review Deliverables	14

1. INTRODUCTION

1.1. PURPOSE

This report defines the scope, data sources, methods and deliverables of the environmental desktop review for the . It also sets out the environmental constraints that the design and the Contractor shall respect now, before the review is complete. It covers threatened and endangered species, wetlands and waters, cultural resources, floodplain, noise, dust, light, traffic, waste and the construction timing windows.

1.2. STUDY AREA

The study area is the 2.41 acre lease tract (350 x 300 ft, HOLD H-03); the 600 ft access road corridor from the county road to the east (HOLD H-05); the route of the outlet lateral from insulating joint IJ-102 to the tap valve of (the receiving pipeline operator), about 96 ft of buried pipe plus the riser, crossing internal road R-3 (HOLD H-04); the temporary workspace and laydown areas; and a 0.5 mile buffer for receptors and waters.

1.3. EXCLUSIONS

The review is a desktop study. Field work (a wetland reconnaissance, a species habitat assessment, and a pedestrian cultural survey where warranted) is scoped here as conditional follow-on work with the triggers stated in each section. The upstream lateral, a separate Owner project, is excluded.

2. DATA SOURCES

TORUS selected the public data sets in Table 2-1 because together they cover every constraint that could affect siting, the stormwater permit or the construction schedule.

Table 2-1: Data Sources for the Desktop Review

Topic	Source	Output
Listed species	US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) official species list; critical habitat mapper; Natural Heritage Inventory records request	Species list with habitat notes and a critical habitat overlap check
American burying beetle	IPaC range layer; USFWS survey protocol and 4(d) rule conservation measures	Range determination and need for a habitat assessment
Wetlands and waters	National Wetlands Inventory; National Hydrography Dataset; USGS topographic maps; NRCS hydric soils; multi-season aerial imagery; lidar contours where available	Mapped features within 500 ft and their likely jurisdictional status
Cultural resources	Archeological Survey site files; State Historic Preservation Office (SHPO) inventories; historic maps, aerials and land office plats	Known sites, survey coverage, sensitivity rating
Floodplain	FEMA National Flood Hazard Layer and flood insurance rate map panel	Zone confirmation (HOLD H-09)
Receptors	Aerial imagery, county parcels, drive-by check	Residences, schools, churches and occupied buildings within 0.5 mile and within the 334 ft potential impact radius
Soils	NRCS soil survey (erodibility, hydric rating, shrink-swell)	Stormwater plan inputs, stockpile placement
Legacy oil and gas	() well, pipeline and spill records; orphan well list	Abandoned wells, pits and flowlines on or near the tract
Air quality status	EPA Green Book	Attainment status of County (expected attainment for all standards, TBV)
Traffic	Department of Transportation counts; county road class	Haul route and access constraints

3. THREATENED AND ENDANGERED SPECIES

3.1. SPECIES EXPECTED ON THE OFFICIAL LIST

Table 3-1 gives the species TORUS expects IPaC to list for central . It is a scoping aid only; the IPaC output governs, and the statuses shall be confirmed at the time of the request because several are under active rulemaking.

Table 3-1: Species Expected for the Project Area

Species	Status (TBV)	Relevance to the site	Expected constraint
American burying beetle	Threatened, with a 4(d) rule	Grassland, pasture and forest edge; County range status by IPaC	Survey, or assumed presence with 4(d) conservation measures, before disturbance
Whooping crane	Endangered	Migration corridor over central ; uses wetlands and crop fields	Stop work and report if cranes are seen within 1,000 ft in migration
Piping plover, rufa red knot	Threatened	Sandbars and shorelines	Not expected on an upland tract
Arkansas River shiner	Threatened; critical habitat on the	The crosses County	Stormwater and hydrotest discharge controls; no in-stream work
Tricolored bat	Proposed endangered	Roosts in trees and structures	Timing of any tree clearing
Monarch butterfly	Proposed threatened	Milkweed in pasture	Native forbs in the restoration seed mix
Lesser prairie-chicken	Listing status under litigation	Western range; not expected in County	None expected
Bald eagle; migratory birds	Protected by statute	Large trees near water; ground and shrub nesters	Nest clearance before clearing

3.2. AMERICAN BURYING BEETLE

The beetle is the one species likely to affect the schedule, because a presence survey can be run only in its active season. Table 3-2 sets out the decision path. No federal nexus is expected, since no Corps permit or federal funding is anticipated, so a Section 7 consultation is not expected. The Endangered Species Act Section 9 prohibitions, as modified by the 4(d) rule, still apply.

Table 3-2: American Burying Beetle Decision Path

Step	Action	Timing
1	Obtain the IPaC list. If the beetle is not listed for the project area, record the result and stop	Week 1

Step	Action	Timing
2	If listed, a qualified biologist assesses habitat: land cover, soil suitability and disturbance history	Weeks 1 to 4
3	Choose either a presence or absence survey by a permitted surveyor in the active season (typically late May to late September with night lows near 60 °F or above, TBV), or assumed presence with the 4(d) rule conservation measures	Week 4
4	Record the determination and enter it as the species eligibility criterion in the stormwater notice of intent	Before the notice
5	Revegetate disturbed ground outside the fence with native seed and limit the time topsoil stays stockpiled	Final stabilization

4. WETLANDS AND WATERS

The Basis of Design requires the siting to avoid all waters. Table 4-1 sets out how the review will confirm this and what happens if avoidance proves impossible. A field delineation is needed only if the desktop work finds a feature within 100 ft of disturbance.

Table 4-1: Wetlands and Waters Review

Item	Scope	Constraint or outcome
Desktop screening	Wetlands inventory, hydrography, topography, hydric soils and multi-season aerals, within the study area and 500 ft	Siting avoids all mapped and apparent waters
Access road	Every drainage crossing on the 600 ft road; the county road ditch needs a culvert	Upland roadside ditches are generally not jurisdictional (TBV)
Outlet lateral	About 96 ft, inside the fence and the receiving pipeline operator's right-of-way	No in-water work planned
Trigger for delineation	Any mapped wetland, stream line, hydric soil unit or visible drainage within 100 ft of disturbance	Delineation to the 1987 Corps manual and the Great Plains supplement
If avoidance fails	Nationwide Permit 12 or 14 with notification; Section 401 certification	Creates a federal nexus for species and cultural review; adds 8 to 16 weeks
Stormwater outfall	Receiving water named in CIV-RPT-002, Stormwater Pollution Prevention Plan	Discharge through energy dissipation to upland (CIV-CAL-002)

5. CULTURAL RESOURCES

Upland red-bed terrain away from streams usually has low archaeological sensitivity, which is why TORUS scoped a records check rather than a field survey. Table 5-1 sets out when more is needed. A Section 106 review under 36 CFR 800 applies only if the project acquires a federal nexus.

Table 5-1: Cultural Resources Review

Item	Scope	Constraint
Records check	Archeological Survey and SHPO files within 1 mile; prior surveys covering the tract	Report known sites and coverage
Sensitivity	Terraces and stream margins rate higher than upland	Pedestrian survey before clearing if the area rates moderate or high
Section 106	Only with a federal nexus	Adds a 30 day SHPO review
Unanticipated discovery	Stop work within 100 ft of any artifact concentration, feature or bone; protect the area; the Owner notifies the Archeological Survey and SHPO, and for human remains the county sheriff and medical examiner as state law requires	Procedure in CON-RPT-003 and SPC-SPC-002

6. NOISE

6.1. SOURCES

Table 6-1 lists the station's noise sources. The control valves and the line heater run continuously in winter; the generator runs for weekly exercise and during outages; blowdowns are short events.

Table 6-1: Noise Sources

Source	Pattern	Level used	Basis
FCV-131 and FCV-132 at the maximum pressure cut	Continuous	85.6 dBA at 3.3 ft, with low-noise trim and before the specified acoustic insulation	PRO-CAL-006
H-101 burner and stack, 6.0 MMBtu/h	Continuous in winter	85 dBA at 3 ft (typical, HOLD H-15)	MEC-DS-003
G-101 in a sound-attenuated enclosure	Weekly exercise and outages	72 dBA at 23 ft (typical, HOLD H-15)	Vendor data
VS-101 blowdown, one section at a time	About nine section blowdowns a year and weekly pig barrel venting	110 dBA at 50 ft (typical); about 20 min to 50 psig	PRO-CAL-008
Construction equipment	Daytime	Typical levels from the Federal Highway Administration construction noise model	CON-RPT-001

6.2. SCREENING

TORUS screened the sources with spherical spreading from a point source and no credit for ground absorption, barriers or air absorption, which overstates the level at a distance:

$$L_p(r) = L_p(r_0) - 20 \log_{10} \frac{r}{r_0}$$

For the control valve at 500 ft:

$$L_p = 85.6 - 20 \log_{10} \frac{500}{3.3} = 42.0 \text{ dBA}$$

The continuous sources combine logarithmically, and for a source that runs 24 hours a day the day-night level is 6.4 dB above the equivalent level:

$$L_{eq} = 10 \log_{10} (10^{4.20} + 10^{4.06}) = 44.3 \text{ dBA}, \quad L_{dn} = L_{eq} + 6.4 = 50.7 \text{ dBA}$$

Table 6-2 gives the results at four distances. The nearest receptor is not yet known (open item RH-13).

Table 6-2: Screened Noise Levels by Distance from the Source

Source	500 ft	1,000 ft	1,500 ft	2,640 ft
Control valve, dBA	42.0	36.0	32.4	27.5
Line heater, dBA	40.6	34.5	31.0	26.1
Generator, dBA (intermittent)	45.3	39.2	35.7	30.8
Vent stack blowdown, dBA (short event)	90.0	84.0	80.5	75.5
Continuous sources combined, Leq, dBA	44.3	38.3	34.8	29.9
Continuous sources, Ldn, dBA	50.7	44.7	41.2	36.3

6.3. CRITERIA AND CONCLUSION

has no state environmental noise limit for this type of facility, and no County noise ordinance is known (TBV). TORUS adopted 55 dBA day-night level at the nearest noise-sensitive receptor as the benchmark, from the EPA levels document; the value used by federal regulators for interstate compressor stations was used as a reference only. Continuous operation meets the benchmark at 500 ft and beyond.

Blowdowns are audible at a mile (75 dBA at 2,640 ft) and will be managed in operation: planned blowdowns in daytime only, advance notice to neighbors, and a silencer on VS-101 if a receptor lies within 1,500 ft (an Owner decision). If the receptor survey finds a residence within 500 ft, a detailed noise study with vendor sound power data will be needed.

7. WASTE STREAMS

The regulatory status of the station's operating wastes depends on the pipeline classification (HOLD H-18). Pigging wastes and separator liquids from a gathering line are exempt exploration and production wastes under the Resource Conservation and Recovery Act and are managed under rules. From a transmission line they are not exempt and shall be characterized under 40 CFR 262.11 before disposal. Table 7-1 sets out each stream and its disposal route.

Table 7-1: Waste Streams and Disposal

Waste	Phase	Quantity	Characterization	Disposal
Clearing debris	Construction	Tract and road	None	Chip on site for erosion control, or haul; no open burning (252:100-13)
Excess or unsuitable soil	Construction	Per the earthwork balance	Visual; sample for petroleum hydrocarbons and BTEX if stained	Reuse on site, or offsite fill with landowner consent
Hydrotest water	Construction	About 7,000 gal plus flushing (MEC-CAL-003)	Source and post-test sampling: pH, suspended solids, oil and grease, hydrocarbons, iron, any additive	Haul-off or land application under the authority set by HOLD H-17; discharge to waters only with permit coverage
Construction pigging debris	Construction	Small	Visual	Solid waste landfill
Coating and paint waste, blast media	Construction	Small	Safety data sheets; metals leaching test if old lead or chromate coatings are met (none expected)	Permitted landfill
Scrap steel, rod stubs	Construction	Small	None	Recycle
Pig solids (black powder, iron sulfide, sand)	Operation, each pig run	Per run (HOLD H-16)	Keep wet, because iron sulfide is pyrophoric; screen for naturally occurring radioactive material; characterize if not exempt	-permitted commercial facility, or a hazardous waste facility if characterized hazardous
Filter separator elements	Operation, at 10 psi differential	About two change-outs a year	As pig solids	As pig solids

Waste	Phase	Quantity	Characterization	Disposal
T-101 liquids	Operation	Up to 350 bbl/yr under the enforceable limit; 52 to 260 bbl/yr expected from pigging (rate HOLD H-20)	Liquid analysis; haul tickets	Sale if marketable, otherwise [REDACTED] - permitted disposal; tickets feed the 12-month throughput record
VS-101 drain liquids	Operation	Small; collected in a portable pan at the plugged 2 in drain valve	As T-101 liquids	Vacuum truck; added to the T-101 throughput record if routed to T-101
Anode well cuttings and fluid	Construction	One well ([REDACTED] CP-CAL-001)	Non-hazardous drilling waste expected	Per the well registration conditions (HOLD H-19)
Used generator oil, UPS batteries	Operation	Small	Used oil rules, 40 CFR 279	Recycle

8. CONSTRUCTION DUST, LIGHT AND TRAFFIC

Table 8-1 sets out the measures the Contractor shall take to control dust, light and traffic during construction.

Table 8-1: Construction Dust, Light and Traffic Measures

Topic	Constraint	Measure
Fugitive dust, 252:100-29	No visible dust crossing the property line	Water truck in dry and windy weather; 15 mph site speed limit; access road built first; tracking pad at the county road; grading stopped above 30 mph sustained wind if dust cannot be controlled
Engine exhaust	Idling	No unnecessary idling beyond 5 min
Light	Station and construction lighting	Full cut-off fixtures aimed down and into the site (ELE-CAL-007); night work only for tie-in or emergencies
Traffic	Heavy haul on the county road	Road condition surveys before and after; oversize loads scheduled with the county; flaggers at the driveway; school bus hours avoided
Mud on public roads	Tracking	Rock construction entrance; daily sweeping when tracking occurs

9. CONSTRUCTION TIMING WINDOWS

Table 9-1 lists the seasonal windows that affect when work can be done.

Table 9-1: Construction Timing Windows

Window	Constraint	Source
Migratory bird nesting, April 1 to July 15	Clear vegetation outside the window, or survey for nests within 5 days of clearing and keep a 50 ft buffer (larger for raptors)	Migratory Bird Treaty Act practice
American burying beetle active season, about late May to late September (TBV)	Surveys possible only in this window	USFWS guidance
Whooping crane migration, about March to May and October to November	Stop work and report if cranes are near the work	USFWS
Winter, December to February	Cold-weather concrete, frozen ground, hydrotest freeze protection, wet clay access	SPC- SPC-003, SPC-SPC-011
Spring storms, April to June	Severe storms and lightning; stormwater inspection after each rain of 0.25 in or more	CIV-RPT-002
Tie-in windows	Tie-in and hot tap only in windows the receiving pipeline operator approves	SPC- SPC-012, CON-RPT-001

10. FLOODPLAIN AND LEGACY OIL AND GAS FEATURES

The site is assumed to lie in FEMA Zone X, outside the 100-year floodplain (HOLD H-09). If any part of the tract or access road lies in Zone A or AE, [REDACTED] County floodplain approval will be needed, equipment and electrical gear shall be raised above the base flood elevation plus a freeboard set by the EOR, and the T-101 containment shall be designed against flotation.

[REDACTED] County has dense oil and gas development. The review will search [REDACTED] records for plugged or orphaned wells, reserve pits and flowlines within 500 ft. Any well within the tract shall be located, its plugging status verified, and the layout adjusted to keep structures at least the setback set by the EOR, not less than 25 ft (TBV against [REDACTED] setback rules). Unknown buried lines found during excavation shall be treated as live until proven otherwise ([REDACTED] CON-RPT-003).

11. CONCLUSIONS AND NEXT STEPS

On the information available, the site has no environmental constraint that would prevent construction. The siting avoids waters, cultural sensitivity is expected to be low, and continuous noise is below 55 dBA day-night level from 500 ft. The American burying beetle is the one item that can delay the start of disturbance, and the permitting authority for stormwater and hydrotest water (HOLD H-17) is the one item that can change how the notice of intent is filed.

TORUS recommends that the Owner request the IPaC list and the Archeological Survey records check in the first week, commission the receptor survey, and decide the beetle route by week 4. The desktop review will produce the deliverables in Table 11-1.

Table 11-1: Desktop Review Deliverables

No.	Deliverable	Content
1	Environmental desktop report	Findings for every topic in this report, with maps
2	Constraints map	Waters and buffers, cultural sensitivity, receptors, wells, the 334 ft potential impact radius
3	Species list and beetle determination	IPaC output and the decision under Table 3-2
4	Cultural records response	Archeological Survey and SHPO
5	Receptor survey	Nearest receptors by bearing and distance; buildings within 334 ft
6	Waste management plan	The waste table in procedure form for the Contractor and operator
7	Permit matrix update	Revisions to REG-RPT-002

The open items are HOLDs H-02 to H-05, H-09, H-15 to H-20 of GEN-DB-001 and GEN-RPT-002, and two regulatory items: RH-13, the nearest noise-sensitive receptor and the decision on a VS-101 silencer (from the receptor survey and the Owner); and RH-14, the IPaC list and beetle range status at the final site coordinates (from the Owner's consultant).