

**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**Falkirk Mining Company**  
**Revision No. 38, Permit NAFK-8405**  
**Approval**

**Case No. RC-18-20**

**REVISION OF PERMIT TO ENGAGE IN SURFACE COAL  
MINING AND RECLAMATION OPERATIONS**

**October 24, 2018**

Based on the application for **Revision No. 38 to Permit Number NAFK-8405** submitted by Falkirk Mining Company for the Falkirk Mine on January 5, 2018, and as revised through October 4, 2018, and all information and documentation contained therein, the North Dakota Public Service Commission (Commission) finds that the application meets all applicable requirements of Chapter 38-14.1 of the North Dakota Century Code (NDCC) and Article 69-05.2 of the North Dakota Administrative Code (NDAC). On the basis of the information set forth in the application or from that otherwise available and known by the applicant, the Commission finds that:

**Finding No. 1. The permit revision application is accurate and complete and complies with the requirements of NDCC Chapter 38-14.1 and NDAC Article 69-05.2 [NDCC 38-14.1-21(3)(a)].**

Revision No. 38 adds 1680.1 acres to Permit NAFK-8405, revises mining and reclamation plans, and updates nearly all other sections of the permit with information for the added area. With the added acreage, Permit No. NAFK-8405 will total 10,256.6 acres. The acreage being added to the permit is a northern extension of the current permit boundary that is located on the north side of State Highway 200 and about two miles northeast of Underwood, North Dakota. Coal removal will occur from portions of the added acreage and other areas will be used for soil stockpiles, sedimentation ponds, pit water ponds, haul roads and other associated disturbances.

The applicant verified that all information included in the application is true and correct to the best of their knowledge. Commission staff conducted completeness and technical reviews to ensure that the required information was provided and mining and reclamation plans meet all applicable requirements. The Reclamation Division sent completeness and technical review letters to the applicant on February 6, 2018, May 29, 2018 and September 19, 2018. Responses to each letter were reviewed and changes to the application were made to address the concerns that were noted. The Commission concludes that this significant revision application is now accurate and complete. The applicant published the required notices in newspapers and the Commission sent notices to all surface owners of the lands being added to the permit area and to numerous local, state and federal agencies. Advisory committee members also reviewed relevant portions of the application

and comments were received from several agencies. No objections or requests for an informal conference were received on this application.

Some of the land being added to Permit NAFK-8405 with Revision No. 38 contains federally owned coal and Falkirk plans to mine a portion of the federal coal within the addition area. The leased federal coal tract that will be mined as proposed by this revision is located in the NE1/4 of Section 10, T146N, R82W. Federal Coal Lease NDM 107039 was issued by the Bureau of Land Management (within the U.S. Department of the Interior) for the E1/2 of Section 10 on January 1, 2018. The SE1/4 of Section 3 within the addition area also contains federal coal; however, Falkirk does not plan to mine that coal at this time. Falkirk owns the surface of the federal coal tract located in the NE1/4 of Section 10 and Falkirk has acquired both the federal (50%) and private (50%) mineral leases for mining the coal in the NE1/4 of Section 10. Therefore, the applicant currently has the legal right to disturb the surface of the federal coal tract to the extent necessary for conducting mining operations on the adjoining tracts where the coal is privately owned or where previous federal mine plan approval was granted by OSM.

The Office of Surface Mining (OSM) determined that the mining of the federal coal in the NE1/4 of Section 10 as proposed by Revision No. 38 constitutes a mine plan modification that needs to be approved by the Department of the Interior. The Bureau of Land Management approved the applicant's Resource Recovery and Protection Plan (R2P2) for the federal coal tracts in the E1/2 of Section 10 on July 11, 2018 and the federal coal lease was issued by BLM on January 1, 2018.

However, before overburden and coal removal is allowed to begin on the federal coal tract located in the NE1/4 of Section 10, the Department of the Interior will need to approve the mine plan modification for that federal coal tract as required by 30 CFR 746.11. This federal regulation states no person shall conduct surface coal mining and reclamation operations on lands containing leased federal coal until the Secretary has approved the mining plans. Condition No. 1 attached to the Commission's approval of Revision No. 38 prohibits any overburden and coal removal from the federal coal tract as described above until the applicant receives approval of a federal mine plan modification from the Department of the Interior. Until that mine plan modification is approved, surface disturbances on the federal coal tract will be limited to those activities that are needed for carrying out mining on the adjoining federal coal tract in the SE1/4 of Section 10 that was previously approved for mining or where the coal is owned by private or state owned entities.

**Finding No. 2. The applicant has demonstrated that reclamation as required by NDCC Chapter 38-14.1 and NDAC Article 69-05.2 can be accomplished under the reclamation plan contained in the revised permit application [NDCC 38-14.1-21(3)(b)].**

Revision No. 38 adds 1680.1 acres to the existing permit and provides detailed mining and reclamation plans for the 160-acre federal coal tract in the NE1/4 of Section 10, and it updates other sections of the permit accordingly. Coal removal will take place from portions of the area being added to the permit and other areas will be used for support activities including soil and overburden stockpiles, water management structures, haulroads, and other associated disturbances. Reclamation of disturbed areas will be carried out using reclamation procedures that have been successful in the past and satisfy the requirements of the North Dakota law and rules. The proposed postmining topography meets the grading requirements and the applicant has demonstrated that sufficient soil materials are available

to meet the soil redistribution requirements of NDAC 69-05.2-15 and the revegetation requirements of NDAC 69-05.2-22.

The reclaimed lands will be capable of supporting the premine uses, or higher or better uses, than existed prior to mining. The predominant pre-mining land use in the permit area is agricultural (including cropland and hayland), native grassland, industrial/commercial, residential, woodlands, developed water resources, wetlands, roads, and fish and wildlife habitat. The predominant pre-mining land use in the Revision No. 38 addition area is cropland, hayland, native grassland, county roads and trails, shelterbelt, temporary and seasonal wetlands and residential/farmstead. The permit area was previously zoned for agricultural use by McLean County. Falkirk has obtained a conditional use permit from the McLean County Commission for coal mining and associated disturbances. The postmining land uses will be similar to the premine conditions.

Of the approximately 10,260 total acres in Permit NAFK-8405, the applicant intends to remove coal from approximately 7,000 acres over the life of the permit and much of the remaining acreage will be disturbed by haulroads, overburden and soil stockpiles, sedimentation ponds, and other associated disturbance. Of the 1680.1 acres being added to the permit with Revision 38, approximately 875 acres will be mined with portions of the remaining areas being used for associated disturbances. The coal removal area presently approved is limited to what will be mined through the 6<sup>th</sup> permit renewal, ending April 21, 2021. The federal coal removal area within the area affected by Revision No. 38 in the NE1/4 of Section 10 will be approximately 90 acres. Reclamation of this disturbed acreage will follow normal reclamation procedures and the practices that the applicant utilizes to reclaim disturbed acreage satisfies the requirements of the North Dakota Program. The applicant's reclamation practices have proven effective in the past.

With regard to the reclamation schedule, Falkirk has demonstrated the need for a variance from the requirement to rough grade the area within 180-days of coal removal and the four spoil peak requirements of NDAC 69-05.2-21-01 for a significant portion of the area being added to the permit with Revision 38 for use as a pre-bench (advanced bench) fill area. Falkirk will use a truck/shovel fleet to remove overburden material in advance of the 102 dragline in most of the addition area because of the deep cover to be removed in this area of the mine that would otherwise be unreachable by the dragline. In addition, Falkirk requested an additional variance from the 180 day rough grading requirement and the contemporaneous reclamation requirements for seeding within 3 years of coal removal as required by NDCC 38-14.1-24(14) for a small area (less than 1 acre) of the federal coal tract in the NE1/4 of Section 10. The variance requests have been justified and the Commission approved the variances as allowed by NDAC 69-05.2-21-01(2) and NDCC 38-14.1.1-24(14).

Six (6) standard conditions and fourteen (14) special conditions were attached to the original permit approval and subsequent revisions. All six of the standard conditions and two special conditions remain in effect.

**Finding No. 3. Based on the assessment of the probable cumulative impact of all anticipated mining in the area, the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area [NDCC 38-14.1-21(3)(c)].**

An assessment of the probable cumulative hydrologic impact of all anticipated mining in the area has been made as required by NDCC 38-14.1-14(1)(o). The Commission finds that the proposed operation has been designed to maintain the quantity, quality, and hydrologic regime of surface and ground water systems in the area. The cumulative effects of all existing and proposed mining operations should not damage the hydrologic balance and water availability within or adjacent to the permit area. The original cumulative hydrologic impact assessment (CHIA) for Permit NAFK-8405 was completed in February 1986 and significant updates to the CHIA were incorporated into the document in August 2007 with approval of Revision No. 23 to the permit. Additional updates to the CHIA were provided for small addition areas to the permit and other significant revisions. The CHIA was again updated in October 2018 to reflect the addition of 1680.1 acres being added to the permit with Revision No. 38 and is on file with the Reclamation Division. The acreage added is contiguous to and directly north of the current mining operations in Permit NAFK-8405 at Falkirk Mine.

**Finding No. 4. Lands being added to the permit area are not within an area designated unsuitable for surface coal mining operations, nor within areas under study or administrative proceedings under a petition to have an area designated as unsuitable for surface coal mining operations [NDCC 38-14.1-21(3)(d)].**

None of the land being added to the permit area has been designated unsuitable for surface coal mining operations pursuant to NDCC 38-14.1-05, nor are they within an area under study or administrative proceedings under a petition to have an area designated as unsuitable for surface coal mining operations.

**Finding No. 5. The proposed mining operation will not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally subirrigated or materially damage the quantity or quality of water in surface or underground water systems that supply these alluvial valley floors [NDCC 38-14.1-21(3)(e)].**

Based on an examination of the geologic and geomorphic characteristics, soils, vegetation, landuse, irrigation potential, and the water quality and quantity of streams occurring within and adjacent to the lands being added to the permit area, it has been determined that no alluvial valley floors exist within or adjacent to this area.

**Finding No. 6. In cases where the mineral estate has been severed from the surface estate, the applicant complied with the requirements of NDCC 38-18 [NDCC 38-14.1-21(3)(f)].**

For the area affected by Revision No. 38 to Permit NAFK-8405, the applicant included leases and other documents in the permit application demonstrating compliance with the North Dakota Surface Owners Protection Act, NDCC 38-18. This documentation included the initial notice that was given to all surface owners within the permit area prior to issuance of the permit and subsequent notices to affected surface owners for changes proposed with permit revisions including Revision No. 38.

**Finding No. 7. Lands being added to the permit area are not within areas subject to the prohibitions or limitations of NDCC 38-14.1-07 unless such areas meet the application review procedures of NDAC 69-05.2-04-01[NDAC 69-05.2-10-03(6)(a)].**

Lands being added to the permit area are:

- a. Not within the boundaries of units of the North Dakota Park System, the National Park System, the National Wildlife Refuge Systems, the National System of Trails, the National Wilderness Preservation System, the National Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act, and national recreation areas.
- b. Not federal lands within the boundaries of any national forest.
- c. Not within 300 feet of any publicly owned park or places included in the State Historic Sites Registry or the National Register of Historic Places. Permit-wide, several cultural resource surveys and inventories of the NAFK-8405 permit area were completed between the mid-1970s and 2016. A Class III cultural resource survey of the federal coal tract located in the NE1/4 of Section 10 was surveyed by KLJ in 2015 and the remaining acreage within the Revision No. 38 Addition Area was surveyed by Ethnoscience in 2016. There were no cultural historic or prehistoric sites discovered within the federal lease tract in the NE1/4 of Section 10. Within the remainder of the Revision No. 38 Addition Area, four historic sites and one prehistoric site were identified. State Historical Preservation Officer (SHPO) correspondence dated July 11, 2016 regarding the four historic sites and the one prehistoric site concurred with the Ethnoscience determination of "No Historic Properties Affected". June 25, 2015 correspondence between SHPO and the BLM North Dakota Field Office provided a determination of "No Historic Properties Affected" for project BLM 15-MT030 conducted by KLJ for the federal lease tract in the E1/2 of Section 10.

The proposed surface coal mining operations will not adversely affect any significant historic, archaeological, or paleontological sites. Correspondence received to date from the North Dakota State Historical Preservation Officer (SHPO) regarding cultural resource sites in Permit NAFK-8405 are located in the permit. Falkirk has committed to testing and mitigating, if necessary, any previously unrecorded archeological, cultural, or historical materials that may be discovered as a result of mining related activities.

- d. Not within one hundred feet of the outside right-of-way line of any public road. Several public roads, section line roads and trails are located within the permit area and around the perimeter of Section 10 and the Revision No. 38 Addition Area. However, McLean County has approved several requests made by Falkirk to close a number of public roads and/or granted approval to operate within one hundred feet of the outside right-of-way of county and section line roads within the vicinity of active mining operations. Falkirk has included a list of the county approvals and a schedule of section line closings and a map showing the road closings in Permit NAFK-8405 as updated with Revision No. 38. McLean County's approval processes include public notices with the opportunity for public hearing and written findings that the interests of the public and affected landowners will be protected. The county approval processes meet the requirements of NDAC 69-05.2-04-01.3. NDAC 69-05.2-04-01.3 requires that copies of the road authority's approval documents, including the written findings, be provided to the Commission. Special Condition No. 1 to Revision No. 22 of Permit NAFK-8405 requires Falkirk to provide these documents to the Commission within thirty days from the road authority's approval date. Permit NAFK-8405 includes plans that show the section line rights-of-way that will be closed in the future to accommodate the mining activities that are planned within the permit and with the Revision No. 38 changes.
- e. Not within three hundred feet of any public building, school, church, community, or institutional building. The Revision No. 38 area contains or is within five hundred feet of several occupied dwellings; however, the applicant has committed not to conduct

any mining activities within five hundred feet of these dwellings unless approved by the owner of the dwelling. Coal removal within other areas of the permit revision area will come within five hundred feet of occupied farm buildings; however, Falkirk Mine has purchased the property and surface rights and plans to remove the farm buildings prior to mining.

- f. Not within one hundred feet of any cemeteries as none exist within or adjacent to the permit area. Therefore, the applicant will not conduct any mining activities within one hundred feet of any cemeteries in accordance with NDCC 38-14.1-07.

**Finding No. 8. With respect to prime farmland, the post-mining land use of the reclaimed prime farmland will be cropland, the reclamation plan was reviewed by the Natural Resources Conservation Service and their suggestions were considered, and operations will be conducted in compliance with NDAC 69-05.2-26 and NDCC38-14.1. The applicant has the technological capability to restore the productivity on reclaimed prime farmlands [NDAC 69-05.2-10-03(6)(c) and NDCC 38-14.1-21(6)].**

The applicant has included a prime farmland reclamation plan that satisfies the requirements of NDAC Article 69-05.2-09-15 and the performance standards of NDAC Article 69-05.2-26. The postmining land use of prime farmland will be cropland. NDAC 69-05.2-10-03(6)(c).

Nominal acreages of prime farmland were identified in the permit area based on the McLean County Soil Survey. Prime farmland includes only those areas that have been historically used for cropland and does not include areas of native grassland, shelterbelts, and farmsteads. Topsoil from prime farmland areas will be removed, stockpiled, and respread separately from the non-prime topsoil. Prime farmland subsoil will be mixed with non-prime subsoil. All reclaimed prime farmlands will be subject to the appropriate revegetation success standards. The Natural Resources Conservation Service has reviewed the prime farmland reclamation plan and has determined that it is adequate to restore the productivity of the prime farmland. The only tract of prime farmland identified within the Revision No. 38 addition area is located in the SE1/4 of Section 3. This area is not currently proposed to be disturbed by mining activities.

**Finding No. 9. The operations will not affect the continued existence of threatened or endangered species or result in the destruction of adverse modification of their critical habitats [NDAC 69-05.2-10-03(6)(d)].**

Surface coal mining and reclamation activities will not jeopardize or adversely affect the continued existence of any currently listed threatened or endangered species or species proposed for listing, or any proposed or designated critical habitats. NDAC 69-05.2-10-03(6)(d). No proposed or designated critical habitat or proposed or listed threatened or endangered species have been identified on or near the permit area. The USFWS Information for Planning and Consultations (IPaC) internet service program identifies eight threatened or endangered species potentially occurring in the area to be affected with Revision No. 38. The species potentially present include the Gray Wolf, Northern Long-Eared Bat, Interior Least Tern, Piping Plover, Rufu Red Knot, Whooping Crane, Pallid Sturgeon and Dakota Skipper. The Reclamation Division made a species-specific effects determination regarding this revision and sent a copy to the USFWS Bismarck Office in April 2018. Determinations for Revision No. 37 and Revision No. 38 concluded that mining and reclamation activities proposed with Revision Nos. 37 and 38 would have "no affect" to the continued existence of any listed or proposed species or any proposed or

designated critical habitat. The USFWS provided their concurrence with the Reclamation Division's "no affect" finding with regard to Revision Nos. 37 and 38 on April 19, 2018.

**Finding No. 10. The applicant has submitted proof that all reclamation fees required by 30 CFR subchapter R [NDAC 69-05.2-10-03(6)(e)].**

Falkirk has paid all reclamation fees required by 30 CFR subchapter R. Records maintained by the Office of Surface Mining's Applicant Violator System show that all fees have been paid.

**Finding No. 11. The applicant has satisfied requirements for approving cropland as a post-mining land use [NDAC 69-05.2-10-03(6)(f)].**

The applicant has satisfied the requirements for approval of a cropland postmining land use under NDAC 69-05.2-22-01. Areas reclaimed to cropland will either be seeded directly to crops commonly grown in the area, a tame grass/legume pre-cropland mixture or a cocktail mixture of species designed to improve soil health. The postmining topography and soils are suitable for cropland in the areas that will be cropped.

**Finding No. 12. All existing structures that will be used to support mining activities within the permit area comply with the application requirements of NDCC 38-14.1-24 and NDAC Article 69-05.2 [NDAC 69-05.2-10-04].**

No existing structures within the revision area will be used to support mining activities. However, some haul roads, sedimentation ponds, and other facilities that are presently located within Permit NAFK-8405 will support mining in the permit revision area. These previously permitted structures have been found to meet the applicable design and performance standards of NDCC 38-14.1-24 and NDAC 69-05.2.

**Finding No. 13. No drill holes, boreholes or wells will be retained for other uses [NDAC 69-05.2-14-03].**

The applicant has not proposed to retain any drill hole, borehole, or well for other uses.

**Finding No. 14. No spoil in the permit area is known to cause toxic mine drainage [NDAC 69-05.2-16-11].**

The chemical characteristics of the overburden materials in the areas being added to the permit are such that they do not produce toxic mine drainage. The analysis of overburden samples included in the permit application do not reveal any substances that would cause any chemical reactions or physical effects that are likely to kill, injure, or impair biota commonly present in the area.

**Finding No. 15. The applicant will not conduct mining activities within or near intermittent or perennial stream channels within the Revision No. 38 application area. [NDAC 69-05.2-16-20].**

There are no intermittent or perennial stream channels within the revision area or in the federal lease tract located in the NE1/4 of Section 10. Much of the drainage within the revision area is essentially an internal/closed basin system composed of several dozen temporary and seasonal wetlands. However, within the Revision No. 38 addition area, five sediment ponds and one pitwater pond are scheduled for construction along the north and west boundaries of the permit addition area.

**Finding No. 16. The applicant does not propose to use any experimental practices in the permit area [NDAC 69-05.2-27-02].**

There are no plans included in the revision application to use any experimental practices that may be allowed under NDAC 69-05.2-27-02.

**Finding No. 17. The applicant does not control and has not controlled surface coal mining and reclamation operations with a demonstrated pattern of willful violations [NDAC 69-05.2-10-03(4)].**

Commission records, and those in the Office of Surface Mining's Applicant Violator System (AVS), do not show that the applicant controls and has controlled surface coal mining and reclamation operations with a demonstrated pattern of willful violations of NDCC 38-14.1 or of other states' laws which are based on P.L. 95-87 (the Federal Surface Mining Control and Reclamation Act), of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of these laws.

**Finding No. 18. Neither the applicant, nor any affiliated companies, have unabated violations or unpaid civil penalties [NDAC 69-05.2-10-03(1)].**

Commission records, and those in the Office of Surface Mining's Applicant Violator System, do not indicate that the applicant, nor any affiliated companies, have any unpaid civil penalties or unabated violations of NDCC 38-14.1 or any other federal or state laws, rules, or regulations pertaining to air or water environmental protection. Staff at the North Dakota Department of Health also verified that the applicant has no unabated violations with regard to air and water environmental protection standards.

**Finding No. 19. Performance bonds totaling \$80,700,000 are sufficient for the proposed surface coal mining operations in the consolidated area that includes this permit [NDAC 69-05.2-12-07].**

The Commission has determined, pursuant to NDAC 69-05.2-12-07, that the existing surety, collateral, and self, bonds totaling \$88,700,000 is sufficient for the proposed operations in Permit NAFK-8405 and others at the Falkirk Mine. The worst-case reclamation cost estimate was not required to be updated as a part of Revision No. 38 as it was determined that the current bond amount is adequate for the additional mining activities proposed by Revision No. 38. It should be noted that, if the annual update of variable costs in the Commission's policy for calculating reclamation cost estimates for setting bond amounts results in a significant increase in the existing cost estimate, permittees are required to update their reclamation cost estimates and increase bond amounts accordingly.

Subject to the right of any person with an interest that is or may be adversely affected to request a formal hearing under NDCC 38-14.1-30, **Revision No. 38 to Permit Number NAFK-8405** is hereby granted to **Falkirk Mining Company** to engage in surface coal mining and reclamation operations, on the following described areas subject to the applicable requirements of the original permit and conditions, Chapter 38-14.1 of the North Dakota Century Code, and the rules promulgated there under. (Attached is a copy of the metes and bounds description of lands being added to the permit area and a general location map of the permit area and the Revision No. 38 Addition Area)

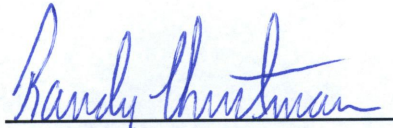


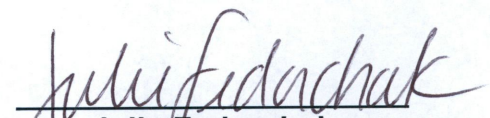
MINE	ADDRESS	ACRES	LOCATION			
			Sec.	Twp.	Range	County
Falkirk	Underwood, ND	1680.1	3, 4, 5, 8, 9, 10	146N	82W	McLean

1680.1 acres – Total Area Added

**PUBLIC SERVICE COMMISSION**

  
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Brian Kroshus  
Commissioner

  
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Randy Christmann  
Chairman

  
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Julie Fedorchak  
Commissioner

**Revision 38 to Permit NAFK-8405 – Metes and Bounds Description**

A tract of land situated in Sections 3, 4, 5, 8, 9 and 10, T.146N, R.82W of the 5<sup>th</sup> P.M, McLean County, North Dakota, being more particularly described as follows:

Beginning at the east ¼ corner of Section 3, T146N, R82W;  
thence South 00°37'36" West a distance of 2645.38 feet to the northeast corner of Section 10;  
thence South 00°29'27" West a distance of 2642.66 feet to the east ¼ corner of said Section;  
thence North 89°31'41" West a distance of 5292.76 feet to the east ¼ corner of Section 9;  
thence North 89°29'34" West a distance of 5282.77 feet to the east ¼ corner of Section 8;  
thence North 89°33'42" West a distance of 2892.34 feet on the east-west ¼ line to the easterly  
Right-Of-Way line of U.S Highway 83; Said point being 175 feet easterly of said  
U.S. Highway 83 alignment;  
thence North 43°37'36" West a distance of 142.39 feet on said easterly Right-Of-Way  
line to the Tangent to Spiral (TS) point;  
thence on the arc of a 175 foot offset Spiral Curve concave to the northeast with a chord  
bearing of North 43°17'44" West, and a chord length of 196.77 feet which at said  
Highway 83 centerline alignment is a 200 foot entry Spiral to a 1°00'00" central  
curve to the Spiral to Curve (SC) point;  
thence on a non-tangent curve concave to the northeast with an arc length of 1,362.43  
feet, a radius of 5,556.06 feet, a chord bearing of North 35°36'03" West, and a  
chord length of 1,359.02 feet on said Right-Of-Way line to the Curve to Spiral  
(CS) point;  
thence on the arc of a 175 foot offset Spiral Curve concave to the northeast with a chord  
bearing of North 27°54'26" West, and a chord length of 196.81 feet which at said  
Highway 83 centerline alignment is a 200 foot exit Spiral to a 1°00'00" central  
curve to the Spiral to Tangent (ST) point;  
thence North 27°34'37" West a distance of 1,279.32 feet on said Easterly Right-Of-Way  
line to the south line of Section 5;  
thence South 89°29'05" East a distance of 1,970.30 feet to the south ¼ corner of said  
Section;  
thence North 00°29'27" East a distance of 2,633.01 feet to the center of said Section 5;  
thence South 89°47'59" East a distance of 2,646.48 feet to the west ¼ corner of Section 4;  
thence South 89°35'11" East a distance of 5,290.24 feet to the west ¼ corner of Section 3;  
thence South 89°26'29" East a distance of 5,298.55 feet to the east ¼ corner of Section 3;  
being also the Point of Beginning.

**Said area of land contains 1680.1 acres.**

General location map of Permit NAFK-8405  
 Revision No. 38 area is labeled as "Addition Area" on the map

