ENVIRONMENTAL ASSESSMENT

On an Application for an

OPENCUT MINING PERMIT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted thereunder place operational guidance and limitations on a project during its lifetime, and provide for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

APPLICANT: Nelcon, Inc

COUNTY: Richland

SITE NAME: Prevost

DATE: July 2015

LOCATION: Section 35, T19N, R57E

PROPOSAL: The applicant proposes to permit a new, short-term gravel pit to mine, crush, stockpile, and transport 230,000 cubic yards of gravel from a 27.9-acre site located 26 miles south of Sidney, Montana. The site occupies a high terrace paralleled by a railroad line to the west and a large irrigation canal to the east.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to cropland/hayland would be completed by June 2021. This application contains all items required by the Opencut Mining Act and its implementing rules. Proponent commits to properly conducting opencut operations and would be legally bound by the permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The site occupies a flat terrace situated at least 30 feet above the Yellowstone River floodplain to the east. The onsite soils consist primarily of Cherry silty clay loam, 0 to 2 percent slopes. The operator would replace 12 inches of soil and 78 inches of overburden. The site receives approximately 12 to 15 inches of precipitation per year. *Impacts:* An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	There are no surface water features on site. The Yellowstone River is located over 1,000 feet to the east and south. Water would be used onsite for dust control and would be obtained from the neighboring irrigation ditch through a short term lease, from a small pit dug on the southernmost end below the terrace, or trucked in from a source greater than 300 feet from the site. *Impacts:* The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources. *Cumulative:* Impacts on water resources by the project as proposed would be negligible.
3. AIR QUALITY	Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment. Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied. Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health. *Impacts:* Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.
4. VEGETATION COVER, QUANTITY AND QUALITY	There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of cultivated crop; and provides variable cover depending on crop stage. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use. *Impacts:* No long term detrimental impacts to the vegetation would occur.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	Although the area is used primarily cropland, it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known. *Impacts:* The proposed mine would temporarily displace some species, but it is likely the site would be re-inhabited following reclamation to similar habitat.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Montana Natural Heritage Program (MNHP) lists the following 15 species of concern in the vicinity of the site: **Great Blue Heron** (*Ardea herodias*) is the largest heron in North America, 60 cm tall and 97 to 135 cm long. Its upper parts are gray, and the fore-neck is streaked with white, black, and rust-brown. Great Blue Herons breed from southern Alaska southeast across central Canada to Nova Scotia and south to Guatemala, Belize, and the Galapagos Islands. Most Montana nesting colonies are in cottonwoods along major rivers and lakes; a smaller number occur in riparian ponderosa pines and on islands in prairie wetlands. Great Blue Herons eat mostly fish but also amphibians, invertebrates, reptiles, mammals, and birds. Disturbance by humans and loss of protected colony sites are major threats.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	Bald eagle (*Haliaeetus leucocephalus*) is a bird of prey found in North America that is most recognizable as the national bird and symbol of the United States of America. This sea eagle has two known sub-species and forms a species pair with the white-tailed eagle. Its range includes most of Canada and Alaska, all of the contiguous United States and northern Mexico. It is found near large bodies of open water with an abundant food supply and old-growth trees for nesting. **Least tern** *(Sternula antillarum)* is the smallest tern in North America, averaging 21 to 24 cm long with a wingspan of 51 cm. Its diminutive size, yellow bill, and white forehead are distinctive. The sexes are virtually identical. Least terns nest on unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana. Sites with gravel substrate provide the most suitable sites for nesting. Generally the least tern consumes small fishes (generally less than 9 cm long), but sometimes eats crustaceans or insects. **Yellow-billed Cuckoo** (*Coccyzus americanus)* is a slender bird with a long, distinctly patterned tail and white throat and breast. The back and head of the Yellow-billed Cuckoo are a plain grayish-brown. Consistent with its common name, the stout, somewhat curved bill is primarily yellow (the upper mandible is mostly black, with some yellow, while the lower mandible is yellow in its entirety). The boldly white and black patterned outer tail can generally be observed during perching and in flight. The bird is generally 26 to 30 cm in length and weighs an average 55 to 65 grams. No information is available specific to Montana, but in other parts of their range the main diet of the Yellow-billed Cuckoo is caterpillars. The western population of the Yellow-billed Cuckoo was listed as a threatened species on 11/2/2014, and critical habitat will be designated in 2015. **Red-headed Woodpecker (***Melanerpes erythrocephalus***)** is a medium sized woodpecker averaging 9.25 inches in length. The completely red head (in adults) and the white wing patches (on secondaries) are both diagnostic features separating the Red-headed Woodpecker from any other woodpecker. Red-headed Woodpeckers are said to arrive in Montana in mid-May and leave in mid-September. They are usually found along major rivers having riparian forest associated with them. They nest in holes in live trees, dead stubs, utility poles, or fence posts. Individuals typically nest in the same tree or cavity in successive years. Red-headed Woodpeckers eat insects and other invertebrates, berries and nuts, sap, and the young and eggs of birds. Often they will flycatch, or forage on the ground and in trees (dead wood) and shrubs. Rarely will they drill into trees for insects. **Pallid Sturgeon** *(Scaphirhynchus albus)* is the larger of the species of sturgeon found east of the continental divide. It grows to about 60 pounds. Because it is rare, little is known about this fish. The Pallid Sturgeon uses the Yellowstone River during spring and summer and the Missouri River below the confluence of the Yellowstone in the fall and winter. The Pallid sturgeon consumes minnows and bugs. **Paddlefish** *(Polyodon spathula)* is an ancient mostly cartilaginous fish with smooth skin and a close relative of the sturgeon. It grows up to 150 pounds or more. They are readily identifiable by the long paddle-like snout, long, tapered

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	gill covers, and the backbone bent up into the upper lobe of the tail fin. Spawning migrations are tied closely with the timing of spring highwater. Although young of the year paddlefish will "bite" at small food particles, they eventually switch to filtering for food. **Shortnose Gar** *(Lepisosteus platostomus)* is a fish native to Montana and is found at only one location--the dredge ponds below Fort Peck Reservoir. Shortnose gar may reach a size and weight of about 31 inches and about 3.5 pounds. This prehistoric-appearing fish is cylindrically shaped, with an elongated bony head and snout containing one row of sharp, conical teeth. The dorsal fin is located well posterior and the pectoral and pelvic fins have no spots. The skin is covered with diamond shaped ganoid scales arranged in oblique rows, providing a very protective surface armor. Color varies from brownish or olive-green on the dorsal surface lightening to yellow on the sides and white on the belly. Gars are predaceous. They are spring, broadcast spawners. They have several unusual features including rectangular scales found only in primitive fishes, and a gas bladder that can function like a lung. Gars can survive in waters that have very little oxygen where most other fish would perish. Gar eggs are poisonous to humans. **Northern Redbelly Dace** (*Phoxinus eos)* is a Montana small minnow. Its maximum size is about 3 inches. The Northern Redbelly Dace is olive to dark brown above; the lower side and belly are yellow or silvery except on adult males during summer when the lower side is red. Northern Redbelly Dace are found in clear, cool, slow-flowing creeks, ponds and lakes with aquatic vegetation, including filamentous algae, and sandy or gravelly bottoms interspersed with silt. As with many small native stream fishes, Northern Redbelly Dace could be adversely affected by stream channelization, reductions to discharge, changes in water quality and temperature, and introductions of non-native predatory fishes. **Sturgeon Chub** *(Macrhybopsis gelida)* is a native minnow found in the eastern Montana prairie river drainages. They have small eyes and many external papillae on their bodies and fins. They feed mostly on small invertebrates living on the bottom substrate. **Sicklefin Chub** *(Macrhybopsis meeki)* is one of the rarest fishes in Montana. It is found in large, turbid streams in the plains region of Montana. It is similar to the sturgeon chub in appearance except that its pectoral fins are strikingly long. They have a conspicuous barbell at each corner of the mouth. They are a bottom feeder which locates its food primarily by taste. **Blue Sucker** *(Cycleptus elongates)* is a fish that appears to inhabit only the larger streams, primarily the Missouri and Yellowstone rivers. It has an elongated shape, long dorsal fin and slate-blue coloration. It grows to slightly larger than 10 pounds. They prefer water with low turbidity and swift current. They feed mainly on aquatic insects. **Sauger** *(Sander canadensis)* is a fish native to Montana east of the Continental Divide. It inhabits both large rivers and reservoirs, but is mainly a river fish. In the spring, sauger broadcast their spawn over riffles in rivers. Sauger are a highly prized sport fish and in some areas outside Montana are also a commercial fish. Their major food items are insects and small fish.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	Snapping Turtle *(Chelydra serpentina)* has a hard serrated (saw toothed) shell on the rear edge of the carapace. The head is large, with a hooked upper jaw and two barbells on the chin. They have been found in backwaters along major river, at smaller reservoirs, and in smaller streams and creeks with permanent flowing water and sandy or muddy bottoms. They tend to eat about anything that can be captured while foraging in the water. **Spiny Softshell Turtle** *(Apalone spinifera)* is primarily a riverine species, occupying large rivers and river impoundments, but it also occurs in lakes, ponds along rivers, pools along intermittent streams, bayous, irrigation canals, and oxbows. It usually is found in areas with open sandy or mud banks, a soft bottom, and submerged brush and other debris. Adult females can reach 52 centimeters in carapace length, but much less in adult males (which average about 10 centimeters shorter). The shell of the spiny softshell is flattened (pancake-like), with flexible edges and covered with leathery skin; the snout is tubular; the tail is thick and long. *Impacts:* None of the listed species are found on site. Even if suitable habitat did exist on site, the disturbance area would be small and large areas of similar habitat surround the site. Possible impact to the species would be minimal.
7. HISTORICAL AND ARCHAEOLOGICAL SITES	The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that two historic sites are in the locality (the historic Northern Pacific Railway and the historic Lower Yellowstone Irrigation Canal). A pedestrian survey of the area by DEQ personnel did not reveal any other artifacts or signs of occupation. SHPO does not feel that a cultural resource inventory is warranted at this site at this time. *Impacts:* If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was determined.
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	There are no unusual demands on land, water, air or energy anticipated as a result of this project. *Impacts:* Negligible impacts to land, water, air, or energy would occur.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	Richland County zoning clearance has been obtained. The site is not zoned.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	As seen on the aerial photo of the area, there are no nearby residences. *Impact:* This commercial pit is being sited in this area because of the location of the resource, and to provide resources for an MDT project.
11. AESTHETICS	The site is located in a common cropland area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be short-term, i.e., planned to take 6 years to complete.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs. *Impacts:* New employment opportunities would be limited.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	The acreage listed in the proposal would be taken out of cropland use. Upon completion of mining, the land would be reclaimed to cropland. *Impacts:* Cropland production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all cropland activities would cease, but would be restored as the site is reclaimed.
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels.
15. DEMAND FOR GOVERNMENT SERVICES	Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
16. HUMAN HEALTH AND SAFETY	Any industrial activity would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. If followed there is no reason to believe that significant safety issues would be present.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	This activity would not inhibit the use of the identified resources.
18. NATIVE CULTURAL CONCERNS	*Impacts:* None identified.

19. Alternatives Considered:

A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.

B. Approval Alternative: The Department would approve an application that complies with the Act and Rules. Impacts of this application are addressed in the body of the EA.

20. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historic Preservation Office, Montana Natural Heritage Program, Richland County Planning, Richland County Weed Board, and DNRC.

21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: Richland County Commission or County Planning Department (zoning), Richland County Weed Control Board, MSHA and OSHA (worker safety), DEQ ARMB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT (road access).

22. Regulatory Impact on Private Property: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

23. Magnitude and Significance of Potential Impacts: This proposal is not likely to create impacts of significance due to mitigation, restrictions, and oversight mandated by the Opencut Mining Act and pursuant rules and the Montana Clean Air Act.

24. Recommendation for Further Environmental Analysis: [ ] EIS [X] No Further Analysis

EA Prepared By: Bryan Allison (Name) Opencut Mining Program Environmental Specialist (Title)

EA Reviewed By: Chris Cronin (Name) Opencut Mining Program Supervisor (Title)

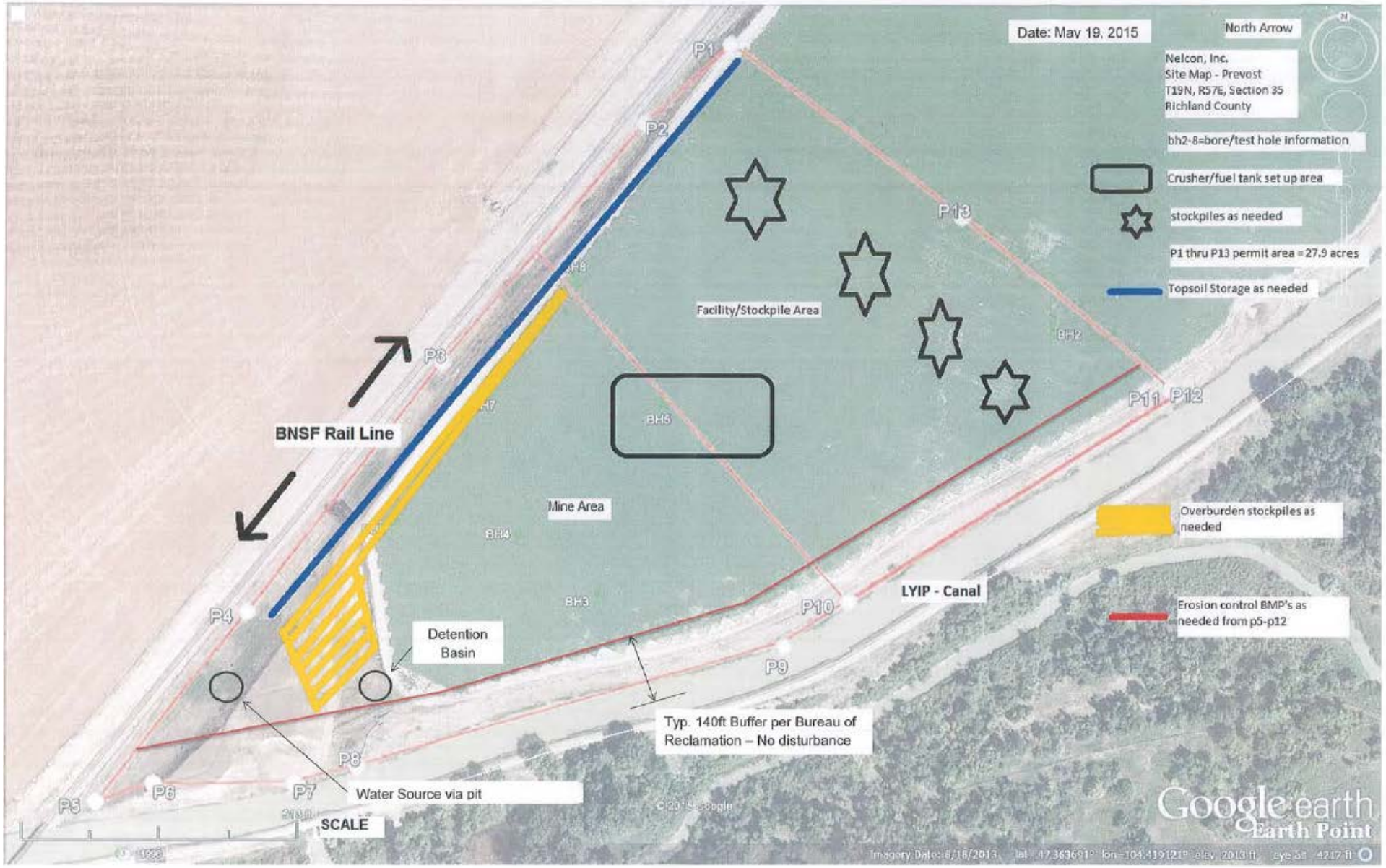
PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.



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