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Phase 1a Brine Gathering System Incident

Remediation Status Report

June 2015

Prepared by

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DEN 98836912v2

1. INCIDENT SYNOPSIS

A brine gathering system pipeline, owned and operated by Crestwood Midstream Partners LP (Crestwood), identified a leak beginning on or about the afternoon of July 3, 2014. The release occurred at a pipe coupling located at 47°47'04"N and 102°38'40"W along the Dunn, McKenzie County line. The total volume released was approximately 26,000 barrels of brine produced water and the total impacted area is approximately 6.1 acres spread over approximately 5,700 linear feet with an overall elevation drop of 305 feet.

From the release point, a small portion of the brine traveled northeast approximately 450 feet along Turnuey Ridge Road. The majority of the flow traveled southwest from the release point along Turnuey Ridge Road. The discharge followed the road approximately 950 feet before pooling up near the edge of a ravine. The discharge then flowed west down the ravine into a wooded draw. It followed the draw for approximately 1,250 feet before entering an unnamed creek. Once in the creek, it travelled north, approximately 5,300 feet, passing through eight intact beaver dams and three un-intact beaver dams. Water flowing in the unnamed creek eventually reaches Bear Den Bay of Lake Sakakawea.

The eight intact and three un-intact beaver dams created reservoirs that held back water within the creek. In addition, immediately below the final beaver dam, Crestwood installed a temporary man-made earthen berm and a sandbag berm as a precautionary measure to ensure any potential migration of produced water would not reach Bear Den Bay. Crestwood also installed two temporary pumps to prevent any migration of produced water from reaching Bear Den Bay. The first pump was installed at the pond above the final beaver dam. Water from this pump was directed to mobile frac tanks and disposed of properly. The second pump was installed as a precaution to capture any water that might accumulate above the temporary berms installed by Crestwood and to pump this water back into the pond above the final beaver dam.

In response to the incident, Crestwood formed an Incident Command System with the Mandan, Hidatsa, Arikara (MHA) Nation to manage and coordinate the various aspects of the incident. The North Dakota Department of Health (NDDOH) was contacted and a report was filed of the incident. Other agencies such as the Army Core of Engineers (USACE), North Dakota Game and Fish (NDGF), NDDOH and various MHA Tribal agencies were also on location.

2. SITE STABILIZATION AND REMEDIATION

Crestwood's immediate remediation efforts included flushing the site with a 1:1 ratio of clean water, to help facilitate the cleaning of the stream water. The flush water came from five separate underground aquifers located in western North Dakota. The water was released on the west site of Area A (see map attached) and followed the same path as the incident. Berms were constructed on the downslope portion within Area B to further guide the flow path and to prevent erosion. All water during the flush was contained by beaver dams and pumped out for disposal. Additional temporary visqueen and sandbag dams were deployed to catch any dam seepage which was also pumped out for disposal. As a precautionary measure, booms were placed at the confluence of the unnamed creek and Bear Den Bay and near the intake for the Mandaree intake station. Within Area A, a calcium based soil amendment, BIO-CAL, was applied and tilled into the soil. At the release point within Area A, contaminated soil in the immediate vicinity of the release was excavated and properly disposed. MHA Tribal approved soil was then backfilled into the excavated area.

Since the incident occurred, the pond created by the last beaver dam has been pumped down 52 times. With each draw down pulling approximately 105,000 gallons or 2,500 barrels of water from the pond. At the onset, these lifts had shown a strong decrease in chloride levels within the pump out pond. On July 9, 2014 the chloride levels were at 27,200 mg/l, within the first week and after approximately 9 drawdowns, the chloride levels decreased to 5,910 mg/l. The recovery of runoff and disposal of water continued until November 2014, when freezing temperatures caused the recovered water to freeze in frac tanks as well as freeze up disposal wells; thus preventing disposal. Recent results have the lowest chloride analysis down to 154 mg/l within the same pond.

After site stabilization and the flushing process, long term site remediation began. In addition to the recovery of liquids, the following remediation plan has been implemented.

Remediation Plan Area A, B, and E

1) Applied flax straw hay, a thickness of 18 inches, crimped into the impacted soil a minimum of 3 feet deep. While a depth of 4 feet was desired, due to underground utilities, we did not want to crimp deeper than 3 feet in many areas. Flax straw hay retains water very well, is slow to decompose, doesn't tie up nitrogen or other nutrients in soil, contains few or no seed heads, will provide a channel for the chlorides to readily leach past the root zone and is easily attainable. The flax straw was crimped into the ground via track hoe. The crimping technique was strictly monitored to assure proper technique, essentially using the backhoe bucket to press the straw into the ground, but never scooping or misplacing the organic layer. The organic top layer of soil remains on the surface. When the process was finished a mixture of straw and hay was visible.

2) Applied 12 inches of alfalfa hay as a highly decomposable organic material above the impacted soil. This hay was worked into the soil via wishek disk pulled behind a tractor. Then a rototiller was used on the area to further break up the soil and smooth it out so rainfall is more evenly distributed. The idea was to revitalize the soil, increase organic matter in the soil, and provide increased leaching capability for the soil to rid itself of chlorides.

3) Powdered citric acid and calcium carbonate, as well as calcium sulfate, was applied via broadcast seeder at 3 to 4 times the recommended agriculture application rate. The citric acid was used to release the chlorides from the silts and clays in the soil. The calcium amendments are used to provide a source of calcium. As the citric acid frees chlorides from the soil, the chlorides will preferentially be displaced by the calcium allowing the chlorides to leach out. The Na+ ion of sodium chloride causes the dispersion of clay particles, which will plug soil pores, reducing soil permeability. Due to the large number of Na+ ions available, the Na+ ions are able to exchange with a sufficient number of the Ca++ and Mg++ ions. The Na+ ion weakens the normal soil aggregate stability. A major impact of a salt water spill is the destruction of the soil aggregates by dispersion. This process should provide a remediated root zone allowing for

vegetation growth, preventing chloride runoff, and allowing Mother Nature to finish the remediation process as the chloride will continually drive deeper into the soil.

4) Seeded the area with a dry land alkali resistant seed mix. Established plant species help reduce water runoff and help keep soil in place. This particular grass seed mix does contain non-native plant species; future remediation plans will consist of over-seeding the area with a native BIA approved grass seed mix. After seed had been spread throughout the area, fertilizer was applied.

5) A double layer of thick blanketed straw was placed over the area. The straw holds moisture in soil, slows the evaporation rate, and helps prevent erosion. Erosion control techniques, such as rock check dams and fiber rolls, were implemented throughout the area, with an emphasis on down slope areas. A fence was built to prevent cattle from trampling and compacting the area as well as eating the hay.

Remediation Plan Area C

In the steeper wooded areas, an in-situ soil treatment was performed with the citric acid and calcium carbonate, a blended calcium-enriched soil amendment that is in a completely water soluble form. It was spread by hand to the areas as they were not able to be reached by the equipment in the previous areas (A, B and E).

1) Dead vegetation such as trees and shrubs were removed or chopped with a wood chipper. Approximately a foot of the trunk was left behind to help prevent erosion. The trees were chipped and spread throughout the forested area. The pH of the soil, where wood chips were laid, will continue to be monitored closely to see any impact the wood chips may have on the soil; however, based on the types of trees in the region there is no anticipated effect.

2) The citric acid and calcium carbonate amendment was spread by hand to the area.

3) The area was tilled, incorporating the wood chips and soil amendments to a depth of approximately 6 inches.

4) The area has been seeded with a dry land alkali resistant seed mix. Established plant species are helping to reduce water runoff and keep soil in place. Future remediation plans will consist of over-seeding the area with a native BIA approved grass seed mix. After seed has been spread throughout the area, fertilizer was applied.

5) Erosion control techniques, such as check dams and fiber rolls were implemented throughout the area. Assisting in erosion control and aiding in an increased soil moisture content by lowering the speed of water flow and retaining water in check dams from storm events. A fence was installed, thus prevented cattle from trampling and compacting the area.

Remediation Plan Area D

Area D is the impacted stream area. With standing water and saturated soils the use of any equipment was impractical and would have created more damage than it would remediate. Area D will be monitored and sampled quarterly. The vertical profile will be sampled to a depth of 18 inches primarily looking at the chloride levels in the soil to display effective natural attenuation of the area.

In area D the vegetation has not died off as it has in other areas, there are three primary causes of this. The first reason is that the dilution and quick flowing of contaminates prevented this areas soils from being impacted as much as upslope areas. The second reason is that the vegetation in this area are naturally salt tolerant species; this is due to the fact the marine sediment deposits that formed this region are naturally high in salts and chlorides, thus the vegetation that is thriving in the region is salt tolerant. The third reason is that the soil is saturated. Salt and chlorides cause vegetation to die by preventing water uptake in the roots; however, with soils in a saturated state the effect that the salts and chlorides have in the root zone are not effective enough to prevent water uptakes.

By the end of 2014, the remediation efforts produced a result of 61% chloride level reduction in the first 6" of the soil profile (reduction percentage is based on chloride levels in the days after the release occurred). By the end of 2015, the anticipated result is a reduced chloride level of 75-80% (within the top 12" of soil); by the end of 2016, an 85-90% reduction is expected (within the top 12"); and by the end of 2017, a 95-99% reduction is expected (within the top 18" of soil).

3. SAMPLING AND MONITORING

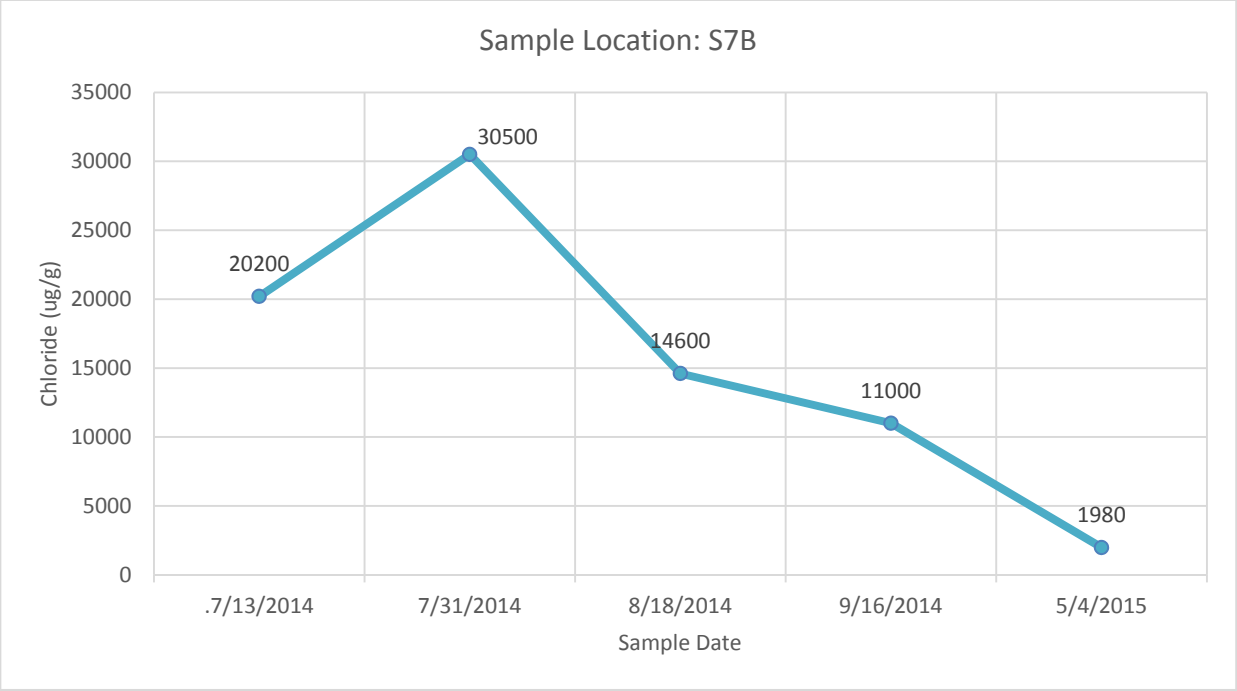
Soil and water samples have been collected routinely throughout the project area since the discovery of the incident. The site was inspected, sampled, and monitored daily since the release was discovered until September 27, 2014. Bi-weekly inspections, with weekly sampling and additional sampling after rainfall events occurred until October 14, 2014. At which point weather conditions made sampling impracticable and inaccurate, as ice formed on the pumpout pond. The ice increases chloride concentration, thus skewing results. All of these dates include the collection of samples in Bear Den Bay as well as the Mandaree water intake.

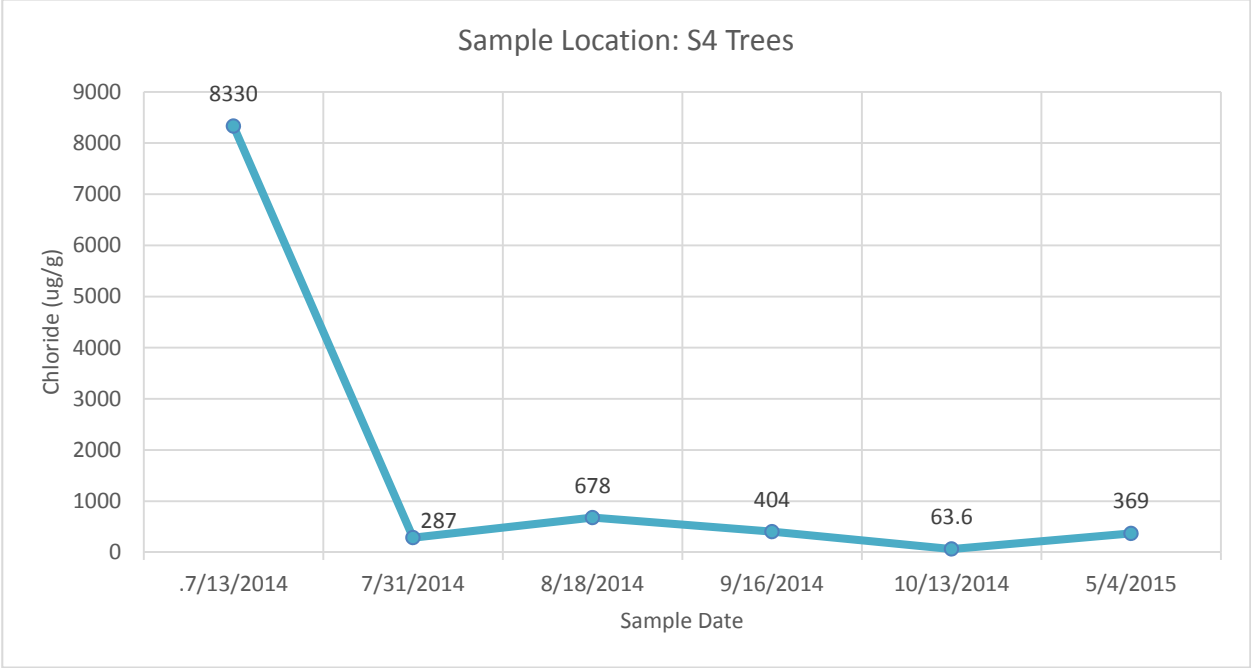
Sample analysis has primarily focused on pH, Conductance, and Chloride. This is not because there are no other constituents that impacted the region, it is simply that of all the components in produced water the chlorides have the largest detrimental impact to the area. In addition chlorides have a relatively quick lab analysis turnaround time, thus sampling can be performed on a larger scale. At the onset of the incident, additional sampling parameters were assessed to rule out impacts other than those from chloride. Analysis for EPA DRO Extraction (Benzene, Toluene, Ethyl Benzene, Xylenes, GRO and DRO) was performed. However, the measured levels of these other constituents were below remediation close out standards and were only detectable near the location of the incident where surface pooling of spilled materials were vacuumed and disposed of, and soils were excavated for disposal. In light of these findings and actions, no additional sampling for these constituents was performed.

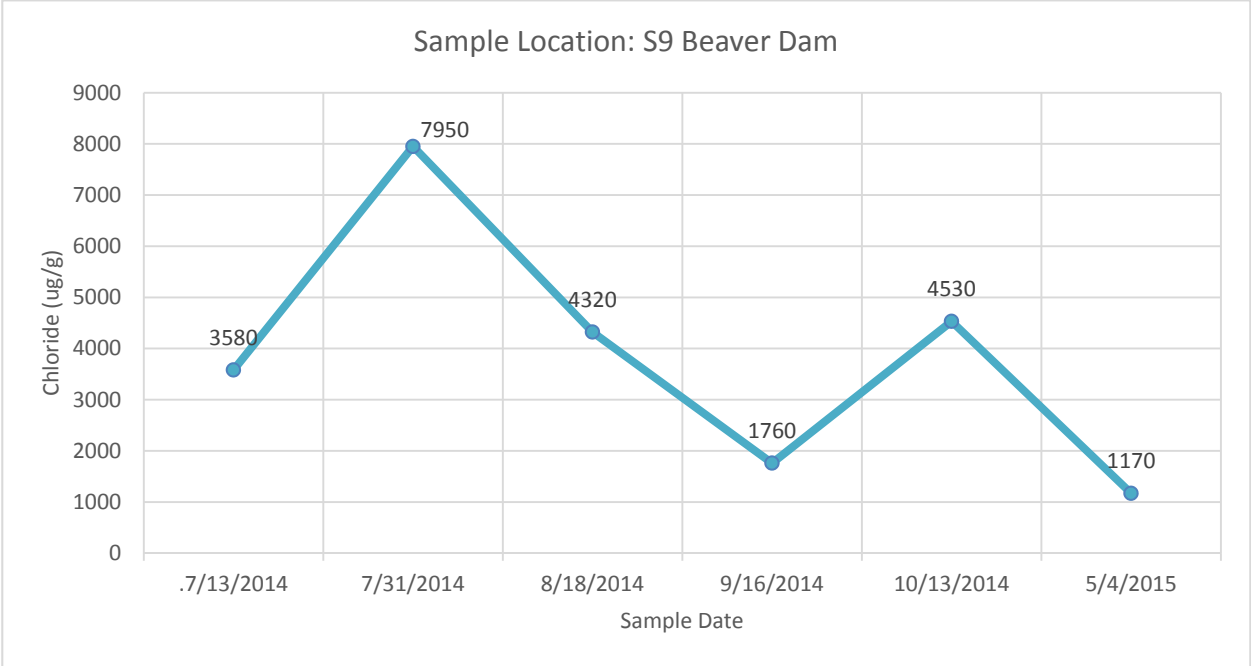
The majority of the samples taken were sent to Minnesota Valley Testing Laboratories (MVTL) in Bismarck, ND for analyses; however, a set of water samples were also sent to Pace Analytical in Billings, MT for metals digestion. On site testing was also performed with a Hanna Direct Soil Conductivity Meter as well as a YSi Multiparameter meter took place at the onset and until daily monitoring concluded.

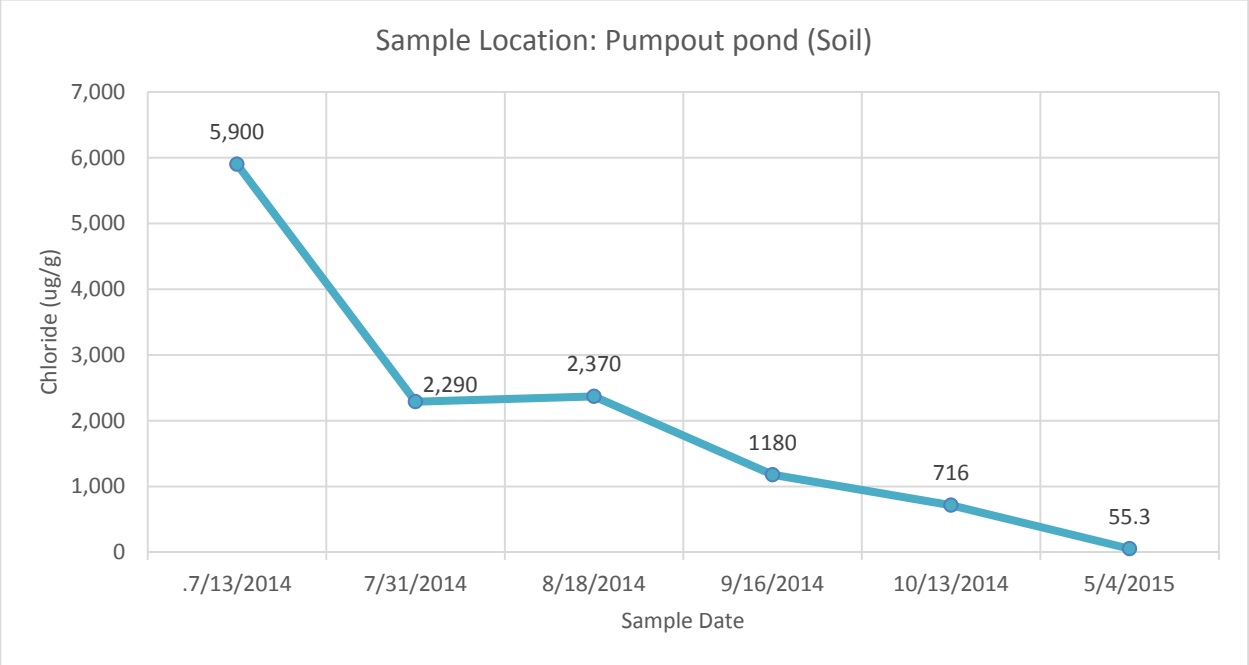
Sampling began again after the spring thaw of 2015 with the intent of quarterly sampling until remediation completion. Monitoring will continue pursuant to the plan and schedule outlined below.

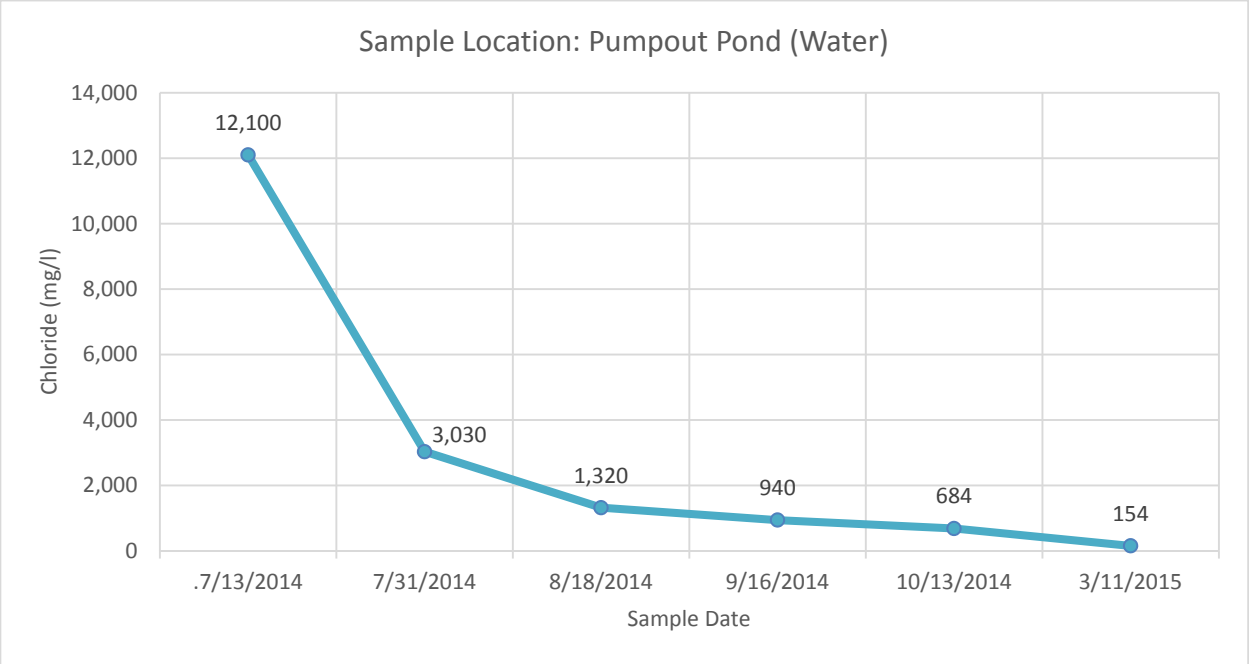
The graphs below display the chloride change since the incident. It is important to note that results can appear cyclical as chloride concentrations are heterogeneous within the small sample locations.




Sample Location: S4 Trees
Chloride (ug/g)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
8330
287
678
404
63.6
369
.7/13/2014
7/31/2014
8/18/2014
9/16/2014
10/13/2014
5/4/2015
Sample Date


Sample Location: S9 Beaver Dam
Chloride (ug/g)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
3580
7950
4320
1760
4530
1170
.7/13/2014
7/31/2014
8/18/2014
9/16/2014
10/13/2014
5/4/2015
Sample Date





BOTANICAL INVENTORY

Keitu conducted a botanical field survey to identify plant species within 500 feet of the affected area within the project area. Due to the nature of brine contaminated soil, all species located within the immediate drainage pathway of the incident were negatively impacted. The botanical survey was conducted alongside the impacted drainage pathway and within areas of identifiable similar features, as these areas are anticipated to have similar plant communities and plant species.

The botanical survey was conducted on September 22, 2014. The dominant species identified during this time were cool season grasses and late season forbs. It is important to note that this survey, although conducted in fall, was conducted within the "botany season" set forth by the US Forest Service. The "botany season" was extended in 2014 until September 30. The "botany season" is a set of dates that the US Forest Service sets forth as the time frame that vegetation can be properly identified on federal land.

Listed below are the identified plant species located within each Section of the incident area. Each Area has distinct features from one another including soil, slope, and hydrologic features that make them unique from one another. Within each Area, different plant communities dominate the overall landscape.

Areas A, B and E

Overall, this area can be identified as rolling plains within the badlands plateau prairies that is composed of predominantly mixed grass species. These sections follow along Turnuey Ridge Road and have been subject to anthropogenic soil disturbance as well as cattle grazing.

Graminoid Species	
Scientific Name	**Common Name**
Bouteloua curtipendula	Sideoats Grama
Bromus inermis	Smooth Brome
Hesperostipa comata	Needleandthread
Nassella viridula	Green Needlegrass
Poa pratensis	Kentucky Bluegrass
Schizachyrium scoparium	Little Bluestem
Stipa spartea	Porcupine Grass

Forb Species	
Scientific Name	**Common Name**
Anemone patens	Prairie Crocus
Artemisia campestris	Field Sagewort
Artemisia cana	Silver Sagebrush
Artemisia frigida	Fringed Sagebrush
Artemisia ludoviciana	White Sagebrush
Dalea purpurea	Purple Prairie Clover
Echinacea purpurea	Purple Coneflower
Glycyrrhiza lepidota	American Licorice
Heterotheca villosa	Hairy Golden Aster
Liatris punctata	Dotted Gayfeather
Opuntia polycantha	Plains Pricklypear Cactus
Ratibida columnifera	Prairie Coneflower
Rhus trilobata	Skunkbrush Sumac

Rosa arkansana	Wild Prairie Rose
Rudbeckia hirta	Black Eyed-Susan
Shepherdia argentea	Silver Buffaloberry
Solidago missouriensis	Prairie Goldenrod
Symphoricarpos occidentalis	Western Snowberry
Symphyotrichum ericoides	Heath Aster
Symphyotrichum novae-angliae	New England Aster
Toxicodendron radicans	Poison Ivy

Area C

Overall, this area can be identified as an open wooded sloped draw with approximately 80 foot elevation change from top to bottom. This area is subject to cattle grazing and natural sloughing.

Graminoid Species	
Scientific Name	**Common Name**
Bouteloua curtipendula	Sideoats Grama
Bromus inermis	Smooth Brome
Hesperostipa comata	Needleandthread
Nassella viridula	Green Needlegrass
Poa pratensis	Kentucky Bluegrass
Schizachyrium scoparium	Little Bluestem
Stipa spartea	Porcupine Grass

Forb Species	
Scientific Name	**Common Name**
Achillea millefolium	Western Yarrow
Ambrosia artemisiifolia	Common Ragweed
Arctium minus	Lesser Burdock
Celastrus scandens	American Bittersweet
Cirsium arvense	Canada Thistle
Cirsium undulatum	Wavy Leaf Thistle
Convolvulus arvensis	Field Bindweed
Fragaria vesca	Wild Strawberry
Glechoma hederacea	Ground Ivy
Juniperus horizontalis	Creeping Juniper
Nepeta cataria	Wild Catnip
Rosa arkansana	Wild Prairie Rose
Rosa woodsia	Woods Rose
Smilacina stellate	False Solomon Seal
Shepherdia argentea	Silver Buffaloberry

Sonchus arvensis	Perennial Sowthistle
Symphoricarpos occidentalis	Western Snowberry
Xanthium strumarium	Rough Cocklebur

Tree Species	
Scientific Name	**Common Name**
Fraxinus pennsylvanica	Green Ash
Juniperus scopulorum	Rocky Mountain Juniper
Prunus americana	American Plum
Prunus virginiana	Chokecherry
Quercus macrocarpa	Bur Oak
Ulmus Americana	American Elm

Area D

Overall, this area can be identified as spring-fed wetland and stream that traverses approximately 5,000 feet until its confluence with Bear Den Bay of Lake Sakakawea (Missouri River). Due to several factors, including a semi-continuous flowing stream, clay stream bed and several beaver dams, the plant species in this area favored well to the incident. However, due to pumping out of contaminated water this has affected downstream plant species by lack of water. This area is also grazed by cattle.

Tree Species	
Scientific Name	**Common Name**
Carex lanuginosa	Woolly Sedge
Schoenoplectus americanus	Three-square bulrush
Spartina pectinata	Prairie Cordgrass
Hordeum jubatum	Foxtail Barley

TREE AND SHRUB INVENTORY

A tree and shrub inventory survey was also performed within Sections C and D (areas with impacted trees). The tree and shrub inventory survey was conducted by North Dakota Public Service Commission inventory standards. Survey protocol states all lost species that are 1 inch diameter at breast height or greater are to be inventoried. Listed below are the wooded species and number lost due to the incident.

Tree and Shrub Species		
Scientific Name	**Common Name**	**Amount Lost**
Fraxinus pennsylvanica	Green Ash	165
Juniperus scopulorum	Rocky Mountain Juniper	3

Quercus macrocarpa	Bur Oak	6
Ulmus Americana	American Elm	18

The following species were also noted in the area, but were not recorded as they were not at least 1 inch diameter at breast height.

Tree and Shrub Species	
Scientific Name	**Common Name**
Juniperus horizontalis	Creeping Juniper
Prunus americana	American Plum
Prunus virginiana	Chokecherry
Shepherdia argentea	Silver Buffaloberry
Symphoricarpos occidentalis	Western Snowberry

4. REMEDIATION AND CONTINUED MONITORING

REMEDIATION AND CONTINUED MONITORING PLAN

Spring 2015

- Take surface soil samples once at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.

Summer 2015

- Take surface soil samples once at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.
- Apply calcium amendment will be applied at a rate of 3 time the standard agriculture use throughout the impacted areas A, B, C, and E. A calcium amendment will be applied to the land of area D at the standard agriculture rate.

Fall 2015

- Take core samples, sampled at 6" vertical intervals to 36" at locations: E-east, E-west, A-east, S2-Road Ditch, S7b, S8b, S3-toeslope, S6-coulee start, S9-Beaver Dam, Creek 1, and BD2. Analysis for: pH, Electrical Conductivity, Calcium, Soluble Salts, Sodium Adsorption Ratio, % Organic Matter, Cation Exchange Capacity and Chloride.
- Take surface soil samples once at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.
- Vegetation regrowth will be assessed and sampling frequencies will be adjusted if needed. A 50% vegetation cover is anticipated during this growing season. If an 80% chloride reduction is not obtained through the top 12" of soil or if the vegetative cove goal is not met further remediation techniques will be implemented, such as soil amendment application, over seeding (following the revegetation plan below), and tilling. Amendment application will be based on Cation Exchange Capacity and Sodium Adsorption Ratio.

Winter 2015/2016

- Due to frozen soil and snow cover, the site will not be sampled.

Spring 2016

- Take surface soil samples once during the spring season at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once during the spring season at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.
- Vegetation regrowth will be assessed and sampling frequencies will be adjusted if needed. A 70% vegetation cover is anticipated during this growing season. If that goal is not reached, further remediation techniques will be implemented.
- Replant impacted shrubs and tree species that were larger than 1inch DBH (Diameter at Breast Height). Replanting shall amounts shall be twice that of the impacted shrubs and trees listed above.

- Replant additional forbs and graminoids to provide at least 70% of the species that were previously in the area.
- A calcium amendment will be applied. The application rate will be based on Cation Exchange Capacity and Sodium Adsorption Ratio.

Summer 2016

- Take surface soil samples once during the summer season at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once during the summer season at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.

Fall 2016

- Take core samples once during the fall months, sampled at 6" intervals to 36" at locations: E-east, E-west, A-east, S2-Road Ditch, S7b, S8b, S3-toeslope, S6-coulee start, S9-Beaver Dam, Creek 1, and BD2. Analysis for: pH, Electrical Conductivity, Calcium, Soluble Salts, Sodium Adsorption Ratio, % Organic Matter, Cation Exchange Capacity and Chloride.
- Take surface soil samples once during the fall months at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, S13-Bay, and background locations. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium, Benzene, Toluene, Ethyl Benzene, GRO (TEH), DRO (TEH), Mercury, Barium, Copper, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Lean, Selenium, Thallium, Radium 226/228 gross alpha and gross beta.
- Take water samples once during fall months at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, S13-Bay and background locations. Analysis for: pH, Chloride, Calcium, Nitrates, Benzene, Toluene, Ethyl Benzene, GRO (TEH), DRO (TEH), Mercury, Barium, Copper, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Lean, Selenium, Thallium, and Radium 226/228, gross alpha and gross beta.
- Vegetation regrowth will be assessed and sampling frequencies will be adjusted if needed. A 70% vegetation cover is anticipated during this growing season. If a 95% chloride reduction is not obtained through the top 12" of soil or vegetation cover goal is not met further remediation techniques will be implemented, such as soil amendment application, over seeding, and tilling. Amendment application will be based on Cation Exchange Capacity and Sodium Adsorption Ratio.

The additional sampling parameters will help to ensure that the region is not impacted by other constituents. If there is an impact, additional remediation methods will be sought and the EPA will be notified of the new plan.

Winter 2016/2017

- Due to frozen soil and snow cover, the site will not be sampled.

Spring 2017

- Take surface soil samples once during spring months at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once during spring months at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates.
- Vegetation regrowth will be assessed and sampling frequencies will be adjusted if needed. A 90% vegetation cover is anticipated during this growing season. If that goal is not reached, further remediation techniques will be implemented.

Summer 2017

- Take surface soil samples once during summer months at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.
- Take water samples once during summer months at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay Analysis for: pH, Chloride, Calcium, and Nitrates.

Fall 2017

- Take core samples once during the fall months, sampled at 6” intervals to 36” at locations: E-east, E-west, A-east, S2-Road Ditch, S7b, S8b, S3-toeslope, S6-coulee start, S9-Beaver Dam, Creek 1, and BD2. Analysis for: pH, Electrical Conductivity, Calcium, Soluble Salts, Sodium Adsorption Ratio, % Organic Matter, Cation Exchange Capacity and Chloride.
- Take surface soil samples once at locations: E-east, E-west, S1-Release Location, A-east, S2-Road Ditch, S7a, S7b, S7c, S8a, S8b, S8c, S3-toeslope, S4-Trees, S5-Tree Pond, S6-Coulee Start, S9-Beaver Dam, Creek 1, Dam 2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Sodium Adsorption Ratio, Calcium.

- Take water samples once at locations: S5-Tree pond, S6 Coulee Start, S9-Beaver Dam, Creek 1, Dam2, Dam 1a, Dam 1, BD1, BD2, S11, Creek to Bay, and S13-Bay. Analysis for: pH, Chloride, Calcium, and Nitrates).
- Vegetation regrowth will be assessed and sampling frequencies will be adjusted if needed. A 90% vegetation cover is anticipated during this growing season. If a 99% chloride reduction is not obtained through the top 18" of soil or vegetation cover goal is not met further remediation techniques will be implemented, such as soil amendment application, over seeding, and tilling. Amendment application will be based on Cation Exchange Capacity and Sodium Adsorption Ratio.

If these goals are met and the parties involved agree that remediation efforts are complete, then site monitoring will no longer be needed. If these goals are not met, site monitoring consistent with the 2016 monitoring schedule and remediation plan will take place.

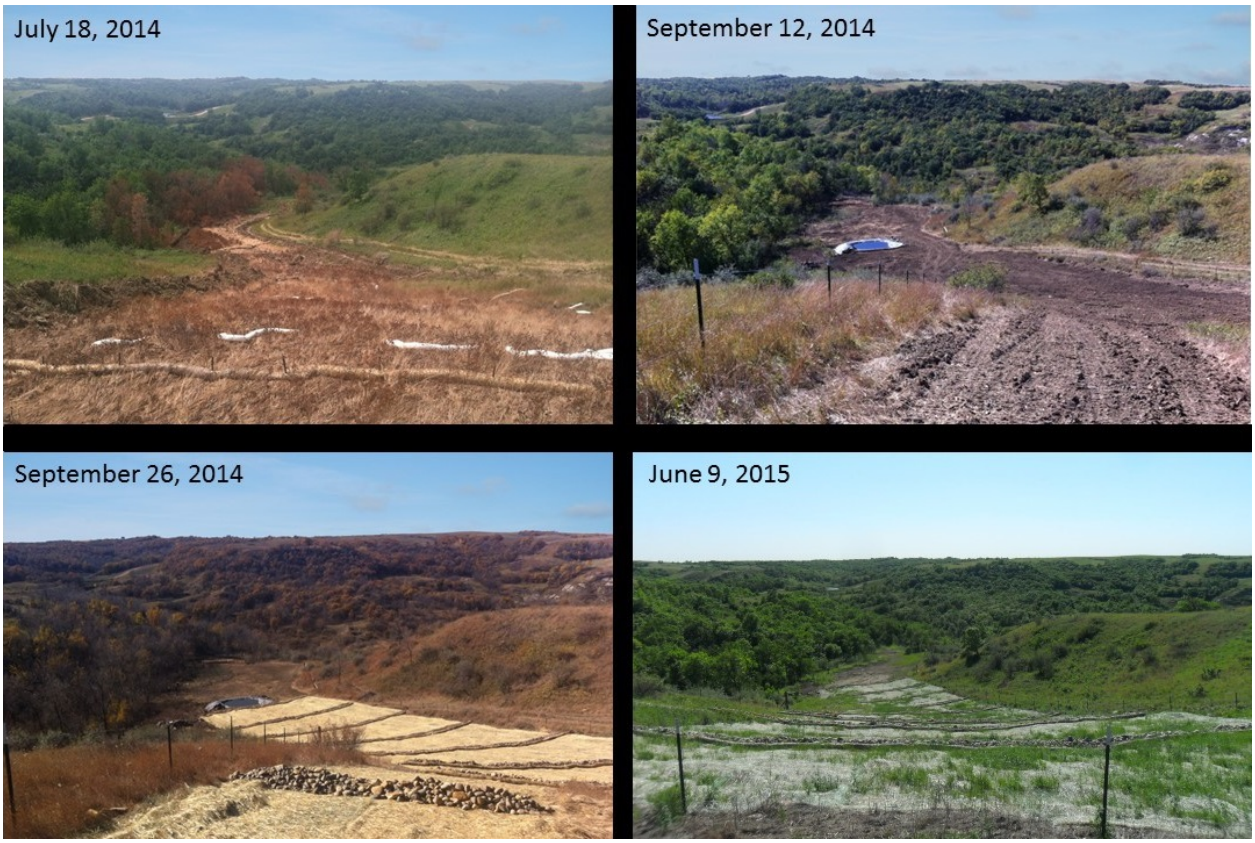
REVEGETATION PLAN

The revegetation plan consists of seeding areas that were disturbed due to the incident and associated cleanup efforts. These areas will be seeded via broadcast seeder with native, non-GMO (non-genetically modified organism) grass species. Due to the nature and seasonal timing of the incident, the grass seed mix will have a mixture of cool-season and warm-season grasses. The ideal time to plant cool-season grasses would be in late fall, as a dormant planting. In the spring, areas will be reseeded once again to give the warm-season grasses a better germination rate. The grass seed mix consists of western wheatgrass, green needlegrass, blue grama, side-oats grama, slender wheatgrass, and prairie junegrass.

Once grass species have been reestablished, areas will be over-seeded with native, non-GMO, medicinal herbaceous plant species. Planting will be done in the spring to accommodate the various characteristics of the plants and ensure growth of the medicinal species. All seed will be acquired from Agassiz seed & supply, out of Fargo, ND and will be certified weed free. The medicinal plant of focus is purple coneflower (Echinacea purpurea). Additional medicinal forb species such as western yarrow (Achillea millefolium), black-eyed Susan (Rudbeckia hirta), prairie coneflower (Ratibida columnifera), and white sagebrush (Artemisia ludoviciana) will be seeded as well.

The revegeation process will be monitored until at least fall 2017. Monitoring will consist of noting all species growing in the impacted area including any species considered noxious or invasive. Any non-native or invasive weeds that appear in areas will be removed and measures will be taken to ensure proper native plant growth.

5. SITE PROGRESS PHOTOGRAPHS



Slope of Area B; looking west.

Area A, along Turnuey Ridge Road; looking west southwest.

Area D, above pumpout pond; looking north.

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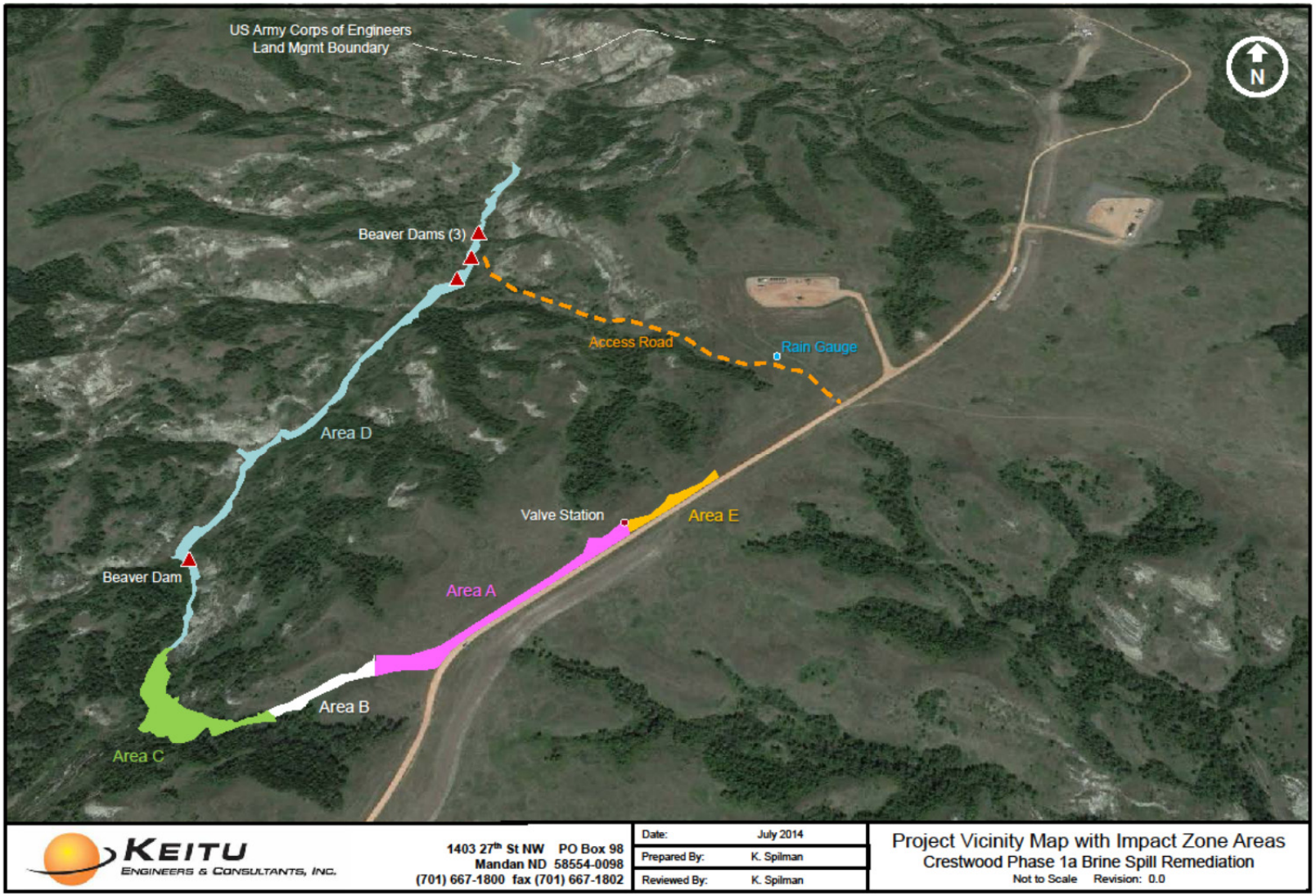

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