Operating Plan for McIntyre Flowback Pits #3 (#418791) and #4 (#418790)

Second Annual Revision – December 31, 2013

Includes Annual Review for 2013, Facility Modification Checklist, and Permit Compliance Documentation

SG Interests I Ltd. (77330)

SG INTERESTS I, LTD.

Operating Plan for McIntyre Flowback Pits #3 and #4 (908.B.8)

Revised December 31, 2013
(Second Annual Revision)
Project Introduction

SG Interests has planned two facilities at which they will store water, including flowback water, for use in hydraulic fracturing of wells in their Bull Mountain Unit and at nearby wells outside the unit. McIntyre Flowback Pits 3 and 4 are located at one of these facilities and are the subject of this Operating Plan. Both facilities will be located on Rock Creek Ranch, a property owned by an affiliate of SG Interests; Rock Creek Ranch I Ltd. The As-Built Condition drawings attached to this plan depict the general arrangement of the facility. As of the writing of this plan revision, the pits have been constructed, but are not operational. The purpose of this Operating Plan is to provide a basis for developing and implementing the processes and procedures that will be used at the facility when it does become operational. Operations at the pits are expected to begin in the spring of 2014. This plan will be revised annually. This facility has had a Spill Prevention, Containment and Countermeasure Plan prepared according to EPA regulations. The SPCC plan includes a Facility Response Plan due to the volume of water stored at the facility. Both the spill plan and the Facility Response Plan are kept on file with this operating plan at SG Interests' Somerset field office.

The basic plan for use of the facilities is to transport water to be stored in the pits via poly pipeline on the ground surface. These pipelines can be laid on the ground without creating ground disturbance (see example photo below). Wherever possible, these pipelines will be laid alongside or over existing disturbance such as along an access road. Before the pipelines are moved to a new location, they will be dried using a foam pig pushed by compressed air. The pig will be pushed back toward the pits allowing the fluid to drain into the pits. The pipeline can then be dragged with a tracked vehicle to the new location.

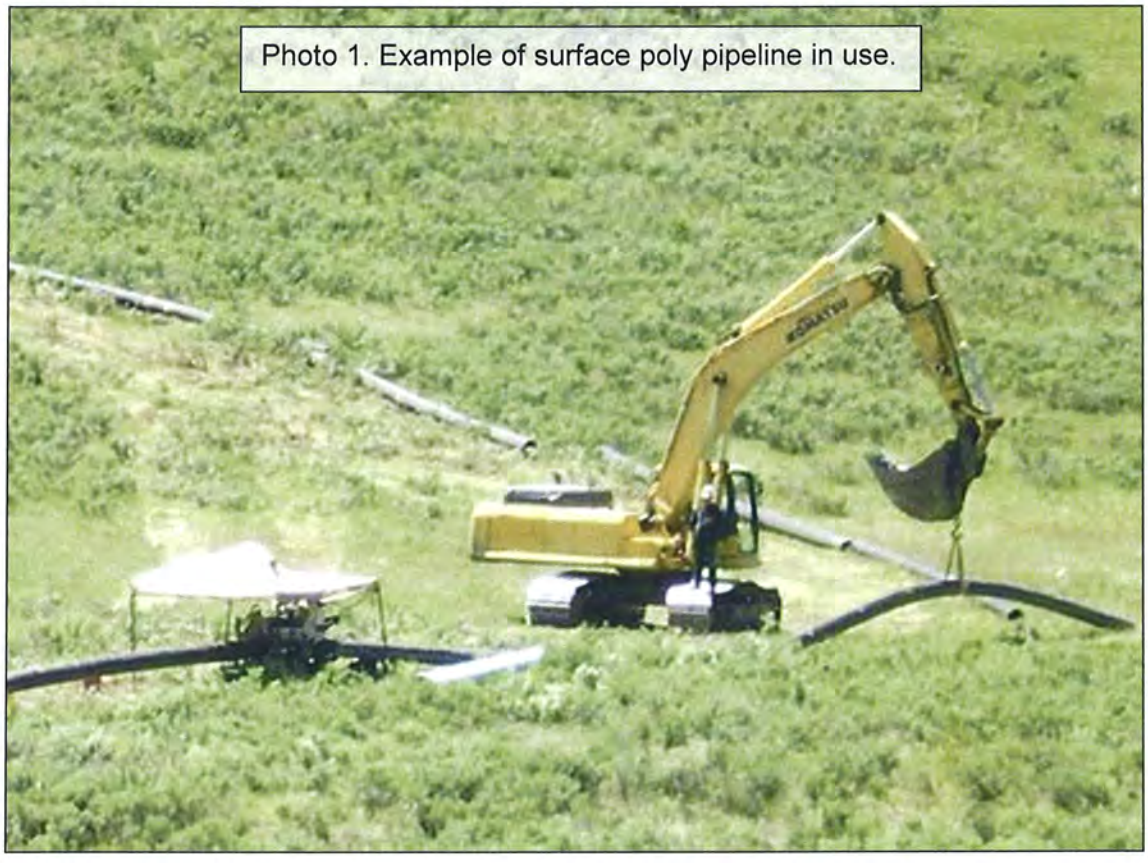


Photo 1. Example of surface poly pipeline in use.

Most produced water that will be stored in the pits will be piped through SG Interests' existing buried water pipeline gathering system to the Federal #24-2 WDW (05-051-06084, water disposal well) and from there to the pits via surface poly pipelines. Surface poly pipelines that cross sensitive areas will have secondary containment to prevent a leak in a poly line from contaminating surface waters. These temporary surface poly water pipes can be moved as needed to connect the pits with gas well sites or injection well sites for disposal.

Trailer-mounted pumps will be located near the edge of each pit to pump water into and out of the pits (see photo 2). Water pumps will have built-in secondary containment systems known as ecology rails (see photo 3). Ecology rails are built-in sump systems that are part of the skids of these pumps.

Booster pumps will be needed at certain points along some of the poly pipeline routes to keep the water flowing at the desired pressure. These points will be determined by field conditions such as topography between the facility and the well location. Although none of these locations have yet been identified, a map with their locations will be provided to COGCC with a Form 4, Sundry Notice whenever a booster pump is needed.

Photo 2. Example of water pumps with stinger pipes reaching down into a pit.

Photo 3. Ecology rails are secondary containment systems that surround the pumps and prevent pump fuel and fluids from reaching the ground.

It will not be possible to connect all wells supplying produced water for storage in the pits via pipe. Some wells will have water trucked from tanks on these locations. Operators will use the permanent manifold structures located next to each pit, to deliver or remove water from pits by truck. This will prevent water hoses from being dropped into the pits and dragged over the liner, which could lead to liner damage. The manifold structure uses poly pipe that is left in place in each pit throughout the season to reach water stored in the pits. This poly pipe will lay on an additional piece of 60 mil liner from its first contact with the pit liner to the bottom of the pit. Operators will only use the manifold structure to access the pit from the staging area. No operators will be allowed to approach the pit any closer than the manifold structure. Prior to disconnecting the hose from the manifold, equipment operators will reverse pump to clear fluid from the hose. Each manifold will have a secondary catch basin in case a leak does occur while operators are connecting or disconnecting hoses. Fluid will not be allowed to build up within any secondary containment system.

Photo 4. Hose manifold with containment system beneath connections.

The pits will not be used during the winter season. Winterization of the pits will consist of removal of stationary equipment from the staging area. Equipment that would be removed from the staging area includes the pumps and most poly pipes. The volume of water stored in the pits over winter will be reduced to accommodate snow fall. The highest recorded annual total snowfall measured in Meredith, Colorado (similar in elevation to this site) was 192" in 1964 (≈ 16') (Western Regional Climate Center data). In order to accommodate this snow if it were all to melt in one event, the pit water would be drawn down 16" in both pits 3 and 4. This draw down would accommodate all of the snow melt resulting from 16' of snow, which would equal approximately 16" of water. Both pits would be drawn down by 19,024 bbl each year if the pits were filled to capacity prior to draw down (capacity calculated with two feet of freeboard). This water would be disposed of either at a commercial facility or at SG's water disposal well each year. The volume in the pits would be monitored daily during the winter. The facility access road will be kept plowed and accessible during the winter. In the event that plowing does not occur in time for daily facility monitoring, the location is accessible with a snowmobile. If problems are noted during a snowmobile site visit, the road will be plowed immediately and the problem addressed.

Following fall bird migration, the nets at the pits will be removed to prevent snow damage to the nets. SG will submit a Sundry Notice to COGCC prior to removing the nets from the pits in the fall. During the time the netting is off the pits, colored bird-deterrent flagging will remain in place. Prior to spring migration, the bird netting will be returned to the pits. A Sundry Notice will also be used to notify COGCC that the netting is back in place. The goal of stringing and removing the netting on a seasonal basis is to have the netting in place when the fluid in the pits is in liquid form and to remove the netting in order to preserve it during periods when the fluid is frozen. The colored flagging will help deter birds in the case of unseasonal warm weather in fall.

Photo 5. Colored flags in use following fall bird migration and removal of netting.

This operating plan will be updated whenever a significant change in operations occurs and annually thereafter. See Appendix A to this plan for the Facility Modification Checklist (FMC) to be used when updating this plan. Changes that should be recorded on the FMC include facility modifications, updates to the Operating Plan, permit reporting information. Whenever the FMC is filled out, it will be forwarded to COGCC with a Form 4, Sundry Notice, for approval.

An Annual Review of Operations will be provided to COGCC by December 31st each year that the facility is in operation. This review will summarize operations for the year and will include the volume of produced water handled at the facility, volume of produced water disposed of, and any results from surface and groundwater monitoring.

A. Method of Treatment and Loading Rates

The water to be stored in the McIntyre Pits will initially be comprised of a mixture of fresh water from the Bainard Reservoir No. 1 Augmentation Plan and produced water from several of SG Interests' wells in the area. A list of these wells and water analysis reports for the listed wells is attached to this application. Fresh water will be added as necessary utilizing the Bainard Reservoir No. 1 Augmentation Plan. SG re-built the existing Bainard Reservoir No. 1 and obtained an Augmentation Plan through State Water Court to use this water for commercial/industrial purposes.

When water is drawn from a pit to be used for completing a well, it will be filtered (filter model # SWD10R29.50P or similar) before use in completing the well and the resulting flowback water will be filtered also. These filters are designed to remove solids, coal, hydrocarbons, and sediments. The filters have a polypropylene core and yarn. The filter sock measures 7.5"W X 32"L and the cartridge measures 2.0"W X 29"L. Filtration will be with a two stage filter system. In the first stage, the water is filtered through twelve 20-micron filters. In the second stage, it passes through twelve 10-micron filters. The micron sizes of the filters were selected to capture a wide range of particle sizes from bacterial body mass to hydrocarbons and fines. The effectiveness of the filter sizes is evaluated periodically by water sampling and testing. The 20 and 10 micron filters are contained at a filter pod. SG will have two of these filter pods for the pit water. A gauge measures the water pressure at each side of the filters (before filtration and after) within a pod. When the pressure differential reaches 12 pounds, the flow of water is switched to the second filter pod. At this point the filters in the first pod are changed. SG anticipates changing the filters daily during loading periods. Used filters are disposed of at a landfill. Water is then piped back into the pits for storage until it is reused. Filter systems may be located on individual well locations or at the pit facility. If it is necessary to change the filter type or size, SG Interests will notify COGCC via Form 4, Sundry Notice. When the pits are being filled, water will flow into them at the rate of about 3,000 barrels per day. Water in the pits will be treated as necessary to prevent bacteria buildup using biocide developed for that purpose. Dead bacteria are filtered out of the water when the water is drawn from the pits for reuse. Bacteria treatment will prevent odor from emanating from the pits.

B. Dust and Moisture Control

Dust on the staging area adjacent to the pits and pit access roads will be controlled by application of fresh water as needed to keep dust down. SG expects dust treatment to be needed infrequently because trucks will not ordinarily be used to transport this water. There will be no dust or moisture control needed for the pits themselves.

C. Sampling

As new wells begin producing and are included in the list of wells contributing produced water to the pits, they will be added to the list of wells by Sundry Notice. Water analyses for this produced water will be included with this form. As new wells are completed and contribute flowback water to the pits, these new wells will also be added to the list of wells through a Sundry Notice. Once flowback water has been added to the pits, analytical water testing will be conducted of the pit water (as per Linda Spry-O'Rourke's email dated October 7, 2010 and attached to this plan). Analytical testing will be conducted four times per year of the pit water. The results of this testing will be included with the Sundry Notice within three months of testing. The current list of wells and analytical test results for this produced water are in Attachment H of the permit application.

There are no water wells used by members of the public for drinking water within one mile of the flowback pits. The State Engineer's Office shows one water well about two miles to the northeast of Flowback Pits #3 and #4 (water well permit #263115). This well was not located in the field when water well sampling was conducted in 2010. Instead the landowners allowed access to the spigot from which they draw water. The source of this water is a spring box located off their property. This water (from spigot, not from water well) was sampled and tested (WQ 11-90-13 #2, Figure 1). The second spring box that was tested is WQ 11-90-27 #1 (Figure 1). Surface water in the vicinity of the

pits has also been collected and tested. Shallow groundwater and surface water have been tested and analyzed according to the parameters listed in Table 910-1. There are six water quality sampling locations associated with this project (Figure 1). Samples collected from shallow groundwater and surface water sites shown in figure 1 will be tested for the following (post baseline):

GC/MS

ANALYTE	CAS
Benzene	71-43-2
Ethylbenzene	100-41-4
Toluene	108-88-3
Xylenes, Total	1330-20-7

All EPA 8260.

Metals Analysis

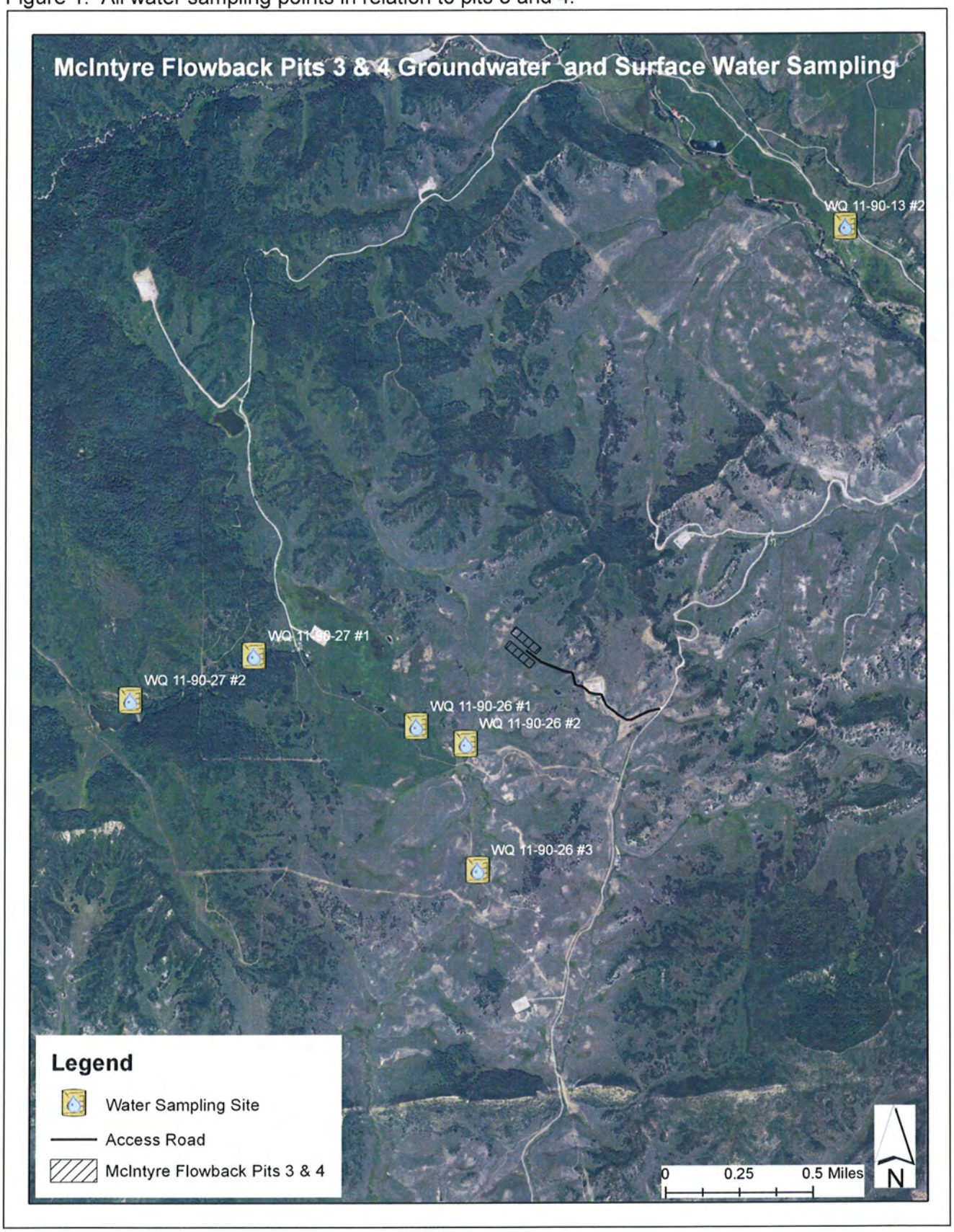
ANALYTE	CAS
Calcium	7440-70-2
Iron	7439-89-6
Magnesium	7439-95-4
Manganese	7439-96-5
Potassium	7440-09-7
Selenium	7782-49-2
Sodium	7440-23-5

Wet Chemistry

ANALYTE	CAS
Bromide	7726-95-6
Chloride	16887-00-6
Conductivity @25C	
Fluoride	16984-48-8
Nitrate as N, dissolved	14797-55-8
Nitrate/Nitrite as N, dissolved	10034
Nitrite as N, dissolved	
pH	10034
Residue Filterable (TDS) @180C	
Sodium Absorption Ratio in Water	
Sulfate	14808-79-8

The complete water sampling and testing database is maintained at SG Interests' Durango office (1485 Florida Road, C202, Durango, CO 81301). This water testing provides a baseline of water quality in the area prior to construction and filling of the pits. Once the pits are operational, testing of the shallow groundwater and surface water will be conducted during the season following initial filling of the pits, on the third year of use, and on the sixth year of use. Sampling of surface water and shallow groundwater sites for TDS will be conducted twice per operating season annually while the pits are in use. If the leak detection system shows there has been a leak in the primary liner or if TDS levels in the water test locations are elevated, additional analytical testing of the surface and shallow groundwater sites will be conducted as per COGCC requirements. The groundwater monitoring wells described in Attachment 13 of the permit application will be checked for a change in water level and/or elevated TDS monthly during the summer use period of the pits. During winter shut-down, the monitoring wells will be checked for a change in water level and/or elevated TDS every other month. All test results will be provided to the COGCC within three months of sampling. SG Interests will report confirmed leaks in pit liners to COGCC immediately.

Figure 1. All water sampling points in relation to pits 3 and 4.



SG Interests has designed the flowback pit facilities to protect water resources. This project includes a liner system that consists of two synthetic liners separated by geonet, which are set on a protective geomat set over a smooth ground surface. This liner system has a leak detection system, which SG will use to discover any leak that has occurred in the primary liner before it can reach the ground surface below the pit. This liner and leak detection system has been installed in pits that were constructed entirely in cut soils, therefore the risk of pit wall failure was minimized. The facility includes appropriately designed drainage features to prevent water from overflowing the pits due to a precipitation event or snow build up. The PE-stamped drainage plan for the facility includes all relevant details (see attached As Built Conditions drawings for details). These features are designed to prevent leaks from the facility, but shallow groundwater and surface water monitoring sites have been identified in this permit application to verify that these waters are not being contaminated by any fluids stored at the facility. The water collected at these sites has been analytically tested. Over the life of the pits, the monitoring test results can be compared to their baseline test results as well as to analytical test results for the flowback pit water in order to verify that contamination of ground and surface waters has not occurred.

D. Inspection and Maintenance

Daily inspection at the facility will include visual inspection of the entire facility for any readily apparent problems. This will include watching for leaks in any equipment, damage to any fencing or netting, and checking the integrity and capacity of secondary containment systems. All equipment will be inspected weekly in greater detail. This weekly inspection will include checking fluid levels, safety features, etc. for all motorized equipment on site. Inspection of the pit liners will occur on a quarterly basis and after any object has contacted the liner (Appendix D).

The pits have been designed with leak detection systems between the primary and secondary liners. The leak detection system will be monitored regularly for water accumulation between these two liners. The leak detection system will be inspected in the spring prior to refilling of the pits, weekly through the active use season, and monthly during the winter shut down period. Prior to putting the pits into use each season, SG will fill each pit to eight feet with water (as measured from the base of the pit) in order to test the liners and liner welds. The pits will then be monitored for 72 hours to determine whether or not there are leaks in the liner. If low volumes of water accumulate between the primary and secondary liners, the rate at which it is accumulating will be noted. This water could be the result of condensation, precipitation flow between the liners via the liner vents, or permeation of fluid through the primary liner (in the absence of a leak or hole in the liner). In 2012 water did not accumulate between the primary and secondary liners during the pressure test. If a leak is confirmed between the primary and secondary liners, SG Interests will draw down the fluid in that pit. The water in the subject pit will be removed to a non-leaking pit through steel or poly pipe, a commercial disposal well or facility by truck, or a deep water disposal well through steel or poly pipe. SG Interests will refrain from using that pit until the liner has been repaired by a certified liner technician. The pit will be refilled and tested for leaks before using. The pressure test will be performed annually before the pits are used for produced water or flowback fluid storage.

Water levels in the pits will be monitored daily. At least two feet of freeboard will be maintained in the pits at all times. The pit liner will be marked at the two foot depth line so that the inspector can easily verify that the water is being maintained at the correct depth. The pits will be covered with bird netting when the pits are in use. This netting will be monitored daily and maintained in proper working condition when in use. During winter shutdown, the netting will be pulled back from the pits so that snow loads do not destroy the netting. The fence surrounding the pits will be inspected visually daily and repaired as needed to keep livestock, wildlife, and unauthorized persons from entering the pit site.

Any abnormalities that are noticed during any inspection will be reported to the Field Superintendent immediately so that any necessary follow-up can be scheduled.

E. Emergency Response (908.b.11)

SG Interests has a 24-hour emergency answering service that will allow the Field Superintendent to be notified of any emergency situation related to the McIntyre Flowback Pits. Table 1 below lists the personnel, positions, duties, and contact information for all relevant personnel associated with the flowback pits.

Table 1: Contact Information for key personnel

Name	Contact	Position	General Duties	Specific Duties Related to Flowback Pits
24-Hour Answering Service	866-261-9766			Will immediately notify the field superintendent or his replacement in the event of an emergency situation related to the flowback pits
Shaun Gordy	Office: 713-333-6522	Vice President, Operations	Manager of company operations	Can commit resources to pit activities and can appoint new personnel duties under this emergency response plan
Dennis Beasley	Office: 970-929-5313 Mobile: 505-947-3564	Field Superintendent	Manager of field operations.	Authority to initiate emergency response actions, oversees all work done on the pits including maintenance, monitoring, and pit closure
Eric Sanford	Office: 970-385-0696 Mobile: 970-259-2759	Operations and Land Manager	Oversees operations, coordinates with landowners	Coordinate and communicate activities with agencies and landowners
Brian Kimball	Office: 970-929-5313 Mobile: 970-424-7664	Lease Operator	Responsible for daily operations of wells, water transportation, and water disposal facilities.	Will conduct the daily monitoring of the pits and associated facilities
Brent Bizer	Office: 970-929-5313 Mobile: 970-589-3187	Lease Operator	Responsible for daily operations of wells, water transportation, and water disposal facilities.	Will conduct the daily monitoring of the pits and associated facilities
Catherine Dickert	Office: 970-385-0696 Mobile:970-209-6464	Environmental and Permitting Manager	Oversee environmental permitting and reporting requirements	Coordinate with agencies, environmental subcontractors for monitoring and compliance.
Eric Petterson, URS	Office: 303-694-2770 Mobile: 970-309-4454	Consulting environmental scientist	Performs water and soil testing and reporting.	Will conduct testing of surface and ground water in vicinity of pits. Will conduct stormwater compliance inspections.

Table 2: Emergency Personnel

Responder	Contact
Gunnison County Emergency Dispatch	970-641-8000
Air Life @ St. Mary's Hospital	970-244-2551 800-332-4923
Colorado State Patrol	970-249-4392
Gunnison County Sheriff	970-641-1113

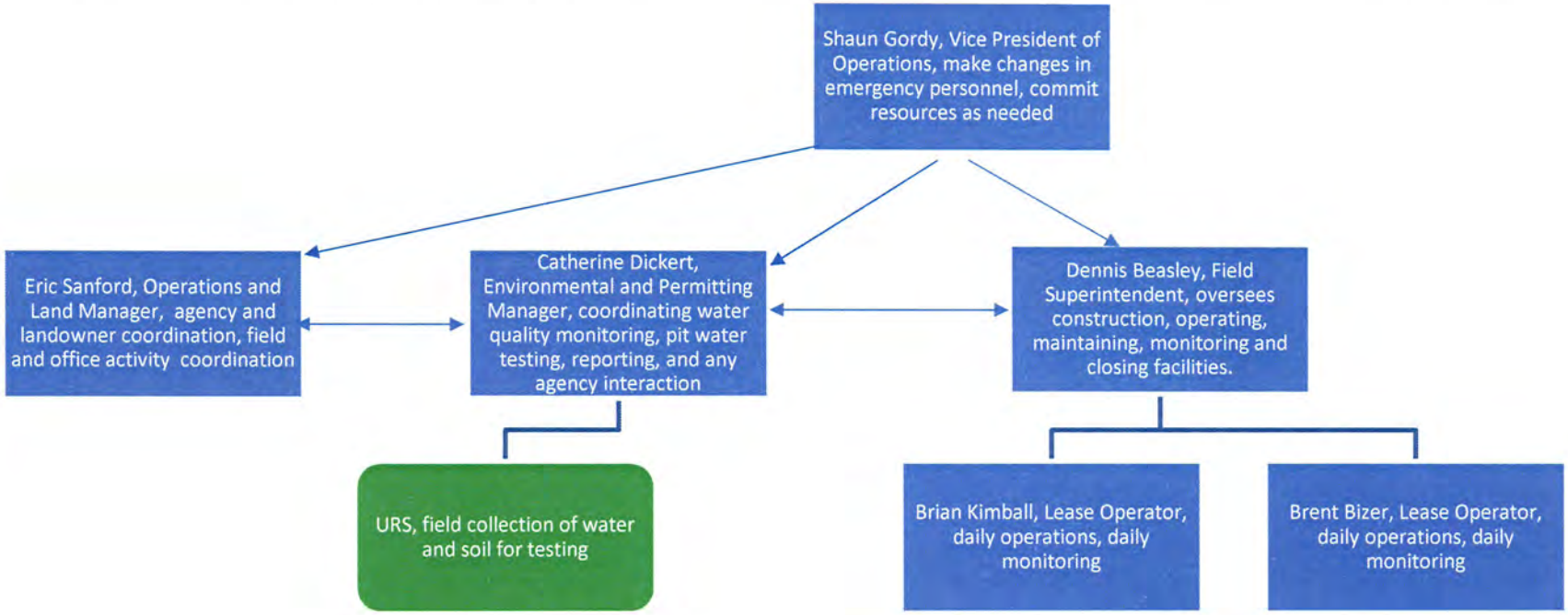
The produced water that will be pumped into the pits from producing wells in the gas field is low in hydrocarbon content. The filter system that will be used to treat water before it is put into the pits will remove most of the hydrocarbons that are present. The low hydrocarbon content of the pit water reduces the risk of fire in the pits.

Prior to moving equipment to the project site, all equipment will be checked for leaks and drips, and any necessary repairs will be completed prior to removal from the contractor yard. In addition, all vehicles will be inspected for leaks regularly throughout their use. In the event that a leak is found, equipment will not be allowed to operate until all leaks have been repaired. Construction equipment requiring maintenance that might result in the draining or leaking of fluids will be serviced only after a 12 mil plastic liner has been installed between the equipment and the soil. This liner must be placed in such a manner that all fluid is contained.

Personnel associated with this project will receive training in spill prevention and response according the SG Interests' spill plan for the facility. The plans titled "SG Interests, I Ltd. Integrated Spill Prevention, Control and Countermeasures Plan" and "McIntyre Pits 3 and 4 Flowback Facility, Facility Response Plan, 40 CFR Part 112.20" are being provided to COGCC with this revision and are kept on file at SG Interests' Somerset field office.

Responsibilities Flow Chart

The following flow chart illustrates the responsibilities of the various personnel associated with this facility. These activities include operating, maintaining, monitoring, and closing the facility.



Chemicals Stored and/or Used on Site

In the case of a spill of any chemical at the McIntyre Pit site, the Spill Prevention, Control, and Countermeasures Plan should be consulted. There are two chemicals that SG expects to use on site; a biocide (Tolcide PS20A) and an anticorrosive agent (Enercept EC1317A). The Material Safety Data Sheets (MSDS) for these two chemicals are attached to this plan. MSDS sheets for the components of the water filters are also attached. The Emergency Overview sections of these sheets will be reviewed prior to facility start up by all employees who will work on site. As new employees begin work at the site, they too will familiarize themselves with the safety information in these data sheets. These employees will receive spill plan training according to the schedule identified in the spill plan.

The two chemicals that may be used in the pits will not be stored at the facility. If small quantities of chemical are required for treatment, they will be brought to the facility in approved containers that are properly placarded and marked with MSDS. Larger quantities of these chemicals will be delivered to the facility by truck. These trucks will be permitted and placarded for hazardous materials as necessary.

If it is necessary to store fuel on site, it will be contained in an approved container and will have secondary containment in the event of a spill or leak. Fuel for the equipment at the facility will be transported to the location by fuel truck. The connection between the equipment fuel tank and the fuel truck hose will be within the area covered by the secondary containment system for that equipment.

Water that cannot be used for completing wells and cannot be stored at the pits, will be transferred to the water disposal well via pipeline or truck for disposal.

In the event that evacuation of the site is required, all personnel should immediately leave the pit site and report to the Federal 24-2 well pad. At this point, a head count of all personnel will be conducted to make sure everyone has left the facility. Under normal circumstances, only one or two truck drivers or personnel monitoring the pits will be on site at the same time.

F. Record-keeping

Record-keeping will be composed of the following elements: date water was transported, method of transportation (truck or pipeline), approximate volume of water, source of water, and number of the pit to which the water was transported. If the water is transported by truck, the name of the trucking company will be included in the records (checklist in Appendix D). SG will also maintain records to support the FMC and Annual Reports described at the beginning of this plan. These records will be kept by SG Interests for five years following final closure of the facility. All records will be made available to COGCC upon request.

G. Site security

The site is secured with an 8' high field style fence. The fence is designed to keep livestock and wildlife out of the facility. It is made of woven wire with a t-post every 10 feet and a wooden post every 50'. A string of barbed wire along the top of the fence deters humans from climbing over the fence. The fence completely surrounds the pits. The gate at the access road/staging area entrance is also 8' high. This gate will be kept closed when not in use. There is currently a gate on the access road to the Narrows Road (a private gas well access and ranch road) where it intersects County Road 265. Two additional gates will be added to the route to the pits; one at the entrance to the Federal 11-90-26 #1 well pad and the other on the pit access road at the Aspen Leaf Ranch/Rock Creek Ranch property line. These steel gates will be locked with combination locks. There are no cattle guards planned for this project. The gate to the facility is kept closed to prevent livestock access. The facility will be manned during all pumping operations.

H. Hours of Operation

The pits could be in use 24-hours per day during the warm weather months in which they are operational. Normal operating hours will be approximately 0630 to 1730 each day. During the winter

season, the pits will not be used, but will be inspected daily for any problems with liner integrity, fluid level, etc. Winter daily visits will be made in all weather. Snow mobiles are available for access in the event the road has not been plowed. SG Interests plans to keep the road plowed to the facility throughout the winter.

I. Noise and Odor Mitigation

Most of the water stored in the pits will be delivered and removed for reuse via pipeline. Transportation of water to and from the pits by pipeline will be significantly quieter than transportation by truck. The facility will meet COGCC's Light Industrial noise standard (Rule 802.c) 350' from the source. This standard is applicable to remote locations such as this where the operator owns the surface property (Rock Creek Ranch I Ltd. is an entity associated with SG Interests I Ltd). Odor will be mitigated by use of biocide to keep the water clean and reduce populations of bacteria in the pits that would otherwise produce odors. The biocide Tolcide PS20A will be used in place of Nalco's EC6106A, which was the MSDS submitted with the original application for this facility (Tolcide PS20A's MSDS is attached to the 2013 annual update for this facility).

J. Final Disposition of Waste

When the water level is drawn down at the end of the operational season and when the pits are no longer needed, the water will be disposed of at one of SG Interests' water disposal wells. Currently, there is one disposal well permitted near the pit locations; Federal #24-2 WDW (05-051-06084). SG Interests plans to permit and construct additional water disposal wells in the Bull Mountain Unit. These wells will be submitted for pre-approved use by this facility on a Form 4, Sundry Notice. This change will also be noted on a FMC (FMC change provided to COGCC by Form 4, Sundry Notice. Currently, SG Interests is permitting the Eck #2 WDW as a disposal well in the Bull Mountain Unit.

When bottom sediment must be removed from the liner in the pits, it will be suctioned off using a SuperVac or similar vacuum hose system to remove the sediment without damaging the liner. Sediment is not expected to build up to the point where removal is necessary often during the lifetime of the pits, because most solids will be removed from the fluid by filtering the water as it is added to the pits. Sediment removed from the pit bottom will be taken to a certified disposal site. A contracted company will come to the facility and remove and bale the liner for transport. Liners will either be taken to a cogeneration plant for incineration (as would be the case with the geoliner) or transported to a recycling company that uses the recycled liner material to make pallets and other objects. The liner removal company will keep transport and disposal records for COGCC.

Appendix A

Facility Modification Checklist

This checklist must be filled out and submitted to COGCC whenever a change to the facility, operating plan, or permit compliance has occurred. The 2013 modifications, updates, and permit compliance submittals are listed below.

Facility Modifications

Facility Modification	Modification Description or Justification	Date of Modification	Comments	Permit Changes Triggered by Modification?
Replaced bird netting with bird deterrent flags	Will preserve bird nets from snow damage over winter.	10/22/2013		No

Operating Plan Updates

Reason for Update	Date changed	Pages changed	Is revised plan attached?
Removed the standard manifold catchment basin size because there is no standard for this equipment.	12/18/2013	3	Yes
Removed text that said pipes and manifold would be removed from the site for winter shut-down.	12/18/2013	3	Yes
Replaced bird nets with bird deterrent flags for winter. Text in plan was changed to reflect this practice and a photo was included.	12/10/2013	4	Yes
Post baseline water quality analytes listed.	12/20/2013	6	Yes
Initial hydrostatic test of the pit liner systems was conducted with fresh water. Subsequent hydrostatic tests of the pit liner systems will be conducted with fresh water, produced water, flowback water, or a combination of these.	12/10/2013	8	Yes
Removed mention of Action Leak Rate from text because no leakage was detected through the primary liner during the initial hydrostatic test.	12/10/2013	8	Yes
Added inspection forms and checklists.	12/18/2013	8, 12	Yes
Updated contact information.	12/18/2013	9	Yes
Responsibility flow chart updated to reflect current staff.	12/13/2013	11	Yes
Updated biocide used at facility	12/26/2013	12, 13	Yes

Permit Compliance 2013

Permit	Agency	Attachments/Comments
Sundry Notice – Use of flags instead of bird nets	COGCC	-
Sundry Notice – Request for relief from requirement to calculate an action leak rate	COGCC	-
Oil and Gas Operations Permit – Pits Pipeline Project	Gunnison County	-

The 2012 modifications, updates, and permit compliance submittals are listed below.

Facility Modifications

Facility Modification	**Modification Description or Justification**	**Date of Modification**	**Comments**	**Permit Changes Triggered by Modification?**
Finalized drainage plan and constructed accordingly	Drainage plan revised to fit as-built conditions	06/19/2012	As-built drawing attached	No
Changed placement of spoil pile	Spoil quantities were less than predicted	Summer 2011	Pile as shown on as-built drawing	No
Sediment pond location changed	Now located closer to the pad, which creates less disturbance and works better.	Summer 2011	Pond as shown on as-built drawing. Change to spoil pile allowed change to pond location.	No
Pit #3 built 12' deep instead of 14' deep	Wet soil encountered during construction.	Summer 2011	No problems noted with shorter pit. Shown on as-built drawing.	No

Operating Plan Updates 2012

Reason for Update	Date changed	Pages changed	Is revised plan attached?
Annual Update	12/31/2012	Entire document revised to reflect post construction conditions. Planned operations for use of facility were not changed.	yes

Permit Compliance

Tab	Permit	Agency	Attachments/Comments
1	Land Disturbance Permit Pits 3&4	CDPHE	-
2	Resolution #11-26 approving Flowback Pits 3&4	Gunnison County	-
3	Form 4 NOI for fence and netting Pit #3	COGCC	-
	Form 4 NOI for fence and netting Pit #4	COGCC	-
4	Amendment to Resolution #11-26 approving Flowback Pits 3&4	Gunnison County	-
5	Form 4 NOI for temporary poly pipeline Pits 3&4	COGCC	Map of temporary route attached
6	Form 4 Report of work done (Hydrostatic Test of pit #3)	COGCC	Hydrostatic test report attached
	Form 4 Report of work done (Hydrostatic Test of pit #4)	COGCC	Hydrostatic test report attached
7	Form 42 for hydrostatic test of temporary poly line Pits 3&4	COGCC	-
8	Form 4 Report of work done (As-built drawing for Pit #3)	COGCC	Approved/stamped as-built drawing attached
	Form 4 Report of work done (As-built drawing for Pit #4)	COGCC	Approved/stamped as-built drawing attached
9	Renewal of Permit/Certification (Stormwater) Pits 3&4	CDPHE	-
10	Form 4 detailing addition of water sources Pit #3	COGCC	Water analysis attached
	Form 4 detailing addition of water sources Pit #4	COGCC	Water analysis attached
11	Form 4 NOI for pit winterization Pit #3	COGCC	-
	Form 4 NOI for pit winterization Pit #4	COGCC	-
12	Form 4 Report of work done (Water Quality Results) Pits 3&4	COGCC	Water quality results contained in original
13	Form 4 Removal of netting for winter Pit#3	COGCC	-
	Form 4 Removal of netting for winter Pit#4	COGCC	-

Additional Comments:

Appendix B

Annual Review Template

Write a narrative report to be submitted to COGCC that contains at least the following elements:

- a summary of the operations conducted at the facility in the past year
- a list of any FMOCs that were submitted to the COGCC that year
- revised list of wells that contribute water to the pits
- pit water monitoring results for that year
- the volume of water that was recycled into the pits
- the volume and source of fresh water added to the pits
- the volume of produced water injected that year and the disposal well(s) API
- the total volume of water injected that year and disposal well(s) API
- any other waste associated with the pits that was disposed of that year (description of waste, reason it was generated, method of disposal)
- monitoring results from surface water testing from that year
- monitoring results from shallow groundwater testing from that year

This narrative will be submitted to COGCC by December 31st for each year the facility is in operation. The 2013 Annual Review is included below.

SG Interests I Ltd.

Mcintyre Flowback Pits 3 (#418791) and 4 (#418790)

Annual Review December 31, 2013

The pit facility has not yet been used to store produced or flowback water. No completions were conducted using the pits in 2013. There are five changes noted on the Facility Modification Checklist that is being submitted with this annual review. The revised operating plan is also attached to this review.

The list of wells that will contribute produced water to the pit facility has not changed. We expect that the list will be updated once the pit facility becomes operational and additional wells have been completed.

No pit water monitoring was conducted in 2013 for the pits because fresh water and precipitation was stored in the pits this year. The source of this fresh water was Aspen Leaf Reservoir (it was filled in 2012). In August of 2013, the water in the pits was treated for algal growth. Approximately 40,000 BBL of water was circulated between the two pits over a period of a few days in order to clear algae out of the water. The chemical Tolcide PS20A was used to treat the algae. When the treatment was complete, the water levels was approximately equal in each of the two pits; ≈ 92,000 BBL in each.

There was no waste generated by or at the facility in 2013.

Shallow groundwater and surface water monitoring was not conducted in 2013 because the baseline conditions have been set in 2012, and the facility is still not in use.

Appendix C

Daily Surface Poly Inspection Form

Surface Poly Inspection Log

(Poly pipe was not used in 2013. No inspection records exist for 2013.)

Time, Date	Inspector	Result (inc. station)	Outcome

Appendix D

Facility Inspection Forms

McIntyre Flowback Pits 3 & 4 Summer Maintenance Checklist

FREQUENCY
LOCATION
TASK ACTIVITY TYPE

WEEKLY

Facility	Inspection
☐	Check Equipment Fluid Levels
☐	Check Equipment Safety Features
☐	Check Leak Detection System - Check Sump
☐	Check for Fluid Between Liners - If Present, Record and Report TDS

NOTES

BIWEEKLY

Facility	Inspection
☐	Inspect On Site Berms

NOTES

MONTHLY

Facility	Inspection
☐	Downgradient Hillsides below Pits for Fluids
☐	Monitoring Wells for Change in Water Level Or Elevated TDS

NOTES

QUARTERLY

Facility	Inspection
☐	Inspect Liners More thoroughly
☐	Inspect Spill Kit Materials Quarterly OR after use
☐	Check TDS of mapped surface water and groundwater monitoring sites. (Warm Weather Only)

NOTES

DATE: INSPECTOR:

McIntyre Flowback Pits 3 & 4 Summer Maintenance Checklist

FREQUENCY
LOCATION

TASK	ACTIVITY TYPE

DAILY

Facility	Inspection
☐	Check Secondary Containment of Equipment On Site for Fluid
☐	Check Volume of Water in Pits (2' freeboard) - Record Volume
☐	Check Condition of Bird Netting / Flags
☐	Check Condition of Water Filters
☐	Check Dust Generated On Site - Need for watering staging area?
☐	Check Drainage Features for Maintenance
☐	Check Equipment for Leaks
☐	Check Damage to Fencing & Gates

NOTES

DATE: _____ INSPECTOR: _____

McIntyre Impoundment Transfer Ticket

Date:

Water Source:

To Pit #:

Transfer Method: PIPELINE TRUCK Circle One

Truck Company:

Amount:

Note

Employee:

TOLCIDE PS20A

Date Prepared: 10/15/08 **Supersedes Date: 8/15/08**

1. PRODUCT AND COMPANY IDENTIFICATION

RHODIA INC.
RHODIA NOVECARE
CN7500
8 Cedar Brook Drive
Cranbury, NJ 08512-7500 US

Emergency Phone Numbers:
FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC (800-424-9300 within the United States or 703-527-3887 for international collect calls) or Rhodia CAERS (Communication and Emergency Response System) at 800-916-3232.

For Product Information:
888-776-7337

EPA FIFRA Registration Number:
4564-18

Chemical Name or Synonym:
TETRAKIS(HYDROXYMETHYL) PHOSPHONIUM SULFATE; THPS

Molecular Formula:
2(C4H12O4P).O4S

2. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:
colorless to pale pink / liquid, characteristic odor.

Warning Statements:
DANGER! RISK OF SERIOUS DAMAGE TO EYES. HARMFUL IF INHALED. MAY BE HARMFUL IF INGESTED. MAY CAUSE ALLERGIC SKIN REACTION. POSSIBLE DEVELOPMENTAL HAZARD, MAY ADVERSELY EFFECT THE DEVELOPING FETUS (BASED ON ANIMAL DATA).

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:

Expected to cause significant irritation to the eyes. Can cause tearing, pain, burns, permanent damage to the cornea.

Acute Skin:
May cause irritation upon prolonged contact. May cause sensitization.

Acute Inhalation:
Harmful if inhaled. May cause coughing, shortness of breath, chest pain.

Acute Ingestion:
May be harmful if swallowed. May cause nausea, vomiting.

Chronic Effects:
Repeated, prolonged ingestion may cause liver damage, (See Section 11-Chronic for a discussion of animal studies.) In a rabbit study, animals fed this product during pregnancy produced an increase in the numbers of offspring with eye abnormalities and/or minor skeletal variations, only at doses that also caused maternal (parental) toxicity. (See Section 11 for details of chronic studies).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	% WT/WT
TETRAKIS(HYDROXYMETHYL) PHOSPHONIUM SULFATE	55566-30-8	Y	18 - 22

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL:

Eye Exposure:
Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention.

Skin Exposure:
In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

Inhalation:
Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.

Ingestion:
Wash out mouth with water and keep at rest. Seek immediate medical attention. Do not induce vomiting unless instructed to do so by a physician.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate existing skin disease.

NOTES TO PHYSICIAN:
All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Treat symptomatically. No specific antidote available.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point:
Not Applicable

Extinguishing Media:
Recommended: water fog, carbon dioxide, dry chemical, foam.

Special Fire Fighting Procedures:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind; keep out of low areas. Evacuate residents who are downwind of fire.

Unusual Fire and Explosion Hazards:
Containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Hazardous Decomposition Materials (Under Fire Conditions):
oxides of sulfur
oxides of phosphorus
oxides of carbon

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:
Ventilate closed spaces before entering. Personnel handling this material should be thoroughly trained to handle spills and releases. Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. Evacuate and isolate spill area.

Containment of Spill:
Stop leak if it can be done without risk. Dike spill using absorbent or impervious materials such as earth, sand or clay. Dike area to prevent runoff. Collect and contain contaminated absorbent and dike material for disposal.

Cleanup and Disposal of Spill:
Recover material, if possible. DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER. Absorb with an inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. Collect washings for disposal. The material should be properly packaged and disposed of in compliance with applicable regulations. Decontaminate tools and equipment following cleanup.

Environmental and Regulatory Reporting:
Do not flush to drain. Runoff from fire control or dilution water may cause pollution. Prevent material from entering public sewer system or any waterways. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Not Available

Handling:
Personnel handling this product should be thoroughly trained as to its hazards. Do not get on skin or in eyes. Do not breathe vapors and mists. Avoid direct or prolonged contact with skin and eyes. Use only as directed.

**
HAZARD WARNING!This product belongs to a chemical family that HAS BEEN TESTED in combination with Trimethylolpropane , Trimethylolpropane derived products or their corresponding Trimethylolpropane homologs for toxicity of the thermal decomposition products in the absence of flame. Products in this chemical family PRODUCED OBSERVABLE ADVERSE HEALTH EFFECTS in laboratory animals. There is a possibility that this thermal decomposition produces bicyclic phosphates and/or phosphites. Bicyclic phosphates and phosphites have acute neurotoxic properties and may cause convulsive seizures in laboratory test animals. Therefore, this product should not be used in conjunction with Trimethylolpropane or Trimethylolpropane derived products unless tested to determine their decomposition toxicity. Follow all precautionary measures outlined in this Material Safety Data Sheet and/or contact Rhodia Inc.

Storage:
Store in an area that is clean, cool, dry, well-ventilated, Store away from; bases, oxidizers, reducing agents, Store in tightly closed containers. Container material to avoid: ordinary steel, Recommended container material: high density, high molecular weight polyethylene containers. Store in original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:
Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

TETRAKIS(HYDROXYMETHYL) PHOSPHONIUM SULFATE

	Notes	TWA	STEL
ACGIH		2 mg/cu m	

Engineering Controls:
Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

Respiratory Protection:
When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Eye/Face Protection:
Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area. Face contact should be prevented through use of a face shield.

Skin Protection:
Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:
Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
(2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
(3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance:
colorless to pale pink / liquid.

Odor:
characteristic odor.

pH:
3 to 6 at 100 wt/wt%.

Specific Gravity:
Not Available

Density:
1.08 to 1.13 g/ml at 25 C (77 F).

Water Solubility:
soluble

Melting Point Range:
Not Available

Freezing Point Range:
0 C (32 F)

Boiling Point Range:
108 C (226 F) at 759 mmHg

Vapor Pressure:
Not Available

Vapor Density:
Not Available

Octanol/Water Partition Coefficient:
Not Available

Molecular Weight:
406.3

10. STABILITY AND REACTIVITY

Chemical Stability:
This material is stable under normal handling and storage conditions described in Section 7.
Under unusual conditions, such as very high temperatures and/or in the presence of strong reducing agents, the product may break down to form hazardous decomposition products noted below. The customer is advised to seek further advice from Rhodia Water Technical Service personnel when considering such applications.

Conditions To Be Avoided:
heat
Temperatures above 160C.
See HAZARD WARNING under HANDLING : in Section 7.

Materials/Chemicals To Be Avoided:
strong bases
strong acids
strong oxidizing agents
strong reducing agents

Decomposition Temperature Range:
> 160 C (320 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
oxides of sulfur
oxides of phosphorus
oxides of carbon
phosphine gas

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:
not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:

Toxicological Information and Interpretation
eye - eye irritation, rabbit.
Severely irritating. This material is expected to cause significant irritation to the eyes.

Acute Skin Irritation:

Toxicological Information and Interpretation
skin - skin irritation, rabbit.
Minimally irritating. This material is not expected to cause significant irritation to the skin.
skin - sensitization, guinea pig.
Sensitizing. May cause significant allergic skin reaction.

Acute Dermal Toxicity:
The following data is for similar or related products.

Toxicological Information and Interpretation
LD50 - lethal dose 50% of test species, > 2000 mg/kg, rat.
Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.

Acute Respiratory Irritation:
No test data found for product.

Toxicological Information and Interpretation
lung - lung irritation (qualitative), **.
This material is not expected to cause significant irritation to the respiratory tract.

Acute Inhalation Toxicity:
The following data is for similar or related products.

Toxicological Information and Interpretation
LC50 - lethal concentration 50% of test species, 0.59 mg/l/4 hr, rat.
Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.

Acute Oral Toxicity:
The following data is for similar or related products.

Toxicological Information and Interpretation
LD50 - lethal dose 50% of test species, 575 mg/kg, rat.
Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.

Chronic Toxicity:
This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

The following data is for similar or related products.

Toxicological Information and Interpretation
- REPRODUCTIVE TOXICITY, rat.
No impairment of fertility was observed in a two generation feeding study. Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.
- CARCINOGENICITY, **.
There was no evidence of carcinogenicity in F344/N rats and B6C3F1 mice (both sexes) dosed by gavage at 5 or 10 mg THPS/kg/day for 2 years. [ref. NTP study report TR296, 1987].

- MUTAGENICITY, **.
Ames Test: Negative.
- MUTAGENICITY, **.
Chinese hamester ovary cells (chromosomal aberrations): Positive.
- TERATOGENICITY, **.
A developmental toxicity study in rabbits resulted in statistically significant developmental effects in offspring, principally including eye malformations, hydrocephaly and skeletal variations, at doses that also caused maternal (parental) bodyweight gain reduction. The No Observed Effect Level (NOEL) for development toxicity and maternal toxicity (rabbit) = 18 mg/kg/day. A developmental toxicity study in rats showed a statistically significant increase only in one skeletal variation (supernumary ribs), at doses that also caused maternal toxicity. The No Observed Effect Level for development toxicity (rat) = 30 mg/kg/day; No observed effect level for maternal toxicity (rat) = 15 mg/kg/day. Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate. Medical surveillance for over 30 years of employees in our manufacturing facility has shown no evidence of developmental toxicity from long-term exposure nor from exposure following an acute incident, for example, a major or minor spillage.
- MUTAGENICITY, **.
Dominant Lethal Assay [rat] (in vivo): Negative.
- MUTAGENICITY, **.
Mouse micronucleus (in vivo): Negative.
- MUTAGENICITY, **.
Unscheduled DNA synthesis assay: Negative. Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.
- SUB-CHRONIC EXPOSURE, 1 mg/kg/90 days, rat.
Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:
The following data is based on the technical grade active ingredient(s) (TGAI).

Ecotoxicological Information and Interpretation:
LC50 - lethal concentration 50% of test species, 19.4 mg/l/48 hr, freshwater invertebrate Daphnia magna (water flea).
LC50 - lethal concentration 50% of test species, 93 mg/l/96 hr, fish: Lepomis macrochirus (Bluegill sunfish).
LC50 - lethal concentration 50% of test species, 119 mg/l/96 hr, fish: Oncorhynchus mykiss (rainbow trout).
LC50 - lethal concentration 50% of test species, 86 mg/l/96 hr, fish: juvenile plaice (Pleuronectes platessa).
LC50 - lethal concentration 50% of test species, 340 mg/l/96 hr, shrimp: Farfantepenaeus aztecus (brown shrimp).
LC50 - ecotox Method for association with dry sediment weight., 2174 mg/kg/10 days, shrimp: Corophium volutator (mud shrimp).
(dry sediment weight).
LD50 - lethal dose 50% of test species, 311 mg/kg, Mallard duck (Anas platyrhynchos).

Material tested was a 75% aqueous solution of Tetrakis (hydroxymethyl) phosphonium sulfate.

Chemical Fate Information:
Product is not expected to bioaccumulate. THPS has been shown to degrade rapidly once diluted to sub-ppm concentrations and forms trishydroxymethyl phosphine oxide which is classified as non-toxic.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

EPA Hazardous Waste - NO

14. TRANSPORT INFORMATION

Transportation Status: IMPORTANT! Statements below provide additional

data on listed transport classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US DOT:
Shipping Name: NOT REGULATED

TDG:
Shipping Name: NON DANGEROUS

IMO:
Shipping Name: NOT REGULATED

IATA:
Shipping Name: NOT REGULATED

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	E

CANADA (DSL)	N
EUROPE (EINECS/ELINCS)	P
AUSTRALIA (AICS)	N
JAPAN (MITI)	N
SOUTH KOREA (KECL)	N

Y = All ingredients are on the inventory.
E = All ingredients are on the inventory or exempt from listing.
P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

FEDERAL REGULATIONS

Inventory Issues:
This product is excluded from TSCA because it is solely for FIFRA regulated use.

SARA Title III Hazard Classes:
Fire Hazard - NO
Reactive Hazard - NO
Release of Pressure - NO
Acute Health Hazard - YES
Chronic Health Hazard - YES

STATE REGULATIONS:
This product contains the following components that are regulated under California Proposition 65:

Ingredient Name	Cancer List	Reprod. List	No Sign. Risk Lvl (ug/day) California	RHODIA
FORMALDEHYDE	Y	N	40	ND

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings--NFPA(R):
2 Health Hazard Rating--Moderate
0 Flammability Rating--Minimal
1 Instability Rating--Slight

National Paint & Coating Hazardous Materials Identification System--HMIS(R):
2 Health Hazard Rating--Moderate
0 Flammability Rating--Minimal
1 Reactivity Rating--Slight

Reason for Revisions:
Change and/or addition made to Section 12.

Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissable Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not determined
RHODIA - Rhodia Established Exposure Limits

Disclaimer:
The information herein is given in good faith but no warranty, expressed or implied, is made.

End Of MSDS Document

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GUNNISON COUNTY, COLORADO

OIL AND GAS OPERATION PERMIT NO. OG2013-02

LIMITED IMPACT OIL AND GAS OPERATION SG INTERESTS I, LTD

ADMINISTRATIVE REVIEW CERTIFICATION NO. 21 SERIES 2013

AN ACTION APPROVING AN OIL AND GAS OPERATION FOR THE MCINTYRE FLOWBACK PITS 3 & 4 GAS AND PRODUCED WATER PIPELINES LOCATED WITHIN SECTIONS 25 & 26, TOWNSHIP 11 SOUTH, RANGE 90 WEST, 6TH P.M. GUNNISON COUNTY, COLORADO

WHEREAS, SG Interests I, Ltd. submitted an application for an Oil and Gas Operations Permit for the construction of the McIntyre Flowback Pits 3 & 4 gas and produced water pipelines. The gas and produced pipelines will connect the Hotchkiss Lateral pipelines to the McIntyre Flowback Pits 3 & 4, a distance of approximately 3,120 feet; and

WHEREAS, Section 1-103 E.1. of the *Gunnison County Colorado Regulations For Oil and Gas Operations* defines a process of review of Oil and Gas Permit Applications for Limited Impact Oil and Gas Operations as Administrative Review. After a review of the relevant facts related to the proposed Oil and Gas Operation with the *Temporary Regulations for Oil and Gas Operations*, the Gunnison County Community Development Department finds the following:

Findings:

1. No substantive issues have been raised in the review of the application.

2. Comments were received from Brian Magee, Colorado Parks and Wildlife, via email on May 17, 2013, noting that: *"CPW has reviewed the project proposal by SG for the McIntyre Pit Pipelines. We do not anticipate potential significant impacts to wildlife and /or wildlife habitat from the project as described, and therefore do not have any comment on the project with respect to wildlife resources."*

3. The proposed pipeline route will follow approved roads. No comments were received from Gunnison County Public Works.

4. No conditions have been identified or imposed by the Colorado Oil and Gas Conservation Commission or federal agencies.

5. The Oil and Gas Operation, without mitigation, in its proposed location is unlikely to have any significant adverse impacts to the County taking into consideration of and being substantially in compliance with the standards in *Section 1-108: Oil and Gas Operations Standards, Gunnison County Colorado Regulations for Oil and Gas Operations.*

6. Site specific Best Management Practices have been included in the application and will be incorporated into the Oil and Gas Operation.

7. The pipeline alignment has been located, to the maximum extent feasible, to avoid crossing water bodies. However, the installation of the pipelines will cross a drainage between the McIntyre Pits and the Hotchkiss Lateral that contains wetlands. Crossing of the drainage may require the applicant to obtain a permit from the U.S. Army Corp of Engineers.

8. The application was properly noticed and documentation is contained within the project file.

9. One public comment was received from Joe Sperry, dated May 16, 2013, in which he stated his support of the requested project.

10. This review and Decision incorporates, but is not limited to, all documentation submitted to the County and included within the Community Development Department file relative to this application; including all exhibits, references, and documents as included therein.

Conditions of Approval:

1. This permit is limited to the activities described within the application and as depicted on maps and plans submitted as part of this application. Expansion or change of this use will require submittal of an application for an amendment or a new permit, in compliance with the applicable requirements of the *Gunnison County Colorado Regulations for Oil and Gas Operations.*

2. The applicant shall provide a copy of any required state or federal agency permit to the Gunnison County Community Development Department.

3. This permit may be revoked or suspended if Gunnison County determines that any material fact set forth herein or represented by the applicant was false or misleading, or that the applicant failed to disclose facts necessary to make any such fact not misleading.

4. Approval of this use is based upon the facts presented and implies no approval of similar use in the same or different location and/or with different impacts on the environment. Any such future application shall be reviewed and evaluated, subject to its compliance with current regulations, and its impact to the County.

NOW, THEREFORE, Oil and Gas Operation Permit No. OG2013-02, is approved as a Limited Impact Oil and Gas Operation and is so certified by the undersigned.

THIS CERTIFICATION AND THE PERMIT GRANTED HEREBY shall not be effective unless and until a copy is recorded in the Office of the Clerk and Recorder of Gunnison County.

/s/
Neal Starkebaum
Assistant Director
Gunnison County Community Development Department

ATTEST:

Gunnison County Clerk and Recorder

GUNNISON COUNTY SEAL COLORADO

McIntyre Flowback Pits 3 & 4 Pipelines

SG Interests I Ltd.

SG INTERESTS I, LTD.

SG Interests I Ltd.

McIntyre Flowback Pits 3 & 4 Buried Pipelines Project

1) Applicant:

SG Interests I, Ltd.
1485 Florida Road, C202, Durango, CO 81301
Phone: 970-385-0696
Fax: 970-385-0636
Email: cdickert@sginterests.com

2) Surface Ownership

Rock Creek Ranch I, Ltd.	Aspen Leaf Ranch, Inc.
100 Waugh Drive, Suite 400,	4956 Old Wagon Road,
Houston, Texas 77007	Delta, CO 81416
Phone: 713-951-0100	Phone: 970-929-5201 and 303-756-9601
Fax: 713-951-0191	Fax: NA
Email: tspeck@sginterests.com	Email: aspenmor@aol.com
Distance on property: 720'	Distance on property: 2,065'

Gunnison County GIS contains incorrect ownership information; please see Attachment 1 for documentation of surface ownership and evidence of surface owner authorization. We depict surface ownership in the area surrounding the project on the vicinity map and site plan map (items 8 and 9 below). Our spatial data are based on legal descriptions taken from assignments of real property that were then recorded in the field using survey equipment. Maps of these two parcels with corrected property lines are included in Attachment 1.

3) Mineral Owner

This project does not affect mineral ownership. It is a surface disturbance only.

4) Parcel Location

Parcel	Legal Description	Property Location
Rock Creek Ranch I, Ltd. (parcel # 2921-000-00-033)	T11S R90W 6th PM: Sec 2: lot 12 Sec 10: SESE, E/2SW/4SE/4 Sec 11: Lots 3, 4, 8, 9, 10, SWSW Sec 13: lots 5, 11, 12, 13, S/2SW/4 Sec 14: lots 2, 3, NE/NW, S/2NW/4, SW/4, SWNE, NW/NW, SE/4 Sec 15: E/2NW/4NE/4, SW/4NW/4NE/4, S/2NW/4NW/4NE/4, W/2NE/4NE/4, NE/4NE/4NE/4, N/2SE/4NE/4NE/4, N/2N/2SW/4NE/4, SE/4NE/4NW/4, N/2NE/4SE/4NW/4, S/2NE/4NE/4NW/4 Sec 23: lots 1, 2, 3, 6, 7, NE/4, N/2NW/4,	918 County Road 265, Upper Muddy

	Rock Creek Ranch description continued SE/4NW/4, N/2SE/4, SE/4SE/4 Sec 24: all (except as on deed) HES 257, HES 268, HES 269, HES 270, HES 312, HES 258, and HES 80	
Aspen Leaf Ranch, Inc. (parcel # 2921-000-00-020)	T11S R90W 6th PM: Sec 25: W/2NW/4, W/2SW/4, SE/4SW/4 Sec 26: SE/4NE/4, SE/4, lots 1, 2, 3, 4, and 5 Sec 27: W/2NE/4, lots 1 and 2 Sec 22: NW/4SE/4, lots 1, 2, and 3 Sec 23: Lots 4 and 5 H.E. Survey No. 70	3093 County Road 849, Upper Muddy

See Attachment 1 for copies of the recorded deeds.

5) Identification of Previously Approved Uses

The pipeline route will start at the Hotchkiss Lateral (Pipeline Easement Agreement #563183, February 28, 2006 recorded on parcel # 2921-000-00-020), pass through the Federal 11-90-26 #1 well pad (Gunnison County permit #OG2006-12), and terminate on the McIntyre Flowback Pits 3 & 4 location (Gunnison County Resolution #11-26). The Aspen Leaf Ranches, Inc. parcel also has a commercial lodge, a single family dwelling, guest cottages and other outbuildings on it.

6) Characteristics and Current Condition of the Operation Location

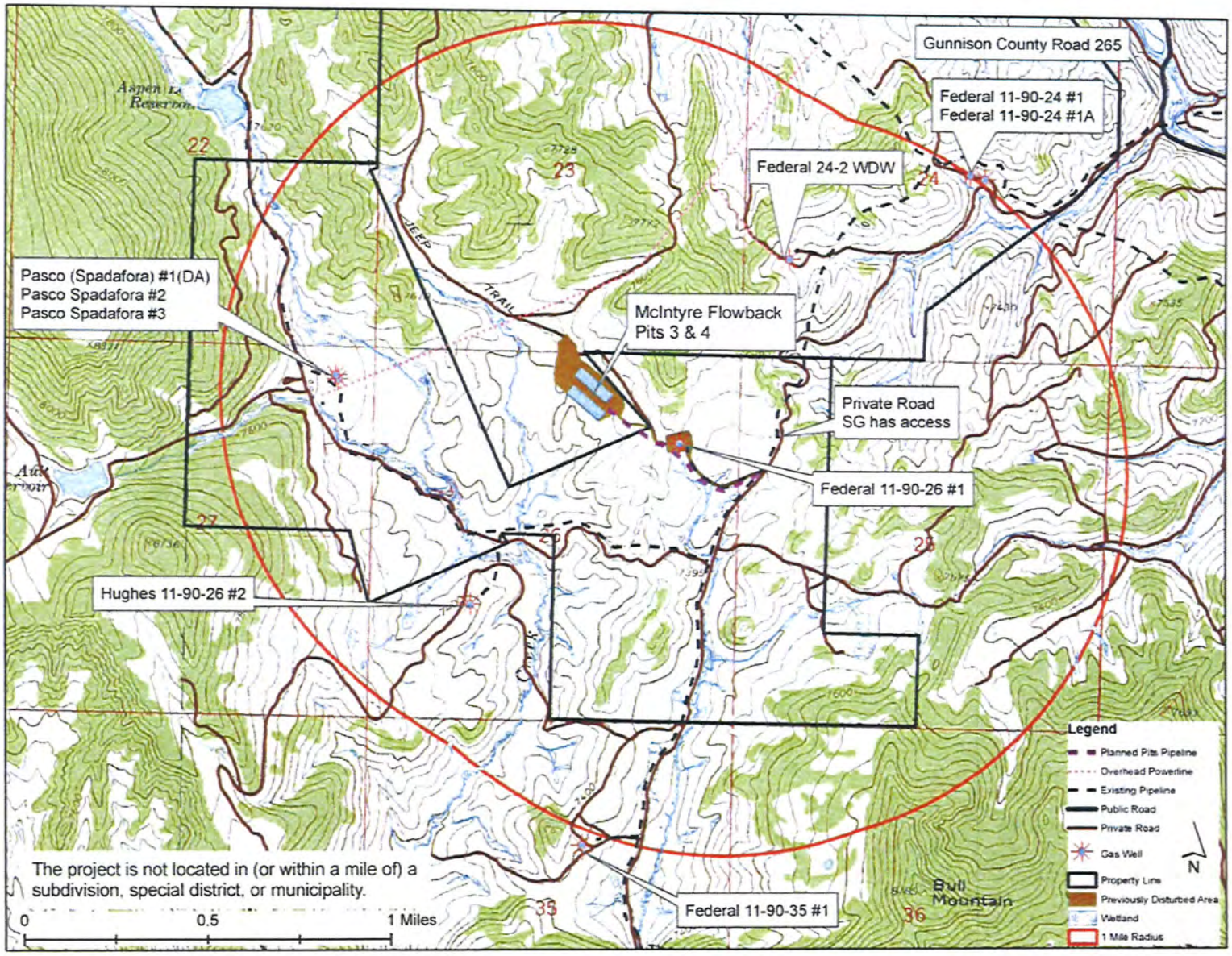
The project will occur adjacent to or within existing disturbance that resulted from construction of the three projects (Hotchkiss Lateral, Federal 11-90-26 #1 gas well, and McIntyre Flowback Pits 3 & 4) listed in item 5 above. In order to construct these projects, the native vegetation was removed. In areas needed for project construction, but not long-term operations, soils were returned to near original contour or to interim reclamation standards and seeded with grasses and forbs.

Prior to starting construction, the boundaries of wetlands along the pipeline route will be determined in the field by a wetlands scientist. The wetlands as shown on the maps attached to this application were mapped using aerial photo interpretation. It appears from this mapping, that there is a drainage that contains wetlands that would be crossed by the pipeline route. The well access road currently crosses this drainage via a culvert.

7) List of Adjacent Landowners

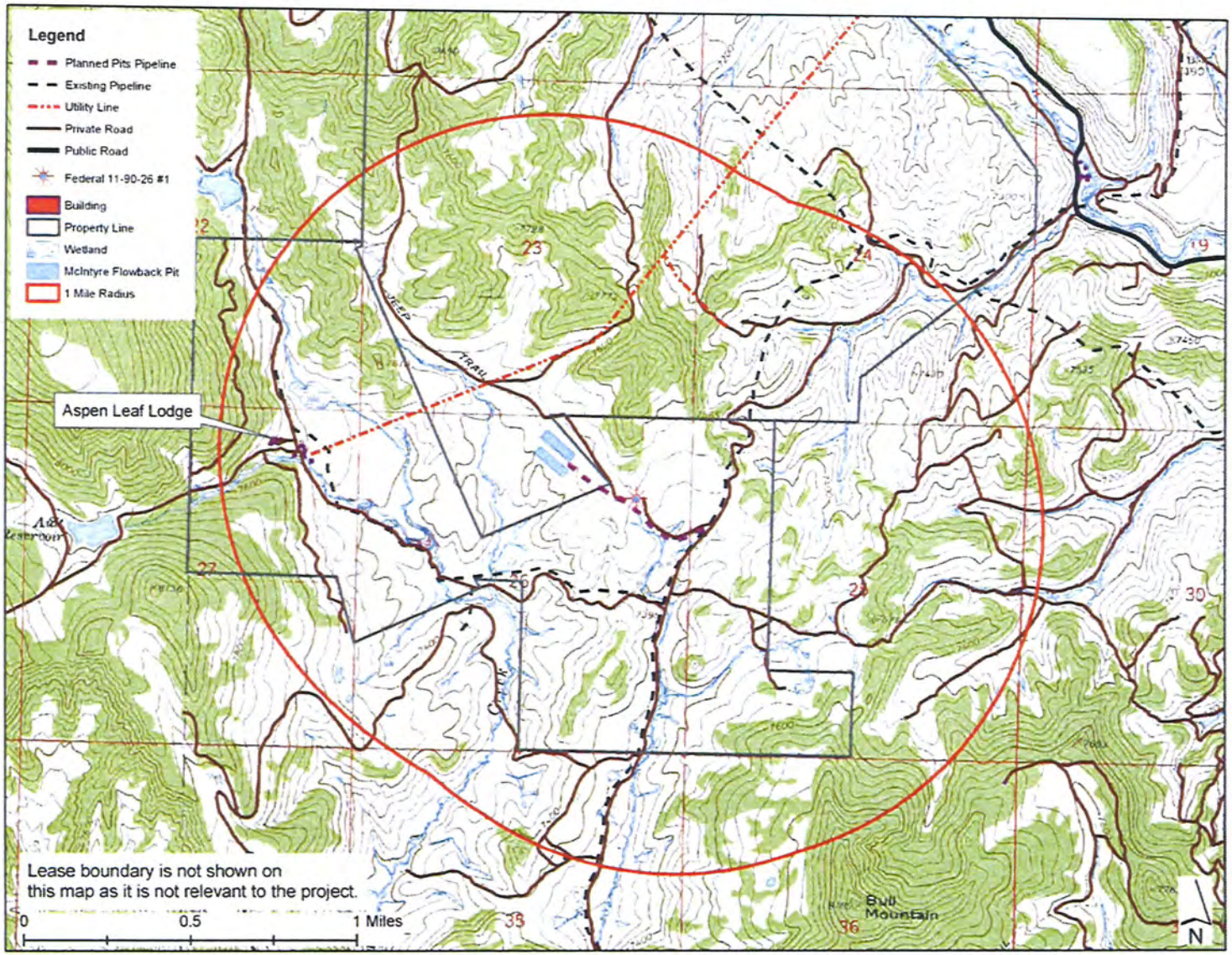
Landowner	Land Use	Parcel #
USDA-Forest Service	Forest Land	2921-000-00-032
Nick Hughes	Agricultural	2921-000-00-021, 2921-000-00-027, 2921-000-00-022, 2919-000-00-012
Memere Family LLLP	Agricultural	2921-000-00-023
Robert Sandridge	Vacant	2921-000-00-026
Michell Myrle Schmidt	Mixed Use	2921-000-00-034
Silvertip Properties, LLC	Agricultural	2921-000-00-004
Clinger Trust	Agricultural	2921-000-00-028
Sperry Land Company	Agricultural	2921-000-00-029
Dan McIntyre	Agricultural	2921-000-00-035
Falcon Seaboard Diversified, Inc.	Agricultural	2921-000-00-012
Doremus Family Limited Partnership	Mixed Use	2921-000-00-014
Patti King Vannice, William Ray Vannice, et al.	Mixed Use, Agricultural	2921-000-00-015, 2919-000-00-010
James T Pearce Jr.	Vacant	2921-000-00-013

8) Vicinity Map



9) Site Plan Map

See the wildlife and vegetation report for maps of wildlife habitat and vegetation types (Attachment 2).



10) Applications and Permits

This project will not require any state or federal permits.

11) Operation Plan

Two steel pipelines will be installed within the same ditch. The route will be 0.6 miles (3,120') in length. Pipeline installation will require approximately 50' of disturbance centered over the pipes. Based on the results of the field wetland delineation, any wetlands along the route will be bored under for pipeline construction. If the field delineation determines the drainage is a Water of the US lacking wetlands, the drainage will be open cut according to the terms and conditions of the US Army Corps of Engineers NWP 12. In total approximately 3 1/2 acres of land will be temporarily disturbed to build the pipeline.

The pipeline route will be cleared of any vegetation using a grader or similar equipment. Because the pipeline route is located within or adjacent to existing facilities, very little vegetation is expected to be removed. Topsoil from along the ditch line will be scraped off and set aside for reclamation activities. Where the pipeline route is within a roadway or on a facility pad, no topsoil will be salvaged. Instead the gravel will be replaced and the roadbed or pad surface compacted as necessary following pipe installation. The pipeline ditch will be approximately five feet deep and three to four feet wide. Sections of pipe are welded together, laid in the ditch, and then buried in the ditch with soil. Large rocks are not used to backfill the pipeline if they will damage the pipe's protective coating. These rocks can be set on the surface, hauled off, or made available to the landowner instead. The trench must be compacted to prevent settling and a sunken trench following reclamation. When an area of pipeline route is being reclaimed, topsoil is replaced over the area from which it was taken and the area is seeded according to landowner specifications or permit conditions.

Planned Schedule:

Activity	Start Date	Estimated Time to Complete
Construction Staking	June 17, 2013	2-4 days
Clearing and grading	June 19, 2013	2-4 days
Trenching, Welding, Installation, Backfilling Recontouring, and Topsoiling	June 21, 2013	4 weeks (weather dependent)
Pressure Testing	October 1, 2013	2-4 days
Seeding	October 3, 2013	1 week
Stormwater and reclamation inspections	June 19, 2013	Ongoing throughout reclamation

The pipelines are expected to remain operational throughout the lifetime of the McIntyre Flowback Pits #3 and #4.

The McIntyre Flowback Pits 3 and 4 Pipeline Project will not require any pit construction (1-108 J).

12) Linear Features

12 a) The pipeline route crosses one drainage (as shown on the Vicinity Map). The pipelines will be installed to avoid impacts to wetlands (see Operation Plan above). There are three additional waterbodies within 150 feet of the pipeline route (see Vicinity Map, item #8).

12 b) These wetlands will be protected during construction and reclamation of the project by implementing the BMPs shown in Figure 25 and according to the spill prevention plan described in section 20.e. In addition to the construction practices and BMPs described above, the following best management practices will be employed to protect waterbodies within 500 feet of the project (as per 1-108 I. 1. and 2.):

- any hazardous materials stored on site will be kept within secondary containment
- spill response materials will be kept on the job site during project construction
- any boring equipment will be located as far away from a waterbody as possible
- pipeline welds will be inspected for safety using radiological methods
- hazardous materials will not be stored within 300' of a waterbody (as per 1-108 K. 3.)
- finished pipeline will be pressure tested for safety prior to use

13) Weed Management Plan

SG is committed to preventing the introduction of noxious weeds during construction and controlling the expansion of existing noxious weed populations over the life of the project. All noxious weeds as defined by Gunnison County, BLM, and the state of Colorado (Colorado Weed Management Act CRS Title 35, Article 5.5 as amended) will be controlled (see list in Attachment 3). The purpose of this weed plan is to prescribe methods to treat existing weed infestations, prevent introduction and spread of infestations during construction, and monitor and treat infestations after construction is complete.

The following preventative measures will be implemented to prevent the spread of noxious weeds:

- If soil stockpiles are created in infested areas, these stockpiles will be kept as close as possible to the infested areas. No soil from infested areas will be moved until they are treated. Soil from an infested area will not be used in any other area beside where it was collected.
- Vehicles and equipment will be required to arrive at the work site clean, power-washed, and free of soil and vegetative debris capable of transporting weed seeds or other propagules.
- Materials used for erosion control and reclamation (i.e. straw bales and seed mixes) will be obtained from sources that are weed-free.
- Disturbed areas will be reseeded in accordance with the Surface Use Agreement and any applicable permit stipulations as soon as possible after construction activities have been completed.

Depending upon the species of weed and the time planned for construction, methods of weed pre-treatment may include:

- Mechanical—mowing, pulling by hand, or tillage could be used.
- Chemical—application of an approved herbicide by a licensed applicator. Herbicides will be selected based on recommendations by local weed control district or BLM and subject to fee-landowner approval in consultation with the BLM authorized officer. All herbicides will be applied in accordance with all applicable laws and regulations on BLM and fee-lands.
- Cultural – employing practices such as reseeding with non-invasive species that can outcompete noxious species. This type of treatment will be conducted in some fashion on all reclaimed areas associated with the project.

Effective control measures vary for different weed species. For many species, a combination of measures should be employed to be most effective. The following table lists the known and potential weeds within the Bull Mountain Unit as well as the best control measures for each. The headings for table 1 (ex. Herbicide Used?) ask whether or not herbicide, mechanical controls, and/or cultural controls can be used. What type of control used in any specific instance is decided on a site-specific basis based on what controls are available that best fit that situation. Not all of the weeds listed in table 1 are known from the project site.

Table 1. Noxious weeds and appropriate controls

Weed Name	Herbicide Used?	Herbicide details	Mechanical measures used?	Type of mechanical control	Cultural Control Used?	Type of cultural control
Bull thistle	Yes (ex. Tordon)	Spray rosettes in early spring	Yes	Removal of rosettes and mowing of bolting plants	Yes	Seeding w/desirable species
Burdock	No	NA	Yes	Sever tap root	Yes	Seeding w/desirable species
Canada thistle	Yes	Mow then spray in late summer or fall	Yes	Mowing prior to spraying	Yes	Seeding w/desirable species
Chicory	Possibly	Contact county specialist	No	NA	Yes	Seeding w/desirable species
Common St. Johnswort	Yes(ex. Roundup Ultra)	Spray green plants, preflowering	No	NA	Yes	Seeding w/ desirable species
Dalmation toadflax	Yes (ex. Tordon K)	Herbicide w/surfacet-ant in early stages	Yes	Hand grubbing during summer	Yes	Seeding w/ desirable species
Diffuse knapweed	Yes	Spray at rosette stage	Yes	Hand pulling of rosettes and plants early in bolting stage	Yes	Seeding w/desirable species
Dyer's Woad	Yes	Spray rosettes in spring or fall	Yes	Hand pull bolting plants, bag any heads	Yes	Seeding w/desirable species
Field bindweed	Yes (ex. Roundup Ultra)	Spray green plants, early flowering stage	No	NA	Yes	Seeding w/desirable species

Table 1 continued						
Weed Name	Herbicide Used?	Herbicide details	Mechanical measures used?	Type of mechan. control	Cultural Control Used?	Type of cultural control
Halogeton	No	NA	No	NA	Yes	Seeding w/desirable species
Hoary cress	Yes	Spray pre -early bloom stage	No	NA	Yes	Seeding w/desirable species
Hounds-tongue	Yes	Spray prebud or rosette state	Yes	Hand pull after bolting- if flowers bag heads	Yes	Seeding w/desirable species
Jointed goatgrass	No	NA	Yes	Mow just after seed heads form	Yes	Seeding w/desirable species
Leafy spurge	Yes (ex. Tordon 22K)	Spray in spring pre flowering and in fall	No	NA	Yes	Seeding w/desirable species
Mediterran-ean sage	No	NA	Yes	Cut flowering plants - bag heads	Yes	Seeding w/desirable species
Musk thistle	Yes (ex. Tordon 22K)	Spray rosettes and early bolting stages	Yes	Hand pull, sever tap root, bag heads, mow large infest. at bolt - early flowering stage	Yes	Seeding w/ desirable species
Oxeye Daisy	Yes	Spray preflower stage	No	NA	Yes	Seeding w/desirable species

Table 1 continued

Weed Name	Herbicide Used?	Herbicide details	Mechanical measures used?	Type of mechan. control	Cultural Control Used?	Type of cultural control
Plumeless thistle	Yes (ex. Tordon 22K)	Spray rosette to early bolting stage	Yes	Sever tap root, bag heads, mow large infest. at bolt - early flowering stage	Yes	Seeding w/desirable species
Poison hemlock	Yes (ex. phenoxy herbicides or glypho-sate)	Spray young plants	No	NA	Yes	Seeding w/desirable species
Puncturevine	Yes (ex. chlorsulfur -on and 2, 4-D)	Chlorsulfur-on preemergence and 2, 4-D , soon after emergence	Yes	Cut or hoe plants prior to seeding, bag any flower heads	Yes	Seeding w/desirable species
Purple loosestrife	Yes (2,4-D and glypho-sate)	Spray in spring preflowering fall spraying w/removal of flower heads	Yes	Hand pull small plants, mow larger infestations	Yes	Seeding w/desirable species
Russian knapweed	Yes (ex. Curtail)	Spray in bud to bloom stage in summer and fall	No	NA	Yes	Seeding w/desirable species
Russian olive	Yes (ex. Garlon)	Spray cut stump or apply to basal bark	Yes	Cut trees down or cut basal bark (follow up with chemical treatment)	Yes	Seeding w/desirable species and plant willow cuttings, Carex plugs

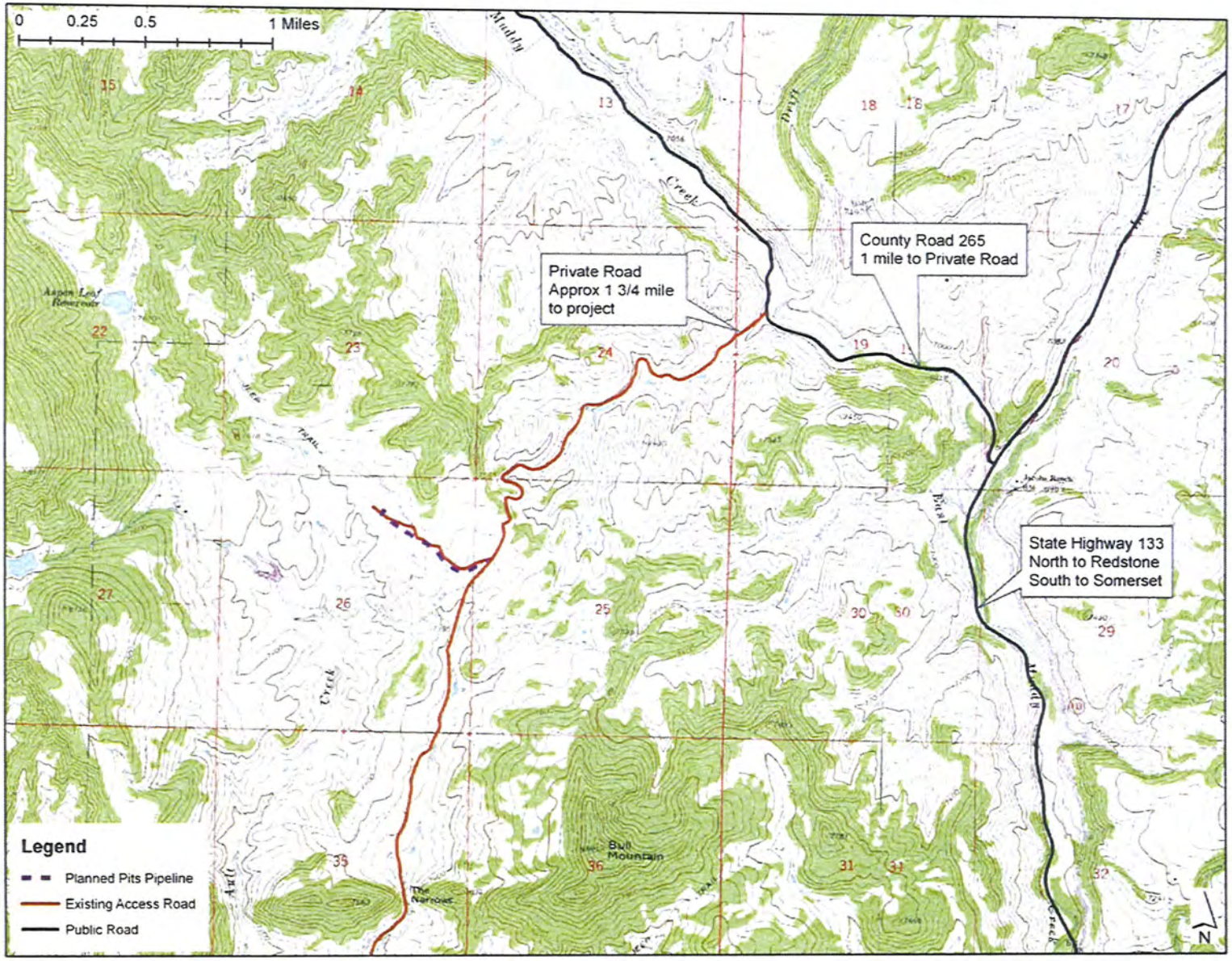
Table 1 continued						
Weed Name	Herbicide Used?	Herbicide details	Mechanical measures used?	Type of mechanical control	Cultural Control Used?	Type of cultural control
Scotch thistle	Yes (ex. Milestone)	Spray rosettes using surfactant added spray	Yes	Dig rosettes, sever root	Yes	Seeding w/desirable species
Spotted knapweed	Yes (ex. Tordon 22K)	Spray rosettes	No	NA	Yes	Seeding w/desirable species
Tamarisk	Yes (ex. Garlon 4)	Paint stump w/herbicide, spray sprouts, use basal bark treatment for small diameter trees	Yes	Cut tree (follow up with chemical treatment)	Yes	Seeding w/desirable species, plant willow cuttings, Carex plugs
Yellow starthistle	Yes (ex. Tordon 22K)	Spray rosettes and early bolting stages	Yes	Hand pull small infestations	Yes	Seeding with desirable species
Yellow toadflax	Possibly	Consult specialists	Possibly	Consult specialists	Yes	Seeding with desirable species

Best Management Practices for the Noxious Weeds of Mesa County recommendations with some herbicide recommendations from 2006 North Dakota Weed Control Guide (http://www.ag.ndsu.edu/weeds/w253/w253w.htm) and additional information from Weed Control Methods Handbook: Tools and Techniques for Use in Natural Areas, The Nature Conservancy.

If any soil stockpiles are maintained for longer than 90 days, these stockpiles will be treated for weeds.

SG will continue to monitor the distribution and density of noxious weeds for the life of the project. Surveys will be conducted concurrently with reclamation monitoring and will occur as early in the year as feasible to identify and control noxious weeds before they produce seed. Monitoring data collected will include the noxious weed species, location, and extent of infestation. At locations where new populations have been identified or pre-existing populations have expanded, SG will take action to eradicate the population or control their spread. The selection of control methods will be based on the available technology and information of the weed species and its control.

14) Access and Transportation Routes



The number and types of vehicles expected to travel to the project site are listed in the table below.

Table of Expected Vehicle Use

VEHICLE	WEIGHT (lbs)	Total Trips
Motor Grader on Lowboy Trailer with Truck	50,800	2
Bulldozer on Lowboy Trailer with Truck	120,000	2
80 bbl water trucks	54,000 loaded 25,000 empty	6-8 trips for dust control
Trackhoe on Lowboy Trailer with Truck	91,000	4
Welding trucks (1 ton pick-ups)	9,500	48 (2 trucks for 24 days)
Crew Cab Pick Ups	5,200	60 (2 trucks for 30 days)
Bending Machine/Trailer	48,000	2
Sidebooms on Lowboy Trailer with Truck	63,000	2
X-Ray Truck	5,200	12 (2 trucks for 6 days)
Testing Truck	6,000	2
Pipe Trucks	58,800 loaded 12,000 unloaded	6
Utility Tractor on Low Boy Trailer with Pick-Up Truck	40,000	2
Boring Machine on Low Boy Trailer with Pick-Up Truck	40,000	2

The project will be conducted in accordance with standard 1-108 B, Access Roads. The roads that will be used to reach the project site are all existing roads; no new road construction is required. County Road 265 is the only Gunnison County Road used to access the project site. Any maintenance of this road will be in compliance with the Gunnison County Standard Specifications for Road and Bridge Construction, in order to support the project traffic and any emergency vehicles. Use of State Highway 133 will be according to permit conditions issued by the Colorado Department of Transportation.

15) Identification of Water Structures

This project has no impact to water structures including irrigation ditches. It also has no impact to water rights.

16) Roadway Impact Analysis

The roads that will be used to reach the project site are all existing roads; no new road construction is required (no new ingress or egress points as described in 1-108 C. 1.). County Road 265 is the only Gunnison County Road used to access the project site. SG Interests, Gunnison Energy Corporation, and Gunnison County have entered into an agreement to maintain CR 265 by grading and applying magnesium chloride (LI #10-241, in compliance with 1-108 C. 2.). Gunnison County Public Works will grade the road yearly and apply the magnesium chloride as needed with reimbursement by SG Interests and Gunnison Energy Corporation. By following the terms of the agreement with Gunnison County and the stipulations attached to road use permits, SG will mitigate any potential impacts to roadways in the county.

17) Wildlife and Wildlife Habitat Analysis

See attached wildlife report (Attachment 2). The project will not cause significant degradation of wildlife or sensitive wildlife habitat (1-108 D).

18) Vegetation

The planned project would impact herbaceous vegetation and grasses that were seeded following construction of the McIntyre Pits facility and the Federal 11-90-26 #1 well pad and access road. The pipeline route does not cross any areas that have not been previously disturbed. Sections of the route that cross the well pad, pit facility pad, or the access roads are barren of vegetation. This accounts for about ¼ mile of the route (about 1,270' of the 3,270' route).

Areas that had been seeded and must be disturbed again to install the pipelines will be seeded again with the seed mixes specified in the permits for reclamation of the McIntyre Flowback Pits and the Federal 11-90-26 #1 (see lists below). Seeding these areas will prevent loss of forage for wildlife and livestock (1-108 D and 1-108 E). Areas that are part of the pits facility or an access road that are disturbed for construction of this project will not be seeded following construction.

See attached vegetation report for more information on vegetation and reclamation (Attachment 2).

BLM Recommended Seedmix (for areas associated with the Federal 11-90-26 #1 well):

SPECIES	% of Mix	PLS	#/Acre
Western Wheatgrass var Arriba	12	8.0	0.96
Slender Wheatgrass var San Luis	12	5.5	0.66
Mountain Brome var Bromar	12	12.5	1.5
Big Bluegrass var Sherman	12	1.5	0.18
Bottlebrush Squirreltail	12	8.0	0.96
Canada Wildrye	12	7.0	0.94
American Vetch	6	10.0	0.6
Rocky Mountain Penstemon	6	1.5	0.09
Western Yarrow	6	1.0	0.06

Total application rate for incorporated seed 5.95 #/acre.
Double this rate if seed is aerial broadcast and not incorporated.

Colorado Parks and Wildlife seed mix (for areas associated with the McIntyre Flowback Pits):

Ecotype: Oakbrush/Mountain shublands

GRASSES Species	Variety*	% of mix	FRPLS+	PLS rate/acre
Slender wheatgrass	San Luis	15%	6	0.9
Western wheatgrass	Arriba	10%	8	0.8
Bluebunch wheatgrass	Secar/Goldar	15%	10	1.5
Idaho fescue		10%	4	0.4
Muttongrass	(UP Colona)	15%	1	0.15
Junegrass	Uncomprahgre	15%	4	0.6
Sandberg bluegrass	"UP release"	10%	2	0.2
Green needlegrass		10%	8	0.8
Mountain brome	Garnet	10%	12	1.2
FORBS Species	**Variety**	**% of mix**	**FRPLS+**	**PLS rate/acre**
Utah sweetvetch	(UP Uncompahgre) TIMP	15%	15	2.25
Lewis flax	Maple grove	15%	4	0.6
Penstemon comarrhenus* (dusty)	(UP Delta)	15%	1	0.15
Penstemon cyanocaulis* (bluestem)	(UP San Miguel)	15%	1	0.15
Penstemon palmeri* (palmer)		15%	2	0.3
Penstemon strictus* (Rocky Mtn)		15%	1	0.15
Silky lupine -sericeus		15%	20	3
American vetch		15%	25	3.75
Oregon daisy	(UP Dry Fork)	15%	1	0.15
(Alfalfa)	Ladak			
(Small burnet)				
(Sainfoin)				
SHRUBS++ Species				**PLS rate/acre**
Antelope bitterbrush				1
Mtn. mahogany				1
Artemisia tridentata ssp. *vaseyana*				1
Utah serviceberry				1

NOTE: (UP)- The UP varieties are recently released and may not be available in sufficient quantities. Supply and availability may increase in future years.

*recommended variety unless locally collected seed is available, in which case locally collected seed is preferred

( ) these species are included to enhance the initial value of the seeding for big game; include in addition to the 5 native forbs

+based on drill seeding; 2x if broadcasting

++Select 3 of the 4 species based on availability

19) Emergency Response Plan (as per 1-108 R)

Project Name McIntyre Flowback Pits #3 and #4 Pipeline Project

(Revised 02/15/2013)
Sections 25 and 26 T11S R90W 6th PM
Gunnison County, CO
Latitude/Longitude: 39.075° N
-107.409° W (Approx. mid-point of pipeline)

Directions: From Paonia, CO, travel approximately 15 miles NE on State Hwy 133. Turn left (NW) on CR 265 (Muddy Creek Road) and travel approximately 1 mile to a ranch road. Travel 9/10 mile to an access road leading west. This is the eastern terminus of the pipeline route. This is the route to be used by any emergency responders. It is the evacuation route as well. A vicinity map is attached.

Contacts:

SG Interests 24-Hour Emergency # - (866) 261-9766

Operator	Incident Commander Field Supervisor:	
Eric Sanford SG Interests I. Ltd. 1485 Florida Road C202 Durango, CO 81301 Office: (970) 385-0696 Cell: (970) 259-2759	Dennis Beasley SG Interests I, Ltd. 1013 CR 265 Somerset, CO 81434 Office: (970) 929-5313 Cell: (505) 947-3564	Surface Owners: Aspen Leaf Ranch, Inc. Rock Creek Ranch I, Ltd

Safety standards and practices consistent within the oil and gas industry shall be used at all times during construction, testing, operation, and maintenance of the pipeline. Third party contractors and companies (collectively referred to as Contractor) providing services and materials in support of SG Interests I, LTD's (SG's) construction, maintenance, and operations are required to have insurance coverage and a safety program in place. Contractor shall comply with and be responsible for the training and enforcement of its own safety procedures and practices, which will comply with all applicable federal, state, and local health, environmental, and safety statutes and regulations, including, where applicable, but not limited to, those of the Department of Transportation (DOT), the Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA). All safety apparel and equipment for Contractor's personnel shall be furnished by the contractor and shall meet the standards of applicable regulatory agencies.

Communications and Emergency Reporting: A "land line" telephone generally is not available at the project site. Site communications will be provided via trucked radio service and/or a satellite telephone. Truck radios will be in contact with SG Interests' field office where a land line is located. Office personnel will be aware of the project location and will be able to communicate with emergency dispatch as needed. Satellite phone numbers will be provided when available. Satellite telephone and cell phone communications are generally not compatible with the nationwide 911 reporting system and can result in mis-routing of emergency service requests that are initiated by a 911 call. Therefore, all requests for emergency services from satellite telephones must be dialed to the appropriate emergency dispatch number. Requests for emergency services from land lines can be initiated by dialing 911. Gunnison County has "mutual aid agreements" in place with Delta County.

Agencies responding to emergencies in this area will be from Delta County.

Delta County Emergency Dispatch Phone Number: 970-874-2015 or 911

Emergency and other contact phone numbers will be made available and will be posted as appropriate. In addition, an *Emergency Preparedness* form will be completed and sent to Rob Fiedler, Delta County Emergency Preparedness Coordinator, prior to commencement of operations. This form provides information regarding project location, directions, contact names and contact information as well as anticipated activity dates.

Emergency Reporting: Emergency phone numbers plus other contact phone numbers, location information and directions will be made available to SG's contractors. Depending on the phase of activity, emergency response calls could be initiated by contractor or SG personnel. Spills, fires, accidents, etc. will be reported to emergency agencies and regulatory authorities as per permit conditions and regulations. All valves, tanks, lines, etc. will be secured any time facilities are unattended.

Reference Colorado Public Utilities Commission, Office of Gas Pipeline Safety, Pipeline Safety Group, Rules Regulating Gas Utilities and Pipeline Operators regarding pipeline safety regulations (http://www.dora.state.co.us/PUC/pipesafety/PipeSafetyRules.htm#commissionrules). These rules will be strictly followed and enforced on all of SG's operations. BLM fire restrictions can be viewed online at: www.co.blm.gov/fire (Fire Bans/ Restrictions and Closures). This site also provides links to

1) The Colorado Office of Emergency Management and lists counties with fire restrictions
2) The Colorado State Forest Service which supplies large fire status and other information

Gunnison County fire restrictions will also be adhered to.

Fire Prevention and Protection: Typically, 4-6 50# fire extinguishers will be suitably located, readily accessible, and plainly labeled as to their type and method of operation. Additional fire extinguishers will be made available if circumstances dictate. If required, or deemed necessary, additional fire-fighting equipment will be kept on location during operations. This equipment may consist of a 400 bbl tank filled with fresh water, a pump and 300' of hose. Personnel on location will be trained as to proper use and safety. In the event that extreme fire danger exits due to drought or other reasons, SG will curtail or suspend operations as directed by authorities.

In the unlikely event of a fire or explosion, all personnel will gather at a predetermined safe briefing area. A head count will be taken and all personnel will be accounted for. The situation will be accessed with immediate response and emergency calls as needed. An employee or other representative will be sent to the nearest county road access to keep unauthorized persons from entering the area and to direct emergency response personnel to the site.

Hazardous Spills: Spills are prevented by following SG Interests' Integrated Spill Prevention, Containment, and Countermeasure Plan, of which this facility is a part. This plan describes the buried produced water pipelines and includes pressure testing requirements for produced water and natural gas pipelines. All hazardous materials (reactive, flammable, corrosive and toxic) will be clearly labeled and stored in appropriate containers and within secondary containment as per state and federal hazardous materials regulations (as per 1-108 K. 1.). In the event fuel or lubricants are spilled, absorbent materials will be kept on location for immediate clean up. Service company vehicles carrying hazardous materials and performing work on the location, set secondary containment and provide absorbent materials for the immediate clean of such materials in the event of an accident or spill. Disposal of any such materials will be in compliance with COGCC rules and regulations as well as federal and local requirements. In the event of an accident or spill, appropriate agencies would be notified including emergency dispatch,

Colorado State Patrol, fire department, Gunnison County Manager, and any others as required (COGCC, Bureau of Land Management, Colorado Division of Water Resources, etc.) by the circumstances of the accident/spill.

Signage: Signs will be used to alert motorists on the county road of construction activities where needed. These signs shall follow Manual on Uniform Traffic Control Devices.

SG Interests I, Ltd. will maintain first aid kits in its vehicles and site offices. Contractors maintain first aid kits in their vehicles and site facilities appropriate to their operations and in conformance with their internal policies. Site personnel with current training in first aid will be identified as such by hard hat markings or other means.

SG Interests I, Ltd. will reimburse emergency response service providers for costs incurred in connection with an emergency as required (as per 1-108 Q and 1-108 R).

EMERGENCY PHONE NUMBERS

DELTA COUNTY EMERGENCY DISPATCH	(970) 874-2015	
Delta County Emergency Preparedness	(970) 874-2004 - office	Delta
Director & Coordinator, Rob Fiedler	(970) 255-7349 – home	
Montrose Interagency Fire Dispatch	(970) 249-1010	Montrose
Gunnison County Emergency Dispatch	(970) 641-8000	Gunnison

OTHER CONTACT PHONE NUMBERS

FIRE

Cedaredge Fire Department	(970) 856-3717	Cedaredge
Hotchkiss Fire Department	(970) 872-3311	Hotchkiss
Paonia Fire Department	(970) 527-5775	Paonia
Ragged Mountain Fire Protection	(970) 929-5646	Somerset

AMBULANCE

North Fork Valley Ambulance Association	(970) 872-4303	Hotchkiss
Delta County Ambulance	(970) 874-9555	Delta
American Medical Response	(970) 242-2920	Grand Junction
Air Life @ St. Mary's Hospital	(970) 244-2551 or (800) 332-4923	Grand Junction

HOSPITAL

Delta County Memorial Hospital	(970) 874-7681	Delta
Delta County Memorial Hospital - ER	(970) 874-2222	Delta
Grand Junction Community	(970) 242-0920	Grand Junction
Montrose Memorial	(970) 249-2211	Montrose
North Fork Medical Clinic	(970) 527-4103	Paonia
	(970) 872-3121	Hotchkiss
Gunnison Valley Hospital	(970) 641-2695	Gunnison
St. Mary's Hospital	(970) 244-2273	Grand Junction

POLICE

State Hwy Patrol	(970) 249-4392	Montrose
Delta Co. Sheriff	(970) 874-2000	Delta
Gunnison Co. Sheriff	(970) 641-1113	Gunnison

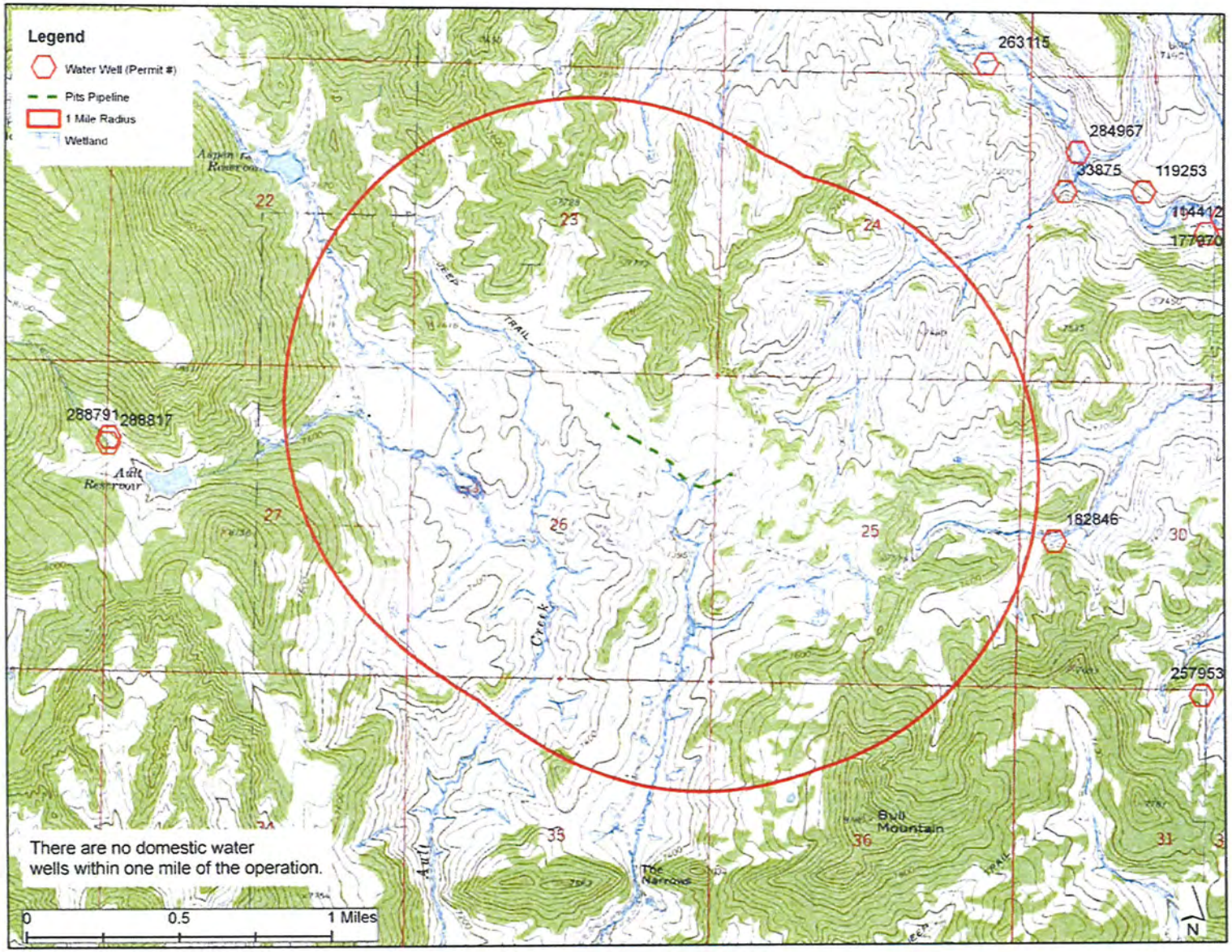
GOVERNING AGENCIES

COGCC, Matt Lepore, Director	(303) 894-2100 ext 5122	Denver
COGCC, Alex Fischer, Env. Supervisor	(303) 894-2100 ext 5138	Denver
Bureau of Land Management	(970) 240-5300	Montrose
Colorado Dept of Public Health and Environment	(877) 518-5608	24-hour hotline

SPILL CONTACTS

Con-Sy, Inc.	(970) 549-1270	Grand Junction
Johnson Construction	(970) 625-2251	Rifle
Reams Construction, Inc.	(970) 865-2886	Naturita

20 a) Identification of all Water Bodies and Domestic Water Wells



20 b) Identification of Intake for a Municipal Water Supply

There are no municipal water supplies within Gunnison County downstream of the planned operation. There is a public water supply intake located approximately 20 miles south of the operation in Somerset, Colorado. The planned project will not cause significant degradation of the water quality of any municipal water supply (1-108 H. 2.).

20 c) Identification of Closest Municipal Watershed Boundary

There are no municipal watershed boundaries within Gunnison County downstream of the planned operation.

20 d) Description of Existing Water Quality

(1) Water Bodies

The following analytes were tested for in the baseline water quality sampling locations:

Analyte	CAS	Analyte	CAS	Analyte	CAS
Benzene	71-43-2	Barium	7440-39-3	Bicarbonate as CaCO3	10139
Ethane	74-84-0	Boron, dissolved	7440-42-8	Bromide	7726-95-6
Ethylbenzene	100-41-4	Calcium	7440-70-2	Carbonate as CaCO3	3812-32-6
Methane	74-82-8	Iron	7439-89-6	Chloride	16887-00-6
Propane	74-98-6	Magnesium	7439-95-4	Conductivity @ 25C	none
Toluene	108-88-3	Manganese	7439-96-5	Floride	16984-48-8
TPH C10 to C28	none	Potassium	7440-09-7	Nitrate as N, dissolved	14797-55-8
Xylenes, total	1330-20-7	Selenium	7782-49-2	Nitrate/Nitrite as N, dissolved	10034
		Sodium	7440-23-5	Nitrite as N, dissolved	none
		Strontium, dissolved	7440-24-6	pH	none
				Phosphorus as P	7723-14-0

Analyte	CAS	Analyte	CAS	Analyte	CAS
				Residue, Filterable (TDS) @ 180C	none
				SAR	none
				Sulfate	14808-79-8
				Total Alkalinity as CaCO3	10093

The locations of the baseline water quality sample sites are shown on the map below (Figure 20 d).

PITS PIPELINE BASELINE WATER QUALITY SUMMARY			
Water Quality ID	Surface or Groundwater	Sample Location	Results
CP3-2	Surface	Pond 4 livestock pond	pH slightly elevated at 8.83 (pH secondary standard* is 8.5) Iron and manganese were both present at levels that exceeded the secondary standard. No target analytes were detected.
CP3-1	Surface	Pond 3 livestock pond	pH slightly elevated at 8.83 (pH secondary standard is 8.5). Iron and manganese were both present at levels that exceeded the secondary standard. No target analytes were detected.
WQ 11-90-26 #3	Surface	Ault Creek on upstream side of road crossing.	Iron 1.47 (as compared to the 0.3 mg/L DW secondary standard)
WQ 11-90-26 #2	Surface	At outflow of stock tank on eastern tributary of Ault Creek.	5/26/2010 Iron 0.75 (0.3 mg/L DW secondary standard) pH is 8.6, which is slightly elevated from the secondary standard of 8.5. 5/25/2011 Iron was 0.64 (0.3 mg/L DW secondary standard).
WQ 11-90-26 #1	Surface	A ditch outflow of 3rd pond on Ault Creek, south of Pasco Spadafora pad	5/26/2010 pH was 8.6, which is slightly above the secondary standard of 8.5

PITS PIPELINE BASELINE WATER QUALITY SUMMARY - Continued			
WQ 11-90-23 #1	Surface	Located on stock pond downstream from of pits 1 & 2	7/14/2011 Iron 5.78 mg/L (0.3 mg/L DW secondary standard) Fecal coliform 2300/100 mls. Waters used for Class 2 secondary contact (meaning non-primary contact waters, including, but not limited to, fishing and other streamside or lakeside recreation) should not have fecal coliform counts greater than 2000/100 ml. 7/6/2011 Methane 0.17, no action required (too low).
WQ 11-90-22 #1	Surface	Located on an unnamed creek just above Aspen Leaf Reservoir, below Fed 15 #1	5/26/2010 Iron 0.66 (0.3 mg/L DW secondary standard).
WQ 11-90-24 #1	Surface	Located in a large stock pond just down from Fed 24 #1 and Fed 24 #1A	Iron 0.52 mg/L (0.3 mg/L DW secondary standard) Sodium 41.2 Toluene 0.2 (too low to trigger action or retest).

*The "secondary standard" is the National Secondary Drinking Water Regulation. Access these standards at http://water.epa.gov/drink/contaminants/index.cfm

Test results from baseline sampling indicate that at most, relatively low levels of contaminates exist in surface waters within a 1 mile radius of the proposed McIntyre Flowback Pits 3 and 4 Pipeline.

Several surface water samples indicated iron was detected at a level that exceeded the Environmental Protection Agencies National Secondary Drinking Water Regulations (secondary standards value), which are more stringent than surface water quality standards. EPA's secondary standards are "non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water" (http:water.epa.gov/drink/contaminants). The secondary drinking water standard for iron is 0.3 mg/L. Test results ranged from 0.52-5.78 mg/L. The EPA does not believe that these levels pose a human health threat.

Several surface water samples indicated pH was detected at a level that exceeded the Environmental Protection Agencies National Secondary Drinking Water Regulations (secondary standards value). The secondary drinking water standard for ph is 8.5 (see table).

One surface water sample indicated that fecal coliform levels were slightly elevated (2300/100 mls). Waters used for Class 2 secondary contact (non-primary contact waters, including, but not limited to, fishing and other streamside or lakeside recreation) should not have fecal coliform counts above 2000 fecal coliforms per 100 ml. Nonpoint sources and stormwater point sources are the primary contributors of fecal coliform loads in the listed streams. Storm events transport fecal coliform from sources such as wildlife, farms, and domestic pets to the receiving water. Nonpoint sources may also include steady-state inputs from sources such as failing sewage conveyance systems and failing or inappropriately located septic systems.

In addition to the secondary drinking water standards, the National Primary Drinking Water Regulations were consulted. Colorado Department of Public Health and Environment's basic water quality standards were used to assess other anayltes (CDPHE Regulation 31 and CDPHE Regulation 35, available at:

http://www.colorado.gov/cs/Satellite/CDPHE-Main/CBON/1251595703337). For methane, COGCC's regulatory limit of 1.0 mg/L was considered the action level. Methane was not detected at levels above 1.0 mg/L in any of the baseline samples (COGCC Rule 609 e.). For toluene, the COGCC regulatory limit of mg/kg^2 was used as the standard (Rule 900 E&P Waste Management, Table 910-1). No samples had toluene in excess of this standard.

General Water Quality Description

East Muddy Creek and West Muddy Creek are the dominant drainages in the project area. East Muddy Creek is a perennial stream that flows to Muddy Creek, which flows into the North Fork of the Gunnison River, and eventually reaches the Colorado River. East Muddy Creek drains the Muddy Slide, a naturally occurring massive landslide occurring on USDA Forest Service administered lands approximately five miles to the north north-west of the project area. This unstable slide continues to deliver massive amounts of fine sediment to the creek during winter, spring and early summer months. Thunderstorms and mid-winter snowmelt events mobility fine sediments which completely cloud the creek. Aside from the late summer and early winter season, this creek is non-fish bearing due to naturally occurring sedimentation issues.

West Muddy Creek has its headwaters on the Gunnison National Forest. It runs through the project area before it joins East Muddy Creek above Paonia Reservoir in T12S R89W Section 20. Because of the widespread livestock grazing activities occurring within the West Muddy Creek drainage, domestic sheep and cattle impact the riparian system and may impact water quality within the creek.

(2) Domestic Water Well Baseline and Monitoring

There are no domestic water wells within one mile of the planned operation. The planned operation will not cause significant degradation of water quality or water pressure of any public or private water wells (1-108 H. 1.). No domestic water well sampling and monitoring plan is proposed.

20 e) Impacts to Water Quality

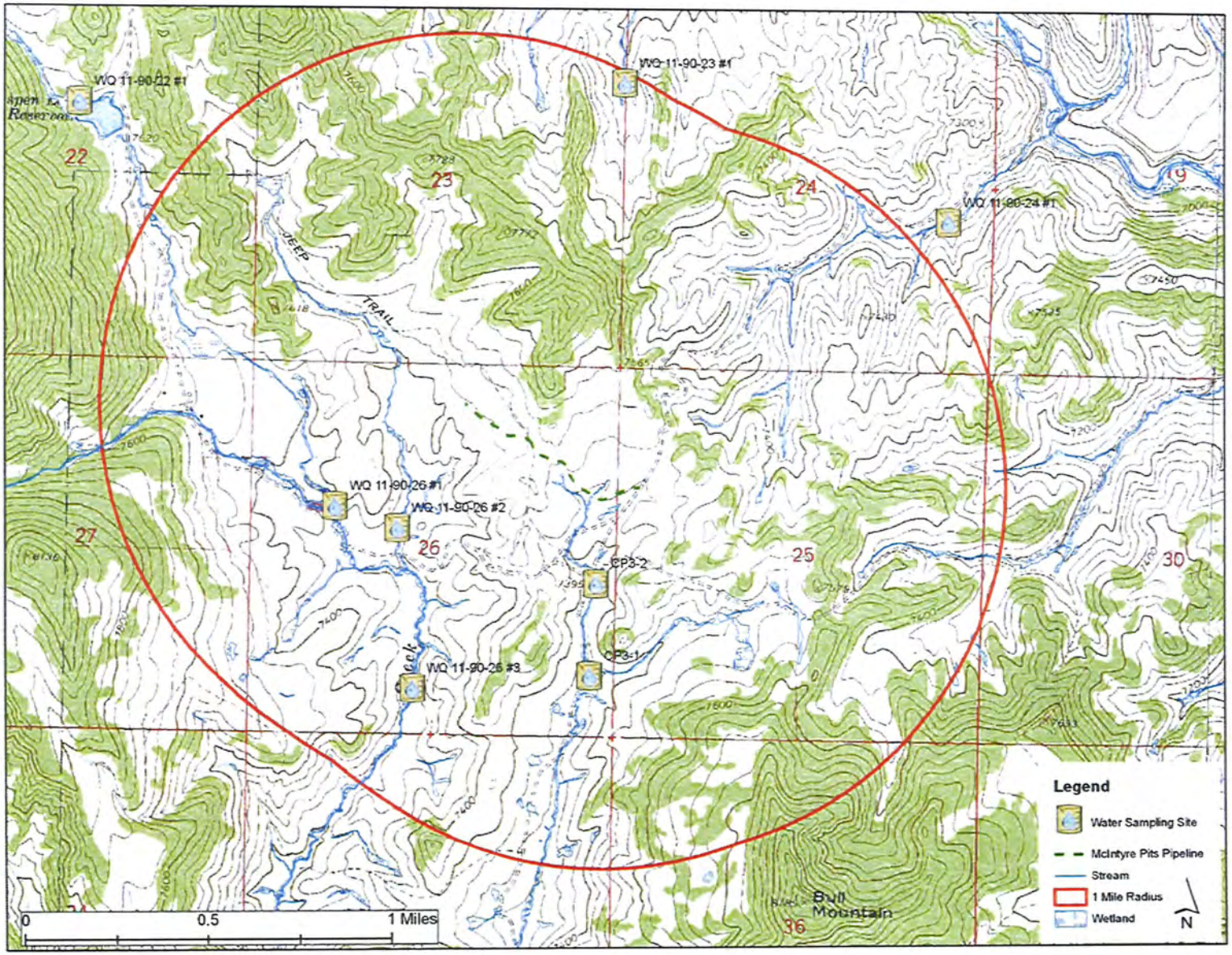
Sedimentation and erosion on disturbed areas associated with the pipeline project will be controlled with Best Management Practices (BMPs) designed to prevent stormwater pollution. The project will be constructed in compliance with SG's stormwater discharge permit from Colorado Department of Public Health and Environment. A Stormwater Management Plan has been written for this permit that contains general practices and BMPs for drainage and erosion control. Under this umbrella plan, a site specific stormwater management plan describes the BMPs that will be used on this project (see item 25). SG Interests' stormwater inspector inspects BMPs and waterways regularly during construction and following storm events to improve and mitigate possible failure of BMPs. SG routinely "cleans up" mobilized sediments after intense storm events until revegetation is successful and BMPs are removed or have degraded. The project will not result in an increase in nonpoint source pollution loads, an increase in erosion and sediment loads, any change in stream channel or shoreline stability, or any change in stormwater runoff flow (in compliance with 1-108 G).

When practicable, SG Interests will try to avoid construction under wet winter and early spring conditions in order to avoid erosion and sedimentation concerns. This will minimize the risk of muddy roads and transportation of mud on vehicles, disturbance to vegetation root systems due to saturated soils, soil compaction, and homogenization of soil pedons and soil profiles.

SG has and will continue to improve, armor, and maintain roads to withstand heavy truck traffic in order to protect water quality. Use of roadbase (as opposed to silty native soils), soil tackifiers, and wetting agents combined with compaction produce a durable road base that will produce much less fine sediment when compared to existing unimproved roads.

The project will be covered by SG Interests' Integrated Spill Prevention, Control, and Countermeasure Plan. This plan was written and certified by a Registered Professional Engineer (David Fox, PE). The goal of this plan is to prevent spills from occurring due to our operations, control spills if they do occur and safely and effectively clean spills up. The McIntyre Flowback Pits Pipeline Project will be added to the integrated plan as part of the produced water gathering system (1-108 K. 3-6. and 1-108 L. 1.). Because they will transport produced water that could potentially contain hydrocarbons, the pipelines are considered oil "containers" and spills of produced water are considered "oil spills" per Environmental Protection Agency rules. The integrated plan requires regular inspections and documentation of those inspections as well as a flowline maintenance program and other inspection, reporting and record-keeping duties not specific to produced water pipelines. If there is a spill associated with this project, it will be reported as per state and federal law. Gunnison County will be notified as well according to section 1-108 L. 2.

Figure 20 d. Baseline surface water sampling sites in vicinity of the project.



21) Water Quality Monitoring Plan

Baseline water quality is described in section 20 d. (1) above. There are five water quality monitoring points associated with the pits pipeline project. They are:

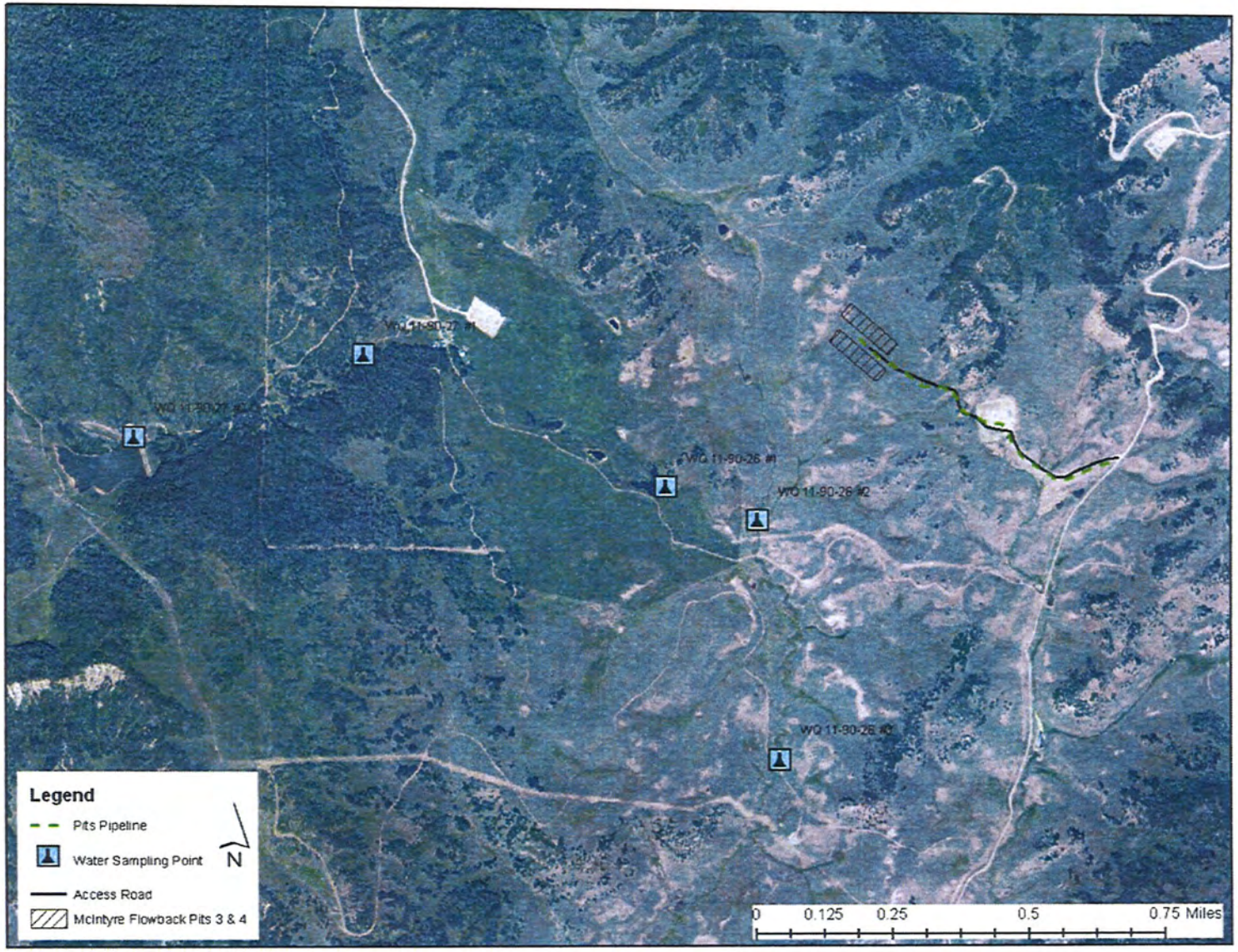
Site Name	Site Type	Stream/Water Body Name	Frequency of Sampling (all locations)
WQ 11-90-27 #2	Surface Water	Ault Reservoir	• First season of pipeline use • Third year following pipeline use • Sixth year following pipeline use • Post project closure as per COGCC requirements for McIntyre Flowback Pits #3 and #4
WQ 11-90-27 #1	Cistern Water	Mixture of shallow groundwater and surface waters	
WQ 11-90-26 #1	Surface Water	Stock Pond	
WQ 11-90-26 #2	Surface Water	Intermittent Tributary to Ault Creek	
WQ 11-90-26 #3	Surface Water	Mainstem Ault Creek	

Sampling will only be conducted if landowner access is granted. All samples will be collected by qualified individuals experienced in water quality sampling and sent to a laboratory accredited by the National Environmental Laboratory Accreditation Program for analysis. Laboratory results will be provided to each landowner within three months of collecting the sample. Laboratory results for baseline, post-completion and complaint response samples will be submitted to the COGCC within three months of collecting the sample(s) for inclusion in its electronic database.

Key indicators of water quality and stream health that will be monitored to detect changes in water quality and the health of the aquatic environment are:

Benzene	Ethylbenzene	Toluene
Xylenes, Total	Calcium	Iron
Magnesium	Manganese	Potassium
Selenium	Sodium	Bromide
Chloride	Conductivity @25C	Fluoride
Nitrate as N, dissolved	Nitrate/Nitrite as N, dissolved	Nitrite as N, dissolved
pH	Residue, Filterable (TDS) @180C	Sodium Absorption Ratio in Water
Sulfate		

The locations of these five sampling sites are shown on the map below:



Sample Handling and Shipment

All sample containers will be labeled. Sample container labels will include the sample identification number, date and time the sample is collected, requested laboratory analyses, and sampler initials.

After the samples have been collected they will be immediately placed on ice in a pre-cooled insulated cooler. The cooler will be kept at or below 4° C during storage and shipment to the analytical laboratory. Each cooler will be packed and sealed in a manner to minimize potential damage to sample containers, help maintain the required temperature, and to help prevent tampering. The coolers will be clearly labeled in order to expedite delivery to the selected laboratory and shipped in a timely manner to minimize the potential for hold time exceed.

Samples will be handled, stored, and shipped in accordance with Chain-of-Custody (COC) procedures. COC procedures require that all samples be maintained under the control of the sampler (i.e., in sight or in a secure, locked environment controlled by the sampler) from the time of collection until delivery to the analytical laboratory or release to a third-party shipping company. Request for Analysis and Custody forms should be provided by the analytical laboratory and filled out completely. The sampler must sign the COC form releasing the samples to the laboratory at the time of delivery to the lab or at the time of release to the shipping company. The laboratory must sign the COC form accepting custody of the samples at the time of delivery by the sampler or the shipping company. The COC form, Request for Analysis, and any other documentation should be sealed in a zipper lock plastic bag and taped to the inside top of the cooler. The cooler will be secured with shipping tape and custody seals (adhesive labels signed and dated by the sampler) should be securely placed on the cooler such that the cooler cannot be opened without breaking the seal.

Documentation

Field records will be kept during sampling to document the procedures used. A Field Sampling Data Sheet is completed for each sample. A Field Sampling Data Sheet is used to record general information such as, equipment used for the activity, equipment calibration records, daily weather conditions (temperature, wind direction, precipitation), locations and times of sampling, any extra level of effort that was extended to perform the duties, or other information deemed pertinent by the sampler.

Field Testing Equipment

The following equipment will be used/but not limited to the collection of water quality field data:

- Hydrogen sulfide field test kit
- pH meter
- Coolers
- Sample container(s)
- Vehicle
- Tape measure
- GPS unit
- Scientific calculator
- Digital camera

Sample Point GPS Coordinate Documentation

Sampling locations will be surveyed using Global Position System (GPS) equipment to determine horizontal and vertical coordinates. SG Interests will collect, store, and process GPS data in a manner consistent with COGCC Rule 215. Latitude and longitude coordinates shall be recorded in decimal degrees.

Data Management & Reporting

Within three months of sample collection, SG will provide the landowner with a letter of testing and analyses completed and a copy of the analytical laboratory report. All sampling data will be submitted to the COGCC in an approved electronic format. The following data will be reported:

- Water quality test cover sheet (e.g. time, date, weather, visual observations, etc.)
- Well or facility ID
- GPS coordinates for each sampling location
- API number for the associated oil and gas well (if available)
- Sample type – baseline, post-completion, or complaint response
- Analytical results for each sample collected will be submitted in an electronic format

Complaints

If COGCC receives a complaint and requests SG Interests to investigate the following complaint sampling procedure will be followed.

Sample Type	Event	Timing
Complaint Investigation	Complaint Investigation Sampling	Within 48 hours of receipt of complaint
	Reporting to Landowner and COGCC	As soon as possible, but no later than 3 months after sample collection
	Notification to COGCC	Within 48 hours

Estimated Costs

The following was derived from a COGCC cost analysis. The following assumptions were made for the cost analysis[1]:

WATER QUALITY SAMPLING COST ESTIMATE			
	Cost/sample		Total
Administration/Personnel	$600.00	5 sites sampled 4 times each	$12,000
Standard Lab analysis	$690.00	5 sites sampled 4 times each	$13,800
Additional testing	$660.00	5 sites sampled 4 times each	$13,200
Average Cost per Sampling Event	$1,980.00	Cost for sampling 5 sites 4 times throughout the duration of the project	$39,600

[1] http://cogcc.state.co.us/RR_HF2012/Groundwater/GroundwaterRegulatoryAnalysis110912.pdf

Mitigation Efforts

Mitigation measures that will be implemented to avoid or minimize adverse effects on surface and ground waters include:

- Best management practices will be implemented throughout the life of the oil & gas operation to protect surface and ground waters.
- Minimize the number of river and stream crossings.
- Keep construction activities within the footprint of the pipeline right-of-way (ROW) and the disturbed area of the adjacent construction zone to the maximum extent practicable.
- Development and implementation of an Erosion Control Plan (see item 25).
- Prevent discharges that have the potential to adversely affect waterbodies or groundwater.
- Stabilize cut slopes immediately when the designed grade is obtained.
- Initiate reclamation of disturbed areas as soon as practicable.
- Follow Integrated Spill Prevention, Control, and Countermeasures Plan to prevent spills and in the event a spill occurs, to minimize its impact on surrounding resources.

22) Waste Management Plan

Waste management activities will be conducted, and facilities constructed and operated, to prevent significant adverse environmental impacts to air, water, soil or biological resources.

- All wastes and recoverable materials will be disposed of or managed in permitted or otherwise authorized locations and facilities only.
- Reduce waste generation whenever practical.
- Reuse or recycle materials whenever practical. This not only lowers consumption of raw materials; it also eliminates the need for waste disposal.
- Avoid co-mingling wastes of different classifications. For example, never place non- hazardous wastes in the same container as hazardous waste. In addition, keep recyclable material separate from non-recyclable waste.
- Maintain good housekeeping practices. Employees and contractors should maintain neat, clean work areas to reduce the need for additional clean up and the wastes it would generate. All garbage will be disposed of in trash dumpsters, which will be emptied and taken to a permitted landfill by the garbage towing company.
- Properly store wastes, especially hazardous wastes, to avoid releases to soil, water, or air, until they can be appropriately managed.
- Waste containers will be clearly identified. Labels or other means will clearly identify the contents of containers of hazardous, non-hazardous and inert wastes.
- A portable latrine will be provided for human wastes, and wastes will be pumped from portable toilets and hauled to an approved sanitation facility. Sewage will not be buried on location.
- Material Safety Data Sheets (MSDS) for all chemicals and hazardous materials that are used during the project will be maintained as per 29 CFR 1910.1200(g). Any petroleum product or other spills will be cleaned up immediately and the material will be hauled to an approved facility. The operator will prevent gasoline, diesel fuel, oil, grease, or any other petroleum products and drilling fluids from migrating off the location or from entering any live stream or riparian area. Spill kits are kept in central locations and employees are trained in spill prevention and response. Fuels and lubricants will be transported by fuels distributors and will be stored in facilities specifically designed for that purpose.

The project is not expected to generate E & P (exploration and production) waste. Waste associated with the project would be generated during the construction period of the project.

23) Hydraulic Fracturing Fluids Disposal and Reporting Plan

Hydraulic fracturing will not take place in this project so no plan is presented.

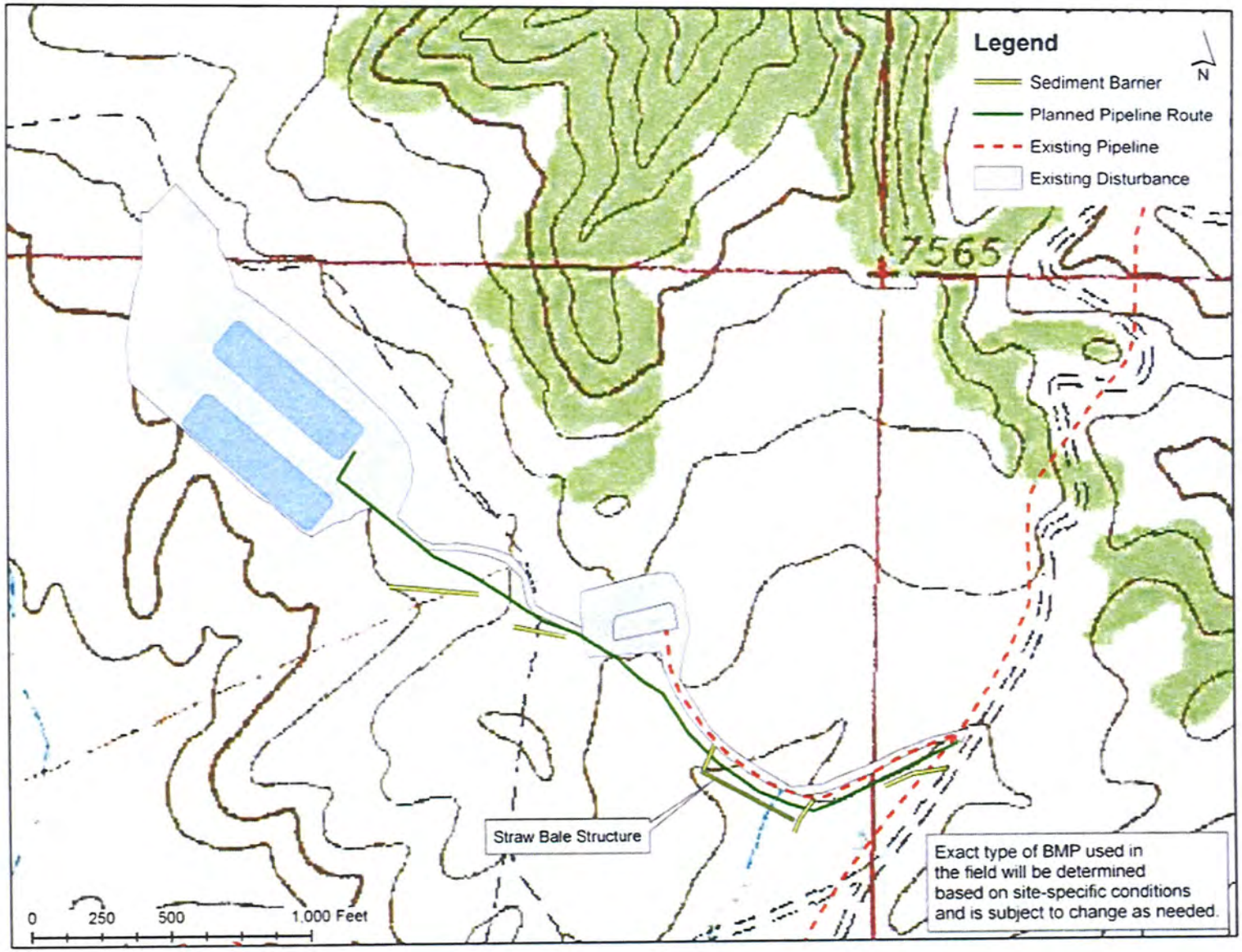
24) Cultural Survey

No cultural resource surveys were conducted for this project because landowner permission for such surveys was denied. Because there will be minimal new ground disturbance from this project, there is very little chance any cultural resources will be affected by it (1-108 M). Communications with landowners on this topic are included in Attachment 4.

25) Drainage and Erosion Control Plan

SG Interests has in place a stormwater discharge permit from Colorado Department of Public Health and Environment (#COR-039711, provided previously). A Stormwater Management Plan has been written for this permit and site specific drainage and erosion control measures will be added into the master plan for this project. The drainage and erosion control measures put in place to stabilize the pipeline route will be maintained. According to 1-108 A, Drainage and Erosion Control, the operation will not cause significant erosion or sedimentation and will be conducted in accordance with the drainage and erosion control plan cited above and shown below.

Drainage and Erosion Control Plan:



26) Wildfire Hazards

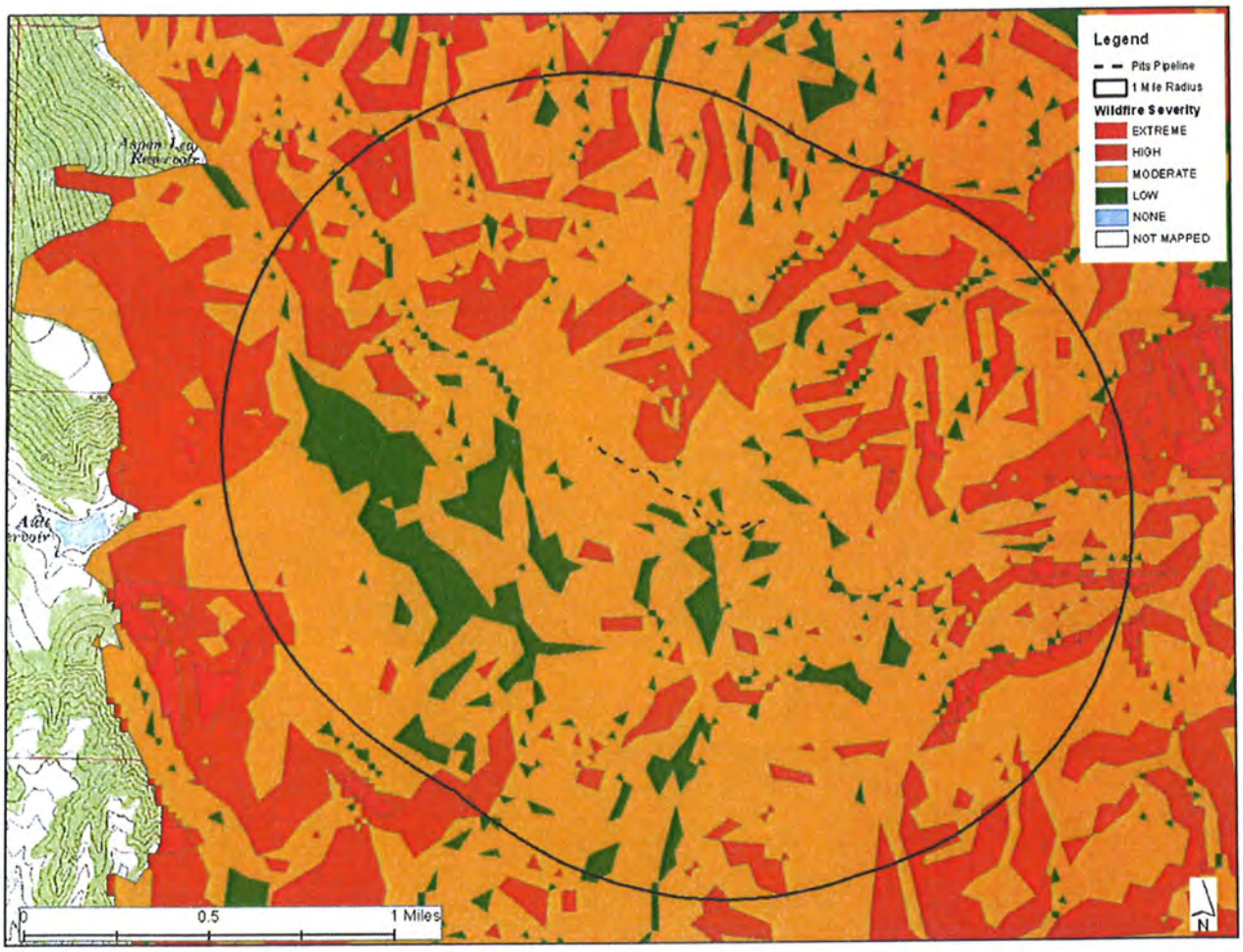
The area around the McIntyre Flowback Pits Project has been mapped as moderate in terms of wildfire hazard. Some small areas along the route have been mapped as low wildfire hazard. The measures for fire prevention described in the emergency response plan (item 19 of this application) as well as those listed below will mitigate the risk of wildfire hazard (1-108 N). SG Interests monitors the fire restrictions set and updated by the county and land management agencies (including Red Flag Warning Days, http://www.crh.noaa.gov/gjt/). SG Interests will adhere to these restrictions.

General fire prevention measures (in place when no elevated fire danger has been identified):

- All field personnel will carry an adequate radio or cell phone along with emergency contact numbers and information, including local and BLM Fire Dispatch. All fires will be reported to local (dial 911) and BLM Fire Dispatch (970-257-4800) immediately.
- A twenty (20) lb. fire extinguisher on site during construction.
- A ten (10) foot diameter area will be cleared of all surface vegetation and scraped to bare mineral soil prior to welding or grinding.
- Area within a twenty foot radius of tie-ins will be wet before welding begins.
- Cut vegetation will be scattered well outside the cleared area, not piled.
- At least 5 gallons of water will be on site during construction.
- Wind boards will be used to manage sparks from surface welding operations.
- Sparks will be kept within the six (6) foot ditch for pipeline welding operations.
- Each vehicle will carry at least one shovel.
- The operator will assure that all workers are aware of fire prevention and safety procedures; evacuation routes and procedures; the designated safe meeting place; and emergency shutdown procedures. The operator will have a roster of all persons on location in the event of an evacuation.
- Building, maintaining, attending or using a fire, campfire, coal or wood burning stove or any type of charcoal-fueled broiler, propane stove, or open fire of any type at the project site is prohibited.
- All flaring operations must be contained by using either self- contained equipment or a flare stack that is located at a Bureau of Land Management or Colorado Oil and Gas Conservation Commission approved location.
- Project manager will have a plan to access more water if needed.

During times of elevated fire danger, additional measures will be employed to prevent wildfire. Fire prevention plans are written and distributed to SG Interests employees and contractors as needed during these times.

Wildfire severity map:



27) Geologic Hazards

No geological hazards have been mapped in the vicinity (one mile radius) of the project and none are known to exist (1-108 O).

28) Existing and Future Land Uses

The two parcels crossed by the pipeline project are used for natural gas exploration and livestock ranching. The McIntyre Flowback Pits #3 and #4 are located on the parcel owned by Rock Creek Ranch I, Ltd. The Rock Creek 11-90-23 well pad is also planned to be located on this parcel. Livestock grazing occurs on the Rock Creek Parcel seasonally. The parcel owned by Aspen Leaf Ranch, Inc. has three active gas wells located on it: Pasco Spadafora #2, Pasco Spadafora #3, and Federal 11-90-26 #1 as well as associated pipelines (including the Aspen Leaf Lateral Pipeline) and access roads. The parcel is also used for ranching operations and there is a commercial lodge on the property that is used by hunters accessing the public lands in the vicinity as well as construction workers employed during natural gas construction projects. The planned project will not impact these uses and meets 1-108 E and 1-108 F. These uses will continue after construction of the pipeline. These uses are expected to continue after final abandonment and reclamation of the natural gas facilities as well.

29) Operational Conflict

Not applicable.

30) Technical Infeasibility or Environmental Protection Waivers

Not applicable.

31) Chemicals Used in Oil and Gas Operation

The following chemicals may be expected to be used in this project:

Name	CAS #
Diesel fuel	68476-34-6
Fresh water	7732-18-5
Acetylene*	74-86-2
Propane*	74-98-6
Butane*	75-28-5
Propylene*	115-07-1

* Welding gas - one or more but not likely all will be on site

Please see attached MSDS sheets for these chemicals (Attachment 5). We do not include an MSDS sheet for fresh water.

32) Future Operations

Please see attached map of SG Interests' planned operations as proposed to the Bureau of Land Management for use in their Master Development Plan Environmental Impact Statement (Attachment 6).

33) Misrepresentation

We understand that any intentional and/or substantive misrepresentation made by SG Interests may result in suspension or revocation of the Oil and Gas Permit.

Attachments provided upon request.

FORM 4 Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109

DE	ET	OE	ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry Information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 77330
2. Name of Operator: SG Interests I, Ltd
3. Address: 1485 Florida Road, Suite C202
   City: Durango State: CO Zip 81301
4. Contact Name
   Catherin Dickert
   Phone: 970-385-0696
   Fax: 970-385-0636
5. API Number 05- OGCC Facility ID Number 418791
6. Well/Facility Name: McIntyre Flowback Pit 7. Well/Facility Number #3
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 26, T11S, R90W
9. County: Gunnison 10. Field Name: N/A
11. Federal, Indian or State Lease Number: N/A

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page	X	
Other		

General Notice

☐ **CHANGE OF LOCATION:** **Attach New Survey Plat** (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:				
Change of **Surface** Footage **to** Exterior Section Lines:				
Change of **Bottomhole** Footage **from** Exterior Section Lines:				
Change of **Bottomhole** Footage **to** Exterior Section Lines:				

attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude Distance to nearest property line Distance to nearest bldg, public rd, utility or RR

Longitude Distance to nearest lease line Is location in a High Density Area (rule 603b)? Yes/No

Ground Elevation Distance to nearest well same formation Surface owner consultation date:

GPS DATA:

Date of Measurement PDOP Reading Instrument Operator's Name

☐ **CHANGE SPACING UNIT**

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ **Remove from surface bond**
Signed surface use agreement attached

☐ **CHANGE OF OPERATOR (prior to drilling):**
Effective Date:
Plugging Bond: ☐ Blanket ☐ Individual

☐ **CHANGE WELL NAME** **NUMBER**
From:
To:
Effective Date:

☐ **ABANDONED LOCATION:**
Was location ever built? ☐ Yes ☐ No
Is site ready for Inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ **NOTICE OF CONTINUED SHUT IN STATUS**
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT

☐ **SPUD DATE:**

☐ **REQUEST FOR CONFIDENTIAL STATUS** (6 mos from date casing set)

☐ **SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK** *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ **RECLAMATION:** Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately ☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date:

☒ Report of Work Done
Date Work Completed: 05/10/2012

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)
☐ Change Drilling Plans
☐ Gross Interval Changed?
☐ Casing/Cementing Program Change
☐ Request to Vent or Flare
☐ Repair Well
☐ Rule 502 variance requested
☒ Other: ALR/calculations
☐ E&P Waste Disposal
☐ Beneficial Reuse of E&P Waste
☐ Status Update/Change of Remediation Plans for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Catherine Dickert Date 01/31/2013 Email: cdickert@sginterests.com

Print Name: Catherine Dickert Title: Environmental & Permitting Manager

COGCC Approved: Title Date:

CONDITIONS OF APPROVAL, IF ANY:

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 77330 API Number:
2. Name of Operator: SG Interests I, Ltd. OGCC Facility ID # 418791
3. Well/Facility Name: McIntyre Flowback Pit Well/Facility Number: #3
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 26, T11S, R90W, 6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

We request relief from the final two COAs attached to our approved Form 15 for the McIntyre Flowback Pit #3. These COAs require SG Interests to provide engineered calculations to determine the pit-specific Action Leak Rate (#12) as well as the updated Action Leak Rate as verified through the initial 72-hour hydrostatic test (#13). Fox Engineering Solutions, Inc. conducted the 72-hour test and reported, "The hydrotest results indicated no observed loss in liner system integrity; therefore, it is our opinion that corrections or adjustments to the Action Leakage Rate (ALR) are not warranted at this time." Because there was no movement of fluid through the primary liner, SG Interests requests relief from the requirements to calculate and report an Action Leak Rate for this pit.

FORM 4 Rev 12/05

Page 1

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109

DE	ET	OE	ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry Information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 77330
2. Name of Operator: SG Interests I, Ltd
3. Address: 1485 Florida Road, Suite C202
   City: Durango State: CO Zip 81301
4. Contact Name: Catherin Dickert
   Phone: 970-385-0696
   Fax: 970-385-0636
5. API Number 05-
   OGCC Facility ID Number 418790
6. Well/Facility Name: McIntyre Flowback Pit
7. Well/Facility Number #4
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 26, T11S, R90W
9. County: Gunnison
10. Field Name: N/A
11. Federal, Indian or State Lease Number: N/A

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page	X	
Other		

General Notice

☐ **CHANGE OF LOCATION:** **Attach New Survey Plat** (a change of surface qtr/qtr is substantive and requires a new permit)

		FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:					
Change of **Surface** Footage **to** Exterior Section Lines:					
Change of **Bottomhole** Footage **from** Exterior Section Lines:					
Change of **Bottomhole** Footage **to** Exterior Section Lines:					**attach directional survey**

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude ____ Distance to nearest property line ____ Distance to nearest bldg, public rd, utility or RR ____

Longitude ____ Distance to nearest lease line ____ Is location in a High Density Area (rule 603b)? Yes/No ☐

Ground Elevation ____ Distance to nearest well same formation ____ Surface owner consultation date: ____

GPS DATA:

Date of Measurement ____ PDOP Reading ____ Instrument Operator's Name ____

☐ **CHANGE SPACING UNIT**

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ **Remove from surface bond**
Signed surface use agreement attached

☐ **CHANGE OF OPERATOR (prior to drilling):**
Effective Date: ____
Plugging Bond: ☐ Blanket ☐ Individual

☐ **CHANGE WELL NAME** **NUMBER**
From: ____ ____
To: ____ ____
Effective Date: ____

☐ **ABANDONED LOCATION:**
Was location ever built? ☐ Yes ☐ No
Is site ready for Inspection? ☐ Yes ☐ No
Date Ready for Inspection: ____

☐ **NOTICE OF CONTINUED SHUT IN STATUS**
Date well shut in or temporarily abandoned: ____
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT ____

☐ **SPUD DATE:** ____

☐ **REQUEST FOR CONFIDENTIAL STATUS** (6 mos from date casing set)

☐ **SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK** *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ **RECLAMATION:** Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately ____ ☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date: ____

☒ Report of Work Done
Date Work Completed: 05/10/2012

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)
☐ Change Drilling Plans
☐ Gross Interval Changed?
☐ Casing/Cementing Program Change
☐ Request to Vent or Flare
☐ Repair Well
☐ Rule 502 variance requested
☒ Other: ALR/calculations
☐ E&P Waste Disposal
☐ Beneficial Reuse of E&P Waste
☐ Status Update/Change of Remediation Plans for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Catherine Dickert Date: 01/31/2013 Email: cdickert@sginterests.com

Print Name: Catherine Dickert Title: Environmental & Permitting Manager

COGCC Approved: ____ Title ____ Date: ____

CONDITIONS OF APPROVAL, IF ANY:

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 77330 API Number:
2. Name of Operator: Sg Interests I, Ltd. OGCC Facility ID # 418790
3. Well/Facility Name: McIntyre Flowback Pit Well/Facility Number: #4
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 26, T11S, R90W, 6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

We request relief from the final two COAs attached to our approved Form 15 for the McIntyre Flowback Pit #4. These COAs require SG Interests to provide engineered calculations to determine the pit-specific Action Leak Rate (#12) as well as the updated Action Leak Rate as verified through the initial 72-hour hydrostatic test (#13). Fox Engineering Solutions, Inc. conducted the 72-hour test and reported, "The hydrotest results indicated no observed loss in liner system integrity; therefore, it is our opinion that corrections or adjustments to the Action Leakage Rate (ALR) are not warranted at this time." Because there was no movement of fluid through the primary liner, SG Interests requests relief from the requirements to calculate and report an Action Leak Rate for this pit.

FORM 4 Rev 04/13

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109

DE	ET	OE	ES

Document Number: 400491287

Date Received: 10/16/2013

SUNDRY NOTICE

Submit a signed original. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full in Comments or provide as an attachment. Identify Well by API Number; identify Oil and Gas Location by Location ID Number; identify other Facility by Facility ID Number.

OGCC Operator Number: 77330 Contact Name Catherine Dickert

Name of Operator: SG INTERESTS I LTD Phone: (970) 3850696

Address: 1485 FLORIDA RD #C202 Fax: (970) 3850636

City: DURANGO State: CO Zip: 81301 Email: cdickert@sginterests.com

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Srfc Eqpmt Diagram		
Technical Info Page		
Other		

API Number : 05- 051 00 OGCC Facility ID Number: 418791

Well/Facility Name: MCINTYRE FLOWBACK Well/Facility Number: 3

Location QtrQtr: NWNE Section: 26 Township: 11S Range: 90W Meridian: 6

County: GUNNISON Field Name: RAGGED MOUNTAIN

Federal, Indian or State Lease Number:

CHANGE OF LOCATION OR AS BUILT GPS REPORT

☐ Change of Location * ☐ As-Built GPS Location Report ☐ As-Built GPS Location Report with Survey

* Well location change requires new plat. A substantive surface location change may require new Form 2A.

SURFACE LOCATION GPS DATA

Data must be provided for Change of Surface Location and As Built Reports.

Latitude PDOP Reading Date of Measurement

Longitude GPS Instrument Operator's Name

LOCATION CHANGE (all measurements in Feet)

Well will be: (Vertical, Directional, Horizontal)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **From** Exterior Section Lines:				
Change of **Surface** Footage **To** Exterior Section Lines:				

Current **Surface** Location **From** QtrQtr NWNE Sec 26 Twp 11S Range 90W Meridian 6

New **Surface** Location **To** QtrQtr Sec Twp Range Meridian

	FNL/FSL		FEL/FWL	
Change of **Top of Productive Zone** Footage **From** Exterior Section Lines:				
Change of **Top of Productive Zone** Footage **To** Exterior Section Lines:				**

Current **Top of Productive Zone** Location **From** Sec Twp Range

New **Top of Productive Zone** Location **To** Sec Twp Range

	FNL/FSL		FEL/FWL	
Change of **Bottomhole** Footage **From** Exterior Section Lines:				
Change of **Bottomhole** Footage **To** Exterior Section Lines:				**

Current **Bottomhole** Location Sec Twp Range

New **Bottomhole** Location Sec Twp Range

** attach deviated drilling plan

Is location in High Density Area?

Distance, in feet, to nearest building , public road: , above ground utility: , railroad: ,

property line: , lease line: , well in same formation:

Ground Elevation feet Surface owner consultation date

OTHER CHANGES

☐ **REMOVE FROM SURFACE BOND** **Signed surface use agreement is a required attachment**

☐ **CHANGE OF WELL, FACILITY OR OIL & GAS LOCATION NAME OR NUMBER**

From: Name MCINTYRE FLOWBACK Number 3 Effective Date: _____

To: Name _____ Number _____

☐ **ABANDON PERMIT: Permit can only be abandoned if the permitted operation has NOT been conducted. Field inspection will be conducted to verify site status.**

☐ WELL:Abandon Application for Permit-to-Drill (Form2) – Well API Number _____ has not been drilled.

☐ PIT: Abandon Earthen Pit Permit (Form 15) – COGCC Pit Facility ID Number _____ has not been constructed (Permitted and constructed pit requires closure per Rule 905)

☐ CENTRALIZED E&P WASTE MANAGEMENT FACILITY: Abandon Centralized E&P Waste Management Facility Permit (Form 28) – Facility ID Number _____ has not been constructed (Constructed facility requires closure per Rule 908)

OIL & GAS LOCATION ID Number: _____

☐ Abandon Oil & Gas Location Assessment (Form 2A) – Location has not been constructed and site will not be used in the future.

☐ Keep Oil & Gas Location Assessment (Form 2A) active until expiration date. This site will be used in the future.

Surface disturbance from Oil and Gas Operations must be reclaimed per Rule 1003 and Rule 1004.

☐ **REQUEST FOR CONFIDENTIAL STATUS**

☐ **DIGITAL WELL LOG UPLOAD**

☐ **DOCUMENTS SUBMITTED** Purpose of Submission: _____

RECLAMATION

INTERIM RECLAMATION

☐ Interim Reclamation will commence approximately _____

Per Rule 1003.e.(3) operator shall submit Sundry Notice reporting interim reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Interim reclamation complete, site ready for inspection.
Per Rule 1003.e(3) describe interim reclamation procedure in Comments below or provide as an attachment and attach required location photographs.

Field inspection will be conducted to document Rule 1003.e. compliance

FINAL RECLAMATION

☐ Final Reclamation will commence approximately _____

Per Rule 1004.c.(4) operator shall submit Sundry Notice reporting final reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Final reclamation complete, site ready for inspection. Per Rule 1004.c(4) describe final reclamation procedure in Comments below or provide as an attachment.

Field inspection will be conducted to document Rule 1004.c. compliance

Comments:

ENGINEERING AND ENVIRONMENTAL WORK

☐ NOTICE OF CONTINUED TEMPORARILY ABANDONED STATUS

Indicate why the well is temporarily abandoned and describe future plans for utilization in the COMMENTS box below or provide as an attachment, as required by Rule 319.b.(3).

Date well temporarily abandoned _____ Has Production Equipment been removed from site? _____

Mechanical Integrity Test (MIT) required if shut in longer than 2 years. Date of last MIT _____

☐ SPUD DATE: _____

TECHNICAL ENGINEERING AND ENVIRONMENTAL WORK

Details of work must be described in full in the COMMENTS below or provided as an attachment.

☒ NOTICE OF INTENT Approximate Start Date 10/22/2013

☐ REPORT OF WORK DONE Date Work Completed _____

☐ Intent to Recomplete (Form 2 also required)	☐ Request to Vent or Flare	☐ E&P Waste Mangement Plan
☐ Change Drilling Plan	☐ Repair Well	☐ Beneficial Reuse of E&P Waste
☐ Gross Interval Change	☐ Rule 502 variance requested. Must provide detailed info regarding request.	
☒ Other install flags at pit	☐ Status Update/Change of Remediation Plans for Spills and Releases	

COMMENTS:

We will install bird deterring flags over the pit in place of bird netting. This flagging will not be affected by snow and can be left over the pit throughout the winter. Based on other operators' experiences with this flagging, we also believe it will be an effective bird deterrent in the spring and summer months as well. We are proposing to use the flagging in place of bird netting year-round.

H2S REPORTING

Data Fields in this section are intended to document Sample and Location Data associated with the collection of a Gas Sample that is submitted for Laboratory Analysis.

Gas Analysis Report must be attached.

H2S Concentration: _____ in ppm (parts per million) Date of Measurement or Sample Collection _____

Description of Sample Point:

Absolute Open Flow Potential _____ in CFPD (cubic feet per day)

Description of Release Potential and Duration (If flow is not open to the atmosphere, identify the duration in which the container or pipeline would likely be opened for servicing operations.):

Distance to nearest occupied residence, school, church, park, school bus stop, place of business, or other areas where the public could reasonably be expected to frequent: _____

Distance to nearest Federal, State, County, or municipal road or highway owned and principally maintained for public use: _____

COMMENTS:

Best Management Practices

No	BMP/COA Type	Description

Operator Comments:

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Catherine Dickert

Title: Env & Permit Manager Email: cdickert@sginterests.com Date: 10/16/2013

Based on the information provided herein, this Sundry Notice (Form 4) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____ Date:

CONDITIONS OF APPROVAL, IF ANY:

COA Type	Description
	Netting shall continue to be used in summer/operating months and during migratory bird seasons when produced fluids are stored in pit.

General Comments

User Group	Comment	Comment Date
OGLA	Conferred with A. Fishcer and Operator. This pit is inactive in the winter and drawn down	12/10/2013 8:58:46 AM

Total: 1 comment(s)

Attachment Check List

Att Doc Num	Name
400491287	FORM 4 SUBMITTED

Total Attach: 1 Files

FORM 4 Rev 04/13

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109

DE	ET	OE	ES

Document Number: 400496179

Date Received: 10/16/2013

SUNDRY NOTICE

Submit a signed original. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full in Comments or provide as an attachment. Identify Well by API Number; identify Oil and Gas Location by Location ID Number; identify other Facility by Facility ID Number.

OGCC Operator Number: 77330 Contact Name Catherine Dickert

Name of Operator: SG INTERESTS I LTD Phone: (970) 3850696

Address: 1485 FLORIDA RD #C202 Fax: (970) 3850636

City: DURANGO State: CO Zip: 81301 Email: cdickert@sginterests.com

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Srfc Eqpmt Diagram		
Technical Info Page		
Other		

API Number : 05- 051 00 OGCC Facility ID Number: 418790

Well/Facility Name: MCINTYRE FLOWBACK Well/Facility Number: 4

Location QtrQtr: NWNE Section: 26 Township: 11S Range: 90W Meridian: 6

County: GUNNISON Field Name: RAGGED MOUNTAIN

Federal, Indian or State Lease Number:

CHANGE OF LOCATION OR AS BUILT GPS REPORT

☐ Change of Location * ☐ As-Built GPS Location Report ☐ As-Built GPS Location Report with Survey

* Well location change requires new plat. A substantive surface location change may require new Form 2A.

SURFACE LOCATION GPS DATA Data must be provided for Change of Surface Location and As Built Reports.

Latitude PDOP Reading Date of Measurement

Longitude GPS Instrument Operator's Name

LOCATION CHANGE **(all measurements in Feet)**

Well will be: (Vertical, Directional, Horizontal)

	FNL/FSL		FEL/FWL		
Change of **Surface** Footage **From** Exterior Section Lines:					
Change of **Surface** Footage **To** Exterior Section Lines:					
Current **Surface** Location **From**	QtrQtr NWNE	Sec 26	Twp 11S	Range 90W	Meridian 6
New **Surface** Location **To**	QtrQtr	Sec	Twp	Range	Meridian
Change of **Top of Productive Zone** Footage **From** Exterior Section Lines:					
Change of **Top of Productive Zone** Footage **To** Exterior Section Lines:					**
Current **Top of Productive Zone** Location **From**		Sec	Twp	Range	
New **Top of Productive Zone** Location **To**		Sec	Twp	Range	
Change of **Bottomhole** Footage **From** Exterior Section Lines:					
Change of **Bottomhole** Footage **To** Exterior Section Lines:					**
Current **Bottomhole** Location		Sec	Twp	Range	
New **Bottomhole** Location		Sec	Twp	Range	

** attach deviated drilling plan

Is location in High Density Area?

Distance, in feet, to nearest building , public road: , above ground utility: , railroad: ,

property line: , lease line: , well in same formation:

Ground Elevation feet Surface owner consultation date

OTHER CHANGES

☐ **REMOVE FROM SURFACE BOND** **Signed surface use agreement is a required attachment**

☐ **CHANGE OF WELL, FACILITY OR OIL & GAS LOCATION NAME OR NUMBER**

From: Name MCINTYRE FLOWBACK Number 4 Effective Date: _____

To: Name _____ Number _____

☐ **ABANDON PERMIT: Permit can only be abandoned if the permitted operation has NOT been conducted. Field inspection will be conducted to verify site status.**

☐ WELL:Abandon Application for Permit-to-Drill (Form2) – Well API Number _____ has not been drilled.

☐ PIT: Abandon Earthen Pit Permit (Form 15) – COGCC Pit Facility ID Number _____ has not been constructed (Permitted and constructed pit requires closure per Rule 905)

☐ CENTRALIZED E&P WASTE MANAGEMENT FACILITY: Abandon Centralized E&P Waste Management Facility Permit (Form 28) – Facility ID Number _____ has not been constructed (Constructed facility requires closure per Rule 908)

OIL & GAS LOCATION ID Number: _____

☐ Abandon Oil & Gas Location Assessment (Form 2A) – Location has not been constructed and site will not be used in the future.

☐ Keep Oil & Gas Location Assessment (Form 2A) active until expiration date. This site will be used in the future.

Surface disturbance from Oil and Gas Operations must be reclaimed per Rule 1003 and Rule 1004.

☐ **REQUEST FOR CONFIDENTIAL STATUS**

☐ **DIGITAL WELL LOG UPLOAD**

☐ **DOCUMENTS SUBMITTED** Purpose of Submission: _____

RECLAMATION

INTERIM RECLAMATION

☐ Interim Reclamation will commence approximately _____

Per Rule 1003.e.(3) operator shall submit Sundry Notice reporting interim reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Interim reclamation complete, site ready for inspection.
Per Rule 1003.e(3) describe interim reclamation procedure in Comments below or provide as an attachment and attach required location photographs.

Field inspection will be conducted to document Rule 1003.e. compliance

FINAL RECLAMATION

☐ Final Reclamation will commence approximately _____

Per Rule 1004.c.(4) operator shall submit Sundry Notice reporting final reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Final reclamation complete, site ready for inspection. Per Rule 1004.c(4) describe final reclamation procedure in Comments below or provide as an attachment.

Field inspection will be conducted to document Rule 1004.c. compliance

Comments:

ENGINEERING AND ENVIRONMENTAL WORK

☐ NOTICE OF CONTINUED TEMPORARILY ABANDONED STATUS

Indicate why the well is temporarily abandoned and describe future plans for utilization in the COMMENTS box below or provide as an attachment, as required by Rule 319.b.(3).

Date well temporarily abandoned _____ Has Production Equipment been removed from site? _____

Mechanical Integrity Test (MIT) required if shut in longer than 2 years. Date of last MIT _____

☐ SPUD DATE: _____

TECHNICAL ENGINEERING AND ENVIRONMENTAL WORK

Details of work must be described in full in the COMMENTS below or provided as an attachment.

☒ NOTICE OF INTENT Approximate Start Date 10/22/2013

☐ REPORT OF WORK DONE Date Work Completed _____

☐ Intent to Recomplete (Form 2 also required)	☐ Request to Vent or Flare	☐ E&P Waste Mangement Plan
☐ Change Drilling Plan	☐ Repair Well	☐ Beneficial Reuse of E&P Waste
☐ Gross Interval Change	☐ Rule 502 variance requested. Must provide detailed info regarding request.	
☒ Other install flags at pit	☐ Status Update/Change of Remediation Plans for Spills and Releases	

COMMENTS:

We will install bird deterring flags over the pit in place of bird netting. This flagging will not be affected by snow and can be left over the pit throughout the winter. Based on other operators' experiences with this flagging, we also believe it will be an effective bird deterrent in the spring and summer months as well. We are proposing to use the flagging in place of bird netting year-round.

H2S REPORTING

Data Fields in this section are intended to document Sample and Location Data associated with the collection of a Gas Sample that is submitted for Laboratory Analysis.

Gas Analysis Report must be attached.

H2S Concentration: _____ in ppm (parts per million) Date of Measurement or Sample Collection _____

Description of Sample Point:

Absolute Open Flow Potential _____ in CFPD (cubic feet per day)

Description of Release Potential and Duration (If flow is not open to the atmosphere, identify the duration in which the container or pipeline would likely be opened for servicing operations.):

Distance to nearest occupied residence, school, church, park, school bus stop, place of business, or other areas where the public could reasonably be expected to frequent: _____

Distance to nearest Federal, State, County, or municipal road or highway owned and principally maintained for public use: _____

COMMENTS:

Best Management Practices

No	BMP/COA Type	Description

Operator Comments:

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Catherine Dickert

Title: Env & Permit Manager Email: cdickert@sginterests.com Date: 10/16/2013

Based on the information provided herein, this Sundry Notice (Form 4) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____ Date: _____

CONDITIONS OF APPROVAL, IF ANY:

COA Type	Description

General Comments

User Group	Comment	Comment Date
Engineer	will "un-assign" ENGR from this sundry, instead assign EPS for area. also should be OGLA review	11/1/2013 2:19:42 PM

Total: 1 comment(s)

Attachment Check List

Att Doc Num	Name
400496179	FORM 4 SUBMITTED

Total Attach: 1 Files