

**Conditions of Approval and Surface Use Plan of Operations**

for

The Colorado Oil and Gas Conservation Commission's Four Monitoring Well Locations Along the Fruitland Formation Outcrop in Archuleta County T34N, R5W, Sec. 4, SW1/4, NUL, T34N, R5W, Sec. 14, SE1/4, SUL, T34N, R4W, Sec. 30, NW1/4, and Sec. 32, SW1/4, SUL.

The following surface occupancy requirements shall apply. Modifications and exceptions to these requirements must be approved in writing by an authorized representative of the U.S.D.A Forest Service (FS), as appropriate. The following conditions shall be implemented in accordance with the requirements of the Northern San Juan Basin CBM (NSJB) FEIS and ROD including any site-specific analyses, monitoring, and mitigation measures applicable to the project.

**I. PROJECT REQUIREMENTS**

- A. The FS point of contact for this project is Walt Brown, Columbine District Geologist, 970 385-1372. An Operator representative shall be designated, in writing, for on the ground activities. Specific authorities for the Operator representative shall be noted in the designation letter.
- B. In an emergency, appropriate action shall be taken and the FS representative shall be promptly notified. Emergencies should also be reported to the San Juan Public Lands Dispatch Center at 970 385-1324. Any resource damage resulting from, or in response to, the emergency shall be rehabilitated as soon as practicable in a manner approved by the FS representative.
- C. This project is part of the San Juan Public Lands Environmental Management System (EMS). The operator must return a signed copy of these COAs to comply with EMS communication requirements.
- D. After facility locations, including well site, pipeline and/or access road alignments have been finalized, maps showing centerline, facility dimensions, and general clearing limits, as well as other pertinent information, must be submitted to the FS representative in hardcopy form and in an appropriate electronic format compatible with FS GIS systems using a universally accepted geographic coordinate system.
- E. The section corner marker that will be impacted by MW-34-5-5-1 construction activities must be perpetuated and rehabilitated in accordance with the attached guidance. In summary, the project surveyor must be licensed in Colorado and must file two monument records with the Colorado State Board of Registrations. Before site activities begin, two corner accessories for the monument in question must be established and referenced by bearing and distance to each of the accessories and the information documented on a monument record and filed with the State Board of registration. After the work on the site is complete, the Colorado licensed surveyor will need to reestablish the corner monument itself by reference to the previously established accessories and set a new monument and then file a new monument record documenting the new corner along with the corner accessories used to reestablish the corner position.
- F. The FS has designated a turn-around location for large vehicles on the Fosset Gulch Road (NFSR 613) approximately ½ mile north of the MW-34-5-14U-1 location. This turn-around location must be recontoured and/or disked and then reseeded with the seed mix referenced in the Reclamation section of this document at the end of project activities. The operator will be responsible for the site until the reclamation standards in Section XI Reclamation have been met.
- G. The FS representative and Operator representative shall schedule and attend a pre-work meeting before any on the ground project activities begin. The meeting should also be attended by any Operator subcontractors that will be working on the project. Coordination meetings to discuss long term site operations, maintenance and reclamation shall be scheduled on at least an annual basis until the site is reclaimed, unless otherwise authorized by the FS representative.
- H. A traffic control safety plan shall be submitted by the operator and accepted by the FS representative before construction operations begin. The traffic control safety plan shall be prepared by an American Traffic Safety Services Association (ATSSA) certified company, unless

otherwise authorized by the FS. The Traffic Control Plan and all signs used shall be in compliance with the Manual of Uniform Traffic Control Devices (MUTCD), unless otherwise authorized by the FS. All necessary signs must be installed before construction activities begin. Signs must not be nailed to trees. For activities on NFS lands, the operator must also submit a Road Use Permit application for review and approval.

- I. The COGCC will need to use the Wagon Gulch (Forest Service non-system road), Fosset Gulch (NFSR 613), and Deep Canyon NFSR 842 roads temporarily to construct the MW-34-5-5-1, MW-34-5-14U-1, and MW-34-4-32-1 locations. If activities related to this project damage the roads, the COGCC will be responsible for road repair to the same condition or better as the road condition at the start of project activities. The fourth location, MW-34-4-30-01, will be accessed from State Highway 151.
- J. Final facility designs, including those for roads, pipelines and pads, and must be reviewed and accepted by the FS representative before construction of the facility begins. This requirement can be generally completed in two stages: 1) Road centerlines and facility disturbance limits are staked and flagged on the ground for plan design review. 2) The plan is modified as necessary to address the field review and then fully staked and flagged for construction and reviewed by the FS representative immediately prior to commencement of project activities. If facility construction varies from the final design drawings, hardcopy and electronic documentation displaying the differences must be submitted to the FS representative as well.
- K. A storm water management plan shall be developed to address all construction, reconstruction, maintenance, and operational activities and submitted to FS representative. This plan shall conform to all EPA and Best Management Practices (BMP) requirements, as well as the requirements in NSJB FEIS Section 3.6, Surface Water Resources. The plan must be reviewed by the FS before project activities begin and finalized and accepted by the FS before interim reclamation activities begin.
- L. All storm water management controls needed during the construction phase of the project, including temporary culverts and wattles, must be installed before project activities can begin.
- M. Topsoil must be segregated and stored separately from subsurface materials to avoid mixing during construction, storage and interim reclamation. Subsurface materials should never be placed on top of topsoil material at any point during project activities.
- N. Routine activities that are conducted to maintain safe operation of a well site such as daily site visits using a typical oil field pickup truck, minor repairs of surface facilities using equipment that can be transported by a typical oil field pickup truck, or removal of produced water by truck can be conducted year-round as long as such activities are in compliance with the road use plan or Road Use Permit for the facility. All non-routine activities must be conducted during the period beginning on May 1 and ending on November 30 of any given year unless otherwise authorized by the FS in writing.
- O. Cattle guards and fences shall be installed and constructed upon request of and to the specifications of the FS representative. If existing cattle guards or fences are damaged during operations, they must be repaired to at least the pre-disturbance condition.
- P. During project activities, if paleontologic or cultural resource artifacts or materials are exposed, or raptor nests are discovered, operations in the vicinity shall be halted and the FS representative shall be notified.
- Q. The operator should, with FS representative assistance, conduct education programs to sensitize employees and Operators to the cultural and legal status of significant cultural resources.
- R. During surveying, clearing, and construction operations, the operator shall protect and preserve all land survey monuments. Records of found corners and monuments shall be furnished to the FS representative. Any corners or monuments destroyed during activities shall be replaced by the operator. All survey work and corner/monument setting shall be under the direction of a Registered Land Surveyor. (RLS)
- S. The use of flareless flowback and closed loop mud systems are encouraged, and may be required in some areas.

- T. Air Quality: 1) Dust abatement measures may be required during some phases of well development or heavy maintenance, depending on seasonal conditions, resource impact and public traffic considerations. The FS representative will determine if such measures are required during operations. 2) Emission Control (small stationary gas field engines built within the project area): All internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of nitrogen oxides (NO<sub>x</sub>) per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower. 3) Emission Control (large stationary gas field engines built within the project area): All internal combustion gas field engines greater than 300 design-rated horsepower must not emit more than 1gram of NO<sub>x</sub> per horsepower-hour.
- U. If vehicle traffic gates and/or cattle guards are needed, the gates must be kept closed and locked at all times. The design and location of any gates must be approved by the FS representative before installation. The decision for gate and/or cattleguard construction and location will be made in coordination with the operator.
- V. Visual and sound mitigation plan – The FS will work with the operator to finalize colors and paint styles for the facilities, including sound walls if they prove to be necessary after the testing period for the gas well is completed. Style and color of paint for any facilities associated with this permit will be approved by the FS in writing.
- W. Monitoring – All facets of the surface operation shall be monitored by the FS to assure compliance. This will begin upon receiving notice that the operator will commence work and will continue throughout the active phases of well development on a regular visitation process and will continue on a periodic visitation until abandoned. Refer to the NSJB FEIS and ROD for monitoring and mitigation measures applicable to this project.
- X. The Operator shall maintain an adequate quality control system and perform inspections as necessary to ensure that work on this project conforms to all applicable requirements, including implementation of all required mitigation measures. Such quality control methods and inspections must be documented in reports submitted to the FS representative on a monthly basis during facility construction and on an annual basis for producing wells. The use of third-party contract inspectors funded by the operator and reporting to the FS is encouraged and may be required in some instances.

## II. WELL SIGN

A sign shall be placed on the well pad or monitoring well facility following construction activities with the following minimum information:

- A. Operator Name
- B. Well Name and Number
- C. Legal Location (1/4-1/4, Section, Township and Range)
- D. County and State

## III. FIRE PREVENTION

Fire prevention and suppression activities shall comply with the requirements in the attached Fire Plan for Industrial Operations.

To the extent practical, the operator shall take measures to prevent uncontrolled fires on the area of operation and to suppress uncontrolled fires resulting from operations. All fires must be immediately reported to the FS representative and to the San Juan Public Lands Dispatch Center at 970 385 1324.

## IV. CLEARING

The cleared area shall be kept to the minimum necessary for safe operation. All clearing limits shall be clearly marked and approved by the FS representative prior to any cutting. No project activities or disturbances are allowed outside the clearing limits unless authorized in writing by the FS. The clearing limit markings (e.g., paint, flagging, lathe, etc.) must be maintained until after interim reclamation of

project facilities has been completed. In general, these limits and areas of avoidance will be marked using orange paint and/or flagging, and means “do not disturb”.

All trees to be removed shall be designated by the FS representative, measured, and sold to the operator prior to being cut. The utilization standards for the merchantable timber shall be identified by the FS representative. After payment has been made for the merchantable timber, the operator shall cut and remove the timber. The disposal of unmerchantable timber shall be treated the same as the clearing slash.

Residual trees (merchantable and unmerchantable) damaged as a result of operations shall be treated the same as trees within the clearing limits. A damaged tree is defined as over 4” diameter at breast height with one or more of the following: 1) >50% of the bark has been skinned or removed; 2) top has been knocked out; 3) >50% of the crown has been skinned or damaged, or 4) the tree is now leaning at least 15 degrees or more.

All slash and unmerchantable timber created as a result of this project shall be disposed of in a manner that minimizes visual impacts and reduces the potential for insect infestations and/or fire danger. Acceptable methods include removal of slash and timber from the site, lopping and scattering slash and unmerchantable timber to lie within 12 inches of the ground, and chipping slash and unmerchantable timber. Other methods may be approved by the FS representative.

Stumps shall be removed, unless otherwise authorized by the FS. Stumps remaining at the FS representative’s request shall be flush cut to within 6 inches of the ground or lower.

## V. WELL PAD CONSTRUCTION

### A. Excavation

Construction shall be limited to when soil conditions will meet compaction requirements and will not result in ruts deeper than 4 inches. Unless otherwise agreed all compaction shall be accomplished with layer placement. Generally, conditions are considered to be too wet for construction or travel if soils within 4 inches of the surface can be rolled into threads that are 3 mm in diameter without breaking or crumbling.

Cut and fill slopes must not be steeper than 1.5:1 unless otherwise approved by the FS representative. Construct 3:1 slopes where practicable, unless such slopes would cause unnecessary disturbance or not blend well with surrounding topography.

Topsoil shall be stripped and stored, for the use in the reclamation of the site. The FS representative shall approve a topsoil storage area. All cut bank areas shall have the stored topsoil spread immediately after the well pad has been constructed. The remaining topsoil shall be stored to accommodate its placement after drilling operations are completed. Long-term topsoil storage shall occur in a manner that ensures soil viability, including storage depths and revegetation sufficient to maintain soil productivity until final reclamation begins.

Provisions shall be made to divert surface water around and away from the well pad. The well pad should be constructed so that water does not collect or pond within the pad area.

Construct berms or v-ditches around the pad with controlled, armored drainage to prevent erosion where necessary. Filter or settle pad runoff water prior to entering any drainage using excelsior logs, settling ponds or other methods.

Unless otherwise authorized, the following guidelines for new pads on terrain steeper than 20% with erosive soils should be followed: limit fill slope length to less than 10 feet or maintain slopes at or less than a 3:1 slope, armor fills with 2- to 6- inch diameter rock at a minimum of 4 inches depth, use excelsior blankets (not erosion cloth) in conjunction with seeding and hydromulching, install excelsior logs at the toe of slope, construct 12 inch minimum height berms or v-ditches around pad to prevent surface water from flowing over fill material, construct armored ditch or berm drainage (2- to 6- inch diameter rock minimum 4 inches depth).

### B. Pit Development

If closed loop mud systems or pit-less drilling fluid systems are not used then pit construction must meet the following three requirements: 1) Sump pits shall be located so that surface water flows will not enter the pit. Preferably, pits will be located on high ground, away from live drainages. Lacking such a location, provisions to divert surface flows shall be made. The FS

representative shall approve sump pit locations. 2) Sump pits and reserve pits shall be excavated below ground level and the excavated material diked around the edges. The pits must not be filled to a depth greater than that reached at ground level, unless authorized in writing by the FS representative. 3) Sump and reserve pits must be made impermeable so they do not leak.

## VI. ROAD CONSTRUCTION, RECONSTRUCTION, MAINTENANCE, AND SNOW REMOVAL

### A. Arterial and Collector Access Roads

As a condition to the use of public roads outside of the leasehold, the operator shall obtain an approved Road Use Permit from the FS, as applicable. Applications are available from the FS representative. Arterial and Collector access roads, in general, are existing roads within the use area that are currently receiving other, non oil and gas use, including recreation traffic, private land access and other public land management use. These access roads include, but may not be limited to, the Sauls Creek Road, Spring Creek Road and Fosset Gulch Road. Other roads shall be identified during the engineering study. Prior to any oil and gas use these and other arterial and collector roads may need to be reconstructed to a double lane, all weather standard to accommodate the intended use.

A traffic and engineering study shall be performed on these roads to determine what work needs to be completed prior to use by oil and gas vehicles. The study shall be conducted by a professional engineer registered in the State of Colorado. This study shall assess all current and anticipated traffic and use and current conditions. The study shall assess the type of traffic including the number, size, weight, and configuration of the vehicles. The results of this traffic study will determine the standard that will be required for these roads. Items that shall be assessed are road width and alignment, drainage, structural strength, including aggregate base and surfacing needs, slope stability, clearing, drainage, cattle guards, and fences.

Any traffic that will access a State of Colorado Highway resulting from the development and operation of oil and gas facilities shall follow the requirements of the most current version of the State of Colorado, State Highway Access Code pursuant to Colorado Revised Statute 43-2-147(4). The developers of the oil and gas operations shall submit an Access Permit Application that addresses traffic impacts at highway intersections according to the State Highway Access Code requirements. This may include the need for a Traffic Impact Study and construction of intersection improvements to facilitate safe ingress and egress at the highway intersection. "If the applicant is other than the fee surface rights owner of the property to be served, then the applicant must include sufficient evidence of concurrence or knowledge in the application by the fee rights owner and proof of development rights, (ie. option to buy, federal use permit)."

All NFS bridges shall also be assessed to determine weight capacity. The Forest Service will furnish the operator with all available information on roads and bridges that may affect the intended use. Any bridge work or upgrades identified should comply with applicable National, State and local codes and requirements.

In general, all road standards conditions as outlined in Section VI, Road Construction and Reconstruction, Well Access Roads, shall be met. However, the required road width may need to be a double lane standard, which in general is a width of 24 feet. All costs associated with upgrading of these roads and bridges shall be at the expense of the operator.

### B. Well Access Roads

The primary objective for road construction or reconstruction is to provide a safe, well-drained, maintainable aggregate surfaced road for constant service and reasonable all-weather structural support for trucks accessing well pads on public lands. The "Gold Book" titled *OIL AND GAS Surface Operating Standards for Oil and Gas Exploration and Development* describes the minimum guidelines to be used to develop the road design necessary to meet the primary objective. All roads constructed/reconstructed on public lands shall be designed and constructed under the direction of a registered professional engineer. A geo-technical engineer must be part of

the design team to address those portions of the roads across landslides or slopes that exhibit signs of instability or meet the criteria for high landslide hazard. High landslide hazard areas are defined as areas with slopes steeper than 40 percent that are underlain by the San Jose Formation and areas with slopes steeper than 30 percent that are underlain by the Animas or Fruitland Formations or the Kirkland Shale.

The well access roads will be considered a low volume, single lane road with turnouts built for the specific purpose of accessing, drilling, maintaining and operating a natural gas well. These roads must be located, surveyed, designed, slope staked, and constructed to the standards listed below:

#### Design Standards and Elements

The road design standards and elements shall meet the following requirements, unless otherwise authorized by the FS. In addition, road design standards and elements shall meet the requirements of the AASHTO Publication "*A Policy on Geometric Design of Highways and Streets*."

- 1) Design speed of 15 mph.
- 2) On slopes of 0 to 20 percent, where minor horizontal and vertical alignment shifts may not affect the road design, a plan and profile is not required. Instead, standard templates, culvert locations and turnout locations and special widening locations shall be provided along with the design to the FS representative. A plan and profile showing road plan and profile and creek crossings details shall be provided to the FS representative for slopes steeper than 20 percent. The plan and profile shall identify grade, alignment, stationing, clearing limits, turnout locations, culvert locations, and special design sections. Cross sections with road templates sections shall be provided to the FS representative.
- 3) Travel width shall be adequate to accommodate the design vehicles and equipment. This width is generally 12-16 feet plus widening for off tracking (curve widening) and turnouts. Turnout widths shall be 8 or 10 feet or as needed for design vehicle and shall be 50 to 100 feet in length with an additional 25 to 50 foot tapers at the ends. Turnout spacing shall be as needed for safety.
- 4) Generally, minimum horizontal curve radius shall be 100 feet. Curve widening shall be designed in accordance with AASHTO procedures.
- 5) The maximum road grade shall be less than 8 percent, except for short pitches up to 12 percent for 300 feet or less, unless previously approved by the FS representative.
- 6) Turnout locations are generally naturally occurring, such as additional widths on ridges or other available areas on flat terrain and are normally located at 1,000-foot intervals or intervals, whichever is less.
- 7) Cut slopes shall be no steeper than 1½:1 in soil and designed by a geotechnical engineer in rock. Fill slopes shall be flatter than 1½:1.
- 8) Drainage shall be provided for the entire road length. Culverts shall be used at all drainage locations and for ditch relief. Culverts shall be designed and sized for a 25-year frequency or greater storm, with an allowable head of one foot above the top of the pipe inlet. Culvert spacing shall be designed taking slope and soil type into consideration using a method approved in writing by the FS representative. Culverts shall disperse runoff into filter strips. At a minimum, roadside ditches of 1 foot deep and 3 feet wide from the subgrade will be required on all roads.
- 9) Clearing and grubbing is required on all sections of the road. All clearing and grubbing shall be confined to a clearing width identified upon completion of the construction stakes (slope stakes). Clearing limits shall be at a minimum of 3 feet beyond the top of the cut and 6 feet from the shoulder or at the toe of the fill, whichever is the greater. The clearing limits shall be marked when the road is slope staked. Branches of all trees extending over the roadbed must be trimmed to give a clear height of 14 feet above the roadbed. All vegetative debris shall be disposed of by scattering outside the roadway, or hauled offsite. The slash disposal method must be approved by the FS representative.

- 10) All suitable excavated material is to be used in the construction of embankments, subgrades and backfill for structures. All soil material and fragmented rock removed in excavation shall be used as directed in the approved plan. Excess cut material shall not be wasted unless identified in the approved plan. Roadbed material shall not be placed when the materials or the surface are frozen or too wet for satisfactory compaction. Borrow material shall not be used until materials from roadway excavation has been placed in the embankments, unless otherwise permitted. Approval by the FS representative must be given prior to the start of excavation of borrow areas used by the operator. All fills shall be placed using layer placement method and using a roller for compaction. Fill material shall be placed in horizontal layers not exceeding 12 inches prior to compacting, except when the material contains rock more than 9" in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. Compaction equipment shall be operated over the full width of each layer until visible deformation of the layer ceases or, until the compacting equipment has completed three (3) complete passes.
- 11) A gravel surface shall be constructed for all weather access. An acceptable soil strength test, such as the C.B.R. Test, shall be performed to determine the gravel depths required for the projected vehicle loads and seasons of use. A pavement design method approved in writing by the FS representative shall be used to determine the required gravel depths. The subgrade width must be wide enough to provide for 3:1 side slopes on the surfacing and a 12-16 foot travel width. All gravel material must come from an undesignated source approved by the FS representative. Both the sub-grade and gravel surfacing shall be placed using layer placement method and using a roller for compaction. The gravel material shall be placed in horizontal layers not exceeding 12 inches prior to compacting, except when the material contains rock more than 9" in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. Compaction equipment shall be operated over the full width of each layer until visible deformation of the layer ceases or, until the compacting equipment has completed three (3) complete passes.
- 12) Traffic and regulatory warning signs shall be placed in accordance to MUTCD standards.
- 13) All disturbed areas, including cut and fill slopes, shall be revegetated. The revegetation shall utilize the same species as listed in the Appendix.
- 14) A flag line shall be established over the entire route location, as approved by the FS representative at the time of the onsite visit. Flags shall be placed approximately every 100 feet, or be intervisible, whichever is less. On curves, flags shall be located at least every 50 feet, or less to define the final location of the road.
- 15) After the flag line is approved, the road survey and design shall be completed. The FS representative shall review the design, on the ground prior to acceptance.
- 16) After the design is accepted, the road shall be slope staked and the clearing limits shall be marked.
- 17) The operator or operator's representative must provide for an adequate inspection and quality control system to ensure compliance with all specifications, designs, and drawings. The operator shall take all necessary precautions for the protection of the work and safety of the public and employees during construction of the road.
- 18) The FS representative will conduct periodic inspections of the construction/reconstruction work and the operator's quality control system.
- 19) Construction shall be limited to when soil conditions will meet compaction requirements and will not result in ruts deeper than 4 inches. Unless otherwise agreed all compaction shall be accomplished with layer placement. Generally, conditions are considered to be too wet for construction or travel if soils within 4 inches of the surface can be rolled into threads that are 3 mm in diameter without breaking or crumbling.
- 20) Erosion control measures and BMPs shall be used to contain sediment inside the disturbance limits during construction and prior to the road being surfaced with gravel and vegetation

- established on cut and fill slopes. Erosion control structures will be maintained until successful revegetation is established on cut and fill slopes.
- 21) Minimize erosion at sites located in steep terrain during the construction phase by measures such as contouring, waterbars, temporary ditches, and detention basins, and minimize the period of disturbance.
  - 22) Use filter strips and sediment traps if needed to keep all sand sized sediment on the land and disconnect disturbed soil from streams, lakes, and wetlands. Disperse runoff into filter strips.
  - 23) Key sediment traps into the ground. Clean them out when 50% full. Remove sediment to a stable, gentle, upland site and revegetate.
  - 24) Implement structural erosion and sediment controls such as interim or permanent waterbars, detention ponds, straw bales, silt fenced, earth dikes, and inlet and outlet protection. Provide non-structural erosion control practices such as interim and permanent and temporary seeding, revegetation, and geotextiles.
  - 25) Implement BMPs to slow or reduce the flow of surface-water runoff across disturbed areas, including diversion of surface runoff around facilities and installing erosion control devices to prevent sedimentation of nearby water bodies.
  - 26) Space cross drains according to road grade and soil type as indicated on table 3-35. Do not divert water from one stream to another.
  - 27) Where applicable, the above measures are also required for well pad construction.

#### C. Road Maintenance

The operator shall maintain all public roads used in conjunction with operations as herein outlined:

- 1) Remove slides, boulders, fallen timber, overhanging brush, and other material obstructing safe road sight distance and travel.
- 2) Replace fills and portions of fills lost and/or which have settled below the original grade and cross-section. Gravel shall be bladed and shaped. Gravel lost during use and maintenance shall be replaced.
- 3) Keep drainage channels, ditches, culverts and bridges clear of debris and functioning as intended.
- 4) Repair fences, gates, cattle guards, culverts, bridges and other structures to standard specifications.
- 5) Blade and shape surface and shoulders to maintain a suitable riding surface. Earth and debris from side ditches, slides, or other sources must not be left on the road or mixed into the surface portions of the road. Blading shall not undercut banks. Gravel or other selected surface material shall not be bladed off the surface of the road. Material from slides or other sources requiring removal from the road shall not be deposited in streams or stream channels or at locations where it will wash into streams and cause damage through silting or obstruction of the streams or reservoirs.
- 6) All maintenance shall be performed as needed, in a timely manner or when directed by the FS representative. In addition, at the end of each operating season, maintenance work shall be performed to minimize damage from adverse weather. Such work shall include final blading to remove ruts and other irregularities that would prevent normal surface runoff, and final clearing of ditches and culverts to ensure satisfactory functioning of the road drainage system.

#### D. Snow Removal

To facilitate operations, the operator may remove snow from public roads under a Road Use Permit or special use authorization. Such removal must be done in a manner to preserve and protect roads during operations to the extent necessary to ensure safe and efficient transportation and to prevent excessive erosion damage to roads, streams and other resources.

Snow removal work shall include the following:

- 1) Removal of snow from all of the traveled way, including turnouts for safe and efficient use.
- 2) Culvert inlets shall be maintained in a functioning condition without snow plowed into them so the drainage system will function properly.
- 3) All material, including snow and ice, removed from the road surface shall be deposited away from drainages or stream channels at FS representative approved locations.
- 4) Banks shall not be undercut, nor shall gravel or other surfacing material be bladed off the road. Gravel lost or bladed off the road during snow plowing operations shall be replaced.
- 5) Ditches and culverts shall be kept functioning during operations and upon completion of operations.
- 6) "Snow Berm" is herein defined as a dike of snow, resulting from the operator's snow removal operations, which extends above the surface of the traveled way. The operator shall space, construct, and maintain drainage holes in the snow berm to obtain surface drainage without discharge on erodible fills. The operator shall remove snow berms or construct drainage holes at the end of winter operations or before spring breakup, whichever is sooner.
- 7) Dozers may be used to plow snow with written approval of the FS representative.
- 8) Equipment used to plow snow shall be equipped with shoes or runners to keep the blade a minimum two inches above the surface of the road, unless otherwise agreed to in writing by the FS representative.
- 9) The FS representative shall notify the operator in writing if surfacing material has been bladed off the surface of the road. The notice must state the number of road miles (rounded up to the next 0.1 mile) and the cubic yard equivalent of surfacing bladed off. The FS representative calculation of the cubic yardage will be available for review. Upon such notice, the operator shall replace the surfacing material, in kind, no later than 90 days after notification, unless otherwise agreed to in writing.

#### VII. PIPELINE CONSTRUCTION

All gas and produced water pipelines used to connect this well with a collection system are required to be placed in the access road disturbance corridor, generally within the road prism, unless otherwise authorized. It is recommended that the lines be placed in the same trench at the time of initial road construction prior to gravel surfacing. The pipeline system (mechanical components as well as construction and reclamation plans) must meet all applicable regulations and be designed and constructed under the direction of a professional engineer registered in the State of Colorado, unless otherwise authorized by the FS.

The Operator, Operator's employees or Operator's subcontractors shall perform all work with explosives in such a manner as not to endanger life or property in accordance with all state and Federal regulations.

- 1) Construction shall be limited to when soil conditions will meet compaction requirements and will not result in ruts deeper than 4 inches. Unless otherwise agreed all compaction shall be accomplished with layer placement. Generally, conditions are considered to be too wet for construction or travel if soils within 4 inches of the surface can be rolled into threads that are 3 mm in diameter without breaking or crumbling.
- 2) Erosion control measures and BMPs shall be used to contain sediment inside the disturbance limits during construction and prior to the road being surfaced with gravel and vegetation established on cut and fill slopes. Erosion control structures will be maintained until vegetation is established on cut and fill slopes.
- 3) Minimize erosion at sites located in steep terrain during the construction phase by measures such as contouring, waterbars, temporary ditches, and detention basins, and minimize the period of disturbance.
- 4) Use filter strips and sediment traps if needed to keep all sand sized sediment on the land and disconnect disturbed soil from streams, lakes, and wetlands. Disperse runoff into filter strips.
- 5) Key sediment traps into the ground. Clean them out when 50% full. Remove sediment to a stable, gentle, upland site and revegetate.

- 6) Implement structural erosion and sediment controls such as interim or permanent waterbars, detention ponds, straw bales, silt fenced, earth dikes, and inlet and outlet protection. Provide non-structural erosion control practices such as interim and permanent and temporary seeding, revegetation, and geotextiles.
- 7) Implement BMPs to slow or reduce the flow of surface-water runoff across disturbed areas, including diversion of surface runoff around facilities and installing erosion control devices to prevent sedimentation of nearby water bodies.
- 8) Pipeline construction that crosses ephemeral, intermittent, or perennial streams would require additional mitigation measures. Digging of new open trenches shall not occur more than one week prior to laying pipelines within 100 feet of stream crossings. Within one week post pipeline placement within 100 feet of stream crossings, open trenches must be backfilled, stabilized, and must provide adequate cross drainage.
- 9) Any pipeline construction in areas of known or potential landslide areas shall require a design accepted by the FS representative prior to construction that minimizes to acceptable levels the risk that water from broken or leaking pipelines could activate landslides. Such a design could include leak detection systems or secondary containment systems (e.g., pipe-in-pipe).
- 10) Stockpiling topsoil, spreading topsoil as soon as pipeline construction is completed and prompt revegetation of disturbed areas are required elements of pipeline construction if the pipeline is outside of a road corridor.
- 11) Pipelines that cross stream channels on the surface should be located above the 100-year flood elevation. Where pipelines will be buried under stream channels, an analysis of channel degradation and scour should be completed to ensure the lines are not exposed and broken during extreme runoff events. Without such an analysis, pipeline crossings should be excavated to bedrock and placed beneath all alluvial material. The level of the pipe should be held constant at that same elevation across the floodplain. If the line is placed at shallower depths beneath the floodplain, channel migration may expose the line where it is not designed to pass beneath the channel. (This is to prevent breakage and water contamination during high flow events.)

#### VIII. FENCE CONSTRUCTION

The entire well pad may need to be fenced and a gate or cattle guard provided where the well access road crosses the fence. If necessary, the fence shall be built within seven days after initial well drilling activities are completed. Any constructed fences must be maintained until otherwise directed by the FS representative. In general, this means that fences must be maintained until the areas not needed for production are revegetated.

Generally, where fences are required, a standard barbed wire fence with wood post construction shall be built. Other fence designs may be acceptable for the site, including the use of stock panels and temporary electric fences. The FS representative shall review and approve any proposed designs before fence construction begins.

#### IX. OPERATIONS

The operator must notify the Columbine District Ranger or the authorized FS representative 48 hours prior to commencing operations or resuming operations following their temporary cessation.

##### A. Drilling Operations

- 1) It is herein agreed that during all operations, the operator shall maintain structures, equipment and other facilities in a safe, neat and workman like manner. Hazardous sites or conditions resulting from the operations must be marked by signs, fenced, or otherwise identified to protect the public.
- 2) A Spill Contingency Plan shall be provided to the FS representative. A copy of this Plan must be kept on file at the operator's project office.
- 3) In the event of a spill or leak meeting FS or COGCC reporting requirements, the FS representative and the San Juan Public Lands Dispatch Center (970 385 1324) must be

immediately notified. Final cleanup operations for the spill or leak must be approved by the FS representative who will recommend additional action as necessary.

- 4) Certification or other approval issued by State Agencies with regulations relating to drilling operations above and beyond the requirements of these stipulations will be accepted.

#### B. Water Resources

No surface water will be removed, nor will water be disposed of on public lands without prior written approval from the FS representative. Refer also to the NSJB FEIS and ROD for monitoring and mitigation measures required to protect ground and surface water.

The operator must provide copies to the FS representative of water well monitoring and baseline data reports required by COGCC when these reports are sent to the COGCC. The FS may require additional water well, surface and ground water monitoring and mitigation after reviewing project-specific gas reservoir, hydrologic and geologic information as it becomes available. If indications of induced contamination are observed, measures must be taken to identify and mitigate contamination. If reasonable evidence indicates that actions related to this project have impacted water well quantity or degraded water well quality to less than State drinking water standards, the operator must replace the lost quantity of well water and/or treat or replace well water that has been degraded with water that meets State drinking water standards. Impacts to other surface and ground water sources from this project, if they occur, must be mitigated to specifications determined by the FS and/or other regulatory agencies.

#### C. Wildlife Resources

- 1) Restrict the use of open reserve pits during drilling, unless absolutely necessary.
- 2) Where possible, capture all liquid in containers and dispose of in an approved manner.
- 3) Nets, screens or covers will be installed over all fluid pits, vents, tanks, and equipment openings to prevent wildlife mortality or wildlife contact with well products, fluids, or equipment openings. More information can be obtained at the U.S. Fish and Wildlife Service's wildlife contaminants website: (<http://mountain-prairie.fws.gov/contaminants/contaminants1c.html>).
- 4) Reserve pits will be lined or otherwise made impermeable or closed fluid system used.
- 5) Unless otherwise authorized by the FS, automated monitoring systems must be installed at well and pipeline facilities to minimize vehicle trips and reduce human/wildlife conflicts and loss of habitat effectiveness.
- 6) To the extent practicable, use noise reduction technologies at all facilities during construction, testing and operation phases.
- 7) Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 to July 31.
- 8) Schedule routine maintenance activities to occur between 0900 and 1500 hours at facilities during the period beginning December 1 and ending April 30 of any given year.
- 9) Restrict well access roads not designated as open to the public to authorized CBM operations only. Also prohibit CBM employee use of recreational off road vehicles unless such equipment is necessary for job performance.
- 10) Prohibit employees and Operators from bringing dogs or carrying firearms on site. This mitigation reinforces standard working agreements with industry and is applied to reduce wildlife harassment.
- 11) The operator should, with FS assistance, conduct periodic wildlife awareness programs covering seasonal wildlife requirements and sensitivities, how disturbance affects wildlife and ways personnel can reduce disturbance.
- 12) Refer to the NSJB FEIS and ROD for additional wildlife monitoring and mitigation requirements.

#### D. Sanitation and Garbage

- 1) A portable toilet shall be made available. Sewage shall be contained and disposed of at a designated sanitary disposal facility.
- 2) The well pad and adjoining areas shall be kept in a neat and safe condition during all phases of the operation.
- 3) The operator shall take all reasonable precautions to prevent any dumping or spilling of oil or hazardous materials on public lands. The operator shall take the appropriate preventative measures to ensure that any spill of oil or hazardous material do not enter any stream or other waters. Any spillage of oil or hazardous material shall immediately be picked up and removed from public lands. Used oil resulting from servicing or repair of equipment must not be disposed of on public lands, and must be removed and disposed in a designated disposal site or recycling facility.
- 4) The well pad, adjoining area, and access road must be cleaned of all trash, materials and equipment within five days of termination of construction or heavy maintenance operations. Cleanup operations also include removal of all flagging, wooden lath, signs and other identifying devices from public lands. The Operator is also responsible for cleanup and maintenance of their facilities, including access roads, until final reclamation has been completed and approved by the FS representative.
- 5) The operator shall dispose of refuse from this use, including waste materials, garbage and rubbish of all kinds by removing it from public lands.
- 6) If trash is stored on site prior to complying with 5. above, the trash must be stored in a bear-proof manner.

#### X. VISUAL RESOURCES

- 1) In facility site planning use existing vegetation and topographic features to screen wells, facilities, and roads to the extent practicable. Collocate and/or centralize well pads, utilities, pipelines, and production facilities wherever possible to minimize surface impacts and reduce gas field traffic.
- 2) Complete interim reclamation as soon as possible so that successful re-vegetation can be established to stabilize soils and reduce visual impacts.
- 3) Paint all permanent structures (on site for more than 6 months) in a flat, non-reflective, earth tone color that matches surrounding summer vegetation or rocks. The FS representative will approve colors.
- 4) Minimize the use of traffic, regulatory and site identification signs. All posts should be painted a flat, non-reflective dark brown color approved by FS representative.
- 5) Facilities must be designed, constructed and reclaimed to blend with the surrounding landscape to the extent practicable.
- 6) Minimize the height of facilities, including pumping units, where possible to be at or below the predominant tree height. Where so directed by the FS representative, design well pads and facilities with scalloped edges in wooded areas, and avoid high wall cuts.
- 7) For facility construction, including pipeline installation, where so directed by the FS representative, clear vegetation in a non-linear fashion to avoid a visually dominant straight line. Where so directed by the FS representative, employ vegetative edge feathering in sloped areas that may be visible from sensitive areas, such as roads, use areas, and residences.
- 8) Avoid straight line-of-sight road construction and design roads through wooded areas to follow a curvilinear path using natural topography. Avoid road construction across ridge tops where it may cause a visual contrast in the landscape or add skyline alterations that are visually obvious.
- 9) Install the minimum lighting needed and use light sensitive, motion activated lighting systems that are illuminated only when needed for security or maintenance. Light fixtures should be hooded to prevent horizontal and upward light pollution.
- 10) Generally, any fencing should be limited to temporary electric fencing or typical wire range fencing using wood or painted "T" posts. If other fencing is needed (such as chain link), this

should be vinyl clad or painted a flat non-reflective color. All proposed designs and colors must be approved by the FS prior to fence construction.

#### XI. RECLAMATION

- A. Bonds: The FS has determined that a surface reclamation bond is not required for this project.
- B. Reclamation Plans: Interim and final reclamation must meet the standards in this document and in the APD, unless otherwise authorized in writing by the FS. Reclamation must address the four components of successful reclamation described in D. 2) (2) below.
- C. Interim Reclamation: Interim reclamation measures should be initiated when facility construction activities are completed. Interim reclamation measures include recontouring and revegetating all areas of facilities (including access roads, pipelines and well pads) not needed for long-term operations. The FS representative may require additional measures for interim reclamation to minimize long-term disturbance on or around project facilities. Unless otherwise authorized, an interim reclamation plan must be submitted to the FS representative for review and approval before or within four weeks of completion of well pad construction activities and prior to installation of gas production facilities other than the well bore.
- D. Final Reclamation: If the well is not productive initially or at the point in time when it becomes un-economic, the entire well site and well access roads shall be fully reclaimed, unless otherwise directed by the FS representative.
  - 1) Well Pads, Well Access Roads and Ancillary Facilities
    - (a) Gravel surfacing, if used, shall be removed from the well pad and access road(s) and disposed of off of public lands, or at other locations approved by the FS representative, unless otherwise authorized.
    - (b) The well site, ancillary facilities, and associated well access roads shall be re-contoured to pre-construction conditions.
    - (c) Topsoil shall be respread over the entire disturbed area.
    - (d) All areas of soil disturbance as a result of operations shall be scarified to at least a 4-inch depth and drainage structures installed at FS representative specified locations.
  - 2) Reclamation, Revegetation, and Weeds
    - (1) Certified weed-free straw mulch, hydromulch, or erosion control blankets are recommended following all seeding activities, particularly on sites with slopes greater than 20 percent.
    - (2) Reclamation Standards

The four components of successful reclamation on lands managed by the San Juan National Forest are recontouring, revegetation, soil erosion, and noxious weeds. Monitoring of these standards by the federal agency should occur one year after reclamation efforts are initiated, and evaluation for compliance with these standards will occur two years after reclamation efforts are initiated.

      - (a) Recontouring Standard: The recontouring component will be considered successful when reclaimed sites are recontoured back to the original contour, and blend in as naturally as possible with the topography of adjacent lands.
      - (b) Revegetation Standard: The revegetation component will be considered successful when the canopy cover of native grasses on the site exceeds 25 percent. The 25 percent can include the seeded grasses and other native grasses that have emerged on their own. The 25 percent figure is based on the canopy cover of native herbs (grasses and forbs) found on comparable, undisturbed sites that have a similar vegetation community and similar soils. The disturbed area will be revegetated using the following approved native seed mixture (unless otherwise approved by the FS representative), available from Southwest Seed Inc., Dolores, Colorado.
        - Nodding Brome (*Bromus anomalus*) 10 PLS#\*/acre
        - Slender wheatgrass (*Agropyron trachycaulum*) 8 PLS#/acre
        - Arizona fescue (*Festuca arizonica*) 2 PLS#/acre

PLS# = pure live seed pounds

- (c) Soil Erosion Standard: The soil erosion component will be considered successful when gully erosion is absent, and sheet and rill erosion is absent or minimal (less than 5% of the site shows evidence of sheet and rill erosion in the form of pedestalled plants, sediment accumulation, or rills). Bare soil may be present on the reclaimed sites as comparable, relatively undisturbed adjacent sites naturally display bare soil.
- (d) Noxious Weed Standard: The noxious weed component will be considered successful when noxious weeds are absent on the reclaimed site. Noxious weeds shall be treated on all areas disturbed by this project, as necessary to eradicate weeds during the course of operations and reclamation, as described below:
  - (i) The operator shall conduct a project area pre-disturbance noxious weed inventory to establish baseline conditions and assist the development of appropriate noxious weed management strategies.
  - (ii) The operator shall employ any cleaning methods necessary to ensure that any equipment, including transportation, construction, heavy maintenance and workover equipment, is free of noxious weed material before coming onto public land. If the Operator desires to clean equipment on public land, such as at the end of a project or prior to moving to a new project, the FS representative shall approve methods of cleaning, locations for the cleaning, and control of off-site impacts, if any. New infestations of noxious weeds of concern to the FS representative, identified by either the Operator or the FS representative, on public land in the Project Area or on the route to the Project Area shall be promptly reported to the other party.
  - (iii) The operator shall control, contain, and eradicate noxious weeds (as applicable) on all areas disturbed by this project during the course of construction, operation, and reclamation. Additional noxious weed management guidance can be obtained from the FS representative.
  - (iv) Seed certification tags from the seed bags used for revegetation shall be submitted to the federal agency within 1 month following seed application. When straw, mulch or gravel is needed for construction, operation or reclamation activities, these materials must be certified to be weed-free, and a copy of the certification must be provided to the FS representative to be included in the project record.

Operator Acknowledgement

I am an authorized representative of the COGCC and acknowledge receipt of the permit conditions above, and the attached fire plan.

Name:

Title:

Date:

**Fire Plan for Industrial Operations  
USDA, Forest Service, San Juan National Forest  
And FS, San Juan Resource Area**

This plan outlines the Operator's responsibilities for fire prevention and suppression activities within the Operator's project area. For the purposes of this provision, the project area is defined as the area within one half mile ( 0.5 miles ) of the project boundary.

**Fire Precautions (9/93)**

**I. SMOKING AND LUNCH FIRE RESTRICTIONS**

Smoking is prohibited except inside a building, developed recreation site, vehicle, or while seated in an area of at least three feet in diameter that is barren or cleared of all flammable materials. 36 CFR 261.52(d), 42 CFR 9212(a).

The building of camp, lunch, warming and other fires within the project area and vicinity is prohibited, except at established camps or at other safe places where all flammable material has been cleared away sufficiently to prevent the start and spread of wildfires. The FS representative may, upon written request, designate specific places where campfires may be built for purposes of heating lunches.

**II. SPARK ARRESTERS AND MUFFLERS**

Operating or using any internal combustion engine, on any timber, brush, or grass covered land, including trails and roads traversing such land, without a spark arrester, is prohibited. The spark arrester must be maintained in effective working order, meeting either (1) Department of Agriculture, Forest Service standard 5100, *Spark Arresters for Internal Combustion Engines* (current edition); or (2) the Society of Automotive Engineers (SAE) recommended Practices J335, *Multiposition Small Engine Exhaust System Fire Ignition Suppression* (current revision), and J350, 36 CFR 261.52(j), 43 CFR 9212.1(h).

Passenger vehicles, pickups, medium and large highway trucks (80,000 GVW) will be equipped with a factory designed muffler system which is specified for the make and model of the respective vehicle/truck or with a muffler system that is equivalent or that exceeds factory specifications.

Exhaust systems shall be properly installed and continually maintained in serviceable condition.

**III. FIRE EXTINGUISHERS AND TOOLS ON EQUIPMENT**

While in use, each piece of equipment with an internal combustion engine shall be provided with at least the following:

1. One fire extinguisher, at least 5# ABC with an Underwriters Laboratory (UL) rating of 3A – 40BC, or greater.
2. One shovel, sharp, size 0 or larger, round-pointed with an overall length of at least 48 inches.
3. One axe, sharp, double bit 3½#, or one sharp Pulaski.

Extinguishers, shovels, axes, and Pulaski's shall be mounted so they are readily available to the operator. All tools shall be maintained in a serviceable condition.

**IV. POWER SAWS**

Each gasoline engine power saw shall be provided with one chemical-pressurized fire extinguisher of not less than 8-ounce capacity by weight, and one size 0 or larger, round-pointed shovel with an overall length of at least 48 inches. The extinguisher and shovel shall be maintained in good working order. The extinguisher shall be with the power saw operator and immediately available for use at all times. The extinguisher shall not be affixed to the saw. The shovel shall be readily available to the operator of the saw at all times. Having the shovel with the gas can used to refuel the saw may be considered "readily available" if not more than 200 feet from the saw. During periods of critical fire danger, the FS may prescribe other precautionary measures.

Any fueling or refueling of a power saw shall be done in an area which has first been cleared of material which will carry fire. The power saw shall be moved at least 10 feet from the place of fueling or refueling before starting.

**V. BLASTING AND WELDING**

The use of fuses in blasting shall not be permitted except near power lines where the danger of accidental detonation is present, and then only by special written permission of the FS. Whenever the relative humidity falls below 50 percent, the Operator shall place a watchman at each point where blasting is done

who shall remain on duty for at least one hour after blasting is finished, and who shall be equipped with a shovel and a water-filled backpack can equipped with hand pump. During periods when the relative humidity falls below 20 percent, blasting shall be discontinued unless authorized, with special provisions, in writing by the FS. Blasting shall not be permitted in any area not cleared to mineral soil without advance written approval of the FS and with such special precautions as may be required.

Prima Cord shall not be used in clearing operations, and in other areas where timber has been felled and slash not burned.

Unless otherwise directed in writing by the FS, all flammable material shall be cleared for 10 feet around any piece of equipment being welded. In addition, the Operator shall provide a fire extinguisher of a size and type designed to extinguish a fire in the flammable materials surrounding the spot being welded.

In order to determine the relative humidity, the operator shall either (a) provide and maintain weather instruments that will measure relative humidity in the area where the blasting will occur; or (b) provide communications to obtain weather data from the FS.

Explosives shall be stored at all times in a locked box marked "Explosives". Powder and blasting caps shall be stored in separate boxes.

#### **VI. STORAGE OF FLAMMABLES**

Gasoline, oil, grease and other highly flammable material shall be stored either in a separate building, or at a site where all debris is cleared within a radius of 25 feet. Storage buildings or sites shall be a minimum distance of 50 feet from other structures. Storage buildings shall be adequately posted to warn of the flammables and to prohibit smoking in or around the building.

#### **VII. CAMP FIRE PROTECTION**

The ground around all trailers, buildings, and other facilities constructed or placed on or near the project area shall be kept free of flammable material for a distance of at least 20 feet from the wall of such structure. Burning of such flammable material shall be as prescribed by the FS in writing.

Stovepipes of all wood burning stoves shall be equipped with suitable roof jacks and serviceable spark arresters. Stovepipes shall be no closer than 2 feet from any wood or other flammables unless adequately protected by metal or asbestos shield.

#### **Fire Precautions and Control**

##### **I. PLANS**

Prior to initiating the Operator's operations during the Fire Precautionary Period, which is from **May 15** thru **October 1**, the Operator shall file with the FS a Fire Prevention and Control Plan providing for the prevention and control of fires on the project area. The Plan shall include a detailed list of personnel and equipment at the Operator's disposal for implementing the Plan. This requirement may be met by preparing a single Plan for more than one project.

##### **II. FIRE PRECAUTIONS**

Specific Fire Precautionary measures listed shall be applicable during the Operator's operations in the Fire Precautionary Period. The Contracting Officer may change the dates of the Fire Precautionary Period by advance written notice, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during the Operator's operations in the Fire Precautionary Period.

###### **A. Substitute Precautions**

The FS may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection, or some of the required measures and equipment are unnecessary.

###### **B. Emergency Precautions**

The FS may require the necessary shutting down of equipment on portions of the Operator's operations when emergency fire precautions are necessary. Under such conditions, after the Operator ceases active operations, the Operator shall release for hire by the FS, if needed, shutdown equipment for fire standby on the project area and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by the Operator for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if Operator requests, shall be operated only by personnel

approved by the Operator. Personnel so hired shall be subject to direction and control by the FS and shall be paid by the FS at fire fighting rates common in the area or at prior agreed rates.

### **III. FIRE CONTROL**

The Operator shall, both independently and in cooperation with the FS, take all reasonable and practicable action to prevent and suppress fires resulting from the Operator's operations and to suppress any forest fire on the project area. The Operator's independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at the Operator's disposal on the project area.

#### **A. Operator's Reinforcement Obligations**

Whenever an Operations Fire or Negligent Fire, whether on or off the project area, or any other forest fire on the project area, has not been suppressed by initial action and appreciable reinforcement strength is required, the FS may require further actions by the Operator until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:

##### **1) Suspend Operations**

To suspend any or all of the Operator's operations.

##### **2) Personnel**

To release for employment by the FS any or all of the Operator's personnel engaged in the Operator's operations. Any organized crew so hired shall include the Operator's supervisor, if any. Personnel so employed shall be paid at the FS standard emergency fire fighting rates.

##### **3) Equipment**

The Operator shall make available for rental to the FS any or all equipment suitable for fire fighting and currently engaged in the Operator's project area. The equipment shall be hired at firefighting equipment rates common in the area or at prior agreed rates.

Equipment shall be operated only by personnel approved by the Operator, if so requested by the Operator.

### **IV. FIRE SUPPRESSION COSTS**

The Operator's obligations for cost of fire suppression vary according to three classifications of fires as follows:

#### **A. Operations Fire**

An Operations Fire is a fire caused by the Operator's operations other than a Negligent Fire.

The FS, except as provided in Section III, shall, under 16 USC 572, perform fire suppression activities on Operations Fires. The Operator agrees to reimburse the FS for such cost for each Operations Fire. The cost of the Operator's actions, supplies, and equipment on any such fire provided pursuant to Section III, or otherwise at the request of the FS, shall be credited toward such maximum. If the Operator's actual cost exceeds the Operator's obligation stated above, the FS shall reimburse the Operator for the excess.

#### **B. Negligent Fire**

A Negligent Fire is a fire caused by negligence or fault of the Operator's operations, including, but not limited to, one caused by smoking by persons engaged in the Operator's operations during the course of their employment, or during rest or lunch periods; or if the Operator's failure to comply with the requirements of Sections II and III results in a fire starting or permits a fire to spread. Damages and the cost of suppressing Negligent Fires shall be borne by the Operator.

#### **C. Other Fires on Project Area**

The FS shall pay the Operator, at fire fighting rates common in the area or at prior agreed rates, for equipment or personnel furnished by the Operator pursuant to Section III, or otherwise at the request of the FS, on any fire on the Project area other than an Operations Fire or a Negligent Fire.

### **V. STATE LAW**

The Operator shall not be relieved by the terms of this contract of any liability to the United States for fire suppression costs recoverable in an action based on State law, except for such costs resulting from

Operations Fires. Amounts due the Operator for fire fighting expenditures in accordance with BT7.41 shall not be withheld pending settlement of any such claim or action based on State law.

#### **VI. PERFORMANCE BY OPERATOR**

Where the Operator's employees, agents, Operators, subcontractors, or their employees or agents perform the Operator's operations in connection with fire responsibilities, the Operator's obligations shall be the same as if performance was by the Operator.

**Should Fire Restrictions become necessary, the following describes the stage levels.**

#### **I. STAGE I AND STAGE II FIRE RESTRICTIONS**

There will be two fire restriction stages: Stage I and Stage II. Stage III denotes area closure. Each agency within a fire restriction area must write its own agency document that authorizes the restrictions within its jurisdiction. Each agency is responsible for using its own format, citing the specific codes of Federal Regulation (CFR) and United States Code (U.S.C.) and having the appropriate legal counsel review the document to assure it is correct and enforceable. To establish consistency, reduce confusion and standardize restrictions, the following criteria will be used in all restriction documents:

**A. STAGE I** The following acts are prohibited until further notice:

- 1) Building, maintaining, attending, or using a fire, campfire, coal or wood burning stove, any type of charcoal fueled broiler or open fire of any type in undeveloped areas.
- 2) Smoking, except within an enclosed vehicle or building, in a developed recreation site or while stopped in an area at least 3 feet in diameter that is barren or cleared of all flammable vegetation.
- 3) Using explosive material: (i.e.: fireworks, blasting caps or any incendiary device which may result in the ignition of flammable material.)
- 4) Welding, or operating acetylene or other similar torch with open flame.
- 5) Operating or using any internal combustion engine without a spark arresting device properly installed, maintained and in effective working order meeting either:
  - (a) Department of Agriculture, FS Standard 5100-1a; or
  - (b) Appropriate Society of Automotive Engineers (SAE) recommended practice J335 (b) and J350 (a).
- 6) Possible Exemptions
  - (a) Persons with a written permit specifically authorizing the otherwise prohibited act or omission.
  - (b) Fires in constructed, permanent fire pits or fire grates within developed recreation sites.
  - (c) Any Federal, State, or local officer or member of an organized rescue or firefighting force in the performance of an official duty.
  - (d) Mechanical stoves and appliances fueled by bottled or liquid gas which allow the operator to control or extinguish the flame with a valve are permitted provided that such devices are approved by Underwriters laboratory Inc.
  - (e) Owners or lessees of land in the restricted area.
  - (f) Residents in the restricted area.

**B. STAGE II** The following acts are prohibited until further notice:

- 1) Building, maintaining, attending, or using a fire, campfire, coal or wood burning stove, any type of charcoal fueled broiler or open fire of any type.
- 2) Smoking, except within an enclosed vehicle or building.
- 3) Using explosive material: (i.e.: fireworks, blasting caps or any incendiary device which may result in the ignition of flammable material.)
- 4) Welding, or operating acetylene or other similar torch with open flame.
- 5) Operating or using any internal combustion engine without a spark arresting device properly installed, maintained and in effective working order meeting either:
  - (a) Department of Agriculture, FS Standard 5100-1a: or
  - (b) Society of Automotive Engineers (SAE) recommended practice J335 (b) and J350 (a).
- 6) Operating a chainsaw without a chemical pressurized fire extinguisher of not less than 8 ounces capacity by weight, and one size 0 or larger round pointed shovel with an overall

- length of at least 36 it was 48" above inches. The extinguisher shall be with the chainsaw operator. The shovel may be kept with the fueling supplies but readily available.
- 7) Other possible restricted acts under Stage II
    - (a) Operating a motorized vehicle off designated roads and trails.
    - (b) Operating a chainsaw outside the hours of 5 a.m. and 11 p.m.
    - (c) Overnight camping limited to listed campgrounds and recreation sites.
  - 8) Possible Exemptions
    - (a) Persons with a written permit specifically authorizing the otherwise prohibited act or omission.
    - (b) Any Federal, State or local officer or member of an organized rescue or firefighting force in the performance of an official duty.
    - (c) Mechanical stoves and appliances fueled by bottled or liquid gas which allow the operator to control and extinguish the flame with a valve are permitted provided that such devices are approved by Underwriters Laboratory Inc.
    - (d) Owners or lessees of land in the restricted area.
    - (e) Residents in the restricted area.

**C. Stage III Fire Restrictions**

- 1) Before the fire season, the "Council" will review the evaluation guidelines and determine threshold levels that substantiate the need for closures.
- 2) Examples include:
  - (a) Potential loss of life due to explosive fire conditions.
  - (b) Potential for extreme or blowup fire behavior.
  - (c) Stage I or Stage II restrictions are not effective in reducing the number of human-caused fires.
  - (d) Resources across the geographic area are at a critical shortage level.
  - (e) Proximity to substantial population centers.
  - (f) The extent of wildland-urban interface.