STATEMENT OF BASIS

PERMITTEE:	Arboles Sand & Stone, LLC
FACILITY:	Lob Lolly Industrial Site
PERMIT NO.:	CO0048194
RESPONSIBLE OFFICIAL:	Nathan A. Barton, Environmental Engineer P.O. Box 88 Cortez, CO 81321
FACILITY CONTACT:	Nathan A. Barton E-mail: wasteline6@aol.com
PERMIT TYPE	Minor Federal Facility, New Permit

This Statement of Basis (SOB) is for a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of pollutants in wastewater from industrial activities from Outfall 001 to the Piedra River.

Background Information:

Lob Lolly Industrial Area is an area adjacent to the Piedra River which includes several industrial activities. Industrial activities in the Lob Lolly Industrial Area include:

1. Sand and gravel extraction, processing (washing), and stockpiling;
2. The operation of a legacy sawmill, including log storage and sawdust storage;
3. Operation of two gas wells including drill pads, pipeline construction, and access road construction and maintenance;
4. Equipment storage areas; and
5. Topsoil and overburden management.

The site as a whole is divided into two parcels: a northern parcel and a southern parcel. There is a pipeline and service road set up between these two parcels. Each parcel contains a gas drilling/production well pad, associated pipeline/service roads, and a sand and gravel extraction area. The southern parcel contains a sawmill operation and a sand and gravel processing plant. Industrial activities on the southern parcel are bifurcated by the Piedra River and an associated access bridge. The site entrance is currently on the southern parcel, and a future entrance bridge is being proposed on the northern parcel as gravel mining operations increase.

Outfall 001 is not a permanent outfall structure. The discharge specified in the permit is for a possible discharge from the gravel mining pit located on the west side of the river. From discussions with the operator of the facility, Mr. Barton, did not anticipate the need to have a discharge from the site. The only reason he anticipates needing to have a discharge is to dewater the mining pit due to a temporary rise of the level of the water table in the alluvium along the

river. The mining operation is to occur above the water table, and stormwater which comes into contact with industrial activities can be maintained on site. Wastewater from the processing of sand and gravel goes into a separate pit with the water being lost to seepage and/or evaporation.

Industrial activities specified in the permit application include sand and gravel operations, topsoil and overburden management, haul road construction and maintenance, gas extraction, and operation of a sawmill. It is anticipated that the size and location of these activities will change with time as mining progresses. This permit authorizes discharges of pollutants from all of these co-located activities. The shape and size of treatment ponds will change over time throughout the site, and the operator of the facility is encouraged to employ a variety of approaches including smaller ponds aligned within a treatment train to most effectively settle and treat pollutants in the most effective manner applicable to the site in its current state. However, the size and location of ponds is not specified in this permit. Instead, a flexible approach is applied provided that stormwater runoff which comes into contact with industrial activities and process water from industrial activities is retained for treatment, re-use, or loss through evaporation and seepage. The permit as written provides an outfall location of latitude 37° 5' 34" and longitude -107° 23' 50". This is located on the bridge crossing the southern parcel. This is the most logical location for dewatering based on the current pond capacity and location of mining activities at the site today. However, if it is necessary to discharge from additional locations, this permit was written so that it can be easily modified to accommodate additional outfalls with the same effluent limitations.

Oil and Gas Extraction and Processing Activities

The 1987 Water Quality Act (WQA) added section 402(*l*)(2) to the CWA specifying that EPA and States shall not require NPDES permits for uncontaminated storm water discharges from oil and gas exploration, production, processing or treatment operations, or transmission facilities. Section 323 of the Energy Policy Act of 2005 added a new provision to the CWA defining the term "oil and gas exploration, production, processing, or treatment operations or transmission facilities" to mean "all field activities or operations associated with exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activity." See 33 U.S.C. § 1362(24).

Consistent with the provisions at 402(*l*)(2) to the CWA and Section 323 of the Energy Policy Act of 2005 (codified at 40 CFR§122.26(a)(2), 40 CFR§122.26(e)(8), and 40 CFR§122.26(c)(1)(iii)), discharges related to the construction and operation of active oil and gas exploration, production, treatment and transmission facilities within the Lob Lolly industrial site is not subject to the terms of this permit unless:

1. These areas have a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6;

2. These areas have a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6; or

3. These areas have a discharge which contributes to a violation of a water quality standard.

If any discharges are commingled, the most stringent effluent limitations for each individual discharge shall be applied to the resulting discharge. If the individual discharge is not authorized, the commingled discharge is not authorized. The discharge of stormwater from oil and gas exploration, production, treatment and transmission facilities at the Lob Lolly site which commingles with stormwater from gravel mining operations, sawmill operations, and the associated clearing stockpiling, clearing, and grading activities associated with sawmill and gravel mining operations is subject to the effluent limitations within this permit.

The operator has the burden of proof in determining whether flows have been segregated in a manner by which discharges to the Piedra River are exempt from the terms and conditions of this permit as being solely attributable to discharges from "oil and gas exploration, production, processing, or treatment operations or transmission facilities".

Receiving Waters:

The Lob Lolly Pit, when discharging, drains to the Piedra River. The discharge point to the Lob Lolly river is Latitude 37°5'34", Longitude -107°23' 50".

Water Quality Standards:

Since the receiving waters are located within the reservation boundaries of the Southern Ute Reservation, the State of Colorado's water quality standards to not apply. The Southern Ute Indian Tribe has not submitted Tribal water quality standards to EPA for federal approval. However, the Southern Ute Indian Tribe has established Tribally-approved water quality standards which classify the Piedra River for **Aquatic Life Cold Class 1, Recreation Class 1, Agriculture and Water Supply**. EPA considers the Tribally-approved water quality standards appropriate in determining the classification for this segment of the Piedra River.

Clean Water Act § 401 Certification:

Following a review of this permit, the Assistant Regional Administrator, in accordance with Clean Water Act § 401, will certify that the discharges of this permit will comply with the applicable provisions of the Clean Water Act Sections 301, 302, 303, 306, and 307 [U.S.C. Sections 1311, 1312, 1313, 1316, and 1317], as long as permittee complies with all permit conditions.

Effluent Limits:

Effluent Limitations - Outfall 001: Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, at a minimum, meet the limitations

as set forth below:

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
Settleable Solids, ml/L b/	n/a	n/a	0.5
Oil and Grease, mg/L	n/a	n/a	10
Flow (Report only)	n/a	n/a	n/a
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.			

a/ See Definitions, Part 1.1, for definition of terms.
b/ Settleable solids is that matter measured by the volumetric method specified in 40 C.F.R.§434.64

Effluent Limitations for Large Precipitation Events: These effluent limits apply to discharges from gravel mining areas, excluding drainage from topsoil and vegetation stockpiling areas and areas undergoing reclamation. These effluent limits apply to any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than or equal to the 10-year, 24-hour precipitation event. Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, at a minimum, meet the limitations as set forth below:

The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.
The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event.

Technology Based Effluent Limits:

Technology based limits for this permit were derived based on Federal Effluent Guildelines for mine dewatering discharges from the construction sand and gravel subcategory at 40 CFR 436.30). Consistent with this effluent guideline, the following effluent limits apply:

Effluent Limitations for Mine Dewatering Discharges			
Parameter	Limitations Daily Avg	Daily Max	Monitoring Frequency
pH	between 6 and 9 S.U.		1/Year

Consistent with the Federal Effluent Guidelines for mine dewatering discharges from the construction sand and gravel subcategory at 40 CFR 436.30), this permit does not apply effluent limitations to overflow if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

In addition to these technology-based effluent limits provided in the Federal ELG, a numeric limit for settleable solids has been provided based on Best Professional Judgment (BPJ). This value is consistent with the expected performance associated with the discharge from detention strucutures which function through setting of larger suspended (as opposed to dissolved) particles. A settleable solids limit was applied as opposed to a limit for Total Suspended Solids limit for two reasons:

1. The settleable solids analysis can be performed directly on site and does not require a significant holding time. This provides the operator with the ability to determine if effluent limits can be met prior to initiating the discharge. If effluent limits cannot be met prior to the discharge, this test will allow the operator to adjust outfall structures and dewatering methods to ensure that the discharge can meet effluent limitations prior to discharging to the Piedra River as opposed to discharging and then determining after-the-fact that effluent limits had been exceeded; and

2. The current control and treatment technologies used to meet effluent limitations for settleable solids in the arid and semiarid western United States are based primarily on the implementation of sedimentation ponds. In arid and semiarid watersheds, sediment can be defined as all material transported by surface water drainage, including dissolved, total suspended, and settleable solids and bedload. In this environment, climate, topography, soil, vegetation and hydrologic components all combine to form a hydrologic balance that is naturally sediment rich. The settleable solids limit in this permit is based on the performance of sediment ponds consistent with EPA's effluent guidelines for the Coal Mining Point Source Category (see 40 CFR Part 434) as a limit which limits pollutant loading but still maintains the existing natural sediment balance.

Management Practices: In addition to the effluent limits applicable to dewatering discharges at Outfall 001, management practices have been included as both water-quality based and technology-based effluent limits for this site. These management practices are based on Best Professional Judgment and are consistent with the terms and conditions provided in EPA's Multi-Sector General Permit for stormwater discharges from industrial activities, EPA's Construction General Permit for stormwater discharges from construction activities, as well as established industry practices for construction, sand and gravel extraction and processing, and timber operations.

Several factors influence the quantity and type of pollutants associated with stormwater runoff from industrial activities. These include the type of industrial activities occurring at the site, the nature of the rain and snowmelt events, erosive potential of exposed soils, the degree to which industrial activities are sheltered from stormwater, the location of industrial activities in proximity to drainages, and the degree of surface imperviousness for the facility. The MSGP (58 FR 61146) contained a discussion of factors affecting the volume and quality of runoff from industrial activities.

A buffer zone of 65.6 feet (20 meters) has been applied to restrict treatment ponds and active gravel mining areas from being located adjacent to water features, drainage channels, and

wetlands areas. This is consistent with EPA's Effluent Limitations Guidelines for the Construction and Development Point Source Category (see 40 CFR Part 450), which prescribes the use of buffer zones when activities are located adjacent to Waters of the United States. A 20 meter buffer zone was recommended by the Colorado Division of Wildlife for protection of wildlife migration areas and riparian habitat.

Management Practices – All areas:

1. Stormwater which has come to contact with industrial activities, including disturbed and un-reclaimed land, will not be allowed to enter surface discharge into Waters of the United States, unless it is treated and discharged within the parameters as defined by the Effluent Limitations and Self-Monitoring requirements in the permit;

2. Temporary and permanent sedimentation basins must have the sediment removed once the depth of sediment collected in the basin reaches ½ of the storage volume. Removal must be completed within 72 hours of discovery, as soon as field conditions allow access;

3. If the Permittee(s) identify BMPs that are not functioning properly, the Permittee shall replace, maintain, or repair the BMPs within seven (7) calendar days of discovery. If BMP replacement, maintenance, or repair cannot be completed within seven (7) calendar days, the Permittee shall implement effective backup BMPs (temporary or permanent) until effectiveness of the original BMPs can be restored;

4. The Permittee shall implement a Stormwater Pollution Prevention Plan as required by the Colorado Division of Reclamation Mining and Safety; and

5. The location of areas not to be disturbed shall be delineated (e.g., with flags, stakes, signs, silt fence etc.) on the development site before work begins.

Management Practices – Sawmill, Log Storage, and Sawdust Storage Areas:

1. Water shall be diverted around log storage areas, milling operations, sawdust storage areas, and residue storage areas using ditches, swales, and/or berms; and

2. Storage areas shall be located on areas with stable, well-drained soils, with slopes less than 5%. Materials shall be stacked in a manner to minimize surface areas exposed to precipitation, and stored residues shall be stored away from drainage paths and surface waters.

Management Practices – Inactive or Reclamation Areas.

1. The Permittee(s) must ensure that permanent stormwater Best Management Practices (BMPs) are in place if the site is temporarily inactive;

2. Each phase of the excavation shall be returned to its current state prior to excavation or to

a higher land use;

3. Prior to terminating activities in an area and removing BMPs, all soils must be stabilized by a uniform perennial vegetative which provides 70% or more of the density of coverage that was provided by vegetation prior to commencing earth disturbing activities, or other equivalent means necessary to prevent soil failure under erosive conditions; and

4. All sediment must be removed from conveyances and from temporary sedimentation basins that are to be used as permanent water quality management basins in order to sufficient return the basin to design capacity.

Water Quality-Based Effluent Limits:

The pollutants in the discharge that are likely to be of potential water quality concern are: oil and grease from equipment parked in or near sediment basins, settleable solids, and pH.

Numeric water quality based effluent limits have not been applied to discharges from the ponds at the Lob Lolly industrial site with the exception of a limitation for oil and grease and a more restrictive limit for pH. The rationale for this is two-fold. First, the facility has never had a discharge which required sampling in the past. Therefore, there is not a significant dataset from which to conduct a site-specific analysis to determine the "reasonable potential" of the discharge to cause or contribute to a violation of water quality standards. Second, the pond is designed for retention without release and has never had a storm-related discharge. Any discharges from the facility are likely to be related to a significant storm event for which there is a high level of on-site storm water dilution and instream dilution in the receiving waterbody, should the discharge reach the Piedra River.

Should the pond discharge during a significant storm event, the operator will be required to provide sampling data to EPA which then can be used to re-evaluate whether there is reasonable potential to cause or contribute to a water quality standards violation and what limits may be needed to prevent such an occurrence. It will also be necessary to submit data to EPA should it be necessary to draw down the pond for maintenance or to remain freeboard capacity. These data from a draw down event will be subject to the self-monitoring requirements and effluent limitations for Outfall 001 described in the permit. EPA may use data from these events as well to determine the potential need for water quality based effluent limits. Activities which could be of concern as a source of pollutants such as wet decking or chemical treatment associated with the sawmill operation are not in use at this site. Therefore, additional monitoring or effluent limits for industrial pollutants outside of oil and grease, settleable solids, and pH have not been required. A high concentration of settleable solids in the discharge may trigger a re-evaluation of permit conditions as particulates sorbed onto these particulates could become an additional source of pollutants.

The effluent limitation for oil and grease is based on Best Professional Judgment. The limitation of 10 mg/L is commonly used in EPA permits and in Tribal permits as a concentration which can have detrimental impacts to impact aquatic life. If oil and grease limits are exceeded,

it may be necessary to evaluate whether oil and gas extraction, treatment, and transmission activities are causing or contributing to a water quality standards violation or whether a reportable quantity release has occurred in association with oil and gas extraction, treatment, and transmission activities, as this would impact whether these activities need to be regulated under the Clean Water Act for this site.

The Southern Ute Indian Tribe's water quality criteria for pH is 6.5-9.0 to support aquatic life and other existing uses. This level is more stringent than the required technology-based performance standard for runoff from construction sand and gravel mining, therefore the water quality-based performance standard for pH of 6.5-9.0 has been applied as an effluent limit for dewatering discharges.

Management practices applicable to the discharges from Outfall 001 have been required in the permit to prevent adverse water quality impacts. Discharges from Outfall 001 must be managed to allow for maximum pollutant removal efficiency and to avoid erosive conditions in the Piedra River. This permit does not allow for discharges from Outfall 001 during the historical low flow of the Piedra River to deter from adverse impacts without the benefit of instream dilution during high flow months. The site is to be maintained to avoid discharges during low-flow conditions. The dates of June 15-September 15 were used to define the historical low flow for the Piedra River based on the past 47 years of USGS gauging data which show when the Piedra River is below 20 cfs based on the minimum daily mean flow rate.

Management Practices- Outfall 001:

1. Pond drawdown must be employed from the top of the pond utilizing either floatation devices or an outfall constructed to draw wastewater from the top of the pond in a manner which maximizes the settling of particulate matters;

2. Velocity dissipation devices or restrictions of flow rate must be employed during drawdown to ensure that discharges to not cause erosion to the bank or bed of the Piedra River; and

3. This permit does not authorize drawdown for the purposes of maintain hydraulic capacity between June 15 and September 10.

Self-Monitoring Requirements

Self-Monitoring Requirements - Outfall 001. At a minimum, upon the effective date of this permit, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3350-1) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Sample Type a/

Total Flow, gpm b/	Monthly	Instantaneous
Settleable Solids, ml/L c/	Monthly	Grab d/
pH, units	Monthly	Grab d/
Oil and grease, visual e/	Daily	Visual e/

a/ See Definitions, Part 1.1, for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in gallons per minute) during the reporting period and the maximum flow rate observed (in gpm) shall be reported

c/ Settleable solids is that matter measured by the volumetric method specified in 40 C.F.R.§434.64

d/ The discharge shall be sampled once at the initiation of the discharge, once during the discharge, and once at the termination of the discharge. The value for each of these three samples shall be reported for each discharge event on the Discharge Monitoring Report Form (EPA No. 3320-1).

e/ A daily visual observation is required. If a visible sheen is detected, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

Endangered Species Act (ESA) Requirements

Section 7(a) of the Endangered Species Act requires federal agencies to insure that any actions authorized, funded, or carried out by an Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

The following table lists the federally-listed endangered, threatened, proposed and candidate species for Archuleta County, Colorado.

Federally-Listed Endangered, Threatened, Proposed and Candidate Species for Archuleta County, CO			
Species	**Scientific Name**	**Status**	**Impact**
Black-footed Ferret	*Mustela nigripes*	E	NLAA
Canada Lynx	*Lynx Canadensis*	T	NLAA
North American Wolverine	*Gulo gulo luscus*	C	NLAA
Pagosa Skyrocket	*Ipomopsis polyantha*	E	NLAA

Rio Grande Cutthroat Trout	*Oncorhynchus clarki virginalis*	C	NLAA
Colorado Pikeminnow	*Ptychocheilus lucius*	E *	NLAA
Mexican Spotted Owl	*Strix occidentalis lucida*	T	NLAA
New Mexico Meadow Jumping Mouse	*Zapus hudsonius luteus*	C	NLAA
Razorback Sucker	*Xyrauchen texanus*	E *	NLAA
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	E	NLAA
Yellow-billed Cuckoo	*Coccyzus americanus*	C	NLAA

* Water Depletions in the Upper Colorado River and San Juan River Basins may affect the species and/or critical habitat in downstream reaches in other states.

Symbols/Acronyms:

T	Threatened
E	Endangered
P	Proposed
C	Candidate
NLAA	Not Likely to Adversely Affect
LAA	Likely to Adversely Affect

The determinations of impact to the species listed in the table are based on the following criteria:

1. Discharges in the pH range of 6.5-9.0 should not create a condition of acute toxicity restricting the migration of sensitive trout species.
2. The Colorado pikeminnow and the Razorback sucker are listed as endangered due to water depletions of the Upper Colorado River and San Juan River Basins. This permit does not contribute to water depletions of these basins.
3. It does not appear that a critical habitat designation exists in Archuleta County for the listed species.

Correspondence was submitted to the U.S. Fish and Wildlife Service – Western Slope Field Office in Grand Junction, CO to gather concurrence with the determinations as part of the public notice period of the permit.

National Historic Preservation Act (NHPA) Requirements

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The EPA has evaluated its planned issuance of the NPDES permit for the Lob Lolly industrial facility to assess this action's potential effects on any listed or eligible historic properties or cultural resources. The EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources because this permit is for an existing landfill and will not be associated with any new

ground disturbance or significant changes to the volume or points of discharge.

Public Notice and Response to Comments

INSERT DATE OF PUBLIC NOTICE AFTER PUBLIC NOTICE AND ANY APPLICABLE COMMENTS

Miscellaneous

The effective date and the expiration date of the permit will be determined at the time of permit issuance. The intention is to renew the permit for a period of approximately five years, but not to exceed 5 years.

Permit drafted by Greg Davis, 8P-W-WW, June 20, 2012.
Permit reviewed by Robert Shankland, SEE, 8P-W-WW,