AES Animas Environmental Services, LLC

624 E. Comanche . Farmington, NM 87401 . TEL 505-564-2281 . FAX 505-324-2022 . www.animasenvironmental.com

39-23586

November 11, 2008

Brad Jones
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

District Copy
For Scanning Only
Has NOT been processed.

RE: Submittal of Corrective Action Plan
BMG Homestead Ranch #2 Well
Rio Arriba County, New Mexico

Dear Mr. Jones:

Enclosed please find the Corrective Action Plan (CAP) prepared by Animas Environmental Services, LLC (AES) for remediation of petroleum hydrocarbon soil contamination at Benson-Montin-Greer Drilling Corporation's (BMG's) Homestead Ranch #2 Well location in Rio Arriba County, New Mexico.

If you have any questions regarding the enclosed CAP or scheduled site activities, please do not hesitate to contact me or Ross Kennemer at (505) 564-2281.

Sincerely,

Blaine Watson

Blaine Watson, P.G.

Enclosure: Corrective Action Plan

Cc: Mike Dimond
Benson-Montin-Greer Drilling Corporation
4900 College Blvd
Farmington, New Mexico 87402

Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, New Mexico 87410

RECEIVED
NOV 2008
OIL CONS. DIV. DIST. 3

Files:2008/BMG/Evaporation Pond/CAP Transmittal Letter 111108

AES Animas Environmental Services, LLC

624 E. Comanche . Farmington, NM 87401 . Tel 505-564-2281 . Fax 505-324-2022 . www.animasenvironmental.com

Prepared for:
Brad Jones
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

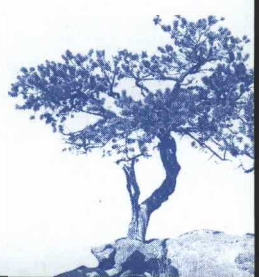
Corrective Action Plan
Homestead Ranch #2 Well Location

Benson Montin Greer
SW¼ SW¼ of Section 34, T25N, R2W
Rio Arriba County, New Mexico

November 7, 2008

Prepared on behalf of:
Benson-Montin-Greer Drilling Corporation
4900 College Blvd.
Farmington, New Mexico 87402

Prepared by:
Animas Environmental Services, LLC
624 E. Comanche
Farmington, New Mexico 87401



Contents

Figures

1.0 Introduction

Animas Environmental Services, LLC (AES), on behalf of Benson Montin Greer Drilling Corporation (BMG), has prepared this Corrective Action Plan (CAP) to remediate petroleum hydrocarbon contamination associated with a January 2008 spill at BMG's Homestead Ranch #2 well location. The spill involved a release of approximately 40 barrels (bbls) of condensate as a result of a valve failure on the 400 bbl condensate tank (Tank #2) at the well location. The spill was contained within the secondary containment berm surrounding Tanks #1, #2 and #3, but the site investigation conducted by AES in April 2008 confirmed that contamination had migrated vertically below the containment area to a depth of approximately 30 feet below ground surface (bgs).

In the conclusions of the Site Investigation Report, submitted to the New Mexico Oil Conservation Division (NMOCD) in July 2008, AES recommended evaluation of a mechanical treatment approach (soil vapor extraction) to address the subsurface contaminated soil. No groundwater contamination has been identified with respect to this release. Therefore, this CAP proposes only to remediate soil contamination as delineated in the July 2008 Site Investigation Report.

2.0 Site Information

2.1 Site Location

The BMG Homestead Ranch #2 well site is located in the SW¼, SW¼ of Section 34, T25N, R2W, Rio Arriba County, New Mexico, and is part of BMG's Gavilan gathering area. A topographic site location map, based on an excerpt from the USGS 7.5-minute Lindrith, Rio Arriba County, New Mexico topographic quadrangle (USGS 1963), is included as Figure 1. A site plan illustrating the general site layout is presented as Figure 2.

2.2 Spill History

In January 2008, BMG personnel discovered that a valve failure on a 400 bbl condensate tank (Tank #2) had resulted in a release of approximately 40 bbls into an earthen secondary containment area surrounding Tanks #1, #2 and #3. The spill was reported to Mr. Brandon Powell of the NMOCD on February 25, 2008.

Subsequent to the NMOCD notification, BMG's Killer B Roust-a-Bout crew excavated approximately three cubic yards of contaminated soil and transported it to the BMG Centralized Surface Waste Management Facility for disposal. No free liquids were recovered from the secondary containment area. No other remedial action has been conducted for this release.

2.3 Site Investigation – April 2008

In April 2008, site investigation activities were performed in order to delineate the full extent of petroleum hydrocarbon impact to surface and subsurface soils resulting from the spill. The investigation procedures included the installation of five soil borings, from which soil

samples were collected, in and around the spill area. Work was completed in accordance with U.S. Environmental Protection Agency (USEPA) Environmental Response Team's Standard Operating Procedures (SOPs) and applicable American Society of Testing and Materials (ASTM) standards.

2.3.1 Soil Boring Installation

On April 24, 2008, AES installed five soil borings to define the lateral and vertical extent of near surface and subsurface soil contamination. All soil borings (TH-1 through TH-5) were installed with a direct push rig. Borings ranged in depth from 44 feet bgs to 48 feet bgs. None of the soil borings were completed as monitoring wells because groundwater was not encountered. Throughout the site, soil lithology consisted of interbedded layers of pale brown and red-brown sands and brown sandy clays. The locations of borings TH-1 through TH-5 are illustrated on Figure 2.

2.3.2 Soil Sample Collection

Soil samples collected from the soil borings were field-screened for volatile organic compounds (VOCs) with a photo-ionization detector (PID) organic vapor meter (OVM). OVM readings were at or near background levels for all samples collected from TH-2 and TH-5. Background OVM readings ranged from 0.0 parts per million (ppm) to 0.1 ppm. Details of PID-OVM readings above background levels are as follows:

- **TH-1** OVM readings ranged from 0.0 ppm at 48 feet bgs (terminal depth) to 2,080 ppm at 12 feet bgs;
- **TH-3** OVM readings above background levels were noted at 32 feet bgs (31.6 ppm) and 36 feet bgs (50.4 ppm);
- **TH-4** OVM readings above background levels were noted at 39 feet bgs (48.1 ppm).

PID readings were recorded on the soil boring logs, which were included in Appendix A of the Site Investigation Report dated July 11, 2008.

2.3.3 Laboratory Analyses – Soil

Soil samples collected from the borings were submitted to an EPA-approved laboratory, Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico, for laboratory analysis of the following parameters:

- Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) – EPA Method 8021
- Total Petroleum Hydrocarbons (TPH) (C_6-C_{36}) Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) – EPA Method 8015 Modified

Soil samples were collected for laboratory analysis from the terminal depths of the borings and from intervals determined by the site supervisor to be representative of the most likely impacted zones within each boring. Remediation action levels promulgated by NMOCD for oil spills and releases (August 13, 1993) were utilized as action levels for soil

characterization in the July 2008 Site Investigation Report. Specifically, the NMOCD remediation action levels for total BTEX are 50 mg/kg and 100 mg/kg for TPH.

Soil analytical results showed that soil samples collected from TH-1 at 1 foot bgs and 20 feet bgs (71.2 mg/kg and 118.2 mg/kg total BTEX, respectively) and from TH-2 at 12 feet bgs (611 mg/kg total BTEX) were above the total BTEX action level. Total BTEX concentrations in the remaining soil samples were either below laboratory detection limits or well below the applicable action level of 50 mg/kg total BTEX.

The NMOCD Action Levels for TPH (100 mg/kg) were also exceeded in three samples, TH-1 at 1 foot bgs (14,860 mg/kg) and 20 feet bgs (1,479 mg/kg) and TH-2 at 12 feet bgs (832 mg/kg). TPH concentrations in the remaining soil samples were either below laboratory detection limits or well below the applicable action level of 100 mg/kg total TPH.

The analytical results for the soil samples are presented on Figure 2. Figure 3 presents geological cross-sections and soil field screening results from the April 2008 field investigation. Soil analytical laboratory reports were presented in Appendix B of the Site Investigation Report, dated July 11, 2008.

3.0 Geology and Hydrogeology

3.1 Geology

Rio Arriba County, New Mexico, is located along the southeastern margin of the San Juan Basin portion of the Colorado Plateau physiographic province. The San Juan Basin is a large structural depression encompassing approximately 22,000 square miles and contains deep Tertiary fill resting on rocks of Late Cretaceous age. The lithography consists primarily of the Mesaverde Group, composed primarily of sandstones. The topography is broad and mostly flat, surrounded by mountains and deep canyons. Major rivers carved deep canyons and mesas, and physical erosion from wind and water chipped and polished the exposed rocks in the canyons.

The regional geology is predominantly Late Cretaceous coastal plains and shoreline and marine units that were deposited along the western margin of the interior seaway. The shallow inland sea transgressed and regressed over a period of 250 million years, depositing the Dakota Sandstone and Mancos Shale units. The Dakota Sandstone records the alternating rise (shale) and fall (sandstones) of sea level as the shoreline moved back and forth across the area about 98 to 100 million years ago. The long-term rise in sea level deposited rocks of the Mancos Group, which includes the Graneros Shale, Greenhorn Limestone, and Carlisle Shale (in order from oldest to youngest). Gradually the sea level dropped again, and the shoreline retreated to the northeast, as deposition of the Mesaverde Group began. The Mesaverde Group consists of alternating sandstones, siltstones, and coal deposited by rivers flowing into the shallow sea.

3.2 Hydrogeology

In the site vicinity, shallow groundwater is encountered within valleys and canyons at depths less than 100 feet and is typically associated with arroyos, which can be incised as much as

20 feet below the valley floor. The depth to groundwater at the site is estimated to range between 60 feet and 80 feet bgs. No groundwater was encountered during completion of the Site Investigation drilling in April 2008.

4.0 Conceptual Site Model and Proposed Remediation Standards

The Conceptual Site Model for the BMG Homestead Ranch #2 well site includes the following potential receptors and exposure pathways for both current and future uses:

Contaminated Media	Receptor	Exposure Route
Subsurface Soil	Construction Worker	Dermal, Inhalation, Ingestion
Subsurface Soil	Groundwater	Leaching via precipitation

Because of the early response work involving the removal of 3 cubic yards of contaminated surface soil from the site, no surface soil contamination is present. Furthermore, groundwater contamination has not occurred as a result of this release, so the only current potential groundwater exposure pathway would be if subsurface soil contamination leached to groundwater. Based on the potentially complete exposure pathways identified above, the final remediation levels are proposed to be based on NMOCD action levels for total BTEX (50 mg/kg) and TPH (100 mg/kg) in soil. No other remediation levels are proposed.

5.0 Proposed Corrective Action Technology

5.1 SVE Technology

Soil vapor extraction (SVE) consists of extraction wells screened in the unsaturated zone which are used to induce airflow through the unsaturated zone by creating a pressure gradient through the extraction of air from the wells. The SVE gas flow can also enhance the evaporation of non-aqueous phase liquids, volatilization of contaminants dissolved in pore water, and desorption of contaminants from the surfaces of soil particles.

Based on the documented site geologic conditions and AES' experience with the effectiveness of properly pilot studied SVE systems at similar sites, it appears that SVE is a viable technology for remediation of petroleum hydrocarbon contaminated soil at this site. Based on site conditions, equipment specifications, and AES' experience with the selected remediation system, AES anticipates a radius of influence (ROI) of at least 20 feet at an applied vacuum of 20" Hg.

To implement the use of SVE as a remediation approach at this site, AES proposes to install three SVE wells inside the tank containment area and two passive air inlet/observation wells outside the containment. To reduce overall costs, as well as the time required for implementing the proposed remedial action, AES anticipates utilizing the central SVE well (SVE-2) as the primary extraction point and incorporating the other two SVE wells as additional observation/inlet wells. The system will use a manifold system to connect the extraction wells so that each one can be controlled individually and can be operated either as

an extraction point or an air inlet point. The proposed well locations and system design information are presented in Figure 4. Figure 5 provides a generalized schematic of the proposed SVE well construction.

5.2 SVE System Operation

A mobile SVE remediation system will be used to conduct the remedial action at this site. This system is a trailer-mounted remediation unit designed around the use of an internal combustion engine (ICE) to provide high (>20" Hg) vacuum for conducting multi-phase (vapor/liquid) extraction and treatment. The ICE unit consists of an RSI S.A.V.E. II Model V3 single engine modular base system, with a compressive thermal oxidizer (the power source) with a destruction rate of up to 30 lbs/hour, a condensate separation and treatment tank, and a Phoenix 1000 Automation System. The RSI unit is capable of generating air flows of up to 292 cubic feet per minute (SCFM) at a vacuum of 20" Hg while at an engine operating speed of 2,000 revolutions per minute (RPM).

AES will install 1-inch diameter reinforced nylon tubing inside each SVE well and will provide excess tubing so the extraction point depth can be adjusted as needed to suit operational conditions. Each SVE wellhead will be capped with a slip-fit cap that has a compression-fit vacuum hose inlet, a 0.25-inch ball valve for air flow control, and a vacuum gauge. Each SVE well will be connected to the ICE system via a single 2-inch reinforced vacuum hose attached to the main air inlet on the ICE system. The vacuum line for each SVE well will be connected directly to the main vacuum hose at a point near the wellhead. The passive air inlet wells will include a similar wellhead cap construction, without the compression-fit vacuum hose inlet.

In order to minimize the installation time needed to begin the remediation, the system will be installed using above ground piping to connect the extraction wells and manifold piping to the ICE unit. On startup, the SVE system will initially be operated similar to a pilot study in order to fully evaluate flow processes and optimize the system for the site. The startup/shakedown will be conducted for approximately three 8-hour days. The startup will include a series of step-increased applications (a minimum of four) in the applied vacuum flow. During startup, the following parameters will be continuously monitored in order to optimize the system design and operation: 1) applied vacuum at the vacuum extraction wellhead; 2) observed vacuum in each observation well; 3) vapor flow rate, including the flow stream temperature and pressure at the location of the flow rate measurement to accurately convert the rate to standard temperature and pressure; and 4) soil gas sampling by OVM and lower explosion limit (LEL) meter. Because the remediation system is based on an ICE system, which results in nearly complete destruction of hydrocarbon vapors, no vapor mitigation is anticipated for the duration of the remediation activity.

VOC air analysis will be conducted during operation of the SVE system via the automated on-board gas monitoring function of the ICE unit. Results will be reported as parts per million by volume (ppmv) for total volatiles in the influent air. In addition, laboratory analytical samples for VOCs in air will be collected once at system startup and again just prior to system shutdown. On each occasion, VOC samples will be collected from the influent air and from the post-treatment effluent air. These laboratory samples will be submitted to Hall

Environmental Analysis Laboratory in Albuquerque, NM, for laboratory analysis of the following parameters:

- BTEX – EPA Method 8021
- TPH GRO – EPA Method 8015 Modified

Startup and SVE operational procedures will be conducted according to the U.S. Army Corps of Engineers (USACE) *Engineering and Design: Soil Vapor Extraction and Bioventing, June 2002.*

5.3 Notification of Utilities

AES will utilize the New Mexico One-Call system to identify and mark all underground utilities at the site before initiating drilling activities. AES will contact separately any utilities not participating in the New Mexico One-Call system.

5.4 Notification of Client and Regulatory Agency

AES will notify Mr. Mike Dimond of BMG and Mr. Brandon Powell of NMOCD via letter before beginning field activities.

5.5 Health and Safety Plan

Prior to the start of the CAP installation activities, AES will prepare and implement a comprehensive site-specific Health and Safety Plan (HASP) addressing the proposed scope of work and associated monitoring and sampling requirements. All employees and subcontractors will be required to read and sign the HASP to acknowledge their understanding of the information contained within the HASP. The HASP will be implemented and enforced on site by the assigned Site Safety and Health Officer. Daily tailgate meetings will be held and documented during field activities and addressed site-specific health and safety concerns or issues.

5.6 Remediation Well installation

A GeoProbe 6620 DT tracked direct push unit capable of standard monitor well installation will be utilized to install the remediation system wells. In general, the SVE and passive air inlet wells will have the same overall construction, with the primary difference being the extraction piping equipment placed inside the SVE wells. All five wells will be installed to an estimated depth of 40 feet bgs to ensure the wells will reach the deepest zones of petroleum hydrocarbon contamination observed in the soil during the April 2008 field investigation.

The SVE and passive air inlet wells will be constructed of 2-inch diameter PVC well casing and slotted screen with interlocking, o-ring sealed joints. The base of the well will be a 2-inch diameter PVC well point joined to the bottom screened section with an interlocking, o-ring sealed joint. Well screens will extend from the base of the boring (40 feet) to a depth of 5 feet bgs. Well casing will extend from 5 feet bgs to ground surface. The annular space, 4 inches in diameter, will be filled with 10-20 silica sand from the base of the boring up to a depth of 4 feet bgs. A hydrated bentonite seal will be placed from 4 feet bgs to a depth of 1 foot bgs. A concrete collar and steel surface protector will ensure surface protection for the well. Proposed SVE well construction details are presented on Figure 5.

Strict decontamination procedures will be employed to ensure that augers and down-hole sampling equipment are properly cleaned between each use. Decontamination will consist of power-washing equipment with water and Alconox followed by thorough rinsing with clean water.

5.7 Waste Disposal

No drill cuttings are anticipated to be generated during the advancement of soil borings. Therefore, no soil disposal will be required. No water is anticipated to be generated as a result of the SVE system operation. Therefore, no water disposal should be required. The SVE system does include a condensation tank, which will allow collection for treatment and disposal of a small volume of water, should any be generated through operation of the system.

6.0 Confirmation Soil Sample Collection and Analysis

6.1 Confirmation Soil Sample Collection

After completion of remedial activities, confirmation soil borings will be advanced at the site. Closure soil samples will be collected from each soil boring to confirm that soil remediation objectives have been met through operation of the SVE system. The samples will be collected using a direct push rig and will be collected from discrete intervals within the pre-cleanup contamination zones in borings TH-1 and TH-2.

The samples will be collected in new, disposable plastic sampling tubes. Because the samples are intended for laboratory confirmation, no field screening of these samples will be conducted. Soil sampling for laboratory analysis will be completed in strict accordance with USEPA Environmental Response Team's SOPs. Once collected, sample containers will be placed on ice in insulated coolers and shipped at less than 6°C to the analytical laboratory.

A Soil Boring Log will be completed for each soil confirmation boring. These logs will record sample depth and method of collection, as well as observations of soil moisture, color, density, grain size, plasticity, contaminant presence, and overall stratigraphy.

6.2 Laboratory Soil Analysis

Soil samples collected from the confirmation borings will be submitted to an EPA-approved laboratory, Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico, for laboratory analysis of the following parameters:

- BTEX – EPA Method 8021
- TPH (C6-C36) GRO, DRO, and MRO – EPA Method 8015 Modified

For all laboratory soil samples, quality assurance and quality control (QA/QC) procedures, sample preservation, apparatus required, and analyses performed were in accordance with USEPA Document EPA-600, "Methods for Chemical Analysis for Water and Wastes" dated

July 1982; and USEPA document SW-846, 3rd Edition, "Test Methods for Evaluating Solid Waste: Physical Chemical Methods", dated November 1986.

7.0 Deliverables

After approval by NMOCD to proceed with installation and operation of the SVE system, AES proposes to begin system installation within 30 days. Within 30 days of completing the startup activities outlined above, AES will submit a written report to the NMOCD to document the startup and initial operation of the SVE system. The report will provide the following to NMOCD:

- A narrative of the startup activities,
- Technical and other data,
- As-built diagrams,
- Soil boring logs,
- SVE well completion reports,
- System specifications, and
- Identification of applicable permits and clearances;

Achieving the specified remediation goals is anticipated to require operation of the system for approximately 3 months. Final closure will be determined by closure sampling of the contaminated soil zones at locations TH-1 and TH-2. The decision to conduct closure sampling will be based on analysis of influent air BTU content collected during system operation.

At the point at which influent air concentrations have reached asymptotic levels for a period of 15 consecutive days the system will be shut down for 7 days. After the shut down, the system will be restarted and allowed to run for an additional 7 days. If at any time during the restart the influent air concentrations exceed the pre-shut down asymptotic level by greater than 5%, the system will be left in operation for an additional 15 days. At the completion of the second 15-day period, the shut-down sequence will be repeated.

Upon completing the second shut-down sequence, or if the initial shut-down is satisfactory, AES proposes to collect soil confirmation samples for evaluation of the soil contamination conditions, after which the soil analytical results will be utilized to determine the next step in completing the remediation. If the confirmation soil samples are below NMOCD action levels, AES will submit a final report to NMOCD documenting the achievement of final remediation objectives and requesting final closure of the release incident. However, if the soil samples indicate continued presence of petroleum hydrocarbon contamination, AES will propose additional system operation or possibly provide a revised CAP.

8.0 Proposed Schedule

AES proposes the following schedule for completing the proposed work scope:

	Proposed Task	*Days from CAP Approval*
1	Obtain permits and clearances required to install and operate SVE system;	30
2	Complete SVE installation and begin startup;	60
3	Prepare and submit results of SVE installation and startup.	90
4	Final Closure Report	30 days after obtaining final soil samples

9.0 Certification

I, the undersigned, am personally familiar with the information submitted in this Corrective Action Plan, prepared on behalf of Benson-Montin-Greer for the Homestead Ranch #2 Well Location in Rio Arriba County, New Mexico. I attest that it is true and complete to the best of my knowledge.

Blaine Watson

Blaine Watson, P.G.
Senior Project Manager

Ross Kennemer
Principal

10.0 References

Animas Environmental Services, LLC, 2008. Site Investigation Report/Homestead Ranch #2 Well Location, Benson Montin Greer, SW¼ SW¼ of Section 34, T25N, R2W, Rio Arriba County, New Mexico, July 2008.

U.S. Army Corps of Engineers, 2002. *Engineering and Design: Soil Vapor Extraction and Bioventing, June 2002.*

U.S. Environmental Protection Agency (USEPA). 1982. *Methods for Chemical Analysis for Water and Wastes.* Document EPA-600, July, 1982.

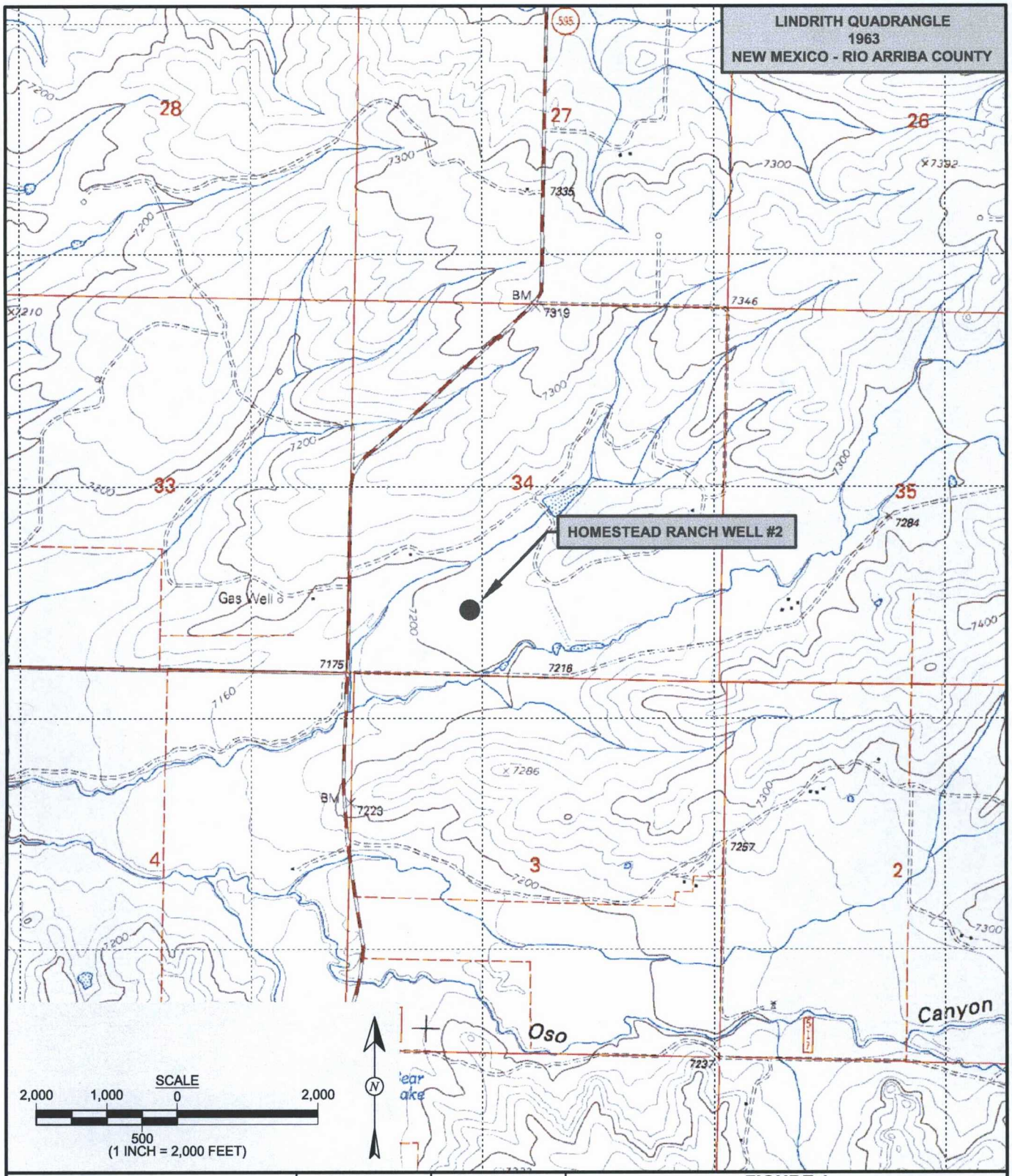
USEPA. 1992. SW-846, 3rd Edition, *Test Methods for Evaluating Solid Waste: Physical Chemical Methods*, dated November, 1986, and as amended by Update One, July, 1992.

USEPA. 1991. *Site Characterization for Subsurface Remediation*, EPA 625/4-91-026, November, 1991.

USEPA. 1997. *Expedited Site Assessment Tools for Underground Storage Tank Sites.* OSWER 5403G and EPA 510B-97-001, March, 1997.

USEPA. 2001. Contract Laboratory Program (CLP) Guidance for Field Samplers. OSWER 9240.0-35, EPA 540-R-00-003. June, 2001.

U.S. Geological Survey. 1963. Lindrith, Rio Arriba County, New Mexico 7.5-minute topographic quadrangle map.

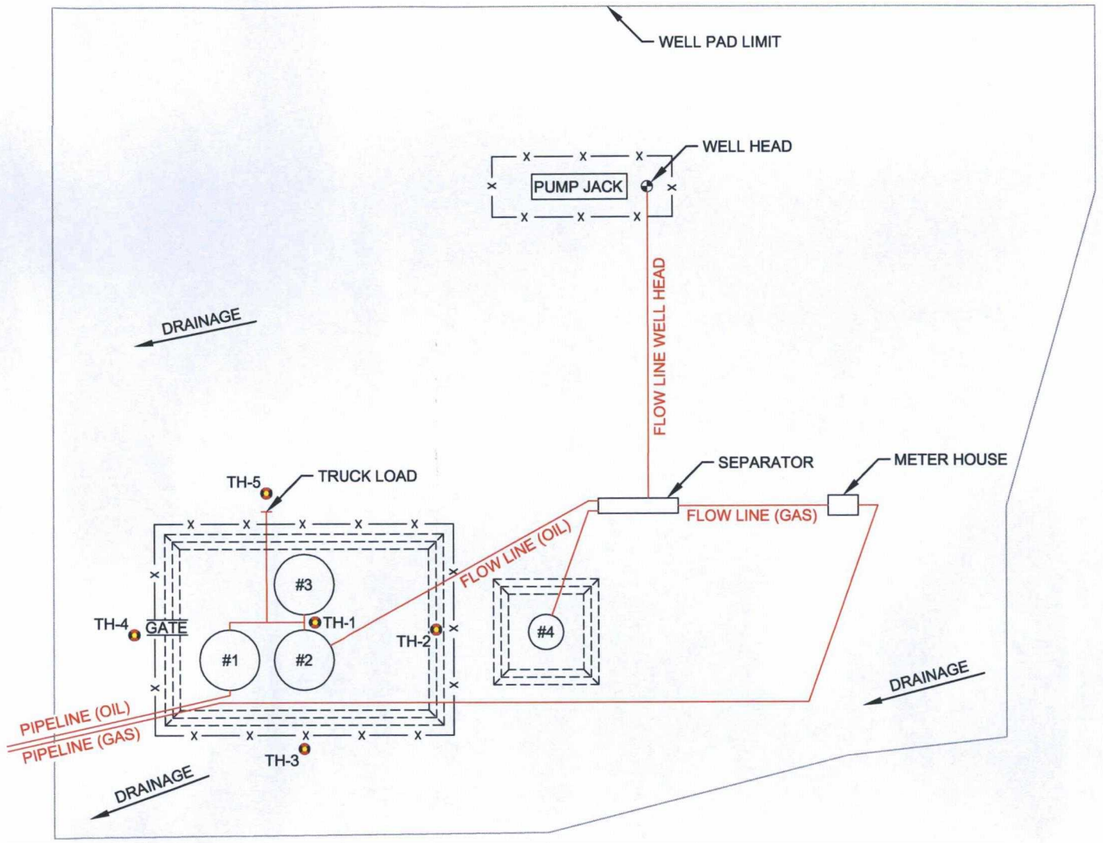


DRAWN BY: N. Willis	**DATE DRAWN:** June 4, 2008
REVISIONS BY: N. Willis	**DATE REVISED:** November 4, 2008
CHECKED BY: R. Kennemer	**DATE CHECKED:** July 11, 2008
APPROVED BY: E. McNally	**DATE APPROVED:** November 4, 2008

AES
Animas Environmental Services, LLC

FIGURE 1
TOPOGRAPHICAL SITE LOCATION MAP
BENSON-MONTIN-GREER
LLAVES PIPELINE
HOMESTEAD RANCH WELL #2
SW ¼, SW ¼, SEC. 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 20.989', W 107° 02.399'

S:\ANIMAS 2000\2008 PROJECTS\BMG\HOMESTEAD RANCH\DRAWINGS\FIGURE 1 TOPOGRAPHICAL SITE LOCATION MAP



STORAGE TANKS

#1 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#2 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#3 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#4 7 ft. x 10 ft., 88 BBL., FIBERGLASS WITH STEEL TOP, CONTAINS OIL AND WATER

SUMMARY OF SOIL ANALYTICAL RESULTS
BMG HOMESTEAD RANCH WELL #2 LOCATION
RIO ARRIBA COUNTRY, NEW MEXICO

Sample I.D.	Date Sampled	Depth	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO	GRO	MRO
		(feet)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Analytical Method			8021B	8021B	8021B	8021B	8015B	8015B	8015B
USEPA Region 6 Screening Levels			1.6	520	230	210	NE	NE	NE
NMOCD Action Level			50				100		
TH-1	24-Apr-08	1	1.1	12	6.1	52	9,200	860	4,800
TH-1	24-Apr-08	20	4.2	32	11	71	79	1,400	<50
TH-1	24-Apr-08	40	<0.050	<0.050	<0.050	0.18	<10	<5.0	<50
TH-1	24-Apr-08	48	0.072	0.45	0.18	3.0	<10	12	<50
TH-2	24-Apr-08	12	15	140	56	400	230	550	52
TH-2	24-Apr-08	20	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-2	24-Apr-08	44	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-3	24-Apr-08	20	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-3	24-Apr-08	32	<0.050	<0.050	<0.050	0.11	<10	<5.0	<50
TH-3	24-Apr-08	44	<0.050	0.27	<0.050	0.50	<10	<5.0	<50
TH-4	24-Apr-08	20	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-4	24-Apr-08	44	<0.050	<0.050	<0.050	0.40	<10	<5.0	<50
TH-5	24-Apr-08	24	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-5	24-Apr-08	34	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50
TH-5	24-Apr-08	44	<0.050	<0.050	<0.050	<0.10	<10	<5.0	<50

NOTE: NE = Not Established

LEGEND

—x— FENCE

SOIL BERMS

TEST HOLE BORINGS (INSTALLED APRIL 2008)

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

N

AES
Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
N. Willis	June 4, 2008
REVISIONS BY:	DATE REVISED:
N. Willis	November 4, 2008
CHECKED BY:	DATE CHECKED:
R. Kennemer	July 11, 2008
APPROVED BY:	DATE APPROVED:
E. McNally	November 4, 2008

FIGURE 2
SITE PLAN AND SOIL SAMPLING RESULTS
BENSON-MONTIN-GREER
LLAVES PIPELINE
HOMESTEAD RANCH WELL #2
SW ¼, SW ¼, SEC. 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 20.989', W 107° 02.399'

S:\ANIMAS 2000\2008 PROJECTS\BMG\HOMESTEAD RANCH\DRAWINGS\FIGURE 2 GENERAL SITE PLAN

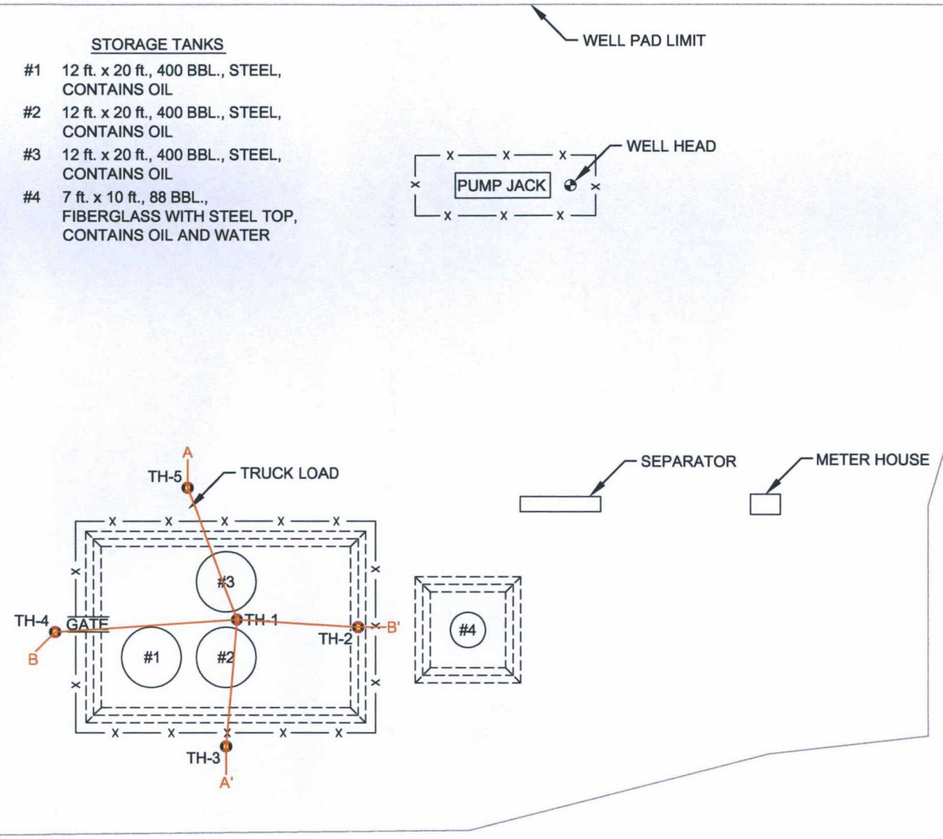
STORAGE TANKS

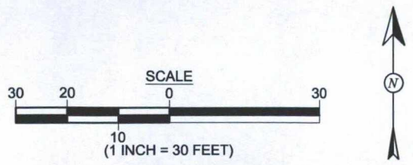
#1 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#2 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#3 12 ft. x 20 ft., 400 BBL., STEEL, CONTAINS OIL

#4 7 ft. x 10 ft., 88 BBL., FIBERGLASS WITH STEEL TOP, CONTAINS OIL AND WATER





LEGEND

FENCE

SOIL BERMS

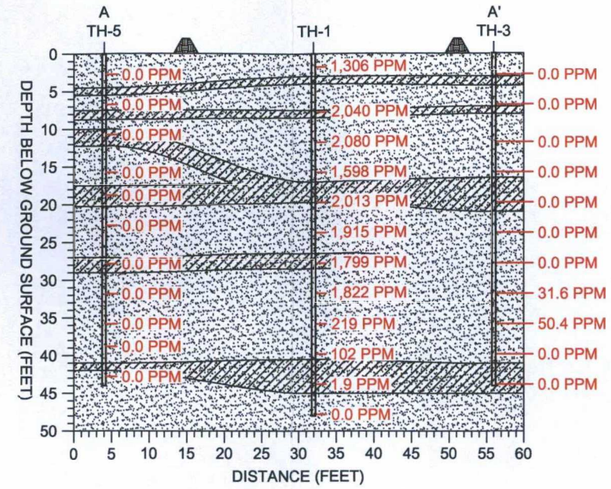
TEST HOLE BORINGS (INSTALLED APRIL 2008)

GEOLOGICAL CROSS SECTION LINES

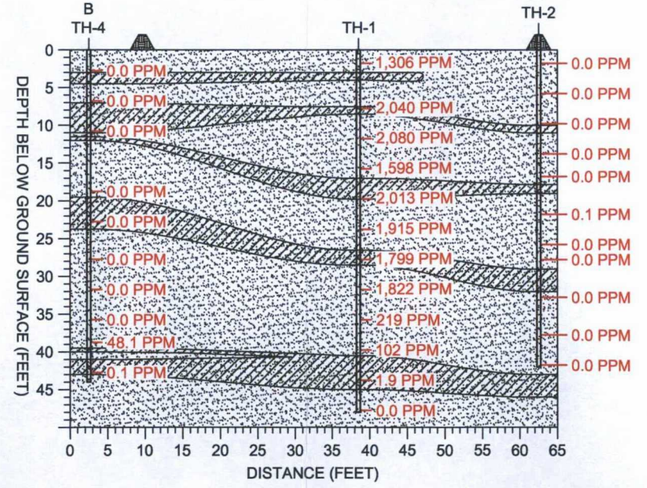
SAND

SANDY CLAY

−1,306 PPM ORGANIC VAPOR METER READING IN PARTS PER MILLION (SOIL SAMPLES)



↑ NOT TO SCALE ↓

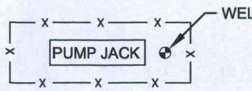


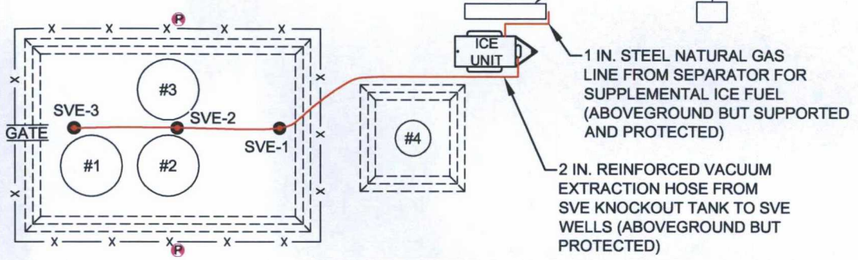
AES Animas Environmental Services, LLC

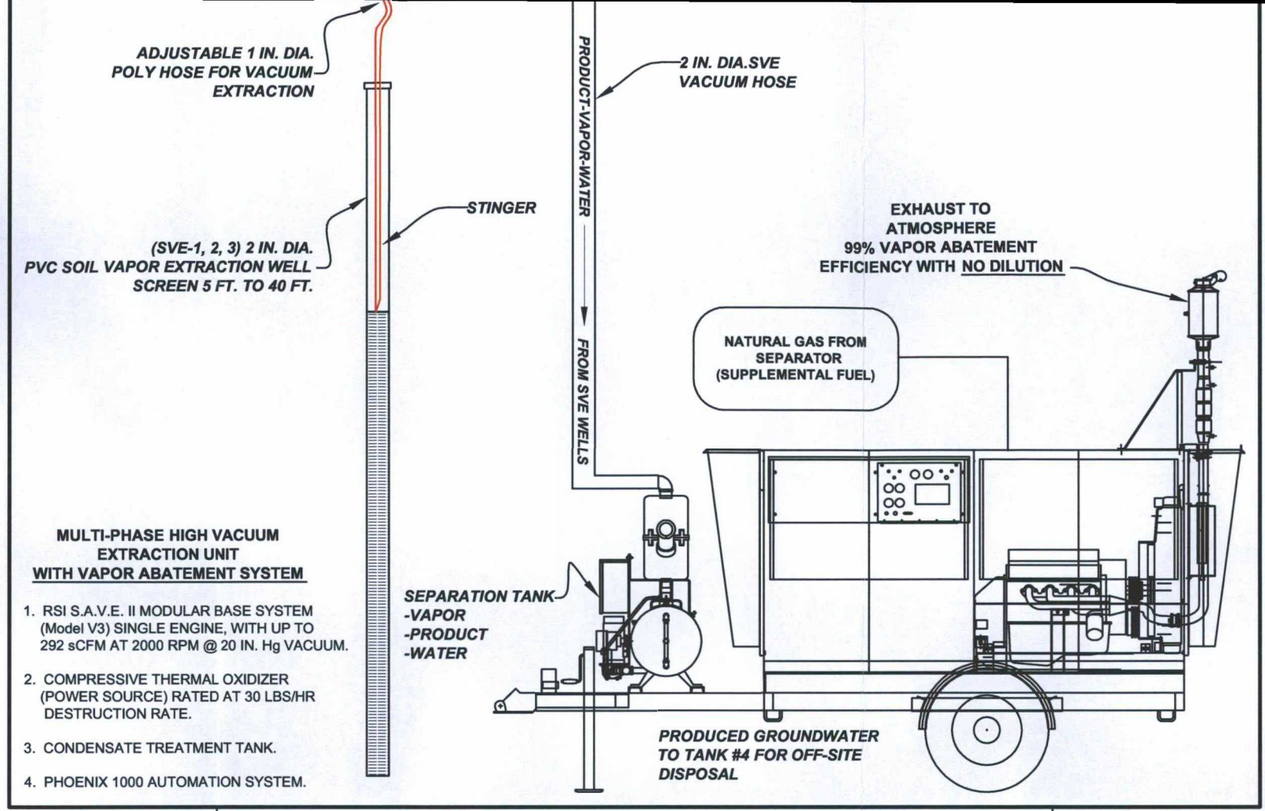
DRAWN BY: N. Willis	DATE DRAWN: June 4, 2008
REVISIONS BY: N. Willis	DATE REVISED: November 4, 2008
CHECKED BY: R. Kennemer	DATE CHECKED: July 11, 2008
APPROVED BY: E. McNally	DATE APPROVED: November 4, 2008

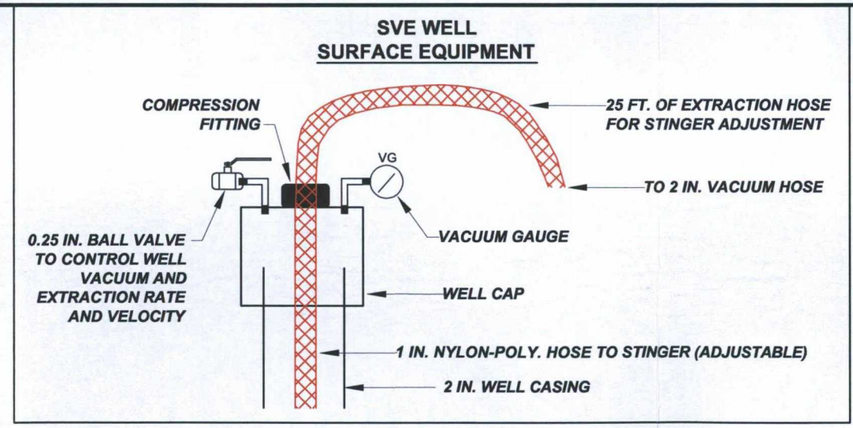
FIGURE 3
GEOLOGICAL CROSS SECTIONS AND SOIL FIELD SCREENING RESULTS
BENSON-MONTIN-GREER
LLAVES PIPELINE
HOMESTEAD RANCH WELL #2
SW¼, SW¼, SEC. 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 20.989', W 107° 02.399'

S:\ANIMAS 2000\2008 PROJECTS\BMG\HOMESTEAD RANCH\DRAWINGS\FIGURE 3 GEOLOGICAL CROSS SECTIONS









LEGEND

- FENCE
- PROPOSED PASSIVE AIR INTAKE WELL
- PROPOSED SOIL VAPOR EXTRACTION (SVE) WELL

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

N

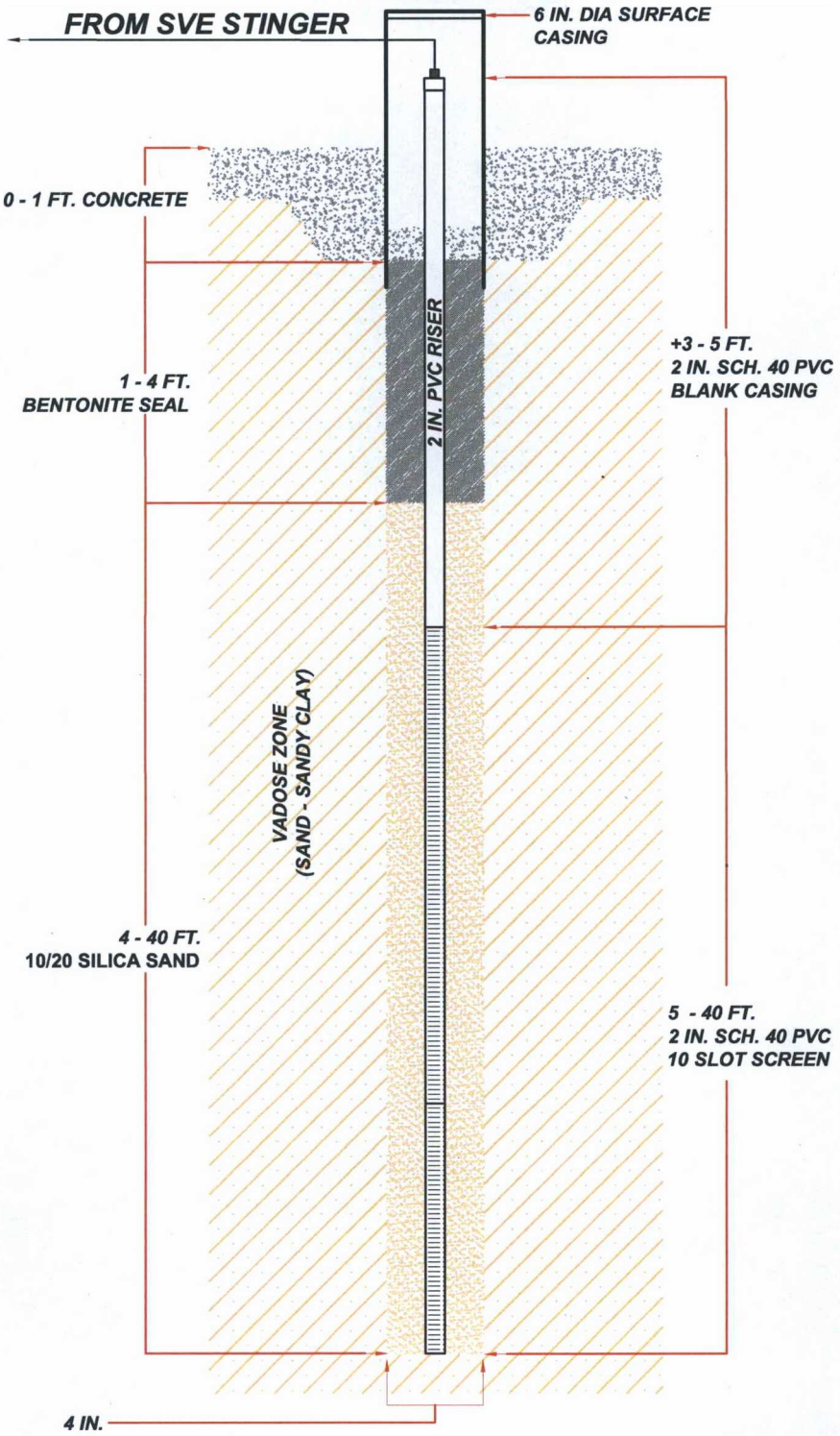
Animas Environmental Services, LLC

DRAWN BY: R. Kennemer	DATE DRAWN: October 24, 2008
REVISIONS BY: N. Willis	DATE REVISED: November 4, 2008
CHECKED BY: E. McNally	DATE CHECKED: November 4, 2008
APPROVED BY: E. McNally	DATE APPROVED: November 4, 2008

FIGURE 4
PROPOSED SOIL VAPOR EXTRACTION SYSTEM
BENSON-MONTIN-GREER
LLAVES PIPELINE
HOMESTEAD RANCH WELL #2
SW ¼, SW ¼, SEC. 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 20.989', W 107° 02.399'

S:\ANIMAS 2000\2008 PROJECTS\BMG\HOMESTEAD RANCH\DRAWINGS\FIGURE 4 PROPOSED SOIL VAPOR EXTRACTION SYSTEM

PROPOSED SVE WELL CONSTRUCTION



NOT TO SCALE

AES
Animas Environmental Services, LLC

DRAWN BY: N. Willis	DATE DRAWN: November 4, 2008
REVISIONS BY: N. Willis	DATE REVISED: November 4, 2008
CHECKED BY: E. McNally	DATE CHECKED: November 4, 2008
APPROVED BY: E. McNally	DATE APPROVED: November 4, 2008

FIGURE 5
PROPOSED SVE WELL CONSTRUCTION SCHEMATIC
BENSON-MONTIN-GREER / LLAVES PIPELINE
HOMESTEAD RANCH WELL #2
SW ¼, SW ¼, SEC. 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 20.989', W 107° 02.399'

S:\ANIMAS 2000\2008 PROJECTS\BMG\HOMESTEAD RANCH\DRAWINGS\FIGURE 5 PROPOSED SVE WELL CONSTRUCTION SCHEMATIC