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REPORTS

DATE:

1999

May 5, 1999

Mr. William C. Olson, Hydrologist
State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division – Environmental Bureau
2040 S. Pacheco
Santa Fe, New Mexico 87505

In reply to: Baker Oil Tools - Hobbs, NM, Work Plan Requesst

Dear Mr. Olson:

The following work plan is being submitted in response to your correspondence of March 10, 1999 requesting remediation and control of contaminants downgradient of the former unlined disposal pit. Implementation of the work plan will be coordinated with our next scheduled monitoring event in June. Please contact me at 713-625-4200 if you have any questions or comments regarding this plan.

Sincerely,

Myk Thornton
Baker Huges Inteq/ Baker Oil Tools/ Baker Atlas HS&E Department

Xc: OCD Hobbs District Office

Remediation Work Plan

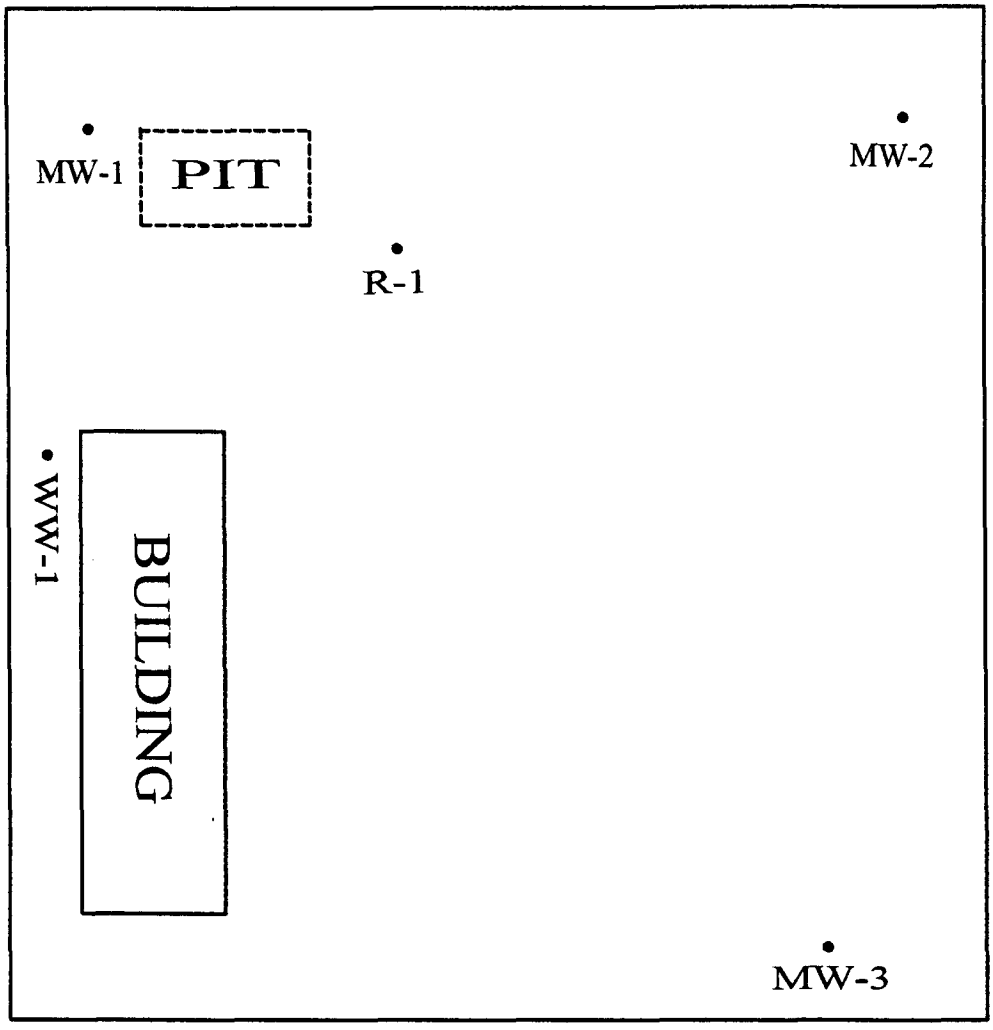
Baker Oil Tools
2800 W. Marland
Hobbs, New Mexico

History and Concerns: Baker Oil Tools vacated a property at 2800 W. Marland in Hobbs, NM and moved to a new location. The property had been used as an oil field service shop. Upon leaving the property it was revealed that an unlined pit in the back portion of the property had been used periodically. Additionally, prior to Baker Oil Tools vacating the site, contamination was noted in the water well used for water at the property. The contamination in the water well was analyzed. The laboratory results indicated gasoline components in the water.

Monitoring wells were installed at 4 locations on the property (Figure 1 property layout). Quarterly monitoring of the wells began and data has been provided to the State of New Mexico. Some of the monitoring events revealed the presence of gasoline products in the groundwater under the Baker property. MTBE has been detected in the groundwater beneath the Baker property (indicative of a potential off-site gasoline source for some of the hydrocarbon contamination). Several areas of apparent surface hydrocarbon contamination originating from the petroleum jobber's facility have been noted along the property boundary extending onto the Baker property during various quarterly monitoring events.

Monitoring well R-1 was installed apparently down-gradient from the unlined pit. R-1 has begun yielding free hydrocarbon product (a naphthalene – type material) which is thought to be sourced from the old unlined pit upon which a closure attempt had been made in the past. It does not appear that this well (R-1), recharges with hydrocarbon product at a rapid rate. Attachment 1 is the description of the monitoring activities at R-1 during the most recent monitoring event in March of 1999.

A concern at this site is that groundwater flow rate not be affected by an active recovery process. If gasoline contamination is present from an offiste source, an active groundwater recovery system could draw the contamination onto the Baker site. This assumption supports the installation of a passive hydrocarbon recovery system rather than an active system.



Page and Kraemer Environmental Services, Inc.
Lafayette / Houston

Figure 1

Baker Oil Tools
2800 W. Marland
Hobbs, NM

Hydrocarbon Recovery Plan

Baker proposes to perform Items 1 and 2 during the next groundwater sampling event in June 1999. This will be followed up with Items 3, 4 and 5.

1. Bail well R-1 and document amount of hydrocarbon recovered. Bail R-1 until all apparent free product is recovered.
2. Install a passive groundwater recovery skimmer in Monitoring Well R-1. (Attachment 2 has specifics of one of the systems currently under evaluation by Baker for installation. Monitoring Well R-1 is a two inch well and it is proposed to install a skimmer with approximately 1000 ml of hydrocarbon recovery capacity.)
3. During the next two regularly scheduled quarterly monitoring events, document the amount of hydrocarbon product recovered in the passive skimmer and bail well to evaluate if any free product (not recovered by the skimmer) is present.
4. If the 2 quarter evaluation period indicates the hydrocarbon recharge rate produces more free product than the skimmer is designed to handle, then Baker will propose to modify the schedule upon which the skimmer in R-1 is recovered and emptied.
5. Baker will provide to the State of New Mexico the results of the hydrocarbon recovery information for the evaluation period.

Attachment 1

Attachment 1

Monitoring Well R-1 Recovery Information
March 1999

Monitoring well R-1 was bailed but not sampled due to the presence of free product in the well when bailing initiated. Approximately 10 inches of free product was observed in the first bailer during the sampling of monitoring well R-1. The recovered amount decreased in subsequent bails until after the 12^{th} bailer taken the amount of product being recovered was less than $^1/_8{}^{th}$ of an inch. The sampling crew left the site for one hour to deliver the samples from the other wells for transport to the laboratory. Samples collected from each well were shipped to Von Analytical Laboratories in Houston, Texas for analysis. (Note: The laboratory was changed for logistical, service and cost considerations.) When the crew returned, R-1 was bailed again. The first bailer yielded water with ¼ inch of free product. The second bailer yielded 2 inches of free product. The third bail contained less than $^1/_2$ inch of free product. Subsequent bails from the well produced a diminishing quantity of free product until on the 10^{th} bail less than $^1/_8{}^{th}$ of an inch of product was recovered. The well was almost bailed dry at this point. Approximately one foot of water sample was being recovered per bail and this material contained a high sediment load. The crew returned the next morning to resample R-1 to determine if recharge of the free product would occur overnight. Bailing of R-1 began at 7:00 a.m. The first bail taken was a full bailer of water with a sheen of free product. The subsequent 13 bails from the well recovered only a hydrocarbon sheen on each. Again the well bailed almost completely dry by the last bail.

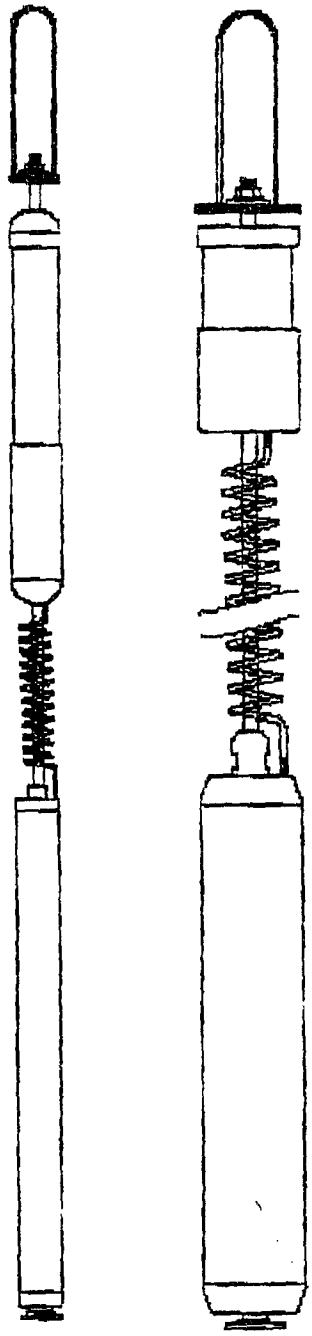
Attachment 2

zorbo™ skimmer systems

geotech

Floating Intake for 4" and 2" wells

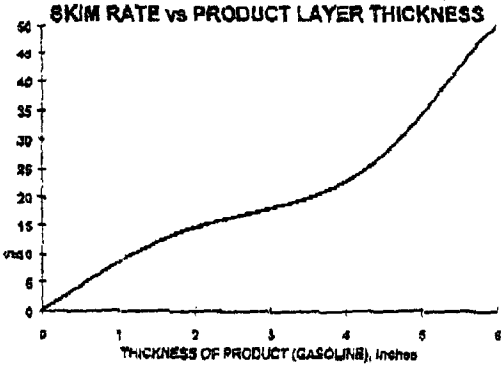
The zorbo™ systems offer the greatest flexibility available in a passive LNAPL recovery system and the highest recovery rates possible with today's skimmer technology! The zorbo™ passive discriminating intake system is ideal for clean up of floating free product down to the sheen!



SUPERIOR FILTER MATERIAL!
The zorbo™ collects non emulsified hydrocarbons, without water, down to a sheen, through the precision intake float! Exceptional skim rates set the zorbo™ sytems apart from any other available products in this class.

SIMPLE INSTALLATION!
If you can use a bailer you can install a complete zorbo™ system! No need for pumps, electrical support or maintenance. This completely passive system begins to work as soon as it is lowered into the well! No more maintenance in the field! Nothing to clean and none of the time and costs associated with cleaning! Geotech can also supply well caps and teflon coated suspension cable!

UNMATCHED RESPONSIVENESS!
No other passive recovery system can match zorbo™ systems for flexibility. The scientifically designed coil tubing and precision intake floats accurately follow LNAPL layers for more efficient recovery. The 4 inch zorbo™ adapts to water table fluctuations of up to 3 feet and has a canister capacity of approximately a gallon. The 2 inch zorbo™ handles water fluctuations of up to 15 inches and has a capacity of up to a quart with the 36 inch canister. A 2 inch, static intake, economy zorbo™ is also available.



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zorbo™ skimmer systems

geotech

Specifications

Zorbo™ 2" skimmer system

Dimensions	
Height/weight with 1 foot canister	49 3/16"; 5.0 lbs
Height/weight with 3 foot canister	73 3/16"; 6 25 lbs
Diameter	1.85" max
Volume of canisters	347 ml (.092 gal), 1066 ml (.279 gal)
Accomodates water fluctuations to:	approximately 15 inches with floating intake
Materials	
Suspension loop	stainless steel
Centering disc	stainless steel
Filter material	polyethylene
Float material	polypropylene
Fittings	brass
Coil tubing	polyurethane, 1/8 x 1/4, with 3/4" id coil
Center shaft	stainless steel
Collection canister	stainless steel
Dispensing valve	brass, 3/8" NPT thread, petcock

Zorbo™ 4" skimmer system

Dimensions	
Height/weight with 1 foot canister	67 5/16"; 15.0 lbs
Height/weight with 3 foot canister	91 5/16"; 19.0 lbs
Diameter	3.75" max
Volume of canisters	1,609 ml (.425 gal), 5,137 ml (1.357 gal)
Accomodates water fluctuations to:	approximately 36 inches with floating intake
Materials	
Suspension loop	stainless steel
Centering disc	stainless steel
Filter material	polyethylene
Float material	polyethylene
Fittings	brass
Coil tubing	polyurethane, 1/8 x 1/4, with 3/4" id coil
Center shaft	stainless steel
Collection canister	stainless steel
Dispensing valve	brass, 3/8" NPT thread, petcock

Zorbo™ 2" economy model (not shown)

Dimensions	
Height/weight with 1 foot canister	29", 3.0 lbs
Height/weight with 3 foot canister	59", 5.0 lbs
Diameter	1.8" max
Volume of canisters	328 ml (.087 gal), 985 ml (.260 gal)
Accomodates water fluctuations to:	7 inches with static intake
Materials	
Suspension loop	stainless steel
Filter material	polyetnylene
Float material	polyethylene
Fittings	brass
Collection canister	PVC
Dispensing valve	brass, 3/8" NPT thread, petcock

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