

NM1 - 10A

# INSPECTIONS & DATA



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

May 9, 2002

2003

**Lori Wrotenbery**

Director

**Oil Conservation Division**

Mr. Philip C. Nobis  
Tierra Environmental Company, Inc.  
PO Box 1812  
Bloomfield, New Mexico 87413

**RE: Surface Waste Management Facility Inspection Report: Permit NM-01-0010A  
Tierra Environmental Company, Inc.  
NW/4 SE/4, Section 2, Township 29 North, Range 12 West, NMPM,  
San Juan County, New Mexico**

Dear Mr. Nobis:

The New Mexico Oil Conservation Division (OCD) inspected the Tierra Environmental Company, Inc. (Tierra) surface waste management facility at the above location on March 5, 2002 in order to review the closure progress and the County road project. The OCD inspection and file review of Tierra indicates some permit deficiencies. This inspection report is based on a site visit performed on March 6, 2003, a visual check of the facility conditions on May 7, 2003, and a review of permit NM-01-0010A conditions issued on August 19, 2002. For reference, attachment 2 contains photographs taken during the inspection.

Tierra shall provide OCD with a detailed description of how the corrections will be made and a timetable of when each of the corrections will be completed. Tierra must respond to the permit deficiencies by May 23, 2003.

If you have any questions please do not hesitate to contact me at (505) 476-3488.

Sincerely,

Martyne J. Kieling  
Environmental Geologist

xc with Attachments: Hobbs OCD Office

**ATTACHMENT TO OCD 711 INSPECTION REPORT**  
**PERMIT NM-01-0010A**  
**TIERRA ENVIRONMENTAL COMPANY, INC.**  
**TRACT "A" LANDFARM**  
**NW/4 SE/4, Section 2, Township 29 North, Range 12 West, NMPM,**  
**San Juan County, New Mexico**  
**(May 9, 2003)**

This inspection report is based on a site visit performed on March 6, 2003, May 7, 2003, a review of permit NM-01-0010A conditions issued on August 19, 2002 and a current file review.

**LANDFARM OPERATION**

1. The facility must be fenced and have a sign at each entrance. The sign must be legible from at least fifty (50) feet and contain the following information: a) name of the facility; b) location by section, township and range; and c) emergency phone number.

**March 6, 2003: Fencing is in place (see photo 7).**

**May 7, 2003: Fencing was down facility was not secure. As roadway is constructed a temporary fence or gate must be installed along with berms along the perimeter to prevent stormwater runoff.**

2. Disposal may occur only when an attendant is on duty. The facility must be secured when no attendant is present.

**March 6, 2003: The OCD understood from Dave Bonawitz that no loads have been received since the facility began closure procedures in August 2002.**

**May 7, 2003: Fencing was down facility was not secure. As roadway is constructed a temporary fence or gate must be installed.**

3. All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.

**NA: Facility is currently being closed no new loads will be accepted.**

**May 7, 2003: Contaminated soil from the County Road Right of Way (ROW) appears to have been graded onto the existing contaminated soils in active cells. This material should be spread within 72 hours to a thickness of 10" onto the existing road and staging area as proposed in the Tierra September 25, 2002 letter. If this is not possible Tierra must request a reason for an extension of time for the spreading of material.**

4. Soils and stabilized bottoms, sludge and mud must be spread on the surface in ten (10) inch lifts or less.

**May 7, 2003: Contaminated soil from the County Road Right of Way (ROW) appears to have been graded onto the existing contaminated soils in active cells (see photo 9 and 10). This material should be spread within 72 hours to a thickness of 10-inches onto the existing road and staging as proposed in the Tierra September 25, 2002 letter. The OCD has some concern that there is not enough room within the existing road area and staging area to manage all of the material from the ROW and the area north of the ROW to a thickness of 10-inches.**

5. Soils must be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants. Methods suggested by the U.S. Soil Conservation Service should be utilized in the tilling of the soils to reduce the occurrence of natural wind erosion.

**March 6, 2003: The OCD understood from Dave Bonawitz the landfarm has been worked every two weeks weather permitting. Upon examining the equipment and talking to Dave the OCD understood that the John Deere tractor with small chisel plow is only able to reach into the ground 6 inches (see photo 6). This is not turning or oxygenation of the entire 10-inch lift thickness. Tierra must propose an alternate tilling method to reach the entire 10-inch lift thickness.**

6. Moisture may be added to contaminated soils received at the facility to (1) prevent emissions of volatile organic compounds, (2) enhance natural and artificial biodegradation, and (3) suppress erosion of contaminated soils from natural wind action.
7. There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation must be removed within 72 hours of discovery.

**March 6, 2003: Ponding was not observed during this inspection. The facility had received a 5-inch snowfall on March 5, 2003. The facility was very muddy.**

8. The portion of the facility containing contaminated soils must be bermed to prevent run-off and run-on. A perimeter berm must be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for the specific region.

**March 6, 2003: Berms along the roadway or eastern edge of the facility were low and need to be rebuilt with clean soil (see photo 4).**

**May 7, 2003: County Road construction operations have removed the berms in some places and in others the contaminated soil has been piled as high as the berm (see photo 9). Tierra must install temporary berms or runoff preventive measurements along the facility perimeter. Where contaminated soil is piled as high as the berm the material must be removed leaving a 10-inch lift thickness. If the berm is still not capable of containing a one-hundred year flood event then the berms must be built up to the appropriate height.**

9. All above-ground tanks must be bermed to contain one and one-third the volume of the

largest tank or all interconnected tanks. All tanks must be labeled as to contents and hazards.

**March 6, 2003 and May 7, 2003: Two empty tanks are located within the landfarm facility (see photos 7 and 8).**

10. All new or replacement above-ground tanks to be used longer than six (6) months containing materials other than fresh water must be placed on an impermeable pad and be bermed so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks.
11. All temporary frac tanks installed at the facility for less than six (6) months containing materials other than fresh water must be bermed so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks.
12. The OCD Santa Fe and Aztec District office must be notified within 24 hours of discovery of a spill or leak.
13. Exempt contaminated soils must be placed in the landfarm so that they are physically separate (*i.e.*, bermed) from non-exempt contaminated soils. There may be no mixing of exempt and non-exempt contaminated soils.
14. Successive lifts of contaminated soils or stabilized material may not be spread until a laboratory measurement of total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.

**May 7, 2003: Contaminated soil from the roadway has been added to existing landfarm cells. If Tierra wishes to add additional lifts to existing cells the Item 14 above must be followed.**

15. Enhanced bioremediation through the application of microbes (bugs) and/or fertilizers is permitted only after prior approval from the OCD. Requests for application of microbes or fertilizers must include the location of the area designated for the program, the composition of additives, and the method, amount and frequency of application.
16. Contaminated soils may not be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no equipment may be operated within ten (10) feet of a pipeline. All pipelines crossing the facility must have surface markers identifying the location of the pipelines.

**May 7, 2003: Contaminated soils appear to have been placed on pipeline crossing (see photo 11). Tierra must remove any contaminated soil from within twenty (20) feet of any pipelines crossing the landfarm.**

17. Any design changes to the landfarm and tank bottom/sludge holding and treatment area must submitted to the OCD Santa Fe office for approval and a copy must be sent to the Aztec District office.
18. Landfarm inspection and maintenance must be conducted on at least a daily basis and immediately following each consequential rainstorm or windstorm. The OCD Santa Fe and Aztec District office must be notified within 48 hours if any defect is noted. Repairs must be made as soon as possible. If the defect will jeopardize the integrity of the landfarm additional wastes may not be placed into the landfarm until repairs have been completed.

**Tierra must continue to inspect the landfarm on a daily basis especially while the road construction process is in progress.**

19. To protect migratory birds, all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted, covered or otherwise rendered non-hazardous to migratory birds.

#### **TANK BOTTOM & SLUDGE ACCEPTANCE**

#### **DRILLING MUD ACCEPTANCE**

#### **TREATMENT ZONE MONITORING**

1. A treatment zone not to exceed three (3) feet beneath the landfarm native ground surface must be monitored. A minimum of one random soil sample must be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample must be taken at two (2) to three (3) feet below the native ground surface.
2. The soil samples must be analyzed quarterly for total petroleum hydrocarbons (TPH) using an OCD-approved field method. If TPH is detected, then a laboratory analysis must be conducted for TPH and volatile aromatic organics (BTEX) using EPA-approved methods.
3. The soil samples must be analyzed annually using EPA-approved methods for total petroleum hydrocarbons (TPH), volatile aromatic organics (BTEX), major cations/anions and Water Quality Control Commission (WQCC) metals.

**March 6, 2003: The OCD did not review the analytical reports at this time. Please submit the annual analytical laboratory results for all the Tierra landfarm cells for 2002.**

4. After obtaining the soil samples the boreholes must be filled with an impermeable material such as cement or bentonite.

## **WASTE ACCEPTANCE CRITERIA**

## **REPORTING AND RECORD KEEPING**

1. Results of the daily inspections of the facility and weekly inspections of the concrete mixing impoundment must be recorded and maintained for OCD review. The OCD Santa Fe and Aztec District office must be notified **with in 48 hours** if any defect is noted.

**The OCD did not review the daily inspection log at this time.**

2. Analytical results from the quarterly treatment zone monitoring must be submitted to the OCD Santa Fe office **within thirty (30) days** of receipt from the laboratory or within thirty (30) days of the field testing. A sample location map must be included with the analysis report.

**The OCD has performed a file review and has not received any quarterly treatment zone monitoring reports since July, 25, 2000. Tierra must submit all quarters of field test results for all active cells and all quarterly (if applicable) and annual laboratory analytical results for all active cells from August 2000 through April 2003.**

3. Analytical results regarding remediated soil must be submitted to the OCD Santa Fe office with a copy to the Aztec District office, along with any request to close the cell, apply successive lifts or remove the remediated material.

**The OCD has performed a file review and has found that the last request regarding remediated soil was dated April 23, 2002.**

4. Results of screening of free water from tank bottoms or sludge must be recorded and maintained for OCD review.
5. JFJ Landfarm L.L.C. must notify the **OCD Aztec District office within 24 hours** of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.
6. The OCD must be notified prior to the installation of any pipelines or wells or other structures within the boundaries of the facility.

7. Comprehensive records of all material disposed of at the facility must be maintained at the facility. The records for each load must include: 1) generator; 2) origin; 3) date received; 4) quantity; 5) certification of waste status as exempt or non-exempt with any necessary supporting documentation to certify non-hazardous status for non-exempt waste; 6) NORM status declaration; 7) transporter; 8) exact cell location; and 9) any addition of microbes, moisture, fertilizers, *etc.*
8. All records of testing and monitoring must be retained for a period of five (5) years.

### **FINANCIAL ASSURANCE**

1. Financial assurance in the amount of \$33,000 in the form of a surety bond has been received and approved by the Division,

**An OCD file review finds that Tierras bond is current and active.**

2. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be reviewed by the OCD no later than five (5) years from the date of this approval. In addition the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of review. The financial assurance may be adjusted to incorporate any closure cost changes.

### **CLOSURE**

1. The OCD Santa Fe and Aztec offices must be notified when operation of the facility is discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Upon cessation of operations for six (6) consecutive months, the operator shall complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director.

**The OCD was notified in via e-mail on May 6, 2002 that the Tierra would be closing the Phase I portion of the landfarm.**

2. A closure plan to include the following closure procedures will be submitted to the OCD for approval:
  - a. When the facility is to be closed no new material will be accepted.
  - b. The soils beneath the sludge/mud receiving and treatment area and landfarm will be characterized as to total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) content to determine potential migration of contamination.

- c. All above and below grade tanks will be emptied and any waste will be hauled to an OCD-approved facility. The empty tanks will be removed.
- d. Contaminated soils or existing landfarm soils will be remediated until they meet the OCD standards in effect at the time of closure or removed to an OCD-approved facility.
- e. The area will be contoured, seeded with native grasses and allowed to return to its natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place.
- f. Closure will be pursuant to all OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

**The OCD to date has not received a closure plan for the Tierra landfarm facility. Tierra must submit a closure plan that addresses the above items.**

**CERTIFICATION**



Photo 1. Storage shed area. Barrel and bucket are not on secondary impermeable containment. Landfarm berm is continued around the shed.



Photo 2. Pipe storage between berm and landfarm fence.



Photo 3. Pipe and equipment storage behind shed between berm and landfarm fence.



Photo 4. Trash pile containing plastic, empty bucket and pipe. Berm along the edge of the facility is low.



Photo 5. Lumber stored between landfarm berm and fence.



Photo 6. John Deere tractor and chisel plow used to work landfarm.

Tierra Environmental Company, Inc. NM-01-0010A



Photo 7. Tierra landfarm is on the right side of the photo and JFJ landfarm is on the left. The fence is the boundary between the two landfarms. Two empty tanks are located within the Tierra landfarm.



Photo 8: May 7, 2003, clearing landfarm for county road construction. Looking southeast. Empty tanks are still in the landfarm facility.



Photo 10. May 7, 2003 clearing landfarm for county road construction.



Photo 9. May 7, 2003, clearing landfarm for county road construction. Red soil is the compacted boundary berm and edge of holding pond located in the NW corner. The dark soil in the foreground is a compacted pile of contaminated soil that has been moved and is level with the containment berm.



Photo 11. May 7, 2003, note plastic in the foreground and pipeline marker in the background. Contaminated soil looks to have been placed on a pipeline pathway.



Photo 12. May 7, 2003, clearing landfarm for county road construction.



Photo 13. May 7, 2003 clearing landfarm for county road construction. Looking east along ROW.

## Kielling, Martyne

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**From:** Foust, Denny  
**Sent:** Friday, May 09, 2003 12:58 PM  
**To:** Kielling, Martyne; Chavez, Frank  
**Subject:** Tierra Sampling

I witnessed Tierra take four subsurface samples two feet into the native clay on the ROW. Jack Collins of Envirotech took the samples. An addition four four point samples were taken at approximately 3" by Phil Nobis and Jeremy Best. I did not witness the 3" sampling. The contractor has definitely placed contaminated material on the EPFS Pipeline ROW. The contractor has made about an 18" cut over the EPFS lines without and EPFS representative on site, the lines had been staked by One Call although the yellow flagging was not labeled as El Paso as it normally is labeled.

## Kieling, Martyne

---

**From:** Foust, Denny  
**Sent:** Friday, May 09, 2003 8:15 AM  
**To:** Kieling, Martyne  
**Subject:** TIERRA



TIERRA\_1.doc

THIS IS MY THOUGHT ON THE ISSUE, I DO NOT THINK THERE IS ANY EXCUSE FOR NOT HAVING TIERRA OVERSIGHT DURING LAND FARM MATERIAL MOVEMENTS, THIS SPREADING, BERM BLDG ETC. BOTH AS COMMON SENSE AND UNDER THE PERMIT. PHOTO #9 SHOWS THE CONTAMINATION BEING MOVED AND THE BOUNDARY AND CONTAINMENT BERM AT THE POND AREA..

STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal Time 1:30 Date 8-5-8-03

Originating Party

Martyre Kieling

Other Parties

Dave Keck  
County Road Dept  
(505) 334-4530

Subject Tierra Land Farm County Road Project

Discussion Meeting on site with Construction Crew & Denny Faust  
Some 1 Foot to 18 inches of Material has been Removed  
From the Land Farm Road right of Way Area. There was  
a Hump in the middle of the road way That the Construction  
Guy cut Down to use For Fill Material in a 200' Low  
Area. This Area was Raised 2 Feet. Phil Nobis will  
be checking the Soil For contamination in the Low Area  
That was Filled and Also checking The Hump that  
was cut Down. There was some contaminated Material  
Found when cutting off the Hump some Dark Stained Soil  
The contaminated Soil Seems to have been thicker  
than 1 Foot to 18 inches as originally told to the  
County -

Conclusions or Agreements Dave Keck Said He would keep Me updated.

Distribution

Signed

Martyre

STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

## MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal Time 10:00 Date 5-8-03  
1:10 5-8-03

Originating Party

Marlyne Kiehl

Other Parties

Phil Nobis  
Phil Nobis updateSubject Land Form Road Construction

Discussion Roadway. Began on Tuesday to move  
Dirt to get to sub surface for sampling.  
They will also be constructing berms & temporary fencing

Tierra is requesting to have EPC manage a compost  
pile onsite to manage all of the rest of the contaminated  
soil on site. I asked Phil to send in a request to  
modify the permit to include composting. Include  
berming and pile setup. Ingredients.

County contractor got ahead of the plan and had moved excess  
material actually beginning to build road. They had also used some  
land form material for fill on road bed.

Conclusions or Agreements I will be sending an inspection report  
this week

Distribution

Signed

Marlyne Kiehl

## Kieling, Martyne

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**From:** Foust, Denny  
**Sent:** Thursday, May 08, 2003 6:35 AM  
**To:** Anderson, Roger; Perrin, Charlie; Chavez, Frank; Kieling, Martyne  
**Subject:** Tierra Land Farm

On my quick inspection of May 7, 2003. It appeared the road construction crew has graded the contaminated land farm material from the County Road ROW onto the Land Farm. This is in addition to the over thick lifts already in place. Dirt was not hauled to the existing road across the land farm and thin spread to 10" lifts. Apparently Tierra had no supervisor on site during this operation. I have seen no evidence sampling was done and approved before the road crew started an earth mover to preparing grade, transporting material upon the road right-of-way to level the grade. My suggested procedure is to notify the county we are investigating the situation and meet with Tierra with witnesses in this office and invite a county representative to state what they have done in the way of moving material and testing..

OLIN CONSTRUCTION Performing Dirtwork

LOREN R. OLIN

CUT 18 inches with Grader

Contaminated material was  
Placed 2 to 1 1/2 feet thick, on land Farm.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Betty Rivera**

Cabinet Secretary

November 25, 2002

**Lori Wrotenbery**

Director

**Oil Conservation Division**

**CERTIFIED MAIL**

**RETURN RECEIPT NO. 7001-1940-0004-3929-8218**

Mr. Phillip C. Nobis  
Tierra Environmental Company, Inc.  
P.O. Box 1812  
Bloomfield, New Mexico 87413

**RE: San Juan County Road Construction within the  
Tierra Environmental Company, Inc. Tract "A" Landfarm  
OCD Permit NM-01-0010A  
NW/4 SE/4, Section 2, Township 29 North, Range 12 West, NMPM,  
San Juan County, New Mexico**

Dear Mr. Nobis:

The New Mexico Oil Conservation Division (OCD) has received from Tierra Environmental Company, Inc. (Tierra) e-mail notification and a map dated September 5, 2002 and supplemental material dated September 25, 2002 regarding the San Juan County road construction project through the middle of the existing Tract "A" Landfarm. The OCD has reviewed this material and acknowledges the construction of the county road across the surface waste management facility and the need to move the location of the contaminated soil material to previously unused portions of the Tract "A" Landfarm.

Tierra must follow all construction, operation, monitoring and reporting as specified in the permit conditions dated August 19, 2002. Tierra must also follow the plan described in the September 25, 2002 letter for moving the contaminated soil and sampling the road right-of-way. Tierra must also commit to the following items.

1. Soil samples must be taken from beneath the former landfarm cells that are located in the area to be included in the roadway. The soils must be analyzed for TPH, BTEX, major cations/anions and WQCC NMAC 20.6.2.3103 metals. The samples must be analyzed using EPA-approved methods.
2. Analytical results from the roadway area must be submitted to the OCD Santa Fe and Aztec district offices for review within 30 days of receipt from the laboratory. A map of the Tract "A" Landfarm showing the sample locations must be included with the

sample results.

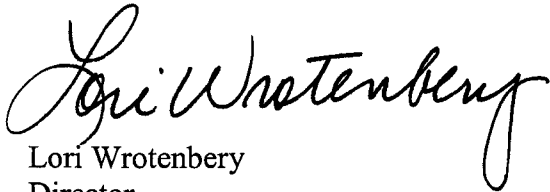
3. All portions of the Tract "A" Landfarm containing contaminated soil must be fenced.
4. All portions of the Tract "A" Landfarm containing contaminated soil must be bermed to contain any runoff. Berms must also be constructed to prevent run-off from the county roadway onto the landfarm.
5. Any ponding of precipitation on the landfarm must be removed within 72 hours of discovery.
6. Lift thickness of contaminated soils may not exceed 10 inches.

Tierra Environmental Company, Inc. is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of the facility reorganization and county road construction does not relieve Tierra Environmental Company, Inc. of liability should your operation result in actual pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Tierra Environmental Company, Inc. of responsibility for compliance with other federal, state or local laws and/or regulations.

If you have any questions please do not hesitate to contact Martyne J. Kieling at (505) 476-3488.

Sincerely,



Lori Wrotenberg  
Director

LW/mjk

xc with attachments:  
Aztec OCD Office



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor  
**Betty Rivera**  
Cabinet Secretary

March 20, 2002

**Lori Wrotenbery**  
Director  
Oil Conservation Division

**CERTIFIED MAIL**

**RETURN RECEIPT NO. 7001 1940 0004 7923 3903**

Mr. Philip C. Nobis  
Tierra Environmental Company, Inc.  
PO Drawer 15250  
Farmington, New Mexico 87401-5250

**RE: Inspection Report  
Surface Waste Management Facility Inspection Report: Permit NM-01-0010  
Tierra Environmental Company, Inc.  
NW/4 SE/4, Section 2, Township 29 North, Range 12 West, NMPM,  
San Juan County, New Mexico**

Dear Mr. Nobis:

The New Mexico Oil Conservation Division (OCD) inspected the Tierra Environmental Company, Inc. (Tierra) surface waste management facility at the above location on March 5, 2002. The OCD inspection and file review of Tierra indicates some permit deficiencies. For reference, attachment 1 contains photographs taken during the inspection. The following are permit deficiencies found at Tierra during the inspection and file review:

1. Material accepted into the facility that could pose a threat to safety:

Smoldering material was accepted into the Tierra facility that, due to the dry conditions that normally prevail in New Mexico, is a potential fire threat (Photo 14). Tierra must immediately thin spread the smoldering material and cover with dirt. This will suffocate the material, prevent odors and prevent the spread of smoldering material to be carried by the wind. Any future shipments that have the ability to smolder or catch fire should sent back to the generator or be immediately thin spread upon receipt into the landfarm and covered with a layer of soil.

Tierra must supply the documentation as to the generator, source, type of waste, and date and time the material was delivered, the attendant that received the material and any notes taken regarding the state the material was in when delivered.

2. Permit NM-01-0010, LANDFARM OPERATION, Item 3: All Contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.

Between January 9 and February 1, 2002, Tierra has received approximately 12,342 cy of soil from the Standing Rock job. This soil has been stockpiled from 32 to 55 days (Photos 1 and 15).

**Tierra must update the OCD by March 25, 2002 as to the status of the legal dispute involving the soil from the Standing Rock job. A determination will be made by the OCD at that time as to what will be required in regards to the stockpiled soil.**

3. Permit NM-01-0010, LANDFARM OPERATION, Item 3: All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.

Liquids received from the McGrath job have been stabilized and stockpiled near the concrete mixing impoundment for approximately 10 days (Photos 9 and 10).

**Tierra must immediately begin spreading the stockpiled contaminated soil to 10-inch lifts or less on empty or approved remediated cells. Tierra must provide a map of the facility that shows the status of each cell as empty or full and the size of the cell.**

**All future stabilized bottoms and sludge must be transported directly from the mixing impoundment to a landfarm cell and thin spread.**

4. Permit NM-01-0010, LANDFARM OPERATION, Item 4: Soils and stabilized bottoms, sludge, and mud must be spread on the surface in ten (10) inch lifts or less.

Several cells contained contaminated soil that appeared to be in excess of the 10-inch lift thickness requirement (Photo 11 and 13).

**In cells where the lift thickness exceeds 10 inches, Tierra must re-disk or re-spread the soils in the affected cell to 10 inches or less. Materials that have been received that are too thick or sticky to spread with the equipment on hand must be sent back to the generator or stabilized in the Tierra concrete mixing impoundment and then spread to no more than 10 inches.**

5. Permit NM-01-0010, LANDFARM OPERATION, Item 9: All above-ground tanks must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks. All tanks must be labeled as to contents and hazards.

The tanks were numbered with paper labels that were somewhat weathered. Not all tanks were labeled as to the contents and hazards. Some tanks that were said to be not in use or empty were not labeled (Photos 6, 7 and 8).

**All tanks must be labeled as to contents and hazards. Labels must be weather resistant and may be removable so as to reflect the materials that are received from different jobs or the status of the tank as empty.**

6. Permit NM-01-0010, LANDFARM OPERATION, Item 10: All new or replacement above-ground tanks to be used longer than six (6) months containing materials other than fresh water must be placed on an impermeable pad and be bermed so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks.

During the OCD inspection on May 29, 2001 there were 12 tanks being used. The tanks were not bermed and there was not an impermeable pad below them. At the time of this inspection there were four tanks in use; they were not adequately bermed or on an impermeable pad (Photo 7).

**Tierra must construct and maintain berms that will contain one and one-third the volume of the largest tank or all interconnected tanks. Tierra must place the tanks that have been in use for longer than six months on an impermeable pad.**

7. Permit NM-01-0010, LANDFARM OPERATION, Item 11: All temporary frac tanks installed at the facility for less than six (6) months containing materials other than fresh water must be bermed so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks.

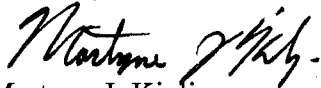
During the OCD inspection on May 29, 2001 there were 12 tanks being used. The tanks were not bermed and there was not an impermeable pad below them. At the time of this inspection there were four tanks in use; they were not adequately bermed or on an impermeable pad (Photo 7).

**Tierra must construct and maintain berms around the temporary frac tanks that have been in use for less than six months so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks.**

Tierra must submit for OCD approval a detailed corrective action plan addressing the deficiencies noted above by April 5, 2002. Failure to respond may result in a compliance action pursuant to the Oil and Gas Act, NMSA 1978, 70-2-1 et seq.

If you have any questions please do not hesitate to contact me at (505) 476-3488.

Sincerely,



Martyne J. Kieling  
Environmental Geologist

xc: OCD Aztec Office



Photo 1. Stockpile of contaminated soil received between January 9, 2002 and February 1, 2002. Stockpile has been on site for 32 to 55 days.



Photo 2. Empty drum storage. Three drums labeled as water in the foreground.



Photo 3. Housekeeping – weathered container of absorbent material, scrap fencing, and rope.



Photo 4. Sign for empty drum storage area is not legible.



Photo 5. Housekeeping- Trash accumulated in bed of old truck . Aerosol cans, tires, scrap metal, boards & cans.



Photo 6. Tanks that have been on site for more than 6 months. Trash and debris pile.



Photo 7. Tanks that have been on site for more than 6 months and are not on an impermeable liner or adequately bermed. Tanks were labeled with ID numbers but not contents.



Photo 8. Concrete mixing impoundment was empty. Four unlabeled storage tanks. Tanks were not bermed or on an impermeable pad/liner. Said to be empty.



Photo 9. Stockpile of solidified material that was brought in from the McGrath project. Said to have been stock piled for 10 days.



Photo 10. Stockpile of solidified material that was brought in from the McGrath project. Said to have been stock piled for 10 days.



Photo 11. Soils in cell spread thicker than 10 inches



Photo 12. Plastic in cell. Plastic was seen stuck in the facility fence along the county road.



Photo 13. Material received from Basin Disposal was received to moist/sticky to be able to spread to a 10 inch thickness within the 72 hours.



Photo 14. Smoldering material that was said to have been received on 3-5-02 but not yet spread.



Photo 15. Pile of contaminated soil stockpiled near the county road received between January 9, 2002 and February 1, 2002. Stockpile has been on site for 32 to 55 days.