

1R - 265

**APPROVALS**

**YEAR(S):**

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**Price, Wayne, EMNRD**

**From:** Price, Wayne, EMNRD  
**Sent:** Thursday, February 28, 2008 12:42 PM  
**To:** Mike Griffin  
**Cc:** Williams, Chris, EMNRD; Johnson, Larry, EMNRD  
**Subject:** Bagely Feild Projects

Dear Mike,

OCD is in receipt of the January 17, 2008 groundwater remediation reports for the following facilities:

<b>frmOrdMaster</b>				
<b>Order No.</b>	<b>Amd #</b>	<b>Applicant</b>	<b>Facility Name</b>	<b>Facility Type</b>
GW-260	0	Whole Earth Environmental Inc.	BELL STATE "A"	Tank Battery
GW-261	0	Whole Earth Environmental Inc.	COLLIER #1	Tank Battery
GW-262	0	Whole Earth Environmental Inc.	GULF STATE #1	Tank Battery
GW-263	0	Whole Earth Environmental Inc.	IVA COM #1	Tank Battery
GW-264	0	Whole Earth Environmental Inc.	MABEL COM #1	Tank Battery
GW-265	0	Whole Earth Environmental Inc.	NORTH BAGLEY FIELD PITS	Pit
GW-267	0	Whole Earth Environmental Inc.	SOHIO STATE #1	Tank Battery
GW-268	0	Whole Earth Environmental Inc.	SOHIO STATE "A"	Tank Battery

OCD hereby approves of the activities to enhance groundwater remediation and further investigation. Please submit all information in the next annual report and make sure the GW order numbers are included. Also this plan is approved with the stipulation that if groundwater exceeds the standards of any monitor well that had not exceeded the standards previously then an action plan must be submitted to the OCD within 30 days of discovery.

Please be advised that OCD approval of this plan does not relieve the owner/operator of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the owner/operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Wayne Price-Environmental Bureau Chief  
Oil Conservation Division  
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Santa Fe, NM 87505  
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2/28/2008



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

June 4, 1997

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-410-431-177**

Mr. Larry G. Sugano  
Tipperary Corporation  
633 Seventeenth St., Suite 1550  
Denver, Colorado 80202

**RE: PIT CLOSURES  
TATUM, NEW MEXICO**

Dear Mr. Sugano:

The New Mexico Oil Conservation Division (OCD) has reviewed Tipperary Corporation's (TC) April 9, 1997 "PIT CLOSURES TATUM, NEW MEXICO" and TC's undated "TATUM PIT CLOSURE PROJECT". This document contains the results of soil investigations and remedial action plans for field production pits at the following TC locations in the North Bagley Oil Field near Tatum, New Mexico:

- Bell State "A"	Unit C, Sec 21, T11S, R33E
- G.S. State #1	Unit G, Sec 08, T11S, R33E
- Iva Com #1	Unit H, Sec 20, T11S, R33E
- Mabel Com #1	Unit D, Sec 29, T11S, R33E
- Satellite #4	Unit I, Sec 12, T11S, R33E
- Sohio State "A"	Unit P, Sec 04, T11S, R33E
- State NBF #1	Unit N, Sec 22, T11S, R33E
- State NBN #1	Unit N, Sec 16, T11S, R33E
- Vera #1	Unit E, Sec 32, T11S, R33E

The remedial action work plan, as contained in the above referenced documents, is approved with the following conditions:

1. All soil samples from the excavations and remediated soils will be taken and analyzed for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylene (BTEX) using EPA approved methods and quality assurance/quality control procedures.

**NOTE:** The proposed BTEX soil analytical method QP-19 is not an EPA approved method for analysis of soils. In fact, the QP-19 procedure does not measure BTEX in soils but actually measures the concentrations of BTEX in vapors emanating from the soil in an enclosed headspace. This method is not acceptable for a final determination of the

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remaining concentrations of BTEX in soils. EPA approved methods must be used.

In addition, the TPH analytical data sheets for the initial surveys do not contain the EPA method QA/QC data such as duplicates, spikes, etc. for each site nor do they contain the signature of the analyst. The soil TPH analyses from the excavations and remediated soils must include appropriate QA/QC data for the EPA method TPH soil analysis and a data sheet signed by the analyst.

2. Upon completion of the soil remedial actions at the Vera #1, State NBN #1, State NBF #1, Bell State "A" and G.S. State #1, TC will install a monitor well directly adjacent to and downgradient of the pit at each site.
3. At the Mabel Com #1 and Iva Com #1, TC will define the full extent of free phase and dissolved phase hydrocarbon contaminants in ground water which are in excess of New Mexico Water Quality Control Commission (WQCC) standards. During the initial ground water investigations at least 2 monitor wells will be installed in a radial pattern downgradient of each site recovery well such that the direction of the local ground water gradient can be determined.
4. At the Mabel Com #1 and Iva Com #1, the recovery wells will be installed directly adjacent to the excavated pit such that the well bore does not pierce the liners in the excavated pit areas.
5. All monitor wells and recovery wells will be constructed and completed as set out below:
  - a. A minimum of fifteen feet of well screen will be installed, with at least five feet of well screen above the water table and ten feet of well screen below the water table.
  - b. An appropriately sized gravel pack will be set around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.
  - c. A 2-3 foot bentonite plug will be placed above the gravel pack.
  - d. The remainder of the hole will be grouted to the surface with cement containing 5 % bentonite.
  - e. Each well will be developed after construction using EPA approved procedures.

6. Ground water from all monitor wells and recovery wells will be initially sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene (BTEX), major cations and anions, WQCC metals and polynuclear aromatic hydrocarbons using EPA approved methods and QA/QC procedures.
7. All wastes generated during the investigative and remedial actions will be disposed of at an OCD approved facility.

**NOTE:** The OCD permitted Gandy/Marley Landfarm is not allowed to accept liquids. This landfarm is only permitted to accept contaminated soils and sludges. If liquids are recovered during the remedial actions they will need to be disposed of at an alternate OCD approved facility which is permitted for those types of wastes.

8. TC will submit a report on the investigations and remedial actions to the OCD by September 5, 1997. The report will contain:
  - a. A description of all activities which occurred during the investigations and remedial actions including the final excavated size of each pit, the volume of material remediated as well as conclusions and recommendations.
  - b. A completed OCD "PIT REMEDIATION AND CLOSURE REPORT" form for each site for which final pit closure approval is sought.
  - c. A summary of all laboratory analytic results of soil and water quality sampling for each site including copies of all laboratory analytical data sheets and associated QA/QC data.
  - d. A water table elevation map for the Mable Com #1 and Iva Com #1 sites using the water table elevation of the ground water in all site monitor wells.
  - e. A geologic log and as built well completion diagram for each monitor well and recovery well.
9. The OCD defers comment on the long term ground water monitoring plan for the Mabel Com #1 and Iva Com #1 until the full extent of contamination has been determined.
10. TC will notify the OCD at least one week in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.

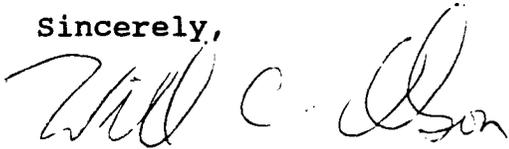
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11. All documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve TC of liability if contamination exists which is beyond the scope of the work plan or if the activities fail to adequately determine the extent of or adequately remediate contamination related to TC's activities. In addition, OCD approval does not relieve TC of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrogeologist  
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor  
Wayne Price, OCD Hobbs Office  
Linda Freedman, NM State Land Office  
Mike Griffin, Whole Earth Environmental, Inc.

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