# AE Order Number Banner

**Report Description**

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**App Number:** pEEM0516833679

NM1 - 45

JAY DAN LANDFARM LLC

*8/9/2016*

State of New Mexico
Energy, Minerals and Natural Resources Department

**Susana Martinez**
Governor

**David Martin**
Cabinet Secretary

**Brett F. Woods, Ph.D.**
Deputy Cabinet Secretary

**David R. Catanach, Division Director**
Oil Conservation Division

May 19, 2015

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Danny Watson
Jay Dan Landfarm LLC
P.O. Box 632
Lovington, New Mexico 88260

**RE: 2014 Bi-Annual Sampling and Five Year Monitoring Report Reviews**
**Jay Dan Landfarm, LLC**
**Permit NM1-045**
**Location: Unit E of Section 32, Township 15 South, Range 35 East, NMPM**
**Lea County, New Mexico**

Dear Mr. Watson:

The Oil Conservation Division (OCD) has completed the review of Jay Dan Landfarm LLC's (Jay Dan) May 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report; September 2014 New Background Report; September 2014 Release Response Report for Cells 1-3 and Five Year Vadose Zone Monitoring Report for Cell 4; and the December 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report. OCD appreciates Jay Dan's efforts to implement changes to your monitoring protocols to comply with the requests in OCD's 2013 Bi-Annual Sampling and Five Year Monitoring Report Review, dated April 8, 2014. The review of the 2014 monitoring data has resulted in the discovery of some issues that must be addressed in order for Jay Dan to remain compliant with Permit NM1-045 and 19.15.36 NMAC (Part 36).

OCD has reviewed the administrative files for the facility and determined that the vadose zone monitoring frequency changed from the permit condition "The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and Water Quality Control Commission (WQCC) metals annually" to semi-annual in 2009. OCD has been unable to locate Jay Dan's modification request for the change in sampling frequency or OCD's approval for such a modification request. Please provide OCD a copy of Jay Dan's modification request and OCD approval in order to continue the semi-annual sampling frequency. If Jay Dan is unable to demonstrate the approval, Jay Dan shall revert back permitted vadose zone monitoring frequency. Please note that the transitional provisions of 19.15.36.20 NMAC must be considered. Please review OCD's letter dated June 30, 2011 and titled "*Compliance with the Transitional Provisions of the Surface Waste Management Facilities rule (Rule 36) and Treatment and Vadose Monitoring Requirements at Existing Landfarms*" for expectation of compliance.

Pursuant to 19.15.36.15.E NMAC, the operator is required to compare the vadose results "to the higher of the PQL [Practical Quantitative Limit] or the background soil concentrations to determine whether a release has occurred." OCD's review of the administrative files for the facility resulted in the discovery of the initial facility background data set from April 2006. The April 13, 2006 background data set provided results for the following 34 analytes: sodium, calcium, magnesium, potassium, conductivity, total alkalinity, chloride, sulfate, bicarbonate, carbonate, pH, total dissolved solids, arsenic, silver, barium, cadmium, chromium, lead, mercury, selenium, aluminum, cobalt, copper, iron, manganese, molybdenum, nickel, zinc, gasoline range organics (GRO), diesel range organics (DRO), benzene, toluene, ethyl benzene, and total xylene, which was provided in the May 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report. The April 13, 2006 background data set demonstrated a detection of DRO at 186 mg/kg. The May 2014 report also included a sheet identified as "New Mexico Limits" and a regulatory reference of "Rule 53 G.(e)." The regulatory reference indicates that this was proposed landfarm closure language for Part 36 during the rulemaking hearing. This language was not adopted by the Oil Conservation Commission and is not effective or applicable for the comparison to vadose zone results. The review of the September 2014 New Background Report resulted in the detection of toluene at a concentration of 0.0819 mg/kg in the vadose zone, 2 feet below the ground surface in native soils. The cover letter did not address or mention the detection. OCD also discovered that TPH by EPA method 418.1 was run with the reporting limit of 100 mg/kg for the facility background. A reporting limit of 100 mg/kg for TPH by EPA method 418.1 is too high to establish the facility background. It assumes that the native soils can be contaminated up to 100 ppm in TPH. OCD is unable to accept a PQL of 100 mg/kg as background for TPH. Please re-establish background for TPH by 418.1 or an equivalent method capable of demonstrating a carbon range from $C_6$ to $C_{36}$. Also, OCD is unsure how the two (2) background data sets will be used for future monitoring. Please provide OCD a demonstration to establish the facility background and/or PQLs. If statistics are used in the demonstration, please provide references from EPA statistical guidance documents to support proposed statistical methods.

OCD compared the April 2006 background data set to the May 2014 bi-annual treatment zone and vadose zone monitoring results, since the 2006 background data was the only background available at the time of assessment. OCD determined common exceedances to all cells for calcium, magnesium, potassium, arsenic, manganese, iron, zinc, and sulfate, and a detection of TPH at 136 mg/kg in Cell 1, 145 mg/kg in Cell 2, and 145 mg/kg in Cell 3 in the bi-annual vadose zone monitoring results. None of the exceedances were recognized in the assessment or recommended for the release response sampling of 19.15.36.15.E.(5) NMAC. The assessment provided in the report's cover letter stated "I compared the vadose sampling to the "background" test as required, and found no problems." Since the 2006 background data set was provided with this submittal, it is assumed it was used for the comparison demonstration. The vadose zone was not sampled for Cell 4, only the treatment zone was sampled during this event. The bi-annual treatment zone results demonstrated chloride concentrations of 2240 mg/kg in Cell 2 and 736 mg/kg in Cell 4. November 16, 2004 facility permit application identifies the depth of ground water to be approximately 75 below the ground surface. Pursuant to Part 36, this would limit the waste acceptance criteria of contaminated soils for chlorides to less than 500 mg/kg. Since the waste acceptance criteria concentration will also be the closure standard for chlorides, this will create issues at closure.

OCD compared the September 2014 new background data set to the September 2014 release response results for Cells 1-3 and the five year vadose zone sampling results for Cell 4. In regards to the release response results for compliance with 19.15.36.15.E.(5) NMAC, Cell 1 demonstrated an exceedance for nitrates and concentrations slightly above the September 2014 background data set for arsenic, barium, cadmium, chromium, lead, and fluoride. Cell 2 demonstrated an exceedance for nitrates and concentrations slightly above the 2014 background data set for arsenic, barium, cadmium, chromium, lead, manganese, uranium, sulfate, and fluoride. Cell 3 demonstrated an exceedance for nitrates and concentrations slightly above the 2014 background data set for arsenic, barium, cadmium, chromium, lead, iron, silver, sulfate, and fluoride None of these exceedances were recognized in the assessment nor was a response action plan proposed or included with the submittal, as required of 19.15.36.15.E.(5) NMAC. The assessment provided in the report's cover letter stated "The analytical for all testing was compared to the new background and lab PQL, and all was in compliance." OCD had to use the April 2006 and September 2014 background data sets complete the comparison to the September 2014 five year vadose zone sampling results for Cell 4. The laboratory chain of custody indicates that the vadose zone sampling event was an attempt to combine the annual vadose zone sampling required by permit condition and compliance with the five year vadose zone monitoring of 19.15.36.15.E.(3) NMAC. Also, this seemed to be an attempt to make up the missing vadose sample for Cell 4 from the May 2014 sampling event. The 2006 background data set includes major anions and all of the major cations required to complete the comparison to annual vadose zone sampling required by permit condition, that were not included in the 2014 new background data set. When compared to the 2014 background data set, OCD determined common analyte exceedances for sulfate, barium, iron, zinc, arsenic, cadmium, chromium, copper, lead, manganese, selenium, and silver. When compared to the 2006 background data set, OCD determined common analyte exceedances for calcium, magnesium, sodium, and potassium. None of the exceedances were recognized in the assessment. In both sampling events, the release response and five year, sulfate and TPH by EPA method 418.1 were run with reporting limits of 100 mg/kg. Please ensure that the laboratory's reporting limit does not exceed the established background and/or PQLs for all future vadose zone sampling events.

On September 10, 2014 OCD approved the High Chloride Soil Identification, Isolation, and Removal Plan for Cell 2 and 4. The plan requires OCD approval to excavate the high chloride soils down to the native ground surface and haul the soils to an OCD approved landfill. OCD has not received any request since the plan was approved. Please provide OCD an update on the status of the work performed under the approved plan.

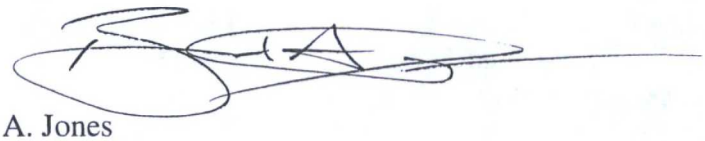
Please note that submittal of treatment zone monitoring results alone does not constitute a request for a successive/additional lift. Furthermore, the permit condition specifies "Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of remediated soils." OCD requires such request to be made under a separate cover from other reporting and include the supporting analytical results and an updated facility map that illustrates and identifies the individual landfarm cells within the facility boundary and indicate the approximate location within the landfarm cells in which the samples were obtained.

Please provide OCD a copy of Jay Dan's modification request and OCD approval in order to continue the semi-annual sampling frequency within 45 days of the date of this letter. Please provide OCD a demonstration to establish the facility background within 45 days of the date of

this letter. If statistics are used in the demonstration, please provide references from EPA statistical guidance documents to support proposed statistical methods. OCD is unable to accept a PQL of 100 mg/kg as background for TPH. Please re-establish background for TPH by 418.1 or an equivalent method capable of demonstrating a carbon range from $C_6$ to $C_{36}$. Please submit a response action plan to address the exceedances of the September 2014 Release Response Report for Cells 1-3 within 90 days of the date of this letter. Please ensure that the laboratory's reporting limit does not exceed the established background and/or PQLs for all future vadose zone sampling events.

OCD has implemented some new policies for submittal. For future submittals, please include a cover letter from the owner/operator, on the owner's/operator's company letterhead, that recognizes the owner/operator has reviewed the submittal, signed by the owner/operator. Also, please provide an updated facility map, for each individual sampling event, that identifies the individual landfarm cells within the facility boundary and indicate the approximate location within the landfarm cells in which the samples were obtained. If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,



Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District I Office, Hobbs
Eddie Seay, Eddie Seay Consulting, Hobbs, NM 88242
Mark Larson, Larson & Associates, Inc. Midland, TX 79701