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INITIAL REVIEW AND TENATIVE DECISION

Dec. 16, 2020

Jones, Brad A., EMNRD

From: Jones, Brad A., EMNRD
Sent: Friday, December 18, 2020 1:03 PM
To: 'Greg Crabtree'
Subject: OCD's review of Envirotech Inc.'s Landfarm #4 surface waste management facility permit application
Attachments: 2020 1216 Envirotech Inc_Landfarm 4_Application Review.pdf

Mr. Greg Crabtree,

The Oil Conservation Division has completed the review of the Landfarm #4 surface waste management facility permit application. Please see the attached. A hardcopy will be mailed to you certified mail return receipt. If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Brad A. Jones ● Environmental Scientist Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
1220 S. Saint Francis Drive | Santa Fe, New Mexico 87505
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http://www.emnrd.state.nm.us/OCD/

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Adrienne Sandoval
Director, Oil Conservation Division

December 16, 2020

Mr. Greg Crabtree
Envirotech, Inc.
5796 US Hwy 64
Farmington, New Mexico 87401

RE: Application for a Surface Waste Management Facility Permit
Landfarm #4
Sections 6, 7, and 8, Township 26 North, Range 10 West, NMPM
San Juan County, New Mexico

Mr. Crabtree:

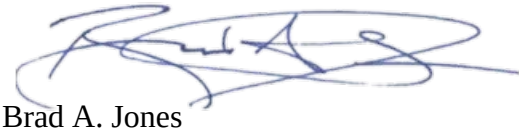
The Oil Conservation Division (OCD) has completed its review of Envirotech Inc.'s (Envirotech) application dated June 27, 2019 to construct and operate a new commercial surface waste management facility, referred to as Landfarm #4, for the remediation of petroleum hydrocarbon-contaminated soils and drill cuttings. The OCD has determined the application is not approvable and is providing this deficiency letter along with the attached document that provides further details regarding OCD's concerns.

Pursuant to 19.15.36.9.B(3) NMAC, Envirotech has 60 days from the issuance of this letter to either submit a revised application or notify the OCD that they will not be submitting a revised application. If Envirotech chooses not to submit a revised application, the OCD shall deny the application without prejudice. A written request for additional time may be considered at the discretion of the OCD. If Envirotech fails to respond within the allotted 60 days, the OCD shall deny the application without prejudice as prescribed by regulation.

Be advised, a revised permit application must be submitted through the OCD permitting fee portal (https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/) and is subject to an additional $10,000 fee.

If there are any questions, please do not hesitate to contact me at (505) 469-7486 or brad.a.jones@state.nm.us.

Respectfully,



Brad A. Jones
Environmental Specialist

Attachment: Application Review Comments

Application Review Comments
Envirotech, Inc. – Landfarm #4

OCD's review has determined that Envirotech submitted this application using the regulatory language and format of the February 14, 2007 version of 19.15.36 NMAC (Part 36), which is no longer in effect. On June 30, 2016, an amended version of Part 36 became effective. Perform a general search to ensure all regulatory references and language provided in the application and Envirotech, Inc.'s responses and demonstrations are based upon the current rule. Envirotech is responsible to ensure that a requested correction to a specific regulatory provision in one attachment should be corrected in other attachments.

Attachment 2:

Pursuant to 19.15.36.8.C(2) NMAC, the application shall include "a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one-half mile of the site's perimeter based upon the records of the applicable county clerk or clerk's office."

Provide a survey plat of the area that Envirotech is requesting to be permitted as the surface waste management facility and that is signed by a professional surveyor. The survey plat should only illustrate the proposed facility boundary in relation to governmental surveys (quarter-quarter section, township, and range) and clearly state the acreage of the proposed facility boundary. Ensure the survey plat and acreage do not include the required 200-foot setback area from the watercourse to the facility boundary as part of the proposed facility. Clarify the ownership of County Roads 7175 and 7225 in the survey. If County Roads 7175 and 7225 are not property owned by Envirotech, then new facility boundaries must be established, and the acreage associated with the roads cannot be recognized as part of the facility acreage. Provide a survey plat that will demonstrate and support the facility acreage and "farmable" acreage discussion in Attachment 4.

Provide a "topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one-half mile of the site's perimeter (facility boundary) based upon the records of the applicable county clerk or clerk's office." Update the written assessments accordingly.

Ensure all figures clearly identify and represent the area Envirotech is requesting to be permitted as the surface waste management facility in this application. Currently, it appears that more than two facility boundaries are proposed in the application.

Attachment 3:

All figures must clearly identify and represent the area Envirotech is requesting to be permitted as the surface waste management facility in this application.

Attachment 4:

Introduction: Update the discussion and associated figures regarding the total facility acreage and total farmable acreage due to the removal of the watercourse and 200-foot setback from the updated survey, the adjustment to compensate for the100-foot interior setback/buffer for the placement of contaminated soils from the new facility boundary, and the assessment of County Roads 7175 and 7225, if applicable. Provide a professional survey that demonstrates and clarifies the correct acreage of the proposed surface waste management facility total acreage. Provide an updated version of Figure 4C, based upon the new survey, to demonstrate the proposed total farmable acreage.

Pursuant to 19.15.36.13.B(1) NMAC, a 200-foot setback from the watercourse is required that should establish a new facility boundary. Establish the facility boundary along the setback and include an additional 100-foot interior buffer for placement of contaminated soils. All figures will have to be updated.

Landfarm #4 – North Side: Pursuant to 19.15.36.15.C(2) NMAC, "The operator shall not place contaminated soils received after the effective date of 19.15.36 NMAC within 100 feet of the surface waste management facility's boundary." Modify the response to comply with the regulatory requirement.

Landfarm #4 – South Side: Update the written discussion of the proposed facility acreage and farmable acreage based upon the new survey." OCD was unable to locate any information regarding the berming requirements for the proposed individual landfarm cells, as discussed in the "North Side" portion pursuant to 19.15.36.15.C(1) NMAC.

Figure 4A, Farmable Area: Utilize an updated version of Figure 4C, based upon a new survey, to demonstrate the "Farmable Area." Ensure the "Surveyed Property Line" clearly identifies and represents the area Envirotech is requesting to be permitted as the facility. Do not use the Figure 4A as it is incomplete and does not coincide with the information illustrated on Figures 4B and 4C.

Figure 4B, Facility Diagram: Make the appropriate changes to Figure 4B based upon new survey.

Attachment 5:

Provide an updated facility map, based upon the survey, illustrating the locations where the proposed berms and pipeline crossings will be installed.

Attachment 6:

19.15.36.13.B(1) NMAC: Update any associated figures to reflect the changes above.

19.15.36.13.B(2) NMAC: Provide a written assessment for wells and springs performed from the proposed facility boundary in accordance with 19.15.2.7.W(8) NMAC that defines wellhead protection area. Explain the two "pending permit" wells located within the proposed facility boundary. Provide a site-specific assessment and update Figure 6C appropriately.

19.15.36.13.B(3) NMAC: Provide a site-specific assessment map that shows the Riverine as a blue line (instead of black) in the southern portion of the proposed facility and update the written response to correctly reflect the initial US Fish and Wildlife Wetland Mapper assessment that warranted the US Army Corps of Engineers follow-up assessment.

19.15.36.13.B(4) NMAC: OCD is unable to accept Figure 6E since is not a current assessment. Provide an assessment of active mines from the "Registered Mines Web Map" search. Also, contact EMNRD – Mining and Minerals Division to inquire about inactive mines and provide your email request and response received for the assessment of inactive mines.

19.15.36.13.B(5) NMAC: The land ownership map from the San Juan County Assessor's Office, only identifies the owners of property, but does not identify if any structures are present. Provide a statement from an Envirotech representative that performed a site inspection, the data of the inspection, and what was and was not observed to demonstrate this siting criterion.

19.15.36.13.E NMAC: Demonstrate how Envirotech will comply with this testing requirement.

19.15.36.13.F(2) NMAC: EPA requires TCLP analysis for all Table 1 Toxicity RCRA demonstrations. Justify the proposed testing of only 8 of the 30 constituents listed in Table 1.

Modify the response to recognize the restrictions for waste acceptance of RCRA non-exempt waste for the proposed landfarm SWMF based upon the considerations recognized in 19.15.36.15.F(3) NMAC and 19.15.36.7.A(3) NMAC.

19.15.36.13.G NMAC: Provide and reference the location of the C-138 form and Bill of Lading that Envirotech will use to demonstrate that the proposed documents satisfy the requirements. Also, explain in the written response how the two documents will be used together to locate individual loads of waste after placement into a landfarm cell.

19.15.36.13.L NMAC: OCD was only able to locate partial compliance with the requirements of 19.15.36.13.L NMAC in the referenced Attachments. Reference Attachment 7, *Inspection and Maintenance Plan*, that recognizes compliance to all the requirements of 19.15.36.13.L NMAC.

19.15.36.15.A NMAC: Identify the party responsible to certify the results of the paint filter and chloride test on form C-138. Provide the protocol for waste that fails the paint filter test.

19.15.36.15.B NMAC: Update the facility background to include the additional constituents of Subsections A(1-2) and B of 20.6.2.3103 NMAC, based upon the December 21, 2018 revisions to 20.6.2 NMAC. Update the table to include a background value for total petroleum hydrocarbons (TPH).

19.15.36.15.C(8) NMAC: The freestanding water will be contaminated run-off from the active landfarm cells and requires special consideration regarding transportation (use of an OCD approved C-133 hauler) and disposal of liquid oilfield waste. Identify the permitted disposal facility.

19.15.36.15.E(2) NMAC: Clarify if Envirotech is seeking an exception request to use the sum of GRO, DRO and MRO by EPA method 8015 M Extended for TPH in lieu of EPA method 418.1. None the proposed background concentrations provided on Table 3 are performed by EPA method 418.1.

19.15.36.15.E(5) NMAC: Clarify in the first paragraph of the written response that only individual landfarm cells which demonstrate exceedances will be sampled as required of 19.15.36.15.E(5) NMAC

19.15.36.15.F NMAC: OCD also requires the same semi-annual demonstration for closure in 19.15.36.15.F NMAC as it does in 19.15.36.15.D NMAC. Modify the written response appropriately.

19.15.36.15.F(3) NMAC: Provide a written clarification on the use of EPA Method 418.1 for TPH.

19.15.36.18.C through G NMAC: Update these sections of the application to represent the June 30, 2016 version of 19.15.36 NMAC.

Figure 6A, Topo Map: Update the figure based upon and new facility boundaries.

Attachment 6, Initial Background Sampling and Analysis Report:

Introduction: This application was submitted in June of 2019 and requires compliance to the requirements at the time of submittal. Update the facility background to include the additional constituents of Subsections A(1-2) and B of 20.6.2.3103 NMAC, based upon the December 21, 2018 revisions to 20.6.2 NMAC.

ProUCL Software Analysis: Provide copies of the ProUCL Dixon Outlier Test outputs, the associated inputs, and the box plot or Q-Q plot to support the proposed removal of outliers from the background data sets. Justify the use of the 1% critical value and/or an $\alpha = 0.100$ level of significance to determine outliers based upon the ProUCL User and Technical Guides.

Constituent Statistical Analysis Details: Provide the ProUCL outputs to support the written assessment of each constituent.

Conclusions: OCD was unable to locate any ProUCL outputs that support the use of "the maximum observed value." Table 3 does not propose or suggest the use of the maximum detected value for any of the data sets. Justify the proposed use of "the maximum observed value" by providing references from the ProUCL Technical and User Guides. Provide a

statement that clearly identifies which Table and values are proposed use for the vadose zone results comparison and treatment zone closure for 19.15.36.15.F(5) NMAC.

Appendix B, Laboratory Analytical Reports: OCD was only able to find the Radium 226 and 228 results for Areas 5, 6, and 7. Provide the balance of background results for these areas.

Attachment 8, Hydrogen Sulfide Prevention and Contingency Plan:

Section 1, Introduction: In accordance with 19.15.11.7.I NMAC, update the written response to recognize the public area abutting the northeast portion of the proposed landfarm boundary.

Section 2, Hydrogen Sulfide Contingency Plan: Provide the correct regulatory reference and demonstrate compliance to each requirement in 19.15.11.9.B(2) NMAC.

Modify the language to address both "hydrogen sulfide and sulfur dioxide," as required of Paragraph 7.6 of the guidelines in the API publication Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide, RP-55 and 19.15.11.9.B(2)(b) NMAC.

Section 2.1, API Guidelines: The two separate H2S plans (Worker Safety and Restricted Access) provided in Appendix B and in Section 2.2 do not satisfy the requirements of 19.15.11.9 NMAC and do not comply with the requirements of Paragraph 7.6 of API RP-55. The "Worker Safety" H2S plan and "Restricted Access" H2S plan should be one continuous "immediate action plan" that addresses all the requirements of Paragraphs 7.6.a-i of API RP-55. Provide a single immediate action plan that begins with the initial detection of H2S and demonstrates compliance to all the requirements of Paragraphs 7.6.a-i of API RP-55 and 19.15.11.9.B(2) NMAC. Ensure that the immediate plan follows the sequence as proposed in Paragraphs 7.6.a-i of API RP-55.

Section 2.2, Plan Activation and Appendix B, Immediate Action Plan: The proposed OSHA 8-hr time-weighted average of 10 ppm is not supported by or representative of the information provided in Appendix A, Physical Data from the NIOSH Guide. Propose an appropriate H2S activation level for the single immediate action plan taking into consideration the NIOSH Guide and OSHA permissible exposure limit ceiling concentrations.

Ensure the immediate action plan provides step-by-step instructions as to how to manage an H2S release event following the sequence and steps in API RP-55. In the first step, describe how to determine the wind direction (such as observing possible wind sock locations or by a site specific wind rose assessment test to determine the prevailing wind direction) to remain "upwind" to support the recommended evacuation routes. In the second step, ensure facility personnel "Don proper personal breathing equipment," as required of 7.6.a.2 of the API RP-55. The importance of donning the proper PPE is to ensure that facility personnel can carry out the rest of the plan without becoming compromised and distressed. In the third step, after donning proper PPE, ensure facility personnel alert other affected personnel as required of 7.6.a.3. This would also include alerting visitors and possibly parties at the Sage Picnic Area (a public area). While at the Sage Picnic Area, it is recommended to instruct facility personnel to install a roadblock

somewhere along the ridge on CR 7175 (a public road) that will prevent entry of traffic into the H2S release area. It is recommended the roadblock include a warning sign explaining why entry is prohibited. In the fourth step, ensure facility personnel assist personnel in distress. In the fifth step, ensure facility personnel proceed to the designated emergency assembly area. Usually the designated emergency assembly areas (muster points) are located along the facility boundary and entrances and upwind from the prevailing wind direction. This allows facility personnel to prevent entry into the facility during a release and to determine if evacuation of the facility is required. The assembly areas/muster points should be clearly identified as "Assembly Area" on the evacuation map. If there is more than one assembly area proposed due to multi-phase evacuation procedures, then the assembly areas should be identified by each phase (1,2,3 or Primary, Secondary, etc.…). In the sixth step, ensure that the acting Landfarm Field Manager accounts for on-site non-Envirotech personnel. There should be protocol identified in Attachment 8 that requires such personnel to sign-in and a procedure in the immediate action plan instructing the responsible Envirotech employee to take the on-site personnel and non-personnel sign-in sheets and any additional equipment required to complete the rest of the plan with them when evacuating to the initial assembly area. If separate parties are assembled in the north and south portion of the facility, then there should be a procedure in the immediate action plan that identifies how the acting Landfarm Field Manager can contact the other party to account for the rest of the on-site personnel and non-personnel. Monitoring of H2S should continue at each assembly point to ensure that conditions do not change that would warrant moving further away to a secondary assembly area. Once everyone is safe and accounted for, 7.6.b of the API RP-55 recommends that facility personnel should take immediate measures to control the present or potential hydrogen sulfide or sulfur dioxide discharge and to eliminate possible ignition sources. Emergency shutdown procedures should be initiated as deemed necessary to correct or control the specific situation. Envirotech should ensure that there is an adequate supply of personal protective equipment (SCBA/supplied air) to complete all the recommended tasks above. If this resolves the H2S emergency, clarify and identify in the immediate action plan the H2S concentration that is deemed safe for re-entry by the Envirotech Safety Department. If the H2S emergency cannot be resolved, 7.6.b of the API RP-55 clarifies "When the required action cannot be accomplished in time to prevent exposing operating personnel or the public to hazardous concentrations of hydrogen sulfide or sulfur dioxide, proceed to the following steps, as appropriate for the site-specific conditions." In accordance with 7.6.c of the API RP-55, facility personnel should alert the public (directly or through appropriate government agencies) that may be subjected to an atmosphere exposure exceeding 30 ppm of hydrogen sulfide or 10 ppm of sulfur dioxide. The public notice procedure of the immediate action plan should be initiated when the H2S monitoring at the initial or secondary assembly point indicates a specified H2S concentration that would warrant Envirotech considering evacuating area and facility. When the Acting Landfarm Field Manager installs the blockade at Angel Peak Road (CR 7175) and Highway 550 prior to heading to the final muster point, provide additional instructions to post a sign on the blockade to warn visitors of the H2S release. Provide additional protocols for a H2S release that occurs in the southern portion of the proposed landfarm SWMF along CR 7225 or south of the watercourse feature. If Envirotech plans for Emergency Services to notify the public via reverse 911 or door to door notifications then provide a protocol in Attachment 8 identifying the language of the recorded voice message that will be sent to landline telephones and registered cellphones within a defined geographical area, a list of addresses of concern that will be provided to Emergency Services to complete the

door to door notice, and discuss the arrangement established with Emergency Services to issue the reverse 911 message and complete the door to door notice. Ensure the evacuation maps Figures 6a and 6b are included in the H2S plan and clearly identify the location of the proposed assembly areas/muster points. No assembly areas/muster points are identified on Figure 8A. Update the immediate action plan to clarify that Landfarms 2 and 3 personnel and non-personnel will evacuate with everyone from Landfarm #4 to the final assembly area/muster point. Identify the location of the final assembly area/muster point in the written plan and on the evacuation map(s). Envirotech must comply with release reporting requirements in 40 CFR Parts 302 and 355. Omit "(refer to Par. 4.4)." It is a reference to a paragraph within API RP-55 that is not applicable. Specify the concentration of H2S that is considered "deemed safe for re-entry." Provide a protocol to notify the public when the emergency is over.

OCD has been unable to locate a map or drawing that illustrates and identifies items required of 19.15.11.9.B.(2)(c) NMAC and defined in 19.15.11.7.I and 19.15.11.J NMAC, provide the required map(s).

Section 3.1, Discussion of Hydrogen Sulfide, General Characteristics: Provide pages from the NIOSH Pocket Guide of Chemical Hazards for sulfur dioxide in Appendix A.

Section 3.2, Table 1 Acute effects of H2S Exposure: OCD is seeking the most current information. Update the Table based upon the information provided at the Occupational Safety and Health Administration website: https://www.osha.gov/SLTC/hydrogensulfide/hazards.html

Section 3.5, Discussion of Hydrogen Sulfide, Potential Release Events: Provide a more recent gas analysis from the two Hilcorp Energy production wells in the NE corner of the proposed facility.

Section 4.2, Training and Drills, Drills: Modify the written response to recognize that the drills will be provided on a single immediate action plan that begins with the lowest detection of H2S that requires Envirotech to implement any action proposed in this plan.

Section 4, Training and Drills: Provide a protocol that addresses the required training of residents and public officials pursuant to 19.15.11.9.B(2)(d) NMAC.

Section 5, Division Notification: Pursuant to 19.15.11.16 NMAC, identify the lowest concentration of H2S that warrants any actions proposed in the H2S plan and modify the response appropriately regarding when OCD notice is required.

Figure 8, Radius of Exposure: Update Figure 8 to comply with 19.15.11.9.B(2)(c) NMAC.

Figure 8a, Evacuation Routes: Update the evacuation map to identify the proposed locations of the assembly areas/muster points and make sure that the correct figure is referenced in the immediate action plan.

Appendix C, RKI Personal Monitor Data Sheet: Pursuant to 19.15.11.9.B(2)(a) NMAC, provide information on the availability and location of all the safety equipment and supplies proposed for use to implement this plan.

Appendix E, ConocoPhillips Well Site H2S Verification: Modify the Appendix cover sheet appropriately to correctly identify the Hilcorp Energy letter provided in Appendix E, instead of ConocoPhillps.

Attachment 9, Closure and Post Closure Plan:

Section 2, Closure Notifications: Envirotech does not have the authority to "delegate a surety to complete closure activities" pursuant to 19.15.36.18.G(3) NMAC. Omit the sentence.

Section 2.1, Closure by Operator (*NMAC 19.15.36.18 (A) 1 through 5*): Pursuant to 19.15.36.18.A NMAC, provide in schedule for closure based upon the sequence of events to complete closure and post-closure activities, as proposed in the Closure/Post-Closure care plan. An allotted amount of time should be assigned to complete each proposed task.

In accordance with 19.15.36.18.A(2) NMAC OCD is granted, a minimum of 120 days to notify Envirotech. Modify the response appropriately.

Section 2.2, Closure by Division (*NMAC 19.15.36.18 (C) 1 through 5*): Pursuant to 19.15.36.18.A(5) NMAC, recognize that an approved closure/post-closure plan is required to initiate closure.

Pursuant to 19.15.36.18.G(1) NMAC, recognize that OCD may order immediate "cessation of a surface waste management facility's operation," rather than "closure."

Section 3.1, Closure Activities: OCD requires a detailed closure/post-closure care plan that recognizes frequencies associated with different tasks (tilling, sampling, reporting, re-vegetation, inspections, etc...), and provides details regarding sampling depths, sampling protocols, types of samples, and constituents required for analysis for both the vadose zone and treatment zone that represents the schedule and supports the financial assurance cost estimates.

Specify the frequency in which disking of soils will occur based upon the requirements of 19.15.36.15.C(5) NMAC.

The following sections of the Part 36 must be addressed in the closure/post-closure plan and update any existing responses to address all the requirements of each provision: 19.15.36.15.G(1-4) NMAC; 19.15.36.18.C(4)(b) NMAC; 19.15.36.18.C(4)(c) NMAC; 19.15.36.18.C(4)(d) NMAC; 19.15.36.18.C(4)(f) NMAC; and 19.15.36.18.A(6) NMAC.

Update Step 10, to recognize the required semi-annual vadose and treatment zone monitoring frequency specified in 19.15.36.15 NMAC.

Clarify and specify what tasks must be completed for the proposed "seed preparation" in Step 8 to "re-vegetate *the site*" and specify the re-vegetation standard, by regulatory reference, that will be applied.

OCD has been unable to locate in the application any information regarding the installation of monitoring wells within the proposed facility boundary of Landfarm #4 or the surrounding area. Justify why Step 9 should remain in the plan or omit.

Modify Table 1 to recognize the required chloride concentration for closure based upon the depth to groundwater determined by Envirotech's subsurface investigation and include the required testing and analysis of 19.15.36.15.F(5) NMAC by identifying the constituents and required test methods. Currently, the vadose background for TPH is demonstrated by EPA Method 8015M (the sum of DRO, GRO, and MRO). If Envirotech wishes to demonstrate TPH by EPA Method 8015M in lieu of EPA Method 418.1, then please make a written exception request and update the table. Provide a written sampling protocol within this closure/post-closure care plan that identifies the frequency in which the treatment zone closure performance standards must be demonstrated for closure, identifies the frequency in which samples must be taken, identifies the depth in which the samples will be taken, and the number and type of sample(s) (composite or grab), based upon the requirements of 19.15.36.15.F(1-5) NMAC, to support the proposed cost estimate. Provide the same information, based upon the requirements of 19.15.36.15.D and 19.15.36.15.E NMAC to support the proposed cost estimates.

Reformat Section 3.1, Closure Activities, to present the proposed closure activities in the sequence in which it should be implemented. The sequence and frequency should support the required schedule and proposed financial assurance cost estimates. Currently in Appendix B, cost estimates for "Berm removal/Re-Contour", "Fence Removal", "Building Removal", and "Seeding" are proposed before any treatment zone and vadose zone sampling cost are proposed.

Section 3.2, Post Closure Activities: Provide a detailed closure/post-closure care plan that recognizes frequencies associated with different proposed post-closure tasks to demonstrate and recognize compliance to all the requirements of 19.15.36.18.E NMAC. If Envirotech is performing vadose and treatment zone monitoring then it is still in closure, not post-closure. Omit Steps 3, 4, and 5. The first step after the closure of a landfarm cell or all facility landfarm cells, pursuant to 19.15.36.15.F NMAC, should be re-vegetation. Identify the method that Envirotech proposes to initially revegetate the site after closure and the frequency it will monitor re-vegetation that support the proposed cost estimates. Provide the details associated with initial re-vegetation, including the farmable and non-farmable acreage requiring re-vegetation, seed preparation method, method or methods of seeding, seed mixes and seed application rates that support the cost estimates. If the Revegetation Plan in Appendix A is recognized as the protocol to satisfy the initial re-vegetation requirements of 19.15.36.18.A(6) NMAC for the complete SWMF, then update the financial assurance cost estimates provided in Appendix B appropriately to reflect the costs to complete the revegetation plan.

Recognize and demonstrate compliance to all the requirements of 19.15.36.18.E NMAC.

Section 4, Financial Assurance: Modify the sentence to recognize the OCD's authority pursuant to 19.15.36.18.G(3) NMAC to allow a surety to perform closure and post closure.

Section 4.1, Secured Financial Assurance: Pursuant to 19.15.36.8.C(9) NMAC, the financial assurance should be enough to close the surface waste management *facility*, not just the "farmable area" as proposed. Modify appropriately to reflect the regulatory language and requirements of Part 36. In the last sentence, demonstrate compliance to administrative process regarding the replacement of financial assurance in accordance with 19.15.36.11.F(1-3) NMAC.

Section 4.2, Partial Financial Release: Modify the written response in the first paragraph to clarify that the remaining portion of financial assurance retained by the division is to "complete post-closure."

Pursuant to 19.15.36.18.B(2) NMAC, modify the written response in the second paragraph to recognize all the conditions that determine the "the remainder of the financial assurance."

Demonstrate how Envirotech will comply with the requirements of 19.15.36.18.B(3) NMAC and 19.15.36.18.F NMAC in the third paragraph.

Section 4.3, Forfeit of Financial Assurance: Pursuant to 19.15.36.18.G(2) NMAC, omit the "surety" from the response and recognize all the refusals, inactions, and conditions from Envirotech that may result in OCD pursuing forfeiture of the financial assurance. OCD will initiate the pursuit of the forfeiture of financial assurance based upon the actions or inactions of the owner/operator, not the surety.

Recognize compliance the with 19.15.36.18.G(2)(a) NMAC and 19.15.36.18.G(2)(b) NMAC. In the second paragraph, recognize the opportunity of the "surety" to "demonstrate an ability to timely complete the closure and post closure in accordance with the approved plan" and to respond to the notice, in accordance with 19.15.36.18.G(3) and (4) NMAC.

Section 5, Conclusion: Modify the response to recognize the administrative process and deadlines Envirotech must comply with regarding changes to the financial assurance pursuant to 19.15.36.11.F(3) NMAC.

Appendix A, Re-Vegetation Plan: Identify the "native plant species" seed mix and associated application rates to demonstrate compliance to 19.15.36.18.A(6) NMAC. Hydro-mulching is a method to spread mulch on an area in a stream of water propelled through a hose, identify the equipment and the volume of water needed to complete the proposed hydro-mulching.

Replace "or" with "and" in Step 7, unless Envirotech is requesting an exception to 19.15.36.18.A(6) NMAC. Both conditions are required of 19.15.36.18.A(6) NMAC.

Update Step 8 to recognize the responsibility of the "landowner," clarify the condition the proposed alternative must satisfy, and recognize the impact the proposed alternative will have on the operator's financial assurance if approved, pursuant to 19.15.36.18.F NMAC.

Appendix B, Financial Assurance: The proposed timeframe of 24 months to complete closure and post-closure activities is not reasonable. Based upon proposing 24 months of vadose zone monitoring and treatment zone monitoring to demonstrate closure and the three years post-closure period required of 19.15.36.18.E NMAC, it will take five years. The shortest timeframe that can be considered is four years, only if the vadose zone and treatment zone sampling can demonstrate closure in two consecutive semi-annual sampling events within a one-year period. Update appropriately.

The proposed cost estimates are for OCD to hire a third-party contractor to complete closure and post-closure when Envirotech is no longer involved or in control of the facility. All cost estimates should be based upon a 40-hour work week and an 8-hour day.

Disking: The disking cost estimates are stated to be based upon "estimated 5 days to disk 212 acres, disking 2 times per month" over a 24-month period. The mobilization and demobilization of the tractor seems to represent a one-way "unit" event to justify the proposed $2000 total cost, much like the dozer cost. This means that the tractor will be on-site for the complete 24-month period. Change the "Disking - tractor cost per event (52 events)" to "Tractor Rental per month," provide a monthly tractor rental rate for 24 months and update the appropriately. If the plan is to mobilization and demobilization for each disking/tilling event and each "unit" represents a roundtrip mob/demob event, then just update the quantity from 2 to 52 and update the total cost appropriately. Provide further details to justify and explain the costs and justify the proposed $116/week truck rental and use cost.

Berm Removal/Re-Contour – Scarify Roads: Clarify what the mobilization and demobilization units represent, roundtrip or one-way. All cost estimates should be based upon a 40-hour work week and an 8-hour day, update the number of days and the operator justification notes and costs appropriately. The note provided at the bottom of this financial assessment states its "based on the facility diagram there are and estimated 27000LF of 3' perimeter berm and 51000 feet of 2' interior berm." Provide the dimensions of the berms to justify the proposed acreage of each type of berm that will require leveling and provide the same for "scarifying" the perimeter/facility roads. Keep in mind that the "2 foot" and "3 foot" descriptions apply the berm height, not the design width needed to calculate the acreage. Justify the proposed $116/week truck rental and use cost.

Fence Removal: Update the cost estimate to include the mobilization/demobilization of the "skidsteer" to and from the landfarm. All cost estimates should be based upon a 40-hour work week and an 8-hour day. Modify the "4-man crew," "skidsteer," and "pickup" rows appropriately. If OCD is required to implement the closure/post-closure activities, it may simply dispose of the fencing. Update to include the required cost estimate for off-site disposal of the 27,000 feet of fencing material (including the fence post) which should include the transportation to the disposal facility and disposal costs. Update and provide the hourly rate for the operator of the "skidsteer" and justify the proposed $116/week truck rental and use cost.

Building Removal: A flatbed truck or trailer will likely be needed to load the office onto for removal, update and include the associated mobilization and demobilization costs for the additional equipment. Update and include costs for the removal and disposal of "associated

foundation materials" proposed in the closure/post-closure plan. All cost estimates should be based upon a 40-hour work week and an 8-hour day, modify the "2-man crew," "skidsteer," and "pickup" rows appropriately. Provide an hourly rate for the operator of the "skidsteer." Provide a third-party cost estimate to justify the proposed $0.58/mile truck rental rate.

Seeding: Attachment 9 must have a revegetation plan that that justifies the proposed cost. Provide individual estimates for each task to complete revegetation plan, as Envirotech provided to justify the other cost estimates.

Semi-annual Treatment Zone Monitoring: Update the proposed cost estimates based upon the requested changes and additions to the closure/post-closure plan. Justify why it will take 4 semi-annual sampling events to demonstrate the treatment zone closure performance standards for closure. Justify the proposed daily truck rental cost and the proposed 10 hours of labor to mobilize and demobilize to and from the site 4 times and collect 94 (4-point composite) treatment zone samples from 23 landfarm cells. All cost estimates should be based upon a 40-hour work week and an 8-hour day. Envirotech proposes cost estimates to demonstrate TPH by EPA Method 8015M in lieu of EPA Method 418.1 contrary to the rest of the application, provide a written exception request and update application accordingly. Identify the constituents required of 19.15.36.15.F(5) NMAC for closure and provide cost estimates for the required analysis.

Provide a copy of the Pace Analytical Lab's cost estimate to support the proposed associated analyte laboratory costs. The cost estimates should be based on current prices.

Semi-annual Vadose Zone Monitoring: Justify the proposed 4 semi-annual sampling events for closure, the proposed truck rental rate, the proposed 160 hours of labor to mobilize and demobilize to and from the site 4 times, remove the treatment zone, collect 368 vadose zone samples (between three and four feet below each landfarm cell's original ground surface) and backfill the sample boleholes from 23 landfarm cells. Provide cost estimates for equipment to remove the treatment zone soils to access the vadose zone and to backfill the sample bore holes.

Annual Reporting: Provide a cost estimate for a closure report that demonstrates to OCD that all the other approved closure activities, such as, buildings, berms fences, roads and equipment have been removed, testing has been conducted on the non-landfarm areas of contaminated soils and cleaned-up, have been completed. Without a closure report, OCD will not be able to determine if closure has been completed and when the three-year post-closure period should begin. Include a protocol in the written closure/post-closure care plan and the financial assurance cost estimates.

Post Closure Activities: Provide cost estimates to implement the re-vegetation plan (Appendix A) to maintain the 70% of the native perennial vegetative cover through two successive growing seasons required of 19.15.36.18.A(6) NMAC.

Attachment 10, Emergency Contingency Plan:

Section 2, Emergency Coordinator Contact Information: The first Envirotech employee that discovers the emergency, if the primary emergency coordinator is not there, must take on the role

of a temporary emergency coordinator until a primary emergency coordinator arrives onsite and takes command. Clarify and include in the plan.

Section 3, Contingency Plan Locations: Pursuant to 19.15.36.13.N(7) NMAC, Envirotech must provide copies of the plan to the appropriate emergency response agencies and OCD offices. Modify Section 3 to include the OCD Santa Fe Environmental Office and its associated contact/mailing information.

Section 4, Contingency Plan Amendments: Modify the section to recognizes all the required conditions of 19.15.36.13.N(8)(c) NMAC.

Section 5, Landfarm #4 Emergency Equipment: Pursuant to 19.15.36.13.N(4) NMAC, provide the required information for all the equipment proposed for use to implement this plan. Specify the number of units and the locations where the emergency equipment can be located during an emergency. OCD was unable to locate any documentation on a H2S "portable monitor" that is capable of the detecting H2S at concentrations greater than 100 ppm, as proposed. Provide or modify appropriately. "100 ppm or greater" is not the immediate action level (the lowest detected H2S concentration) that activates the H2S plan. Clarify how the portable H2S monitor will used during an H2S emergency when it is located approximately 20 miles from the proposed Landfarm #4 location at the "main office," located at 5795 U.S. Highway 64, Farmington, New Mexico 87401. Update the list and include all equipment identified in the contingency plan (Attachment 10) and the H2S contingency plan (Attachment 8) proposed for use during an emergency.

Section 7.1, Fires, Landfarm #4 Personnel Actions: Include the fire "hydrant supplied at Landfarm #4 field office" on the equipment list. Modify the Emergency Contingency Plan to identify which Envirotech personnel are responsible to complete each step of the plan, since the Emergency Coordinator will not be at Landfarm #4 during any emergencies but will be notified and updated by Envirotech personnel during the implementation of the Emergency Contingency Plan. Include a protocol to prevent to entry of trucks delivering waste to the facility or any other visitors, that are not providing emergency services, in the event of either a small or a large fire.

In the large fire emergency contingency plan, include a protocol to obtain the sign-in sheet out of the Landfarm #4 field office prior to evacuating the landfarm and driving approximately 2 to 3.9 miles to the muster point. Include the evacuation Landfarm #2 and #3 personnel if the emergency requires Landfarm #4 personnel to evacuate to the final muster point. Include a protocol to notify and evacuate any parties at the Sage Picnic Area and to prevent access (by roadblock) into the Landfarm #4 surface waste management facility from CR 7175, that continues along the ridge south through BLM's Angel Peak Scenic Area into the facility.

Section 7.3, Fires, Evacuation Plan: The evacuation plan is proposed based upon which landfarm cell(s) Envirotech personnel and visitors are in during an emergency. Provide a drawing that identifies the individual landfarm cells and clearly identifies the roads within the facility that direct parties to the access gates, within the surface waste management facility. The individual landfarm cells will require some type visible sign that identifies the landfarm cells number, and/or signs identifying the locations of the access gates that grant access to Hwy 550.

Please provide. Pursuant to 19.15.36.13.N(5) NMAC, provide the required alternative evacuation routes instructions and update Figure 10A appropriately.

If the evacuation plan of Section 7.3, under the heading Fires, is a generic evacuation plan for all emergencies, then place it under a generic heading that applies to the complete contingency plan such as Section 5, Landfarm #4 Emergency Equipment or Section 6, Training Programs. Provide a stand-alone Emergency Contingency Plan that does not refer to other sections and figures of the permit application. Provide a figure that illustrates and identifies the individual landfarm cell layout, the facility boundary roads, and the access roads to the landfarm cells to illustrate the exit/evacuation routes from the landfarm cells and the perimeter roads to the access gates and alternate evacuation routes.

Section 7.3, Fires, Evacuation Plan, Cells 3-12 Evacuation Route to Muster Point: Recognize the use of the Pipeline ROW and Great North Road Protection Zone features, as illustrated on Figure 4G, Berm Crossing Details as possible alternate evacuation routes. Update Figure 10A to illustrate the existing road within Landfarm #2 to reach Angel Peak Road/ County Road 7175 from the access gate on the west side of Cell 3. In Option 2, modify the written evacuation directions to instruct evacuating parties by use of the interior roads and instruction for parties in Cells 3 and 4 on how and where to cross the bermed pipeline ROWs and Great North Road feature to exit the access gate in the northeast corner of Cell 5. Provide a figure that illustrates the interior roads within the facility and illustrates the evacuation routes by use of the interior roads to access Angel Peak Road/County Road 7175 and/or County Road 7225.

Cells 13-19 Evacuation Route to Muster Point: Update the evacuation protocol to instruct parties in Cells 13 through 15 and Cells 17 through 19 to exit the bermed landfarm cells by use of the east interior perimeter road to access Angel Peak Road/County Road 7175 and County Road 7225 and exit Cell 16 through the access gate in the southwest corner.

Cells 20-21 Evacuation Route to Muster Point: Modify the written evacuation directions to instruct evacuating parties by use of the interior roads and provides evacuation instructions for parties in Cells 21.

Cells 22-23 Evacuation Route to Muster Point: Modify the written evacuation directions to instruct evacuating parties by use of the interior roads and provides evacuation instructions for parties in Cells 23.

Section 7.5, Fires, Fire Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Section 8.1, Explosions, Personnel Actions: Modify the Emergency Contingency Plan to identify which Envirotech personnel are responsible to complete each step of the plan, since the Emergency Coordinator will not be at Landfarm #4 during any emergencies but will be notified and updated. Include the following: a protocol to obtain the sign-in sheet out of the Landfarm #4 field office prior to evacuating the landfarm and driving to the final muster point; a protocol to evacuate Landfarm #2 and #3 personnel if the emergency requires Landfarm #4 personnel to evacuate to the final muster point; a protocol to notify and evacuate any parties at the Sage

Picnic Area and to prevent access (by roadblock) into the Landfarm #4 surface waste management facility from CR 7175; and a protocol to prevent to entry of trucks delivering waste to the facility or any other visitors that are not providing emergency services in the event of an explosion.

Section 8.5, Explosions, Explosion Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Section 9.1.1, Air, Personnel Actions: In the event of a release of H2S, please see Attachment 8. Update the discussion to identify the lowest detected level of H2S (the immediate action plan activation limit) that prompts any action described in the updated H2S plan.

Omit the note at the end of Section 9.1.1 of the Attachment 10 states "**Note: If release registers at max detection level of personal monitor for H2S immediately reference Attachment 6, Hydrogen Sulfide Prevention and Contingency Plan, and initiate the Immediate Action Plan. See Appendix A, RKI Personal Monitor Data Sheet for personal monitor detection levels*." There are several issues with the instructions provided in the "note." The maximum detection level of the RKI 03 Single O2 Gas Personal Monitor for H2S is 100 ppm, which is also the Immediately Dangerous to Life or Health Concentrations (IDLH) concentration for H2S. Also, the H2S Contingency Plan and Appendix A are only provided in Attachment 8. As proposed, all Envirotech personnel and visitors would be exposed to H2S concentrations that exceed any recommended regulatory RELs and PELs.

Section 9.1.5, Air, Air Release Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Section 9.2.1, Soil, Personnel Actions: Modify the Emergency Contingency Plan to identify which Envirotech personnel are responsible to complete each step of the plan.

Section 9.2.4, Soil, Post Release Clean up: Recognize compliance to the applicable requirements of 19.15.29 NMAC or 19.15.30 NMAC, as required of 19.15.36.13.K NMAC.

Section 9.2.5, Soil, Soil Release Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Section 9.3.1, Surface Water, Personnel Actions: Modify the Emergency Contingency Plan to identify which Envirotech personnel are responsible to complete each step of the plan.

Section 9.3.5, Surface Water, Surface Water Release Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Section 9.4.1, Ground Water, Personnel Actions: Modify the introductory sentence to properly reflect the subject matter discussed in Section 9.4, Ground Water. instead of "surface water" as proposed.

Section 9.4.4, Ground Water, Post Release Clean up: Recognize compliance to the applicable requirements of 19.15.29 NMAC or 19.15.30 NMAC and OCD, not NMED.

Section 9.4.5, Ground Water, Ground Release Source Determination: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(10) NMAC.

Attachment 10, Emergency Contingency Plan: Describe how Envirotech personnel will complete each task required of 19.15.36.13.N(6) NMAC, 19.15.36.13.N(10) NMAC, 19.15.36.13.N(11) NMAC, and 19.15.36.13.N(13) NMAC.

Figure 10A, Evacuation Routes: Update Figure 10A based upon the review comments and recommendations above.

Attachment 11, Run-on and Run-off Control and Best Management Practices Plan:

Section 2.3, Peak Run-On Calculations: In Appendix C, Soil Geologic Analysis, of Attachment 14 of this application, the results of a composite soil sample representing 2.5 -7.5 feet below the natural ground surface identify the soils as "Lean Clay (CL) (or shale/siltstone)." Provide the USDA area of interest soil survey for each individual basin and a printout of the associated map unit description for each soil type identified, including the identified percentages and acreage of the area of interest, and provide a discussion of the assessment of the data from the USDA Web Soil Survey website to support the hydrologic soil group B determination.

The Run-on Curve Number calculations in Appendix B, references Table 2-2c of TR-55 to support the proposed curve number of 69 and describes the ground cover as "desert brush" with 50 % density and identifies the hydrologic condition as "fair," instead of "good" as provided in this section. Table 2-2c of TR-55 is titled, *Runoff curve numbers for other agricultural lands*, and does not address any "rangelands" or "desert brush ground covers." The only cover type identified on Table 2-2c that matches the hydrologic condition of "fair" and has a curve number of 69 associated with hydrologic soil group B is "Pasture grassland or range – continuous forage for grazing," not "desert brush ground cover." Table 2-2d of TR-55 is titled, *Runoff curve numbers for arid and semiarid rangelands*, which is more appropriate for New Mexico and the run-on conditions. Recalculate the run-on curve number based upon the considerations of Table 2-2d of TR-55 and update the written portion and Appendix B appropriately. Recalculate the peak discharges for each basin using the new run-on curve number based upon the considerations of Table 2-2d of TR-55. Modify this section to reflect the changes in the curve number and update the "largest calculated run-on peak flow" value. Also re-assess the capability of the "perimeter berm and swale" design.

Section 2.4, Peak Run-Off Calculations for Farmable area: The *run-on basins* illustrated Figure 11A are not considered or utilized in the peak *run-off* calculations for the farmable areas. Omit the reference. Cell 1, Cell 8, Cell 13, Cell 14, and Cell 15 are split into two separate landfarm areas by pipeline ROWs and associated ROW berms, as illustrated in Section E-E, Figure 11E, Control Features Details. This means that the use of the proposed total acreage of Cell 1 (7.4 acres) and Cell 8, Cell 13, Cell 14 and Cell 15 (10 acres) to calculate the peak run-off discharges does not represent the proposed facility design of each landfarm cell or portion of

cell. The landfarm cells should be designed and contoured to allow for the collection of contaminated/contact stormwater in a single location within each cell or portion of cell so that it can be easily removed and to prevent pooling of liquids on the treatment zone soils (soils being remediated). OCD has been unable to locate any designs for stormwater collection features for each landfarm cell design based upon the calculated peak run-off discharges and volumes. Update the acreage for Cells 20 and 21, and Cells 22 and 23, based upon the updated survey. Recalculate the peak run-off discharges and volumes for the landfarm cells discussed above and demonstrate that the landfarm cell stormwater collection features can handle the calculated volumes.

The Run-off Curve Number calculations in Appendix C, references Table 2-2b of TR-55 to support the proposed curve number of 75 and describes the land use as "Agriculture," the ground cover as "contoured" with "< 50 % " density (instead of "cleared natural vegetation" as provided in this paragraph) and identifies the hydrologic condition as "good." The only cover type identified on Table 2-2b that matches the conditions of a ground cover of "contoured," a hydrologic condition of "good," and has a curve number of 75 associated with hydrologic soil group B is for "row crops." The cover type and considerations do not coincide with the landfarm operational requirements of 19.15.36.15.C(5) NMAC. The required bi-weekly disking/tilling should prevent any vegetative growth from establishing on the surface. Based upon the required disking/tilling and considerations of Table 2-2b of TR-55, a cover type of "Fallow" and a treatment of "Bare soil" would be more representative of an active landfarm cell. Recalculate the run-off curve number based upon the considerations of Table 2-2b of TR-55 expressed above and update the written portion and Appendix C appropriately.

Update the Peak Design Discharge rates and Run-off volumes on the table for the 25-year 24-hour peak run-off for groups of cells, based upon the review comments for Attachment 11 and its associated Figures and Appendices.

Section 3, Run-on Control: Update the discussion of the largest 25-year-24-hour run-on peak flow based upon the review comments for Attachment 11 and its associated Figures and Appendices.

The design modeled in the Trapezoidal Swale Capacity East Basin calculations provided in Appendix B is not the design proposed in Appendix A on Figure 11E, Section B-B: 3 FOOT PERIMETER BERM AND SWALE COMBINATION. Cross-Section B-B on Figure 11E illustrates the swale design with a bottom width of 2 feet, with 1.5:1 (horizontal feet to vertical feet) slopes, and a depth of 1.5 feet from the perimeter fence side. In Appendix A, Envirotech modeled a swale design with 2:1 slope, a bottom width of 2 feet, and a design depth of 2 feet, which has a greater capacity than the design proposed in Cross-Section B-B on Figure 11E. Address or justify the discrepancies written portion and the calculations and update Attachment 11 appropriately.

Modify appropriately to include some of the design features (slope, height, and width on top) of the proposed perimeter berm discussed in the last paragraph.

Section 4, Run-off Control: OCD has been unable to locate any waste management protocols for the "collected" contact stormwater from active landfarm cells or for any collected contaminated storm water. Clarify how it will be disposed of once collected.

Clarify if the "internal perimeter berms" discussed are the "Landfarm Cell Berms" identified as Section C-C and illustrated on Figure 11E. To prevent confusion, identify and discuss each berm design as it is represented on the design drawings. In accordance with19.15.36.7.B(6) NMAC and 19.15.36.15.C(1) NMAC, OCD wishes to clarify that neither provision identifies any required cell design size specifications, other than the maximum landfarm cell size, and, as proposed in this application, only Landfarm Cells 5 through 19 will be 10 acres. Modify the written response to address the berming of all landfarm cells, of 10 acres *or less*, and provide a complete and appropriate regulatory reference. Clarify and modify the written response appropriately to recognize that the pipeline ROWs berms that intersect Landfarm Cells 1, 2, 3, 8, 9, 13, 14, 15, and 16 will serve as landfarm cells berms and will create at least two separate run-off areas within Landfarm Cells 1, 2, 3, 8, 13, 14, 15, and 16. Clarify and modify the written response appropriately to recognize that the Great North Road berms that borders Landfarm Cells 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, and 21 will serve as landfarm cells berms.

Figure 11A, Run-on Basins: Provide a figure that includes a scale that can confirm the proposed slope lengths. Identify and illustrate the 1975-foot slope length (300-feet of sheet flow + 1675-feet of shallow flow) that was used to determine and calculate the "Time of Concentration (Tc)" for the South Basin, the 6559-foot slope length (300-feet of sheet flow + 6259-feet of shallow flow) that was used to determine and calculate the "Time of Concentration (Tc)" for the East Basin, and the 2150-foot slope length (300-feet of sheet flow + 1850-feet of shallow flow) that was used to determine and calculate the "Time of Concentration (Tc)" for the Southeast Basin in Appendix B.

Figure 11B, Run-on And Run-off Directions: Update Figure 11B based upon the updated survey to only illustrate the area requested by Envirotech to be Landfarm #4. Do not include the watercourse feature within the facility boundary. All Figures will have to be modified and updated to re-establish the proposed facility boundary and the 100-foot setback for the placement of contaminated soil. Enlarge the image of Landfarm #4 since it will no longer include Landfarm #2.

Figure 11C, Run-on Control Features: Modify Figure 11C appropriately to ensure that the line color and descriptors match the Legend and coincide with the written discussion.

The "Notes" above the Legend states "The established drainage along CR 7225 will also help convey runon to the water course along the east side of the facility boundary. Established drainage along CR 7175 will allow runon to flow to the Highway 550 ROW." There are several issues with the two sentences. First, there are no run-on features identified or proposed on Figure 11C for CR 7225 or CR 7175 to suggest how run-on can be controlled and directed. Identify and illustrate the design. Second, based upon the surface elevations illustrated on Figure 11B, OCD is unsure how run-on from CR 7225 can be conveyed "to the water course along the east side of the facility boundary" when it must travel upgrade from a surface elevation of approximately 6530 feet to 6540 feet msl and must cross CR 7225 to convey the run-on "to the water course

along the east side of the facility boundary." Please justify. The note regarding run-on from CR 7225 does not coincide with information provided on other figures. Modify appropriately. Third, for run-on from CR 7175 "to flow to the Highway 550 ROW" it must travel over 3100-feet across Envirotech's Landfarm # 2 SWMF (Permit NM1-011). Identify and illustrate the run-on feature designs that will allow the run-on generated on CR 7175 within the proposed Landfarm #4 facility boundary "to the Highway 550 ROW." Update the note appropriately.

Update Figure 11C based upon the updated survey to only illustrate the area requested by Envirotech to be Landfarm #4 and identify the run-on/off control features that will be installed along the newly established facility boundary from the watercourse feature.

Figure 11D, Run-off Control Features: Modify Figure 11D appropriately to ensure that the line color and descriptors match the Legend and ensure that it does not contradict other Attachments or Figures. Properly illustrate and identify all berm features for Cells 8 and 19.

OCD was unable to locate a scale on Figure 11D to demonstrate and support the slope lengths (300-feet of sheet flow + the shallow flow lengths) that were used to determine and calculate the "Time of Concentration (Tc)" for the landfarm cells in Appendix C. Provide a scale on Figure 11D to demonstrate that the slope lengths (300-feet of sheet flow + the shallow flow lengths), used to calculate the "Time of Concentration (Tc)" for each landfarm cell or portion of cell in Appendix C, to demonstrate they are appropriate and are based upon the illustrated run-off flow illustrated on Figure 11D. Based upon the scale (1-inch equals 1280-feet) provided on Figure 11B, OCD is having difficulty confirming the slopes lengths used in the calculations.

Appendix B, Run-on Calculations & Background Information:

Run-on Curve Number Calculations: The Run-on Curve Number calculation in Appendix B, references Table 2-2c of TR-55 to support the proposed curve number of 69. Table 2-2c of TR-55 is titled, *Runoff curve numbers for other agricultural lands*, and does not identify any land uses for "rangelands" or "desert brush ground covers." The only cover type identified on Table 2-2c that matches the hydrologic condition of "fair" and has a curve number of 69 associated with hydrologic soil group B is "Pasture grassland or range – continuous forage for grazing," not "desert brush ground cover." Table 2-2d of TR-55 is titled, *Runoff curve numbers for arid and semiarid rangelands*, which is more appropriate for New Mexico and the run-on conditions. Recalculate the run-on curve number based upon the considerations of Table 2-2d of TR-55 and update the written portion and Appendix B appropriately.

OCD located a Web Soil Survey Map, Figure 14D, that includes the soils in the watercourse feature. The Legend "facility boundary" indicator of Figure 14D clarifies that the watercourse feature and the 200-foot facility boundary setback are included in the assessment and recognized as part of the facility, contrary to the siting requirements of 19.15.36.13.B(1) NMAC. This area must be removed from the soils survey assessment since it cannot be included as part of the proposed facility boundary. OCD performed its own USDA Web Soil Survey and determined that 100% of the Sd-Sheppard-Mayqueen-Shiprock complex, 0 to 8 percent slopes soils are Hydrologic Soil Group: A; 50 % of the DS-Doak-Sheppard-Shiprock association, rolling soils are Hydrologic Soil Group: A; and 65% of the FX-Fruitland-Persayo-Sheppard complex, hilly

soils are Hydrologic Soil Group: A. OCD's assessment of each of the basins from the USDA Web Soil Survey website did not support the hydrologic soil group B determination. Since over 70% of the acreage of the proposed facility boundary is represented by hydrologic soil group A soils, recalculate the run-on curve number based upon the consideration of hydrologic soil group A.

Time of Concentration (Tc) South Basin: Identify and illustrate the 1975-foot slope length (300-feet of sheet flow + 1675-feet of shallow flow) on Figure 11A that was used to determine and calculate the "Time of Concentration (Tc)" for the South Basin. Also identify the illustrate the 6559-foot slope length (300-feet of sheet flow + 6259-feet of shallow flow)for the East Basin and the 2150-foot slope length (300-feet of sheet flow + 1850-feet of shallow flow) for the Southeast Basin.

SCS Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volume, based upon the any changes to the run-on curve number and time of concentration (Tc) for South Basin, East Basin and Southeast Basin.

Trapezoidal Swale Capacity: Update and reassess the swale capacity based upon the any changes to the run-on curve number and time of concentration (Tc) for South Basin, East Basin and Southeast Basin.

Appendix C, Run-Off Calculations & Background Information:

Run-off Curve Number Calculations: Recalculate the run-off curve number based upon the considerations of Table 2-2b of TR-55 expressed above and hydrologic soil group A. Update the written portion and Appendix C appropriately.

Time of Concentration (Tc) for Cell 1: Identify and illustrate the 1200-foot slope length (300-feet of sheet flow + 900-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cell 1. Figure 11D illustrates that Cell 1 is split into two separate landfarm areas by pipeline ROWs and associated ROW berms, Section E-E, Figure 11E, Control Features Details. This should result in two separate calculated time of concentrations, for Cell 1A and Cell 1B. The calculations for Cell 1 do not represent the operational design illustrated on Figure 11D. Also, justify the Manning's Roughness (n) of 0.06 of "<= 20% cover" based upon Table 3-1 of TR-55. Table 3-1 of TR-55 associates the considerations above to a surface description of "cultivated soil with a residue cover of ≤ 20%." The Manning's Roughness (n) of 0.06 of "<= 20% cover" does not represent the operations of an active landfarm cell. Utilize a Manning's Roughness (n) that represents the required biweekly tilling, such as "Fallow (no residue)." Update and recalculate appropriately.

Cell 1 SCS Run-off Curve Number Method: Figure 11D illustrates that Cell 1 is split into two separate landfarm areas. This means that the use of the proposed total acreage of Cell 1 (7.4 acres) to calculate the peak run-off discharges does not represent the proposed facility operational design. Update and recalculate the peak discharge and run-on/off volumes, based upon the any changes to the drainage area acreage, run-on curve number, and time of concentration (Tc) for Cell 1A and Cell 1B.

Time of Concentration (Tc) for Cell 2: Identify and illustrate the 1341-foot slope length (300-feet of sheet flow + 1041-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cell 2. Update and recalculate based upon the design slope length and a Manning's Roughness (n) that represents the required biweekly tilling for Cell 2A and Cell 2B.

Cell 2 SCS Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volumes, based upon the any changes to the drainage area acreage, run-on curve number, and time of concentration (Tc) for Cell 2A and Cell 2B.

Time of Concentration (Tc) for Cell 3-4: Identify and illustrate the 1930-foot slope length (300-feet of sheet flow + 1630-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cells 3 and 4. Figure 11D illustrates that Cell 3 is split into two separate landfarm areas. This should result in two separate calculated time of concentrations, for Cell 3A and Cell 3B. The calculations for Cell 3 do not represent the operational design illustrated on Figure 11D. OCD was unable to locate a slope length of 1930-feet in Cell 4 based upon the general flow directions indicated by the blue arrows illustrated on Figure 11D. Utilize a Manning's Roughness (n) that represents the required biweekly tilling, such as "Fallow (no residue)."

Cells 3-4 SCS Run-off Curve Number Method: Figure 11D illustrates that Cell 3 is split into two separate landfarm areas. This means that the use of the proposed total acreage of Cell 3 (9.5 acres) to calculate the peak run-off discharges does not represent the proposed facility operational design. Update and recalculate the peak discharge and run-on/off volumes, based upon the any changes to the drainage area acreage, run-on curve number, and time of concentration (Tc) for Cell 3A, Cell 3B, and 4.

Time of Concentration (Tc) for Cells 5-15: Identify and illustrate the 1930-foot slope length (300-feet of sheet flow + 1630-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cells 5 through 15. The calculations for Cells 8, 13, 14, and 15 do not represent the operational design illustrated on Figure 11D. OCD was unable to locate a slope length of 1930-feet in Cells 5, 6, 7, 9, 10, and 11 based upon the general flow directions indicated by the blue arrows illustrated on Figure 11D. Update and recalculate based upon the individual landfarm cell design slope length and a Manning's Roughness (n) that represents the required biweekly tilling.

Cells 5-15 SCS Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volumes, based upon the any changes to the drainage area acreage, run-on curve number, and time of concentration (Tc) for Cells 5 through 15.

Time of Concentration (Tc) for Cells 16-19: Identify and illustrate the 1100-foot slope length (300-feet of sheet flow + 800-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cells 16 through 19. Update and recalculate based upon the individual landfarm cell design slope length and a Manning's Roughness (n) that represents the required biweekly tilling.

Cells 16-19 Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volume, based upon the any changes to the run-on curve number and time of concentration (Tc) for Cells 16 through 19.

Time of Concentration (Tc) for Cells 20-21: Identify and illustrate the 2020-foot slope length (300-feet of sheet flow + 1720-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cells 20 and 21. Update and recalculate based upon the updated survey, the individual landfarm cell design slope length and a Manning's Roughness (n) that represents the required biweekly tilling.

Cells 20-21 Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volumes, based upon the any changes to the drainage area acreage due to the newly established facility boundary, run-on curve number, and time of concentration (Tc) for Cells 20 and 21.

Time of Concentration (Tc) for Cells 22-23: Identify and illustrate the 1207-foot slope length (300-feet of sheet flow + 907-feet of shallow flow) on Figure 11D that was used to determine and calculate the "Time of Concentration (Tc)" for Cells 22 and 23. To comply with Part 36, Envirotech must establish a new facility boundary on each side (north and south) of the watercourse feature and then establish the 100-foot setback for contaminated soil placement from the newly established facility boundary. Update and recalculate based upon the updated survey, the individual landfarm cell design slope length and a Manning's Roughness (n) that represents the required biweekly tilling.

Cells 22-23 Run-off Curve Number Method: Update and recalculate the peak discharge and run-on/off volume, based upon the any changes to the drainage area acreage, run-on curve number, and time of concentration (Tc) for Cells 22 and 23.

OCD has been unable to locate any designs for stormwater collections ponds/areas for the landfarm cells based upon the calculated peak run-off discharges and volumes for individual landfarm cells or portions of cells. Please provide.

Attachment 12, Best Management Practices Plan:

Section 2, Run-on and Run-off Management: Update the written discussion of Attachment 11 based upon the requested change above. Envirotech's plan to construct "level" landfarm cells "to prevent the drainage of runoff from gathering in specific areas along the berms" will result in the pooling of liquids on the treatment zone soils (contaminated soils being remediated) and will make difficult to remove freestanding water within 24 hours required of 19.15.36.15.C(8) NMAC. It will also result in a hydraulic head developing on top of the contaminated soils and will not allow for the quick removal of contaminated run-off to prevent the infiltration of contamination into the vadose zone. A properly designed stormwater collection pond/area, based upon the calculated peak run-off discharges and volumes for individual landfarm cells or portions of cells, will reduce the concern regarding the integrity of the 2-foot landfarm cell berm

“from being compromised by large flows.” Provide and modify the written response appropriately.

Provide design drawings of the proposed stormwater collection feature, “Furrows” and demonstrate that the stormwater run-off control/collection feature can control a 25-year storm event, based upon the calculated peak run-off discharges and volumes for individual landfarm cells or portions of cells. Provide figures and design drawings that illustrate the installation design and where the “Furrows” stormwater run-off control/collection feature will be installed within the each landfarm cell.

Modify to identify the “contaminated water” as liquid oil field waste and clarify that it must be transported by an OCD approved C-133 hauler and that the liquid oil field waste will be sent to an OCD-approved disposal facility permitted to receive such waste.

Section 3, Groundwater Protection: Provide a best management practice that clarifies what actions Envirotech will implement to protect groundwater if vadose sampling results demonstrate exceedances above the proposed established background concentrations.

Section 4, Landfarm #4 Emergency Equipment: Omit this section. Complete and detailed equipment list are required above for the H2S plan and the Emergency Contingency plan.

Section 5, Conclusion: Pursuant to 19.15.36.13.N NMAC, only Attachment 10, Emergency Contingency Plan, should be referenced when responding to any emergency or release, regardless of its volume, modify appropriately.

Attachment 13, Siting Requirements: Provide a cover sheet identifying the topic of discussion of Attachment 13.

Paragraphs (2, 3, and 5) of 19.15.36.13.A NMAC: Modify the sentence to clarify that “borings” were drilled to depths of 100-feet or greater “in” various portions of the proposed landfarm facility.

Paragraph (1) of 19.15.36.13.B NMAC: Pursuant to 19.15.36.13.B(1) NMAC, update all figures and discussions regarding Cell 20, 21, 22, and 23 based upon the updated survey.

Paragraph (2) of 19.15.36.13.B NMAC: Provide a written assessment that identifies the FEMA panel number and the associated panel date and the flood zone designation from Figure 6B. Provide a written assessment for a wellhead protection area and provide figures that demonstrate the assessment of wells and springs from the proposed facility boundary based upon the regulatory definition of 19.15.36.7.W(8) NMAC.

Paragraph (4) of 19.15.36.13.B NMAC: Update the written response to address the updated assessment for active mines and the assessment for inactive mines requested above.

Paragraph (5) of 19.15.36.13.B NMAC: Update the written response to coincide with the site inspection certification statement requested above.

Paragraph (6) of 19.15.36.13.B NMAC: Provide written assessment that the proposed facility is not located in an unstable area susceptible to mass earth movements by demonstrating that it is not in an area subject to seismic activity in accordance with 19.15.2.7.U(6) NMAC.

Attachment 14, Hydro-Geological Data:

Section 2, Surface Water: Update the response to recognize the assessment from the surface waste management facility boundary, as required of 19.15.36.13.B(1) NMAC.

Section 2.1, Streams and Springs: Update the first paragraph to clarify that "the second ephemeral wash" "a tributary to the Gallegos Canyon Wash" is 200-feet from the surface waste management facility boundary and not within the facility surveyed boundary.

In the first sentence of the second paragraph, clarify if the distance from the San Juan River tributary was assessed from the "farmable area" which is 100-feet within the facility boundary or was it assessed from the facility boundary in accordance with 19.15.36.8.C(15)(a) NMAC. Update the response to recognize the assessment of the pond from the surface waste management facility boundary.

The title of Section 2.1 is *Streams and Springs*. Provide a map and a written assessment of springs within 1 mile of the facility boundary, in accordance with 19.15.36.8.C(15)(a) NMAC.

Section 3.1, Site Specific Groundwater Investigation: Update the Section 3.1 to include the discussion of results of the subsurface investigation of Soil Boring # 5, which represents the assessment of the lowest elevation investigated. In the second paragraph, identify the surface elevation and the elevation in which Soil Boring #1 was drilled. Based upon the discussion of the depths in which each soil boring was drilled, one may assume the proposed surface waste management area is flat, which it is not supported by the surface elevation contours illustrated on Figure 14B, Contour Map with Boring Locations. Update the discussion in Section 3.1 regarding each boring based upon surface elevation, depth, and depth elevation. OCD was unable to locate the lithology log for Soil Boring #1 in Appendix B. The only soil boring logs provided in Appendix B, Lithology Logs, are for Soil Borings 3, 4, and 5. Provide lithologic logs for all 5 of the soil borings recognized in Section 3.1 and used to create the geologic cross-section. Identify the surface elevation and the elevation in which Soil Boring #2 was drilled and provide a lithologic log for Soil Boring #2 in Appendix B to support the written assessment and the geologic cross-section. Identify the surface elevation and the elevation in which Soil Boring #4 was drilled and provide an assessment regarding groundwater for Section 3.1 to support the geologic cross-section. Identify the surface elevation and the elevation in which Soil Boring #5 was drilled and provide an assessment regarding groundwater.

Section 3.2, Water Wells: Pursuant to 19.15.36.8.C(15)(a) NMAC, provide a demonstration and a statement regarding the assessment wells within 1 mile of the site's perimeter (facility boundary).

The discussion of the average depth to water assumes that the surface elevation of the proposed surface waste management facility area is the same surface elevation as each of the eight water wells used for the proposed depth to groundwater, that all the water wells are hydraulically connected, and the assessed 10-kilometer or 6.2-mile radius is flat, having the same surface elevation. This assumption is not supported by the surface elevation contours illustrated on Figure 14B, Contour Map and the information for specific water wells identified on Figure 14C, Groundwater Information. OCD was unable to locate water wells SJ 00032, SJ 00033, SJ 00034, and SJ 00194 on Figure 14C, but did find water wells SJ 04302 and SJ 00221 illustrated on the Figure which were not recognized in the discussion. Provide a figure that illustrates the locations of all the water wells discussed in the depth to water justification with a surface elevation contour background to provide a representative discussion of the OSE wells, their associated groundwater elevations, and the depth to groundwater based upon the surface elevation of the proposed surface waste management facility. Provide a written discussion based upon wells within 1-mile of the proposed *facility boundary* and the wells surface elevations and depth to water and water elevations, explain how the water bearing zones are hydraulically connected or not and why, and provide a determination of the depth to groundwater and potential groundwater elevation beneath the proposed surface waste management facility supported by the data provided in Attachment 14. If some of the data provided in Attachment 14 does not assist or support the discussion for the determination of the depth to groundwater and potential groundwater elevation beneath the proposed surface waste management facility, then omit and do not include in the discussion.

The distance from water well SJ00077 to the northwest portion or closest portion of Landfarm #4 is not supported by the PLSS legal description for SJ00077 provided on the NMOSE print out provided in Appendix A and the PLSS legal description for the northwest portion or closest portion of the proposed facility boundary of Landfarm #4. Water well SJ00077 is identified as being in Unit B of Section 26, Township 27 North, Range 11 West, NMPM, San Juan County, New Mexico. The closest portion of the proposed Landfarm #4 is in Lot 2 (equivalent to Unit B) of Section 6, Township 26 North, Range 10 West, NMPM, San Juan County, New Mexico or approximately 2.6 miles away from SJ 00077.

Section 3.4, Summary Findings: In the summary of findings, Envirotech compares the surface elevation and depth to water of the Huerfano Unit #68 cathodic protection well to the "lowest surface elevation in the farmable area" of 6494 feet. The surface elevation of Soil Boring 5, which was drilled within the 200-foot setback of the watercourse to the facility boundary as illustrated on Figure 14B, is 6494 ft msl. Establish the new facility boundary and the new 100-foot setback buffer zone and landfarm cell berm for the placement of contaminated soils and determine the new lowest elevation in the farmable area and illustrate the lowest elevation in the farmable area on an updated Figure 14B to support the updated assessment and conclusion.

Section 4.1, Web Soil Survey Information: The Legend "facility boundary" indicator of Figure 14D clarifies that the watercourse feature and the 200-foot facility boundary setback are included in the assessment and recognized as part of the facility, contrary to the siting requirements of 19.15.36.13.B(1) NMAC. This area must be removed from the soils survey assessment since it cannot be included as part of the proposed facility boundary. Update the written discussion of the soil types based upon the reassessment requested in Attachment 11.

Section 4.2, Site Specific Soil Investigation: Provide the field notes and a discussion regarding the location of each soils boring and the soils observed and documented to support the Summary of Findings in Section 5. Provide a discussion that summarizes the test results of the soils from Soil Boring #4 and the classification of the soil of the composite sample to support the Summary of Findings in Section 5. Update the discussion regarding the location of Soil Boring #5 after re-establishing the new facility boundary and the new 100-foot setback buffer zone.

Formation, Section 6.1, Depth: Please update the response based upon the OCD review comments provided above for Section 3.4, Summary Findings.

Section 7, Soil Types Below the Surface Waste Management Facility: The current assessment is not supported by the Soil Boring Lithology Logs and the Geological Cross Section. Update the written discussion based upon the elevations in which the common formations were encountered.

Section 9, Potentiometric Map: OCD recommends that Envirotech provide a clear statement as to why a potentiometric map is not provided and initially provide a discussion of the groundwater elevations of the cathodic protection wells for Huerfano Unit #68 and Huerfano Unit #270. Then provide a separate discussion of the groundwater elevations of SJ 00194, SJ 00193, SJ 02734, and SJ 00077. There seems to be two separate water bearing zones, one regional and the other site-specific, based upon their groundwater elevations. Please provide.

Section 10, Soil Geologic Parameters: Provide a summary statement of the results of the "sediments on which the contaminated soils will be placed" provided in Appendix C and provide the correct regulatory reference of compliance, 19.15.36.8.C(15)(g) NMAC.

Figure 14A, Surface Water Map: Provide a scale to support the 1-mile assessment.

Figure 14C, Groundwater Information: Update Figure 14C to indicate that SJ-00193 and SJ-00194 (located at the same location as SJ-04302-POD1) as "active" water wells and provide their surface elevations and depth to water. Also update all "active" water wells information to include the groundwater elevation for each well and include an appropriate scale.

Figure 14D, Web Soil Survey Map: Update the Figure 14D and illustrate the re-established facility boundary from the watercourse feature, based upon the requested updated survey and update the associated discussion regarding the percentage of area per soil types in Attachment 14.

Figure 14E, Geological Cross Section: Update Figure 14E to reflect the feet above mean sea level elevation along the left side of the figure. At the bottom of the Cross Section, identify the distance between each well location and the total distance that is assessed in the Cross Section. Ensure that all the formations illustrated on Figure 14E are properly identified in the legend. Update and revise the Cross Sections to coincide with the formations and soils identified on the Soil Boring Lithology Logs of Appendix B.

Appendix B, Soil Boring Lithology Logs: Provide the Soil Boring Lithology Logs for Soil Boring #1 and for Soil Boring #2 for Appendix B to support the discussion and the Geological Cross Section illustration on Figure 14E.