

**NM1 - \_\_\_\_50\_\_\_\_**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**February 2014 – Present**

**2<sup>nd</sup> Hearing Application Review Comments  
Crowe Blanco Properties, LLC – Blanco Landfarm  
Commercial Surface Waste Management Facility  
February 3, 2014**

**Tab 19.15.36.8.C.2, Plat & Topographic Maps:**

**Page 2.1, Sheet 1 of 15, *Boundary Survey*:**

Please verify if the water well identified in the proposed lower half of the facility boundary is installed in the marked location or is the location improperly identified and it belong to the home located east of the proposed facility.

**Page 2.7, Sheet 10 of 15, *Springs And Water Wells Within 1 Mile*:**

Sheet 10 of 15 only identifies 5 wells within 1 mile of the proposed facility boundary. Sheet 11 of 15 identifies 19 homes within 1 mile of the proposed facility boundary. A review of the NMOSE New Mexico Water Rights Reporting System database indicates that wells might be associated with some of the identified homes.

**Tab 19.15.36.8.C.4, Facility Description & Diagram:**

**Page 4.1:**

The brief summary description of the proposed facility identifies the specific acreage for the processing area and individual landfarm cells, but never identifies the total area within the facility boundary in which Crowe Blanco is seeking OCD's consideration for permitting. Please identify as part of the facility description.

**Page 4.3, Sheet 1 of 15, *Boundary Survey*:**

Please see comments above for Page 2.1, Sheet 1 of 15, *Boundary Survey*.

**Page 4.6, Sheet 5 of 15, *Retention Dikes And Details*:**

In the upper right hand corner of Detail H/5, the Section A diagram indicates to "See detail E/5 for berm with v-ditch." Detail E/5 is an illustration of an earth berm without a ditch. V-ditches are proposed for general facility berming and run-on/off control as illustrated on Page 4.11, Sheet 15 of 15. Please provide.

**Page 4.7, Sheet 6 of 15, *Cell Map*:**

The table on the illustration provides information on the acreage for the stormwater retention pond or ponds for each individual landfarm cell (active and disposition) and the volume. Regarding the proposed volumes, OCD has been unable to locate the supporting information for the basis of the proposed volumes. Also, there is not a unit of measurement proposed for the volumes. Please provide.

**Page 4.15, Sheet C104, *Proposed Site Map*:**

The "Solids Handling Convey Area System" and "Solids Handling Area" proposed inside and adjacent to the building within the processing area are not discussed or explained in the

permit application. Please provide design drawings and discuss operations within the Operational/Management Plan under Tab 19.15.36.8.C.6 of the application.

**Page 4.16, Sheet C105, *Liner Grading and Drainage*:**

The illustration demonstrates a 1 foot rise in elevation (from 5737.5 to 5738.5) over a distance of 185 feet (9.25 inches at 1 inch = 20 feet). Based upon the data, the proposed bottom slope of the processing area liner will be 0.54%. Landfill and pond designs require a minimum of 2% slope for the leak detection system design to ensure the collection of liquids. The design combination of an almost flat bottom liner and 6 feet of soil on top does not promote drainage toward the liquid collection system, but will more likely develop a hydraulic head on the liner. Please provide a design that facilitates the collection of fluids. Also, the scale indicates one foot contour intervals. The proposed liner design is presented using half foot contour intervals. The existing grade contours are presented using one foot contour intervals. Please modify the scale appropriately.

**Page 4.17, Sheet C106, *Surface Grading and Drainage Plan*:**

The new loading ramp for the mobile slurry and shaker tanks proposes a 3% slope at the top of the ramp and 4:1 slope for the ramp. Since no elevations are provided on the grading plan for the ramp, then OCD cannot complete the review. Please provide.

**Page 4.18, Sheet C107, *Foundation Plan*:**

Limited information has been provided on the construction of the ramp in conjunction with the installation mobile slurry and shaker tanks. Using the Points Table information on page 4.19 (Sheet C108), Point # 160 and 161 indicate that the elevation of the top of each tank (slurry and shaker) is 5744.07 feet. Point # 171 and 172 represent the top of the wall (or ramp) with an elevation of 5752.57, with the highest elevation of the ramp at Point # 169 at 5753.51 feet. Based upon this information and the Foundation Plan view of Sheet C107, the ramp will extend 8.5 to 9.5 feet above and in front of each tank (slurry and shaker) without the use or support of jersey barriers. Also, the Jersey Barrier Detail of 3/C107 illustrates a top of the wall elevation of 5754 feet. Please clarify the design.

**Page 4.21, Sheet C110, *Process Plan and Engineering Plan*:**

Based upon the proposed construction of the ramp in conjunction with the installation mobile slurry and shaker tanks, where will the proposed “future” slurry and shaker tanks (identified in the Process and Engineering profile view) be installed? Or since they have been removed from all other figures due to the construction of the ramp, are they no longer proposed? Please clarify and/or address.

Also, the Process and Engineering profile view indicates that the centrate tanks have a volume of “1000 bbls each.” The Equipment Specifications information, under the heading *Centrate Tank*, the volume is identified as “approximately 900 barrels.” Please clarify the volume of the proposed centrate tanks.

**Tab 19.15.36.8.C.5, Engineering Design:**

**Page 5.3, Sheet 1 of 15, *Boundary Survey*:**

Please see comments above for Page 2.1, Sheet 1 of 15, *Boundary Survey*.

**Page 5.7**, Sheet 5 of 15, *Retention Dikes And Details*:

Please see comments above for Page 4.6, Sheet 5 of 15, *Retention Dikes And Details*.

**Page 5.8**, Sheet 6 of 15, *Cell Map*:

Please see comments above for Page 4.7, Sheet 6 of 15, *Cell Map*.

**Page 5.12**, Sheet 10 of 15, *Springs And Water Wells Within 1 Mile*:

Please see comments above for Page 2.7, Sheet 10 of 15, *Springs And Water Wells Within 1 Mile*.

**Page 5.37**, Sheet C104, *Proposed Site Map*:

Please see comments above for Page 4.15, Sheet C104, *Proposed Site Map*.

**Page 5.38**, Sheet C105, *Liner Grading and Drainage*:

Please see comments above for Page 4.16, Sheet C105, *Liner Grading and Drainage*.

**Page 5.39**, Sheet C106, *Surface Grading and Drainage Plan*:

Please see comments above for Page 4.17, Sheet C106, *Surface Grading and Drainage Plan*.

**Page 5.40**, Sheet C107, *Foundation Plan*:

Please see comments above for Page 4.18, Sheet C107, *Foundation Plan*.

**Page 5.43**, Sheet C110, *Process Plan and Engineering Plan*:

Please see comments above for Page 4.21, Sheet C110, *Process Plan and Engineering Plan*.

**Tab 19.15.36.8.C.6, Operational/Management Plan:**

**Page 6.2**, 1.2 Emergency Non-oilfield Waste:

Crowe Blanco has proposed to accept “non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety.” The current permit application only proposes operations and management of RCRA exempt liquid oil field waste in the processing area and landfarming or “remediation of petroleum hydrocarbon-contaminated soils and drill cuttings.” If such waste (non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety) is accepted how will it be handled and managed?

**Page 6.2**, 2.0 Waste Acceptance:

Within the heading, three regulatory references are provided: 19.15.36.A.3, 19.15.36.13.E, and 19.15.36.15.A. The written response does not recognize the waste acceptance criteria identified within the regulatory references. Pursuant to 19.15.36.A.3 NMAC, “No landfarm that accepts soil or drill cuttings with a chloride concentration that is 500 mg/kg or less shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.” Pursuant to 19.15.36.13.E NMAC, “The operator shall

not place oil field waste containing free liquids in a landfill or landfarm cell. The operator shall use the paint filter test, as prescribed by the EPA (EPA SW-846, method 9095) to determine conformance of the oil field waste to this criterion. Pursuant to 19.15.36.15.A NMAC, “Oil field waste acceptance criteria. Only soils and drill cuttings predominantly contaminated by petroleum hydrocarbons shall be placed in a landfarm. The division may approve placement of tank bottoms in a landfarm if the operator demonstrates that the tank bottoms do not contain economically recoverable petroleum hydrocarbons. Soils and drill cuttings placed in a landfarm shall be sufficiently free of liquid content to pass the paint filter test, and shall not have a chloride concentration exceeding 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste or exceeding 1000 mg/kg if the landfarm is located where ground water is 100 feet or more below the lowest elevation at which the operator will place oil field waste. The person tendering oil field waste for treatment at a landfarm shall certify, on form C-138, that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm’s operator shall not accept oil field waste for landfarm treatment unless accompanied by this certification.” The only recognized portion of compliance to 19.15.36.15.A NMAC expressed in the written response is the acceptance of “tank bottoms do not contain economically recoverable petroleum hydrocarbons.” Based upon the waste protocols expressed in Sections 5.1 through 5.3 which proposes testing for chlorides and paint filter after the waste is accepted, OCD is unsure if Crowe Blanco is requesting an exception or waiver to the waste acceptance protocol of 19.15.36.15.A NMAC. Please clarify and address appropriately.

**Page 6.3, 3.3 Form Department of Public Safety:**

Crowe Blanco has proposed to accept “non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety.” The current permit application only proposes operations and management of RCRA exempt liquid oil field waste in the processing area and landfarming or “remediation of petroleum hydrocarbon-contaminated soils and drill cuttings.” If such waste (non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety) is accepted how will it be handled and managed?

**Page 6.4, 4.1 Flowchart for Waste Acceptance/Disposal:**

Based upon the Waste Acceptance protocol of Section 2.0, the Flowchart for Waste Acceptance of Section 4.1, and the waste management protocols of Sections 5.1 through 5.3, the required paint filter and chloride testing prior to placement into the landfarm cell will be completed by Crowe Blanco rather than the generator of the waste. If this assessment is correct, then the proposed protocol would be an exception/waiver request to 19.15.36.15.A NMAC. Pursuant to Subsection A of 19.15.36.15 NMAC, “The person tendering oil field waste for treatment at a landfarm shall certify, on form C-138, that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm’s operator shall not accept oil field waste for landfarm treatment unless accompanied by this certification.” Please clarify which party will be responsible for the required testing and by who and when will the certification statement be signed.

The flowchart should clarify that chloride testing be performed after demonstrating compliance to or passing the paint filter test for any stabilized waste. If waste fails the paint filter and the waste requires further stabilization to eliminate free liquids, then the addition of new soils will most likely results in a new chloride concentration. As proposed, waste would be tested for chlorides prior to confirmation of the paint filter test. If the waste fails the paint filter test and further stabilization is required, then the waste will have to be retested for paint filter and chlorides for conformance and waste acceptance for placement into the landfarm cell.

Also, the proposed chloride testing within the flow chart references Appendix A and use of a field test. The test method recognized in Part 36 for chlorides, specifically within 19.15.36.15 NMAC – *Specific Requirements Applicable To Landfarms*, is EPA Method 300.1. The proposed use of the field test method is an exception or waiver request pursuant to 19.15.36.19 NMAC. Please provide additional information to assist OCD in determining “that the proposed alternatives will provide equivalent protection of fresh water, public health, safety and the environment.”

**Page 6.6, 5.1 Hydrocarbon Impacted Soils & Gravel:**

Please see the comments above on Section 2.0, Waste Acceptance, regarding clarification on an exception or waiver request to the waste acceptance protocol of 19.15.36.15.A NMAC.

In Step 2, please clarify that chloride testing will be performed after demonstrating compliance to or passing the paint filter test for any stabilized waste.

**Page 6.7, 5.2 Hydrocarbon Impacted Drill Cutting:**

Please see the comments above on Section 2.0, Waste Acceptance, regarding clarification on an exception or waiver request to the waste acceptance protocol of 19.15.36.15.A NMAC.

In Step 2, please clarify that chloride testing will be performed after demonstrating compliance to or passing the paint filter test for any stabilized waste.

**Page 6.8, Hydrocarbon Impacted Drill Cuttings-Liquids:**

Please see the comments above on Section 2.0, Waste Acceptance, regarding clarification on an exception or waiver request to the waste acceptance protocol of 19.15.36.15.A NMAC.

Step 1 refers to “Sheet C107-Ramp Detail” to illustrate the elevated ramp to offload waste into the slurry and shaker tank. The design detail 1/C107 (identified as “Ramp Detail”) on Sheet C107 of page 6.18 is a construction detail for the entry and exit ramps for the building as indicated on the Foundation Plan view. Please provide a correct reference.

Steps 4 and 5 should be switched to ensure and clarify that chloride testing will be performed after demonstrating compliance to or passing the paint filter test for any stabilized waste.

**Page 6.9, 5.3 Tank Bottoms:**

Please see the comments above on Section 2.0, Waste Acceptance, regarding clarification on an exception or waiver request to the waste acceptance protocol of 19.15.36.15.A NMAC.

Step 1 refers to “Sheet C107-Ramp Detail” to illustrate the elevated ramp to offload waste into the slurry and shaker tank. The design detail 1/C107 (identified as “Ramp Detail”) on Sheet C107 of page 6.18 is a construction detail for the entry and exit ramps for the building as indicated on the Foundation Plan view. Please provide a correct reference.

Steps 3 and 3 should be switched to ensure and clarify that chloride testing will be performed after demonstrating compliance to or passing the paint filter test for any stabilized waste.

**Page 6.10, 7.1 Treatment Zone Monitoring:**

The proposed “alternative process” discussed in the second paragraph and below is an exception or waiver request pursuant to 19.15.36.19 NMAC. A similar protocol is identified on page 6.5 in Section 5.0, Treatment/Bioremediation, but does not identify it as an “alternative process.” The difference between the two protocols is that in Section 5.0, Treatment/Bioremediation regulatory limits are associated with the constituent testing that must be demonstrated and achieved prior to adding an additional biopile to the landfarm acre. Section 7.1 only proposes testing for the constituents and does not propose concentration limits for the additional biopile consideration. Please clarify which method is proposed.

Also, the last step of the waste management protocols of Sections 5.1 through 5.3 (Pages 6.6 – 6.9) state “Soils samples are taken at regular intervals and tested by independent laboratories” and refers to “Section 7.1 Treatment Zone Monitoring.” A sampling frequency is not proposed for the TPH and Chloride testing presented on page 6.10. Pursuant to 19.15.36.15.D NMAC, *Treatment Zone Monitoring*, there are three sampling considerations and requirements. The first is testing for an additional lift, which is closely proposed here except for the concentration limits for the additional biopile consideration. A similar protocol is identified on page 6.5 in Section 5.0, Treatment/Bioremediation and it includes the limits of 19.15.3.6.15.D NMAC. This is supported by the regulatory language “The operator shall conduct treatment zone monitoring to ensure that prior to adding an additional lift the TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg and that the chloride concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste or 1000 mg/kg if the landfarm is located where ground water is 100 feet or more below the lowest elevation at which the operator will place oil field waste.”

The next sampling consideration and requirement is the next sentence which states “The operator shall collect and analyze at least one composite soil sample, consisting of four discrete samples, from the treatment zone at least semi-annually using the methods specified below for TPH and chlorides.” This is the sampling that is not addressed in the application. This would be regular operational semi-annual sampling that could be applied to request an additional biopile, but is required regardless if it is used for an additional biopile request or not. When assessing the regulatory language “using the methods specified below for TPH and chlorides,” the “methods specified below for TPH and chlorides” are those identified in Subsection F of 19.15.36.15 NMAC: “TPH, as determined by EPA method 418.1 or other EPA method approved by the

division...” pursuant to 19.15.36.15.F.(3) NMAC; and “Chlorides, as determined by EPA method 300.1...” pursuant to 19.15.36.15.F.(4) NMAC.

The last sampling consideration and requirement is the last sentence of 19.15.36.15.D NMAC which states “When that thickness is reached, the operator shall not place additional oil field waste in the landfarm cell until it has demonstrated by monitoring the treatment zone at least semi-annually that the contaminated soil has been treated to the standards specified in Subsection F of 19.15.36.15 NMAC or the contaminated soils have been removed to a division-approved surface waste management facility.” This is a transitional provision that identifies the number of samples required to demonstrate closure and the time frame in which two consecutive sampling events must demonstrate compliance to the treatment zone closure performance standards of 19.15.36.15.F NMAC. This sampling would be for closing biopiles only.

Based upon the proposed protocol, OCD is unsure if Crowe Blanco is requesting additional exceptions to certain requirements of 19.15.36.15.D NMAC when the proposal do not represent all of the requirements. Please clarify.

**Page 6.11, Semi-Annual Treatment Zone Monitoring:**

As discussed above on page 6.10, Section 7.1 Treatment Zone Monitoring, the regular operational semi-annual sampling “using the methods specified below for TPH and chlorides” is not proposed or addressed under the heading. Please clarify if this is an exception or waiver request pursuant to 19.15.36.19 NMAC.

The discussion provided in the written response identifies the transitions provisions that lead to treatment zone closure performance standards demonstration of 19.15.36.15.F NMAC for closure, followed by the treatment zone closure performance standards requirements of 19.15.36.15.F NMAC. Even though this sampling demonstration must be completed within two consecutive (semi-annual) sampling events, it is not the regularly scheduled operational semi-annual treatment zone sampling of TPH and chlorides required of 19.15.36.15.D NMAC. This section should include the regularly scheduled operational semi-annual treatment zone sampling of TPH and chlorides required of 19.15.36.15.D NMAC, identifies the transitions provisions that lead to treatment zone closure performance standards demonstration of 19.15.36.15.F NMAC for closure, and refer to Section 8.0 Treatment Zone Closure Performance Standards on page 6.13 for the closure testing and standards, unless an exception or waiver is being requested.

The note (identified by an \*) at the bottom of the page states “Biopiles meeting semi-annual (two events within a one year timeframe) Treatment Zone monitoring standards also meet Treatment Zone Closure Standards and will not require further testing.” This statement is not completely correct. The minimum regular sampling of TPH and chlorides required of the treatment zone regarding 19.15.36.15.D NMAC is not the same and does not include all of the testing required of the treatment zone closure performance standards of 19.15.36.15.F NMAC. Therefore, further testing is required to demonstrate 19.15.36.15.F NMAC. Please correct comment.

**Page 6.12, 7.2 Vadose Zone Monitoring:**



The proposed sampling protocol is an exception or waiver request pursuant to 19.15.36.19 NMAC.

**Page 6.13, 8.0 Treatment Zone Closure Performance Standards:**

The note (identified by an \*) at the bottom of the section states “Biopiles meeting semi-annual (two events within a one year timeframe) Treatment Zone monitoring standards also meet Treatment Zone Closure Standards and will not require further testing.” This statement is not completely correct. The minimum regular sampling of TPH and chlorides required of the treatment zone regarding 19.15.36.15.D NMAC is not the same and does not include all of the testing required of the treatment zone closure performance standards of 19.15.36.15.F NMAC. Therefore, further testing is required to demonstrate 19.15.36.15.F NMAC. Please correct comment.

**Page 6.14, 10.2 Facility Requirements:**

The first bullet provides a special discussion regarding arroyos. Pursuant to 19.15.36.2.7.W(4) NMAC, a watercourse “” means a river, creek, arroyo, canyon, draw or wash or other channel having definite banks and bed with visible evidence of the occasional flow of water.” Arroyos are considered a watercourse by definition in which the 200 foot setback is required.

The note (identified by an \*) at the bottom of the section refers to “Binder Section 19.15.36.8.C.4 – Description of Facility & Design” for the siting and setback demonstrations. OCD was unable to locate the demonstrations. Please indicate which drawing or figure demonstrates each siting and setback requirement.

**Page 6.18, Sheet C107, *Foundation Plan*:**

Step 1 on pages 6.8 and 6.9 refers to “Sheet C107-Ramp Detail” to illustrate the elevated ramp to offload waste into the slurry and shaker tank. The design detail 1/C107 (identified as “Ramp Detail”) is a construction detail for the entry and exit ramps for the building as indicated on the Foundation Plan view. Please provide a correct reference.

**Page 6.19, Addendum A, C-138:**

Based upon the Waste Acceptance protocol of Section 2.0, the Flowchart for Waste Acceptance of Section 4.1, and the waste management protocols of Sections 5.1 through 5.3, the required paint filter and chloride testing prior to placement into the landfarm cell will be completed by Crowe Blanco rather than the generator of the waste. If this assessment is correct, then the proposed protocol would be an exception/waiver request to 19.15.36.15.A NMAC. Pursuant to Subsection A of 19.15.36.15 NMAC, “The person tendering oil field waste for treatment at a landfarm shall certify, on form C-138, that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm’s operator shall not accept oil field waste for landfarm treatment unless accompanied by this certification.” Please clarify which party will be responsible for the required testing and by who and when will the certification statement be signed.

**Page 6.21, Addendum C, Material Entry Record:**

H<sub>2</sub>S monitoring (as proposed on the form) is no longer proposed as part of the waste acceptance protocol. Since it is no longer discussed, OCD is unsure how it would be applied and what would be the concentration in which waste would be denied for acceptance. Please clarify or remove from the form. In regards to chloride testing, as proposed under Tab 19.15.36.8.C.6 of the application, OCD is unsure if chloride testing will be reconfirmed after waste that fails the paint filter test is stabilized again with additional soils and paint filter demonstrated for compliance. Please clarify on the form. Also, the form provides instruction to “attach copy of results to C-138” of the chloride testing performed by Crowe Blanco. Please see the comments regarding the exception/waiver request for Page 6.19, Addendum A, C-138.

**Page 6.21, Addendum D, Material Entry Record (Long Form):**

Please see comments above for Page 6.21, Addendum C, Material Entry Record.

**Page 6.24, Addendum F, Biopile Record:**

In the bottom half of the form, under the options for reuse/recycle, one of the standard options is “Berm Maintenance.” In Section 10.3 on page 6.14, titled “*Berms*,” it states “The facility perimeter and landfarm cells will be bermed (with virgin soils) to prevent stormwater run-on/off.” Please clarify which berms the remediated soils will be requested for reuse.

**Page 6.27, Appendix A, Chloride Content In Solids Field Testing Procedure:**

The test method recognized in Part 36 for chlorides, specifically within 19.15.36.15 NMAC – *Specific Requirements Applicable To Landfarms*, is EPA Method 300.1. The proposed use of the field test method is an exception or waiver request pursuant to 19.15.36.19 NMAC. Please provide additional information to assist OCD in determining “that the proposed alternatives will provide equivalent protection of fresh water, public health, safety and the environment.”

**Tab 19.15.36.8.C.7, Routine Inspection & Maintenance Activities:**

**Page 7.1, Table 1:**

Under the Maintenance Task *Processing Area*, the inspection and removal of fluids from liquids collection system (sump) is not proposed. OCD has been unable to locate any protocol to address the operation of the liquids collection system. Please update and provide.

Under the Maintenance Task *Monitoring Wells*, semi-annual sampling is proposed. OCD has been unable to locate a ground water monitoring sampling plan or protocol within the permit application. Ground water monitoring is an operational requirement for landfill operators. It would be considered for other operations if there was a concern for ground water contamination, such as one of the following examples: If there was a concern with the liner integrity of the secondary containment feature of the processing area’s liquid collection system; or if landfarm vadose sampling results demonstrated that landfarm operations were resulting in contamination of the vadose zone and potential ground water contamination. Please clarify if Crowe Blanco proposed ground water monitoring as part of its’ routine inspection and maintenance operations. If so, please update the Closure and Post-Closure Care Plan to reflect and include procedures and cost estimates for the imposed sampling.

**Page 7.3, Inspection and Maintenance Checklist:**

At the top of the page under the heading *Moisture/Dust Control*, Blowing Dust, in the far right column “centrate” is identified as one of the sources of moisture to add to biopiles. Section 5.4, Centrate Water (Wastewater) on page 6.10 of the permit application, states “Centrate water – produced in conjunction with the use of the centrifuge will be transported off-site (by an approved C-133 hauler) to a permitted facility with the proper manifest C-138 form.” Section 4 Fugitive Dust & Order Emissions, page 14.6 of the Best Management Plan under Tab 19.15.36.8.C.14, only proposes the use of fresh water for road and yard dust and adding (trenching) moisture to the biopile. Please update the form to represent the proposed changes in the application.

Under the heading *Processing Area – Metal Tanks/Centrifuge/Tanks*, please update and include a process to inspect the liquid collection system and conditions that will prompt the removal of collected fluids.

**Page 7.4, Inspection and Maintenance Checklist:**

Under the heading *Monitoring Wells*, semi-annual sampling is proposed. OCD has been unable to locate a ground water monitoring sampling plan or protocol within the permit application. Ground water monitoring is an operational requirement for landfill operators. It would be considered for other operations if there was a concern for ground water contamination, such as one of the following examples: If there was a concern with the liner integrity of the secondary containment feature of the processing area’s liquid collection system; or if landfarm vadose sampling results demonstrated that landfarm operations were resulting in contamination of the vadose zone and potential ground water contamination. Please clarify if Crowe Blanco proposed ground water monitoring as part of its’ routine inspection and maintenance operations. If so, please update the Closure and Post-Closure Care Plan to reflect and include procedures and cost estimates for the imposed sampling.

**Tab 19.15.36.8.C.8, Hydrogen Sulfide Contingency Plan:****Page 8.4, Section V, C.2 Events That Could Lead to a Release of H2S:**

Based upon, the proposed piping illustrated on Sheet C104, page 8.22, only the two centrate tanks will be supplied the H2S treating agent. Please clarify in the written response, which currently suggests all tanks.

**Tab 19.15.36.8.C.9, Closure and Post Closure Plan:****Page 9.4, Section 2, General Surface Waste Management Facility Closure:**

The last paragraph states “Post-closure will be considered accomplished when all closure activities have been completed, closure standards have been achieved, and vegetative cover is equal to 70 percent of native perennial cover excluding noxious weeds through two successive growing seasons (19.15.36.18.A.6 NMAC).” Pursuant to 19.15.36.18.A.(6) NMAC, “Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in Subsection G of 19.15.36.18 NMAC. Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion

damaging to native vegetation) or scientifically documented ecological description consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons.” Please identify the special consideration associated with proposed use of the “native perennial vegetative cover.” Pursuant to 19.15.36.18.F NAMC, “Landfarm and pond and pit post closure. The post-closure care period for a landfarm or pond or pit shall be three years if the operator has achieved clean closure. During that period the operator or other responsible entity shall regularly inspect and maintain required re-vegetation. If there has been a release to the vadose zone or to ground water, then the operator shall comply with the applicable requirements of 19.15.30 NMAC and 19.15.29 NMAC.” The written response does not recognize the required three years post closure care period or the responsibilities of the operator during this period. Please modify.

**Page 9.5, Section 5, *Processing Area Closure*:**

The sixth sentence of the first paragraph proposes testing of the concrete floor/foundation for NORM, Benzene, BTEX, GRO/DRO, Corrosivity, Ignitability, Paint filter, and RCRA 8 metals (TCLP). To clarify, the concrete floor and concrete foundations are two separate contact surfaces and are not the same item. This statement is provided because only one sample is proposed for both surfaces in Table 2 – Processing Area on Page 9.9. The concrete floor will be impacted from the operations proposed within the building. The concrete foundations will be impacted by the accumulated fluids in the liquids collection system. Please clarify and modify appropriately. Also, OCD recommends limiting the testing to the following: NORM, Benzene, BTEX, TCLP RCRA 8 metals, and GRO/DRO or TPH.

In the second paragraph, please identify the “estimated 23 tanks” proposed for closure. OCD recognizes at least 25 tanks required for the initial operations that could increase up to 29 tanks. The initial 25 tanks would include the following: 16 tank battery tanks; 2 tank bottom tanks, 2 centrate tanks; 1 mobile shaker tank; 1 mobile slurry tank; 1 fuel tank, and two water tanks. If the facility reaches full operations, the 29 tanks would include the initial 25 plus the proposed 2 additional tank battery tanks, one additional mobile slurry tank, and one additional shaker tank. Please identify the “estimated 23 tanks” to ensure all operational tanks are addressed at closure. Also, please identify the volume of the tanks to provide a basis for and justify the proposed volume of “BS&W/washout” proposed for off-site disposal. It will also clear up some of the conflicting volumes for the tanks.

In the third paragraph, OCD recommends using the piping and pumps to remove the liquids from the liquid collection system for disposal prior to disassembling and removing the piping and pumps for closure. Also, include closure protocols and cost estimates for the removal, transportation and off-site disposal of collected fluids.

The second sentence of the fourth paragraph proposes taking two composite samples per lift for soils within the lined processing area, the first lift at 12 inches below the processing area surface and the second at 48 inches below the surface. It does not propose to sample the ramp that is built up above the surface and above the slurry and shaker tanks in which trucks will off-load. This will probably be one of the most contaminated areas due to planned operations for off-loading. Please include sampling of the ramp and modify Table 2 appropriately. The 2 composite samples per lift is proposed to demonstrate the closure performance standards of

19.15.36.15.F NMAC for reuse of soils. Both samples will be taken during the same sampling event. For reuse of landfarmed or biopiled soils pursuant to 19.15.36.15 NMAC, the soils would have already satisfied the paint filter for placement into the landfarm cell, and would have to have been demonstrated twice (semi-annual) for compliance for 19.15.36.15.F NMAC for consideration for closure and reuse. Please modify the written response to address the proposed reduced sampling for consideration for closure and reuse of soils and absence of the paint filter test for backfilling in the protocol and update Table 2 or clarify if this is an exception or waiver request pursuant to 19.15.36.19 NMAC. OCD recommends including an additional step to remove any remaining fluids that could not be extracted from the liquid collection system prior to the removal of the liner.

The third to last sentence of the fourth paragraph proposes to solidify soils not meeting the paint filter test prior to placement into a biopile. At this point of closure, the building and centrifuge (the only proposed method of solidification) have been removed. How will the processing area soils be stabilized at this point of closure? Also, if further stabilization is required so is confirmation for the paint filter test and chlorides for placement into an “active” biopile. Please include and address.

In the fifth paragraph, if the liner material is proposed for disposal into a solid waste facility permitted by NMED-SWB, then the special considerations and/or condition the liner must satisfy for acceptance pursuant to Part 35 need to be identified. Please provide.

The third to last sentence of the sixth paragraph proposes to solidify soils not meeting the paint filter test prior to placement into a biopile. At this point of closure, everything including the liner has been removed has been removed from the processing area. How and where will the soils from beneath the liner be stabilized at this point of closure? Also, if further stabilization is required so is confirmation for the paint filter test and chlorides for placement into an “active” biopile. Please include and address.

The first sentence of the seventh paragraph discusses the removal and reuse of the “processing area berms.” OCD is unsure if this will include the berms associated with Cell # 2. Please clarify. Also, OCD was unable to locate a closure procedure for the removal of the lined stormwater collection pond within Cell # 2 in order to accomplish re-vegetation. Based upon the information provided in the application, Cell # 2 is not proposed for landfarming. Please provide and include in Table 1.

**Page 9.6, Section 6, Active “Treatment” Cell Closure:**

The first sentence of the first paragraph proposes “Active “treatment” cell closure will begin upon acceptance of the last load of contaminated soils, in accordance with Treat Zone Monitoring Standards 19.15.36.15.D NMAC and/or upon closure.” OCD is unsure of the meaning of the protocol since the treatment zone sampling and standards of 19.15.36.15.D NMAC is commonly incorrectly identified in the permit application as being the same as the treatment zone closure performance standard sampling for 19.15.36.15.F NMAC. The only treatment monitoring standards that are specifically identified in 19.15.36.15.D NMAC are those proposed for TPH and chlorides in consideration for an additional lift for a landfarm cells or an additional 1000 cubic yard biopile. There is also the regular operational semi-annual sampling

of 19.15.36.15.D NMAC that could be applied to request an additional biopile (as proposed in the operational plan), but is required regardless if it is used for an additional biopile request or not. See the comments for Page 6.10, Section 7.1, Treatment Zone Monitoring for further explanation. The last two sentence of 19.15.36.15.D NMAC only discusses at which time and frequency in which the treatment zone closure performance sampling of 19.15.36.15.F NMAC must be initiated and demonstrated. The standards of 19.15.36.15.F NMAC are only identified and specified in 19.15.36.15.F NMAC. The standards of 19.15.36.15.F NMAC are only referenced by provision in 19.15.36.15.D NMAC.

In the second paragraph only 10 monthly events are proposed for the monthly operational requirement of turning the biopile pursuant to 19.15.36.15.C.(5) NMAC. The first paragraph states “it is anticipated it will take 3-12 months for different biopiles within the four active “treatment” cells to remediate to closure standards as specified in 19.15.36.15.F.” This means that in a worst case scenario it will take 10 months of turning biopiles before the first sampling event of treatment zone closure performance standards of 19.15.36.15.F NMAC can be taken and demonstrated. If there are no exceedances, it will require an additional 6 months of turning until the last semi-annual treatment zone closure performance standard sampling event for 19.15.36.15.F NMAC can be taken and demonstrated. This results in a total of 16 events to turn the biopiles. Please update this section and the cost estimates or justify and provided a basis for the proposed 10 events and the 105 days.

The third paragraph seems to make an attempt to demonstrate compliance to the regular operational semi-annual sampling for TPH and chlorides of 19.15.36.15.D NMAC, but is not supported by some of the proposed language and the proposed cost estimate. The second sentence of the third paragraph states “Up to four different events will take place with a total of 105 samples being taken.” OCD has determined that the proposed “105 samples” represents a sample obtained from each of the 105 biopiles remaining in the four active treatment cells. OCD determined the basis of the “105” by using the identified “usable” areas (acreage) for each of the active treatment cells 7 through 10 (9.36 ac., 7.76 ac., 9.27 ac., and 8.82 ac, respectively) and the proposed operation of three 1000 cubic yard biopiles per acre or  $(9.36 + 7.76 + 9.27 + 8.82 = 35.21 \text{ acres}) (3 \text{ 1000 cubic yard biopiles per acre}) = 105.63 \text{ biopiles}$ . Based upon the written proposal, each biopile will not be sampled per sampling event since only “a total of 105 samples will be taken” out of 4 possible sampling events. This is also supported in Table 3 by the proposed costs estimates for 4 sampling events and the 105 samples proposed for TPH and chlorides testing. This protocol does not coincide with the proposed Treatment Zone Monitoring of Section 7.1 on page 6.10 of the Operational/Management Plan under Tab 19.15.36.8.C.6, which proposes to test each biopile per sampling event. Please correct and clarify or justify the proposed reduced sampling.

In the first sentence of the fourth paragraph, the proposed treatment zone closure performance standards monitoring of 19.15.36.15.F NMAC is referred to as “Treatment Zone” monitoring. The only provision with the heading “Treatment Zone Monitoring” in Part 36 is 19.15.36.15.D NMAC. This clarifying statement is provided due to notes provided in the Operational/Management Plan under Tab 19.15.36.8.C.6 which state “Biopiles meeting semi-annual (two events within a one year timeframe) Treatment Zone monitoring standards also meet Treatment Zone Closure Standards and will not require further testing.” Based upon the

constituents identified for testing in the first bullet, only the treatment zone closure performance standards monitoring of 19.15.36.15.F NMAC is being proposed. Please refer to the correct testing. Also, the second sentence of the first bullet identifies an option for risk assessment that only applies to the metals results of 19.15.36.15.F(5) NMAC. As proposed and written, the risk assessment is available for any exceedance of any of the constituents tested under 19.15.36.15.F NMAC. Please correct the language to demonstrate compliance to Part 36.

The last sentence of the fifth paragraph refers to “Table 1: Facility Closure-Treatment Zone Monitoring and/or Treatment Zone Closure” to demonstrate the proposed and anticipated sampling. The misunderstanding of the two separate sampling requirements of 19.15.36.15.D NMAC, *Treatment Zone Monitoring*, and 19.15.36.15.F NMAC, *Treatment Zone Closure Performance Standards*, is clearly identified in Table 1 on page 9.8. The second row on Table 1, page 9.8, the Purpose is identified as “Treatment Zone Monitoring and/or Treatment Zone Closure 19.15.36.15.F NMAC” and proposes the analysis for the Treatment Zone Closure Performance Standards of 19.15.36.15.F NMAC. The regular operational semi-annual sampling for TPH and chlorides of 19.15.36.15.D NMAC, that is somewhat proposed in the third paragraph on page 9.6 is not proposed in Table 1 on page 9.8. Please correct the written text and Table 1. Also the note (identified by an \*) at the end of the paragraph states “Biopiles meeting semi-annual (two events within a one year timeframe) Treatment Zone monitoring standards also meet Treatment Zone Closure Standards and will not require further testing.” This statement is not completely correct. The minimum regular sampling of TPH and chlorides required of the treatment zone regarding 19.15.36.15.D NMAC is not the same and does not include all of the testing required of the treatment zone closure performance standards of 19.15.36.15.F NMAC. Therefore, further testing is required to demonstrate 19.15.36.15.F NMAC. Please correct comment.

The eighth or last paragraph states “Until the Division has approved final closure of the site, IEI will submit reports of annual vadose and treatment zone sampling results (19.15.36.18.D.4.g) but will not take additional samples after closure standards are reached.” Pursuant to 19.15.36.18.D.(4)(g), the operator shall ensure that “annual reports of vadose zone and treatment zone sampling are submitted to the division's environmental bureau until the division has approved the surface waste management facility's final closure.” The proposed written response suggests “reports of annual vadose and treatment zone sampling results” when the provision requires the submittal of annual reports for the regulatory required semi-annual vadose zone and treatment zone monitoring. Please modify and correct.

**Page 9.7, Section 7, *Other Closure Procedures & Re-vegetation*:**

Pursuant to 19.15.36.18.D.(4)(f) NMAC, the operator shall ensure that “buildings, fences, roads and equipment are removed, the site cleaned-up and tests conducted on the soils for contamination.” This section addresses the removal or non-removal (with justifications) of buildings, fences, roads and equipment, but OCD was unable to locate a proposal for “site cleaned-up and tests conducted on the soils for contamination” required of 19.15.36.18.D.(4)(f) NMAC. Please provide a protocol and update Table 3 on page 9.10 or identify as a request for exempt/waiver pursuant to 19.15.36.19 NMAC.



In the second paragraph, the proposed closure protocol only addresses the removal and disposal of the lined stormwater retention ponds for the “four active “treatment” cells.” OCD was unable to locate a closure protocol for the removal and disposal of the lined stormwater retention ponds within the final disposition cells in order to accomplish re-vegetation. Please provide a protocol and closure cost estimates. Also, if the liner material is proposed for disposal into a solid waste facility permitted by NMED-SWB, then the special considerations and/or condition the liner must satisfy for acceptance pursuant to Part 35 need to be identified. Please provide.

**Page 9.7, Section 8, *Facility Post Closure:***

The second sentence of the second paragraph states “Re-vegetation will be considered complete (stabilized) when the vegetation cover equals 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation).” This only considers a portion of the re-vegetation requirement. Pursuant to 19.15.36.18.A(6) NMAC, “Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in Subsection G of 19.15.36.18 NMAC. Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) or scientifically documented ecological description consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons.” Please include the required maintenance portion of the provision in the written response.

**Page 9.8, Table 1, *Facility Closure Testing Requirements:***

In the second row on Table 1, the Purpose is identified as “Treatment Zone Monitoring and/or Treatment Zone Closure 19.15.36.15.F NMAC” and proposes the analysis for the Treatment Zone Closure Performance Standards of 19.15.36.15.F NMAC. The minimum regular sampling of TPH and chlorides required of the treatment zone regarding 19.15.36.15.D NMAC is not the same and does not include all of the testing required of the treatment zone closure performance standards of 19.15.36.15.F NMAC. Please modify and correct. Also, the regular operational semi-annual sampling for TPH and chlorides of 19.15.36.15.D NMAC, that is somewhat proposed in the third paragraph on page 9.6, is not proposed in Table 1. Please include in Table 1.

Under the Purpose, Processing Area Closure, when discussing the concrete floor and concrete foundation sampling frequency, please identify the proposed number of scraping surface samples that are proposed to complete the sampling event. The concrete floor and concrete foundations are two separate contact surfaces and are not the same item. The concrete floor will be impacted from the operations proposed within the building. The concrete foundations will be impacted by the accumulated fluids in the liquids collection system. Please clarify and modify appropriately. Also, OCD recommends limiting the testing to the following: NORM, Benzene, BTEX, TCLP RCRA 8 metals, and GRO/DRO or TPH. The proposed limit for Benzene should be identified as “less than 10 mg/kg” rather than 9.99 and “less than 500 mg/kg” for BTEX rather than the proposed 499.99. Please modify.



Under the Purpose, Processing Area, when discussing the “Soils beneath the liner,” the proposed standards do not coincide with the written protocol on Page 9.5. On page 9.5, under Section 5, *Processing Area Closure*, the second sentence of the sixth paragraph proposes to compare the results to “the higher of the PQL or background” for vadose zone monitoring of 19.15.36.15.E NMAC. The vadose zone standards of 19.15.36.15.E NMAC are not expressed correctly in Table 1. The proposed standards in Table 1 are based upon the treatment zone closure performance standards of 19.15.36.15.F NMAC for TPH, BTEX, and chlorides. Please modify appropriately.

The first sentence in the main box of the last row on Table 1 states “Must meet semi-annual (2 events within one year timeframe) Treatment Zone Monitoring or Treatment Closure requirements as listed above.” The minimum regular sampling of TPH and chlorides required of the treatment zone regarding 19.15.36.15.D NMAC is not the same and does not include all of the testing required of the treatment zone closure performance standards of 19.15.36.15.F NMAC. Please modify and correct. The third sentence states “if exceeded, a site specific risk shall be performed using EPA methods and IEI shall propose closure standards based upon individual site conditions that protect water, public health/safety and the environment.” The option for risk assessment only applies to the metals results of 19.15.36.15.F.(5) NMAC. As proposed and written, the risk assessment is available for any exceedance of any of the constituents tested under 19.15.36.15.F NMAC. Please correct the language to demonstrate compliance to Part 36.

When identifying metals within the Analyses column of Table 1, the regulatory reference to the Water Quality Control Commission regulations is incomplete. The correct reference should be “Subsection A & B of 20.6.2.3103 NMAC.” Please correct throughout Table 1.

**Page 9.9, Table 2, *Processing Area Closure*:**

In the first section, *Building*, and in the third section, *Piping/Pumps*, each proposed an hourly rate for the rental of “NORM testing (licensed instrument).” The fifth section, *Soil Sampling (above & below liner)*, based upon its heading does not include NORM testing. Please either create a new section that will address and demonstrate the cost estimate for qualified (for NORM testing) staff and vehicle support to complete the proposed NORM sampling or modify the fifth section by re-titling the heading to include “NORM sampling” and updating the proposed hours for staff and vehicle support.

In the second section of Table 2, under the heading *Tanks*, the basis for the proposed volume of 12,800 bbls has not been explained or justified within the Closure and Post-Closure Care plan. It comes into question due to the number of tanks proposed for removal. Crowe Blanco proposes to remove 23 tanks. OCD recognizes at least 25 tanks required for the initial operations that could increase up to 29 tanks. See Sheet C110 on page 5.43. The initial 25 tanks would include the following: 16 tank battery tanks; 2 tank bottom tanks, 2 centrate tanks; 1 mobile shaker tank; 1 mobile slurry tank; 1 fuel tank, and two water tanks. If the facility reaches full operations, the 29 tanks would include the initial 25 plus the proposed 2 additional tank battery tanks, one additional mobile slurry tank, and one additional shaker tank. Please identify the “estimated 23 tanks” in the written text on page 9.5 to ensure all operational tanks are addressed at closure. Also, please identify the volume of the tanks to provide a basis for and

justify the proposed volume of “BS&W/washout” proposed for off-site disposal in the written text on page 9.5. It will also clear up some of the conflicting volumes for the tanks. Please update Table 2 based upon any new information.

In between the second section, *Tanks*, and the third section, *Piping/Pumps*, there should be a new section that addresses the removal of fluids from the liquids collection system and the transportation and disposal of the fluids prior to removing piping and pumps. Currently the permit application does not provide any protocols for operations and maintenance of the liquids collection system. Please provide protocols and procedures on page 9.5 and modify Table 2 appropriately.

In the seventh section, *Concrete Scrapings*, the cost estimate and closure procedure on page 9.5 proposed one sample for the concrete floor and concrete foundations. The concrete floor and concrete foundations are two separate contact surfaces and are not the same item. This statement is provided because only one sample is proposed for both surfaces in Table 2. The concrete floor will be impacted from the operations proposed within the building. The concrete foundations will be impacted by the accumulated fluids in the liquids collection system. Please clarify and modify appropriately. Also, OCD recommends limiting the testing to the following: NORM, Benzene, BTEX, TCLP RCRA 8 metals, and GRO/DRO or TPH. Please make the appropriate modifications to Table 2 and page 9.5.

On page 9.5, the second sentence of the fourth paragraph proposes taking two composite samples per lift for soils within the lined processing area, the first lift at 12 inches below the processing area surface and the second at 48 inches below the surface. It does not propose to sample the ramp that is built up above the surface and above the slurry and shaker tanks in which trucks will unload. This will probably be one of the most contaminated areas due to planned operations for off-loading. Please include sampling of the ramp and modify Table 2 appropriately. The 2 composite samples per lift protocol is proposed to demonstrate the closure performance standards of 19.15.36.15.F NMAC for reuse of soils. Both samples will be taken during the same sampling event. For reuse of landfarmed or biopiled soils pursuant to 19.15.36.15 NMAC, the soils would have already satisfied the paint filter for placement into the landfarm cell, and would have to had been demonstrated twice (semi-annual) for compliance for 19.15.36.15.F NMAC for consideration for closure and reuse. Please modify the written response to address the proposed reduced sampling for consideration for closure and reuse of soils and absence of the paint filter test for backfilling in the protocol and update Table 2 appropriately. If this is an exception or waiver request pursuant to 19.15.36.19 NMAC, then please identify and justify on page 9.5. OCD recommends including an additional step to remove any remaining fluids that could not be extracted from the liquid collection system prior to the removal of the liner. Please provide a closure protocol on page 9.5 and include cost estimates for Table 2.

Please see the comments regarding the seventh paragraph on page 9.5. If the discussion regarding the removal and reuse of the “processing area berms” does not include the berms associated with Cell # 2, then please provide a protocol on page 9.5 and include cost estimates in Table 2. Also, OCD was unable to locate a closure procedure for the removal of the lined stormwater collection pond within Cell # 2. Based upon the information provided in the

application, Cell # 2 is not proposed for landfarming. Please provide a protocol on page 9.5 and include cost estimates in Table 2.

**Page 9.10, Table 3, *Landfarm Closure*:**

The first section, *3-12 Months Of Remediation*, proposes cost estimates for 10 events that will involve turning the biopiles on a monthly basis. The monthly turning is required of 19.15.36.15.C.(5) NMAC. On page 9.6, the first paragraph states “it is anticipated it will take 3-12 months for different biopiles within the four active “treatment” cells to remediate to closure standards as specified in 19.15.36.15.F.” This means that in a worst case scenario it will take 10 months of turning biopiles before the first sampling event of treatment zone closure performance standards of 19.15.36.15.F NMAC can be taken and demonstrated. If there are no exceedances, it will require an additional 6 months of turning until the last semi-annual treatment zone closure performance standard sampling event for 19.15.36.15.F NMAC can be taken and demonstrated. This results in a total of 16 events to turn the biopiles. Please update this section on page 9.6 and the cost estimates on Table 3 appropriately or provided a basis for the proposed 10 events and the 105 days on page 9.6.

The second section, *Treatment Zone – Soil Sampling*, and third section, *Treatment Zone – Lab Analysis*, must be discussed together. Pursuant to 19.15.36.15.D NMAC, “The operator shall collect and analyze at least one composite soil sample, consisting of four discrete samples, from the treatment zone at least semi-annually using the methods specified below for TPH and chlorides.” In Section 7.1, *Treatment Zone Monitoring (19.15.36.15.D)*, on page 6.10 of the Operational/Maintenance Plan, it proposes that “... the treatment zone (biopile) shall be tested by collecting and analyzing a minimum of one composite sample from each biopile consisting of four discrete aliquots.” The closure protocol proposed in the third paragraph on page 9.6 states “Up to four different events will take place with a total of 105 samples will be taken.” OCD is unsure how this closure will be implemented since it does not recognize a sampling frequency and that it clearly suggest that not all biopiles will be sampled each event since “a total of 105 samples will be taken” for the four separate sampling events (not for each sampling event). This is supported in Table 3 cost estimates. Please clarify if an exception or waiver is being requested pursuant to 19.15.36.19 NMAC or modify the closure protocol on page 9.6 and update Table 3 to demonstrate compliance to Part 36.

In the fourth section, *Semi-Annual Monitoring – Soil Sampling*, based upon the “# of events” proposed, eight (8) sampling events will be performed for treatment zone closure performance standards demonstrations of 19.15.36.15.F NMAC and vadose zone monitoring of 19.15.36.15.E NMAC. These 8 sampling events, as proposed, will require the same amount of time (8 hours for a field tech and 9 hours for a support vehicle) that is proposed to perform the four (4) sampling events for treatment zone monitoring of 19.15.36.15.D NMAC. Please clarify or correct the discrepancy. Also, the fifth section, *Lab Analysis – Semi-Annual Treatment Zone*, and the sixth section, *Semi-Annual Vadose Zone*, only proposes two (2) sampling events for each task. Please see comments below regarding vadose zone monitoring prior to making any changes.

In the second row in the fifth section, *Lab Analysis – Semi-Annual Treatment Zone*, please remove “or TPH (418.1)” from the first column. GRO/DRO combined fractions by EPA

Method 8015M and TPH by EPA Method 418.1 are not optional. Each has a treatment zone closure performance standard that must be demonstrated by the specified test method identified in 19.15.36.15.F NMAC.

The sixth section, *Semi-Annual Vadose Zone*, only proposes two (2) sampling events during closure. Since this is an operational requirement and operations continue until “clean” closure is demonstrated, then the first two semi-annual vadose sampling events will occur during the 12 months of proposed remediation. An additional sampling events may be needed.

Pursuant to 19.15.36.18.D.(4)(f) NMAC, the operator shall ensure that “buildings, fences, roads and equipment are removed, the site cleaned-up and tests conducted on the soils for contamination.” OCD was unable to locate a proposal for “site cleaned-up and tests conducted on the soils for contamination” required of 19.15.36.18.D.(4)(f) NMAC. Please provide a protocol on page 9.7 and update Table 3 or identify as a request for exempt/waiver pursuant to 19.15.36.19 NMAC.

On page 9.7, under Section 8, *Facility Post Closure*, the first sentence of the second paragraph proposes that “perimeter berms will not be removed until vegetation has stabilized the soils.” In the eighth section, *Post Closure*, OCD was unable to locate the task and associated cost estimate for this post closure activity. Please provide.

**Page 9.11, *IEI Facility Closure Costs*:**

Please update if any changes occur in Tables 1-3.

**Page 9.12, Sheet 6 of 15, *Cell Map*:**

Please see comments above for Page 4.7, Sheet 6 of 15, *Cell Map*.

**Tab 19.15.36.8.C.11, Run On/Off Control Plan:**

**Page 11.1, 2.0 Run-on Control Measure:**

On page 11.4, Sheet 5 of 15, *Retention Dikes And Details*, in the upper right hand corner of Detail H/5, the Section A diagram indicates to “See detail E/5 for berm with v-ditch.” Detail E/5 is an illustration of an earth berm without ditch, in which it is titled. V-ditches are proposed for general facility berming and run-on/off control as illustrated on Page 5.17, Sheet 15 of 15. Please provide.

**Page 11.1, 3.0 Run-off Control Measure:**

In regards to the first bullet and references to v-ditch design, please see the comment above for Section 2.0 Run-on Control Measure.

**Page 11.4, Sheet 5 of 15, *Retention Dikes And Details*:**

Please see comments above for Page 4.6, Sheet 5 of 15, *Retention Dikes And Details*.

**Page 11.5, Sheet 6 of 15, *Cell Map*:**

Please see comments above for Page 4.7, Sheet 6 of 15, *Cell Map*.

**Page 11.38, Sheet C105, *Liner Grading and Drainage*:**

Please see comments above for Page 4.16, Sheet C105, *Liner Grading and Drainage*.

**Page 11.39, Sheet C107, *Foundation Plan*:**

Please see comments above for Page 4.18, Sheet C107, *Foundation Plan*.

**Tab 19.15.36.8.C.14, Best Management Practices:**

**Page 14.11, Sheet C107, *Foundation Plan*:**

Please see comments above for Page 4.18, Sheet C107, *Foundation Plan*.

**Tab 19.15.36.8.C.15, Geological/Hydrological Data:**

**Page 15.80, Sheet 10 of 15, *Springs And Water Wells Within 1 Mile*:**

Please see comments above for Page 2.7, Sheet 10 of 15, *Springs And Water Wells Within 1 Mile*.

**Tab 19.15.36.8.C.16, Application/Certification:**

**Page 16.2, Form C-137:**

The certification statement at the end of the Form C-137 which states "I hereby certify that the information submitted within this application is true, accurate and complete to the best of my knowledge and belief." was signed by Mr. John P. Crowe, Secretary, on April 24, 2012. This version of the application was submitted to OCD on November 6, 2013. Please provide a signed and dated Form C-137 that represents the application.